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					***************************************		call the CRA project manager a at (425) 413-1164.
Copy to: Perry Pineda, Shell Oil Products US (electronic copy)  Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street, Pleasan CA 94566-6267							
	(	Colleen	Winey, Zone 7 W	ater Agen	cy (electro	nic copy)	
	1	Larry Tu	ırner, CAR Enter	prises (pro	perty owr	ıer; electron	ic copy)
Completed	by: _l	Peter Scl	haefer		Signed:	Pete	Solafin
Filing: Co	orrespoi	ndence F	ile			1	7



Mr. Jerry Wickham Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577 Shell Oil Products US

Soil and Groundwater Focus Delivery Group 20945 S. Wilmington Avenue Carson, CA 90810 Tel (425) 413 1164 Fax (425) 413 0988 Email perry.pineda@shell.com Internet http://www.shell.com

Re:

3790 Hopyard Road Pleasanton, California SAP Code 135784 Incident No. 98995842 ACEH Case No. RO0000363

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.

As always, please feel free to contact me directly at (425) 413-1164 with any questions or concerns.

Sincerely, Shell Oil Products US

Perry Pineda

Senior Environmental Program Manager



# SITE CONCEPTUAL MODEL AND CLOSURE REQUEST

SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD PLEASANTON, CALIFORNIA

SAP CODE

135784

INCIDENT NO.

98995842

AGENCY NO.

RO0000363

SEPTEMBER 3, 2013 REF. NO. 200497 (6) This report is printed on recycled paper. Prepared by: Conestoga-Rovers & Associates

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### **EXECUTIVE SUMMARY**

- The SCM and other information included in this report demonstrate that this site meets the requirements of the SWRCB's Low-Threat Underground Storage Tank Case Closure Policy.
- Historical groundwater monitoring data adequately define TPHg, BTEX, and MTBE impacts in groundwater to below applicable RWQCB ESLs and demonstrate that the plume is not migrating.
- Petroleum hydrocarbons in soils have been adequately delineated to below RWQCB ESLs and are primarily present in the area of the current and former dispensers and fuel USTs.
- Residual COC concentrations do not appear to pose a threat to human health or the
  environment, and all COC concentrations in groundwater are projected to reach
  WQOs by August 2021, with the exception of TBA in well S-6, which is projected to
  meet the WQO by October 2053.
- This site meets SWRCB criteria for a low-threat fuel site. Therefore, on behalf of Shell, we respectfully request closure of this case. CRA requests that ACEH 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 demonstrate that this site meets the requirements of the State Water Resources Control Board's (SWRCB's) Low-Threat Underground Storage Tank Case Closure Policy.

The subject site is a Shell-branded service station located on the southwest corner of Hopyard Road and Las Positas Boulevard in a mixed commercial and residential area of Pleasanton, California (Figure 1). The current site layout includes three fuel underground storage tanks (USTs), a former UST compound, two former waste oil USTs, two existing product dispenser islands, two former dispenser islands, and a station building (Figure 2).

A summary of previous work is contained in Appendix A.

### 2.0 <u>SITE CONCEPTUAL MODEL (SCM)</u>

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
2.1	Hydrocarbon Source	
2.1.1	Identify/Describe Release Source and Volume (if known)	Release source and volume are unknown. Site assessment activities began in 1986, when hydrocarbons were detected in five
		borings drilled adjacent to the USTs prior to UST replacement.
2.1.2	Discuss Steps Taken to Stop Release	The USTs were replaced in 1988, and the UST pit was over-excavated to 20 feet below grade (fbg). Fuel systems at the site were upgraded in 1998 and 2002. One 550-gallon waste oil tank was removed in 2007.
2.2	Site Characterization	·
2.2.1	Current Site Use/Status	The site is a Shell-branded service station.
2.2.2	Soil Definition Status	Petroleum hydrocarbons in soils have been adequately delineated to below San Francisco Bay Regional Water Quality Control Board (RWQCB) environmental screening levels (ESLs) <sup>1</sup> and are primarily present in the area

Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater, California Regional Water Quality Control Board, Interim Final – November 2007 [Revised May 2008] – Updated May 2013

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
		of the current and former dispensers and fuel USTs. Vadose zone soil impacts (less than 12 fbg) exceeding ESLs are defined horizontally by soil samples collected from S-3, A1, B1, S-10, S-7, S-5, CPT-5, and SR-1. Deeper soil impacts (greater than 12 fbg) are likely related to groundwater impacts and generally have been found within the area of the historical groundwater plume.
		Historical soil analytical data are presented in Tables 1 and 2, and soil sampling locations are presented on Figures 2 and 3.
2.2.3	SPH Definition Status	Up to 0.09 feet of separate-phase hydrocarbons (SPHs) have been observed in well S-5. SPHs have not been measured in any site wells since August 2004.
2.2.4	Groundwater Definition Status (TPHg/BTEX)	Groundwater has been monitored at the site since November 1987.
		During the first quarter 2013 groundwater monitoring event, total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) concentrations were below ESLs for groundwater where groundwater is a potential source of drinking water with the following exceptions:
		<ul> <li>Up to 1,200 micrograms per liter (μg/L) TPHg in wells S-2, S-5, S-6, and SR-3; and</li> <li>Up to 6.7 μg/L benzene in wells S-2 and S-5.</li> </ul>
		The RWQCB advises that "TPH ESLs must be used in conjunction with ESLs for related chemicals." Toluene, ethylbenzene, and total xylenes were not detected above ESLs during the first quarter 2013, and benzene concentrations are defined to below ESLs down gradient horizontally by wells S-6 through S-11 and vertically by intermediate-zone wells S-5B and S-9B and deeper-zone wells S-5C and S-9C.

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
		Historical groundwater data are included in Table 3, and historical grab groundwater data are presented in Table 4. The first quarter 2013 groundwater contour map is included as Figure 4.
2.2.5	TPHg/BTEX Plume Stability and Concentration Trends	Groundwater monitoring data indicate that TPHg and benzene concentrations are stable to declining in wells S-2, S-5, S-6, and SR-3 and are below ESLs in other site wells.
2.2.6	Groundwater Definition Status (Oxygenates)	During the first quarter 2013 groundwater monitoring event, fuel oxygenate concentrations were below ESLs for groundwater where groundwater is a potential source of drinking water with the following exceptions:
		<ul> <li>Up to 9.1 μg/L methyl tertiary-butyl ether (MTBE) in wells S-2, S-9, and S-11; and</li> <li>Up to 1,100 μg/L tertiary-butyl alcohol (TBA) in wells S-2, S-4, S-6, SR-1, and SR-3.</li> </ul>
		No di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), or tertiary-amyl methyl ether (TAME) was detected in groundwater samples collected during the first quarter 2013 groundwater monitoring event. MTBE and TBA concentrations are defined to below ESLs down gradient horizontally by wells S-10, S-12, S-14, and S-15 and vertically by wells S-5B, S-5C, S-9B, and S-9C.
2.2.7	Oxygenate Plume Stability and Concentration Trends	As shown in Figures 5 through 13, groundwater monitoring data indicate that MTBE and TBA concentrations are stable to declining.
2.2.8	Groundwater Flow Direction, Depth Trends and Gradient	Static groundwater depth has ranged from 4.96 to 45.31 fbg and is typically 12 to 19 fbg. Groundwater flow direction is generally southerly to easterly. Groundwater depths are presented in the historical groundwater monitoring table (Table 3). The first quarter 2013 groundwater contour map is included as Figure 4.
2.2.9	Stratigraphy and Hydrogeology	According to the Evaluation of Ground Water Resources: Livermore and Sunol Valleys

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
		(California Department of Water Resources [DWR] Bulletin No. 118-2, June 1974), the site is located in the Bernal sub-basin of the Livermore Valley groundwater basin. Streams draining Livermore Valley merge in the Bernal sub-basin and then leave the valley as Arroyo de la Laguna.
		Shallow sediments below the site are primarily low-permeability silts and clays to a depth of approximately 43 to 53 feet underlain by interbedded sand, silt, and clay. DWR Bulletin No. 118-2 indicates that surface soils extend to 110 fbg in the area of the site and that water-bearing materials below these shallow sediments are comprised of the valley-fill materials. These materials are present as a sequence of sandy gravel and sandy clayey gravel aquifers up to 100 feet in thickness. The aquifers are separated by silty clay confining beds up to 30 feet in thickness. Boring logs and cross sections are presented in Appendix B.
2.2.10	Preferential Pathways Analysis	In 2002 and 2003, Cambria Environmental Technology, Inc. (Cambria) conducted a utility conduit survey to determine the location of potential preferential pathways in the site vicinity. On- and off-site utility locations are shown on Figures 2 and 3.
		Cambria used information acquired from the City of Pleasanton and Pacific Gas and Electric (PG&E), in addition to conducting a site visit to identify underground utilities and potential receptors. The identified locations of sanitary and storm sewers, and water, natural gas, and electric utility lines are mapped on Figures 2 and 3 and summarized below:
		One 16-inch-diameter water main and one 20-inch-diameter water main trend north along Hopyard Road, and another 16-inch-diameter water main line trends east along Las Positas Boulevard. City of Pleasanton

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
		engineering maps indicate that the water mains are typically buried at a depth of approximately 5.6 to 7.2 feet to the top of the pipe. The bottom of the deepest trench backfill is estimated to be approximately 9 fbg.
		<ul> <li>A 15-inch-diameter storm drain flows north along Hopyard Road, and an 18-inch-diameter storm drain flows east along Las Positas Boulevard. City of Pleasanton engineering maps of the region indicate that the storm drain conduits are typically buried at a depth of approximately 6.5 to 10.2 feet to the top of the pipe. The bottom of the deepest trench backfill is estimated to be approximately 12.5 fbg.</li> </ul>
		<ul> <li>According to the most recent map of utilities for the area, which predates construction of Las Positas Boulevard, an electric line runs northeast from the site into an electric line of unknown size that trends west-east along Las Positas Boulevard. Electric lines are typically buried at a depth of approximately 2 to 3 fbg.</li> </ul>
		A gas line runs along the eastern edge of Hopyard Road and runs across the northern portion of Hopyard Road.
		No sanitary sewer lines were identified on any of the available utility maps.
		Based on utility survey results and depth to site groundwater, utilities in the site vicinity are not expected to affect groundwater flow or to provide preferential groundwater migration pathways.
2.2.11	Other Pertinent Issues	None.
2.3	Remediation Status	
2.3.1	Remedial Actions Taken	Appendix C presents available tables detailing the historical performance of full-scale remedial actions and remediation

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
		feasibility testing. The site history included as Appendix A provides additional details for the events described below.
		1988 Excavation: In 1988, three fuel USTs were removed, and impacted soils were over-excavated to a depth of 20 fbg. Analytical results for soil samples collected during the UST removal are presented in Table 1. Three new fuel USTs were installed in a new location east of the former UST excavation.
		2001-2003 Mobile Groundwater Extraction (GWE): In May 2001, Advanced Cleanup Technologies Inc. (ACT) conducted three weekly 8-hour mobile GWE events using site monitoring wells S-2 and S-4 and tank backfill well T-2. In August 2001, ACT conducted three additional GWE events. In April 2002, Onyx Industrial Service (Onyx) initiated semi-monthly events extracting from tank backfill well T-2. Between June 2002 and September 2002, Onyx also extracted groundwater from well S-4. Extraction from well S-4 was discontinued due to low extraction volumes. Tank backfill well T-4 was added to the semi-monthly extraction events in October 2002.
		2003-2006 GWE: From July 2003 until May 2006, Cambria and then Delta Consultants (Delta; beginning in February 2005) operated a full-scale GWE system using three groundwater recovery wells (SR-1 through SR-3) and one UST backfill well (T-3). The GWE system was operated until reaching its cost-effective limit for mass removal.
		2010 Magnesium Sulfate (MgSO <sub>4</sub> ) Injection Feasibility Study: In May and August 2010, Delta conducted an MgSO <sub>4</sub> injection feasibility study on wells S-2 and S-4.

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
		Approximately 75 gallons of MgSO <sub>4</sub> solution were gravity-fed into each well during each event. Based on subsequent groundwater sampling, Delta concluded that the MgSO <sub>4</sub> injections were of limited effectiveness and should not be implemented on a full-scale basis.
2.3.2	Area Remediated	The area of the current and former USTs and dispensers.
2.3.3	Remediation Effectiveness	Mobile GWE removed an estimated 0.96 pound of TPHg and 9.31 pounds of MTBE. The GWE system extracted and treated an estimated 3,142,212 gallons of water containing an estimated 15.7 pounds of MTBE.
2.4	Well and Sensitive Receptor Survey	
2.4.1	Designated Beneficial Water Use	The SWRCB'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.
2.4.2	Well Survey Results	In 2002 and 2003, Cambria conducted a sensitive receptor survey. Cambria reviewed DWR and Alameda County Flood Control & Water Conservation District Zone 7 Water Agency (Zone 7) files to locate records of municipal and private wells within a one-half-mile radius of the site. Six wells, not including monitoring wells, were identified. The predominant groundwater flow direction is generally toward the south-southeast to southeast (Figure 4).
		One abandoned well is located either on site or immediately down gradient of the site. According to Wyman Hong of Zone 7, the well was an old farm well formerly owned by Volk McClain Company in 1960. Records show the well was 12 inches in diameter with a total depth of 172 fbg. The well was last sampled in 1978 by Zone 7. Mr. Hong also stated that Zone 7 could not locate the well and it is considered closed by Zone 7.

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
		One active municipal well (Hopyard well 6) and one destroyed Zone 7 municipal well (Hopyard well 1) are located approximately 0.3 mile southeast of the site. Two additional active wells of unknown use are located 0.4 mile to the southeast. One destroyed irrigation well is located approximately 0.5 mile east of the site. The well locations identified in the well survey are shown on Figure 1, and a table summarizing well details is presented in Appendix D.
2.4.3	Likelihood of Impact to Wells	Given the definition of constituents of concern (COCs) in groundwater down gradient from the site and the distance from the site to the wells, it is unlikely that hydrocarbons originating from the site will reach these wells.
	Likelihood of Impact to Surface Water	Canal Arroyo Mocho, located approximately 400 feet south of the site, is the closest surface water body. Surface water in Canal Arroyo Mocho flows to the west-southwest at a depth of approximately 25 feet below the surrounding grade. Current COC concentrations in wells S-9 and S-12, which are located up gradient of Canal Arroyo Mocho, are below RWQCB ESLs for freshwater surface water, with the exception of 7.4 µg/L MTBE in well S-9. Given the attenuation of MTBE concentrations between well S-5 and S-9 (Figure 4) and no COC concentrations in well S-12, the closer well, it is unlikely that water in Arroyo Mocho will be impacted by chemicals from the site.
2.5	Risk Assessment	
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, and intrusion of vapor to indoor air.

ITEM	EVALUATION CRITER	IA COMMENTS/DISCUSSION
		Groundwater ingestion does not appear to be a completed pathway because there are no down-gradient water-producing wells or surface water that are likely to be impacted.
		As discussed above, impacted soil is limited on site. Any worker doing trenching or excavating at an active 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. At this time, no further investigation associated with the residual soil impact is recommended.
		As stated in SWRCB's Low-Threat Underground Storage Tank Case Closure Policy, "Exposures to petroleum vapors associated with historical fuel system releases are comparatively insignificant relative to exposures from small surface spills and fugitive vapor releases that typically occur at active fueling facilities. Therefore, satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk." The site is an active fueling facility, and there is no reasonable concern that
		subsurface contamination poses unacceptable indoor inhalation health risk. Historical soil vapor data are presented in Table 5.
2.5.3	Risk Assessment Status	No formal risk assessment has been conducted.
2.5.4	Identified Human Exceedances	NA

ITEM	EVALUATION CRITERIA	COMMENTS/DISCUSSION
2.5.5	Identified Ecological	NA
	Exceedances	

### 3.0 LOW-THREAT CLOSURE EVALUATION

Site data also demonstrate that the site conditions meet the low-threat UST case closure criteria outlined in the SWRCB's *Low-Threat Underground Storage Tank Case Closure Policy*. These criteria are addressed below. SWRCB's low-threat checklist is included in Appendix E.

### 3.1 GENERAL CRITERIA

### 3.1.1 THE UNAUTHORIZED RELEASE IS LOCATED WITHIN THE SERVICE AREA OF A PUBLIC WATER SYSTEM

The City of Pleasanton Water Division is the public water system for the site and the surrounding area.

### 3.1.2 THE UNAUTHORIZED RELEASE CONSISTS ONLY OF PETROLEUM

The site is a Shell-branded service station. Soil and groundwater impacts identified in site investigations since 1986 consist only of petroleum hydrocarbons and fuel additives.

### 3.1.3 THE UNAUTHORIZED ("PRIMARY") RELEASE FROM THE UST SYSTEM HAS BEEN STOPPED

No specific releases have been identified. The USTs were replaced in 1988, and the UST pit was over-excavated to 20 fbg. Fuel systems at the site were upgraded in 1998 and 2002. One 550-gallon waste oil tank was removed in 2007.

### 3.1.4 FREE PRODUCT HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE

No free product has been measured in site groundwater monitoring wells since August 2004.

### 3.1.5 A CONCEPTUAL SITE MODEL THAT ASSESSES THE NATURE, EXTENT, AND MOBILITY OF THE RELEASE HAS BEEN DEVELOPED

An SCM is presented in Section 2 above.

### 3.1.6 SECONDARY SOURCE HAS BEEN REMOVED TO THE EXTENT PRACTICABLE

As stated above, in 1988, three fuel USTs were removed, and impacted soils were over-excavated to a depth of 20 fbg. From 2001 to 2003, mobile GWE removed an estimated 0.96 pound of TPHg and 9.31 pounds of MTBE. From 2003 to 2006, a GWE system extracted and treated an estimated 3,142,212 gallons of water containing an estimated 15.7 pounds of MTBE.

### 3.1.7 SOIL OR GROUNDWATER HAS BEEN TESTED FOR MTBE

Soil samples have been analyzed for MTBE in all investigations from July 2002 to the present. Groundwater samples have been analyzed for MTBE since June 1996. Analytical data has been reported to Alameda County Environmental Health (ACEH) in investigation reports and periodic groundwater monitoring reports.

### 3.1.8 NUISANCE AS DEFINED BY WATER CODE SECTION 13050 DOES NOT EXIST AT THE SITE

Site conditions do not interfere with enjoyment of life or property, affect an entire community or neighborhood, and present a nuisance during or as a result of the treatment or disposal of wastes.

#### 3.2 MEDIA-SPECIFIC CRITERIA

#### 3.2.1 **GROUNDWATER**

The contaminant plume that exceeds water quality objectives is stable or decreasing in areal extent, and this site meets the groundwater requirements specified for class 5 in the low-threat document.

As stated above, COCs in groundwater are adequately defined down gradient horizontally and vertically. All COC concentrations in groundwater are projected to reach WQOs by August 2021, with the exception of TBA in well S-6, which is projected to meet the WQO by October 2053.

One active municipal well is located approximately 0.3 mile southeast of the site, and two active wells of unknown use are located 0.4 mile to the southeast. Given the definition of COCs in groundwater down gradient from the site and the distance from the site to the wells, it is unlikely that hydrocarbons originating from the site will reach these wells.

The closest surface water body is Canal Arroyo Mocho, located 350 feet south (down gradient) of the site. Current COC concentrations in wells S-9 and S-12, which are located up gradient of Canal Arroyo Mocho, are below RWQCB ESLs for freshwater surface water, with the exception of 7.4  $\mu$ g/L MTBE in well S-9. Given the attenuation of MTBE concentrations between well S-5 and S-9 (Figure 4) and no COC concentrations in well S-12, the closer well, it is unlikely that water in Canal Arroyo Mocho will be impacted by chemicals from the site.

Residual COC concentrations in groundwater are decreasing, COCs are projected to reach WQOs in a reasonable time frame, and no receptors are likely to be impacted. Therefore, site groundwater conditions do not appear to pose a threat to human health or the environment.

#### **3.2.2 VAPOR**

The site is an active fueling facility, and there is no reasonable concern that subsurface contamination poses unacceptable indoor inhalation health risk.

#### 3.2.3 DIRECT CONTACT AND OUTDOOR AIR EXPOSURE

This site meets the direct contact and outdoor air requirements for benzene and ethylbenzene in commercial soil specified in scenario 1 in the low-threat document:

• Benzene and ethylbenzene concentrations at 0 to 5 fbg are less than 8.2 mg/kg and 89 mg/kg, respectively: Up to 5.0 mg/kg benzene and 20 mg/kg ethylbenzene have been detected in soil samples collected from 0 to 5 fbg.

• Benzene and ethylbenzene concentrations at 5 to 10 fbg are less than 12 mg/kg kg and 134 mg/kg, respectively: Soil samples collected from 5 to 10 fbg have contained up to 2.7 mg/kg benzene and 4.7 mg/kg ethylbenzene.

### 4.0 CLOSURE REQUEST

Given the COC concentrations 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 and COC concentrations in groundwater are projected to meet WQOs in a reasonable time frame.

This site meets the SWRCB's low-threat UST closure policy requirements. Therefore, on behalf of Shell, we respectfully request closure of this case. CRA requests that ACEH suspend the groundwater monitoring program during the closure review.

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

JUM SMall Peter Schaefer, CEG, CHG

Aubrey K. Cool, PG



**FIGURES** 

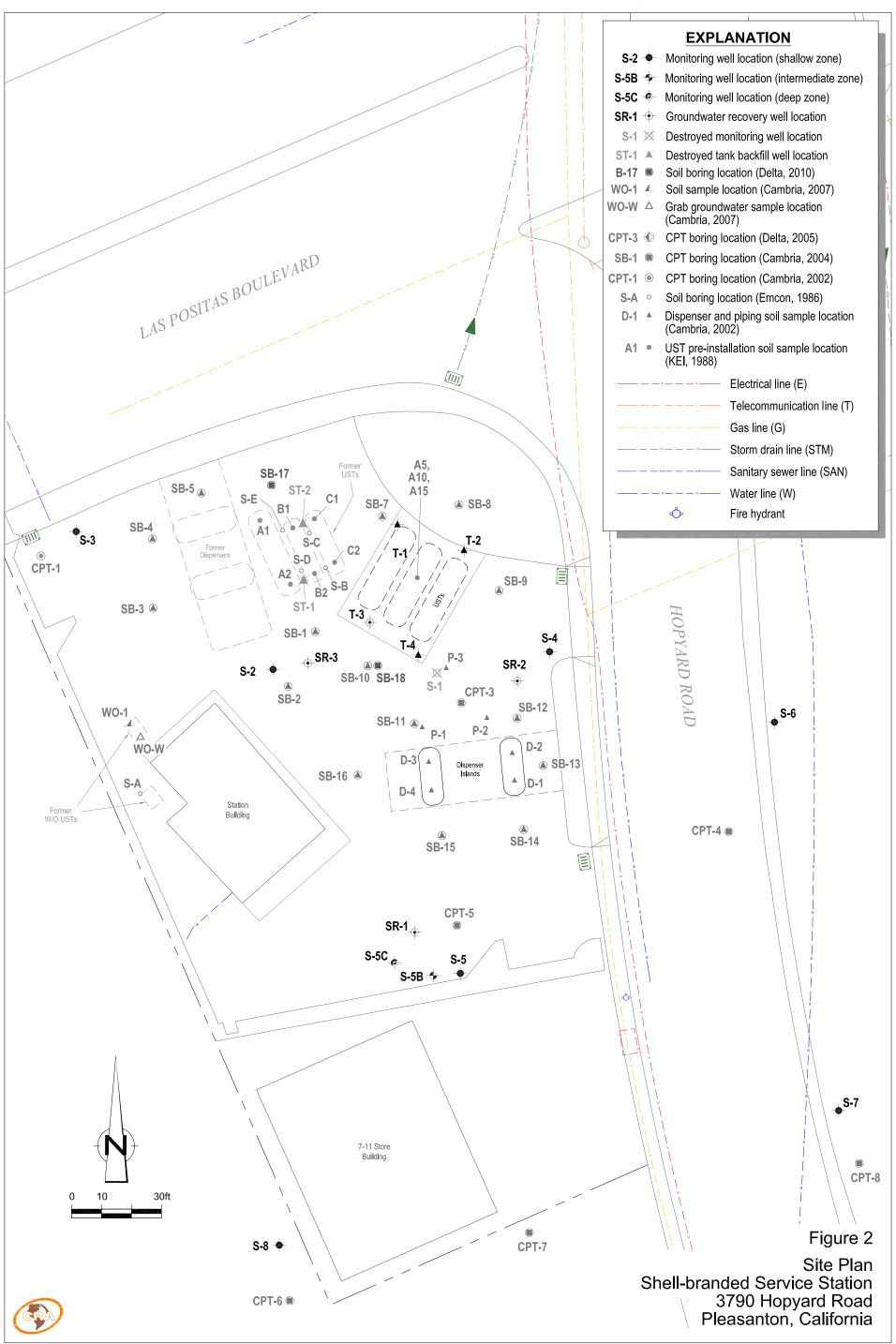
**Shell-branded Service Station** 

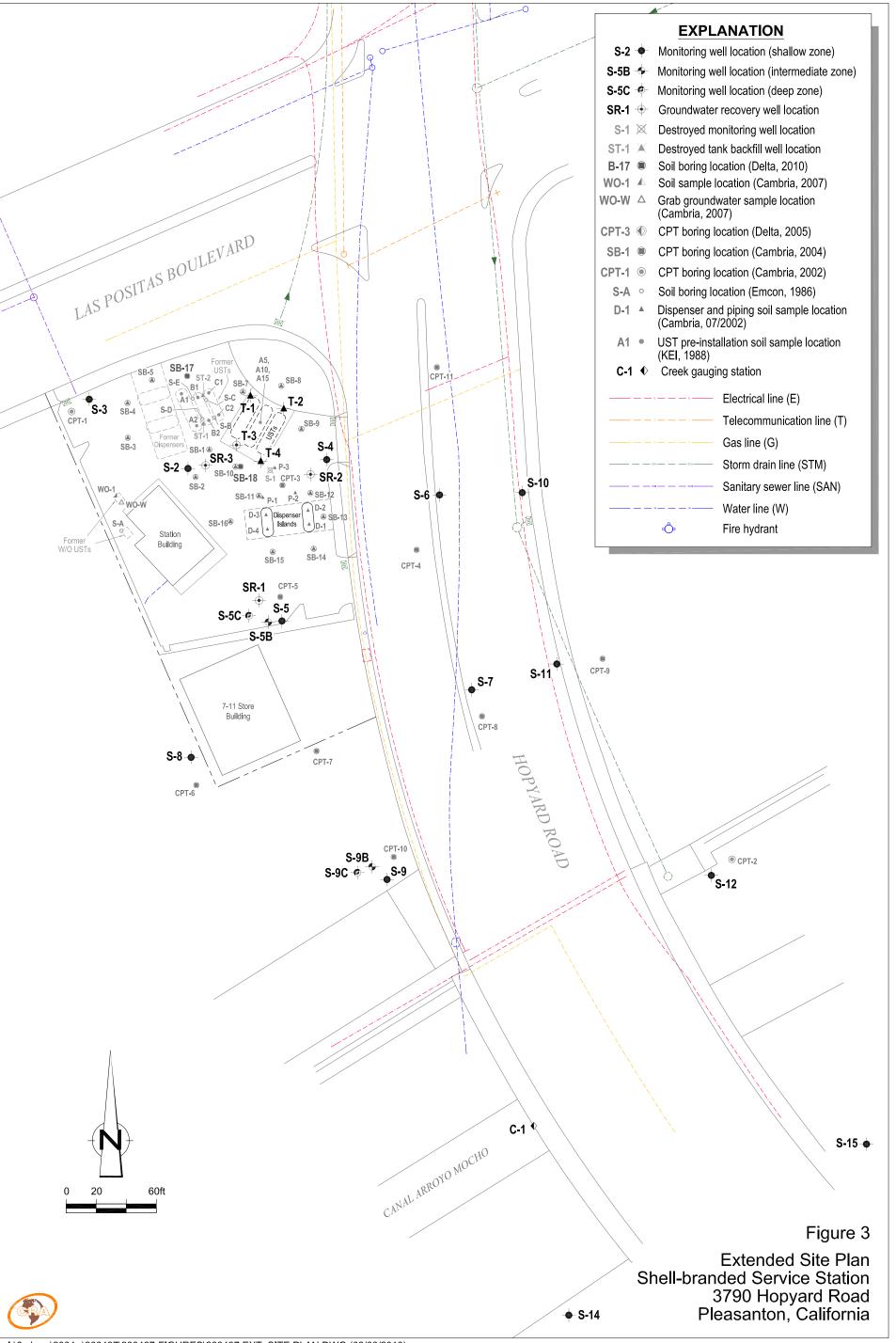
3790 Hopyard Road Pleasanton, California



SCALE : 1" = 1/4 MILE

**Vicinity Map** 





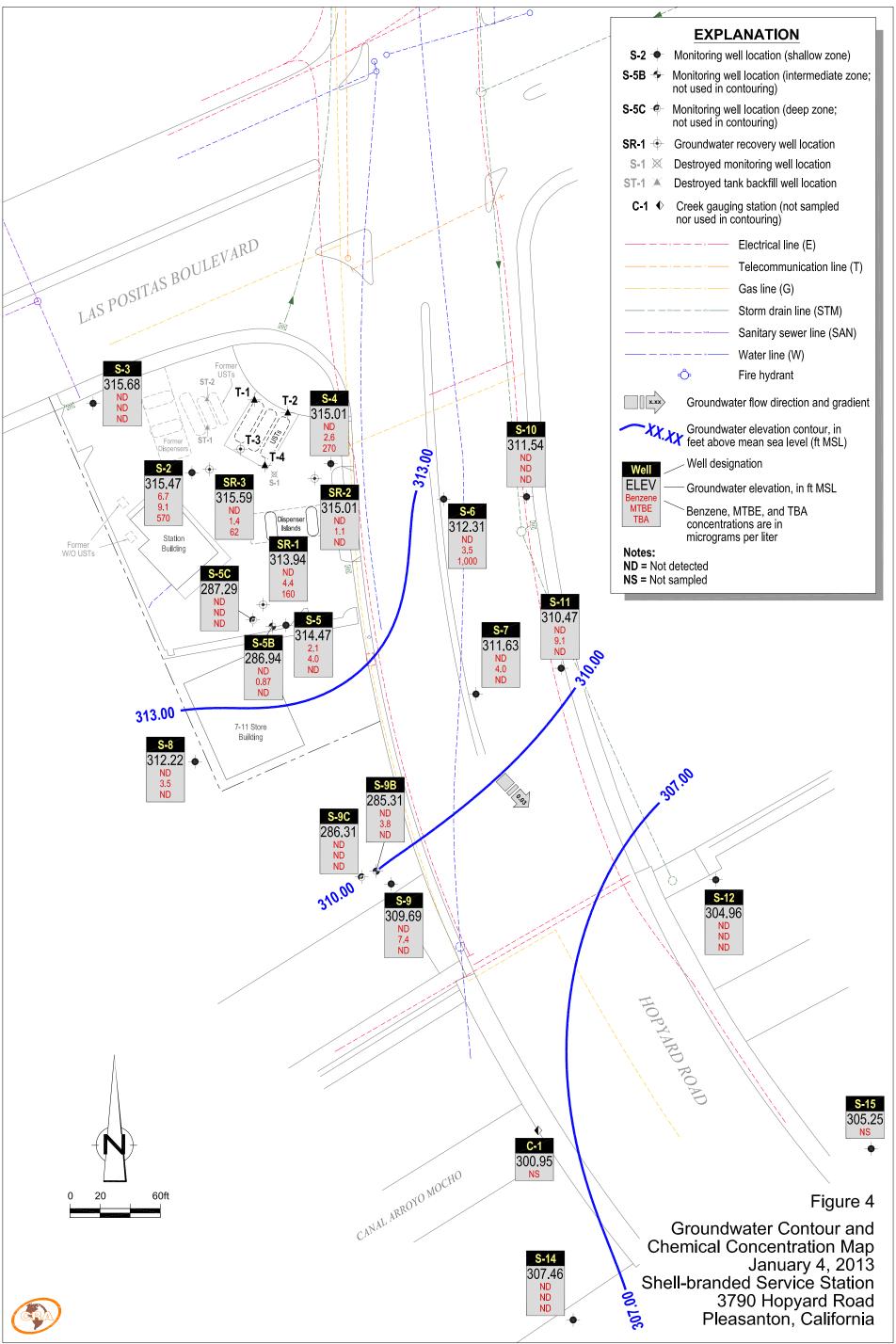


Figure 5: Predicted Time to Reach Environmental Screening Levels (ESL) in Well S-2 Shell-Branded Service Station 3790 Hopyard Rd, Pleasanton, California

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

		Methyl Tertiary	
		Butyl Ether	Tert-Butyl Alcohol
	Constituent	(MTBE)	(TBA)
Given			
ESL:	y	5	12
Constant:	b	5.94E+28	6.73E+26
Constant:	a	-1.55E-03	-1.37E-03
Starting date for current trend:		1/21/2009	4/11/2008
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	1.22	1.39
Estimate 1 Date to Decal ECL	(1-(/1-)-/)	M 2014	J 2010
Estimated Date to Reach ESL:	$(x = \ln(y/b) / a)$	Mar 2014	Jun 2018

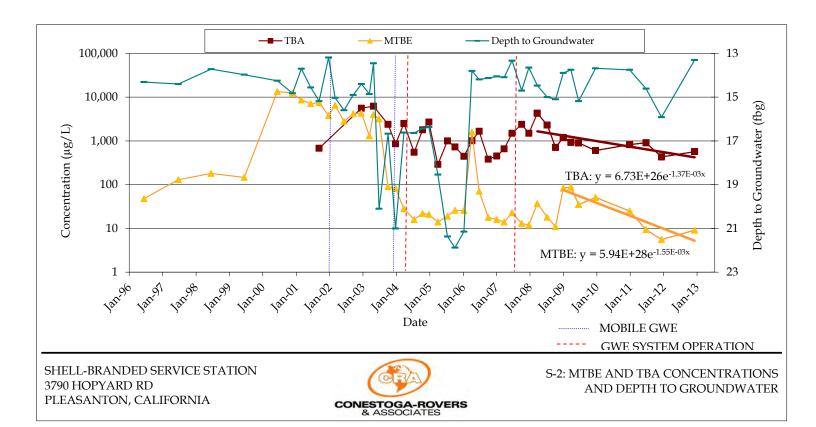


Figure 6: Predicted Time to Reach Environmental Screening Levels (ESL) in Well S-4 Shell-Branded Service Station 3790 Hopyard Rd, Pleasanton, California

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

Given	Constituent	Methyl Tertiary Butyl Ether (MTBE)	Tert-Butyl Alcohol (TBA)
ESL:	y	5	12
Constant:	b	7.60E+27	1.98E+22
Constant:	a	-1.53E-03	-1.10E-03
Starting date for current trend:		7/12/2006	4/11/2008
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	1.24	1.73
Estimated Date to Reach ESL:	$(x = \ln(y/b) / a)$	Dec 2011	Aug 2021

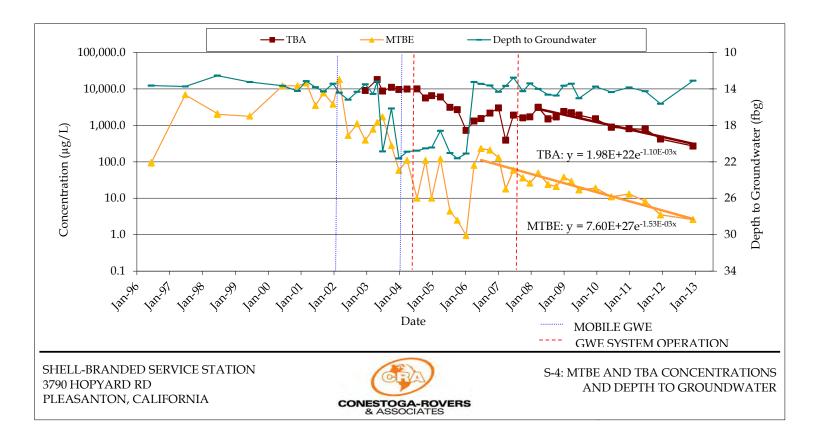


Figure 7: Predicted Time to Reach Environmental Screening Levels (ESL) in Well S-6 Shell-Branded Service Station 3790 Hopyard Rd, Pleasanton, California

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

Given	Constituent	Methyl Tertiary Butyl Ether (MTBE)	Tert-Butyl Alcohol (TBA)
ESL:	y	5	12
Constant:	b	5.84E+15	3.00E+25
Constant:	a	-8.46E-04	-1.00E-03
Starting date for current trend:		1/22/2007	7/12/2006
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	2.24	1.90
Estimated Date to Reach ESL:	$(x = \ln(y/b) / a)$	Apr 2012	Oct 2053

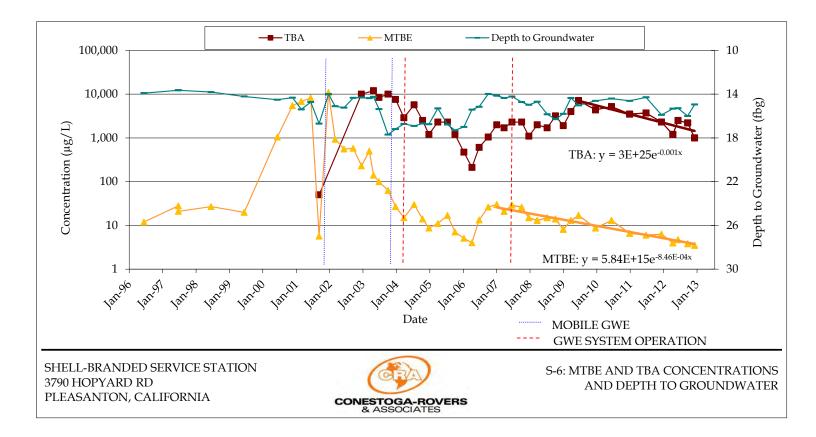


Figure 8: Predicted Time to Reach Environmental Screening Levels (ESL) in Well S-7 Shell-Branded Service Station 3790 Hopyard Rd, Pleasanton, California

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

Methyl Tertiary **Butyl Ether** Constituent (MTBE) Given ESL: y Constant: b 7.99E+20 -1.14E-03 Constant: a Starting date for current trend: 7/12/2006 Calculate Attenuation Half Life (years):  $(-\ln(2)/a)/365.25$ 1.66 Estimated Date to Reach ESL:  $(x = \ln(y/b) / a)$ Sep 2011

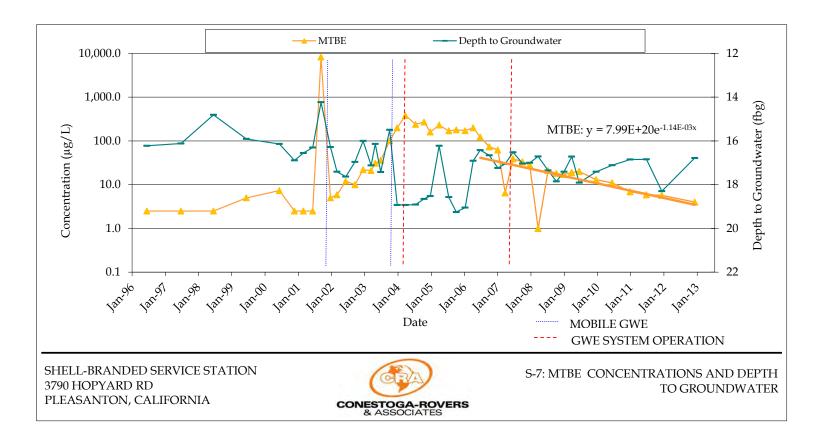


Figure 9: Predicted Time to Reach Environmental Screening Levels (ESL) in Well S-8 Shell-Branded Service Station 3790 Hopyard Rd, Pleasanton, California

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

Methyl Tertiary **Butyl Ether** Constituent (MTBE) Given ESL: y Constant: b 6.25E+23 Constant: a -1.31E-03 Starting date for current trend: 4/11/2008 Calculate Attenuation Half Life (years): 1.45  $(-\ln(2)/a)/365.25$ Estimated Date to Reach ESL:  $(x = \ln(y/b) / a)$ Feb 2011

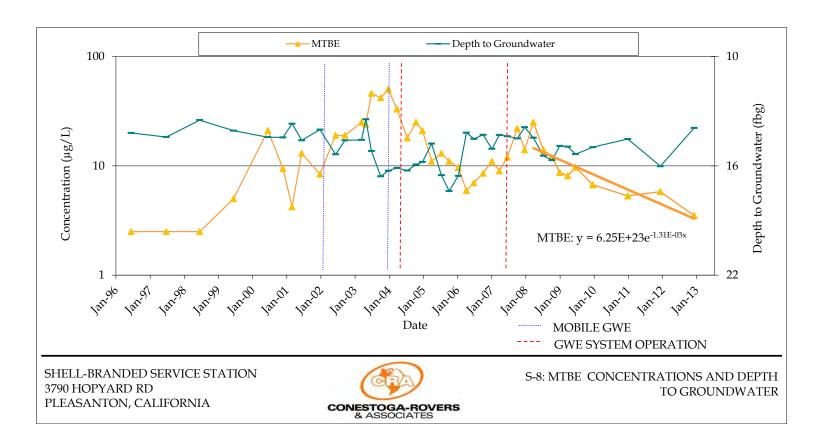


Figure 10: Predicted Time to Reach Environmental Screening Levels (ESL) in Well S-9 Shell-Branded Service Station 3790 Hopyard Rd, Pleasanton, California

 $y = b e^{ax}$  ===> x = ln(y/b) / awhere:  $y = concentration in \mu g/L$  a = decay constantb = concentration at time (x) x = time (x) in days

Methyl Tertiary **Butyl Ether** Constituent (MTBE) Given ESL: y Constant: b 1.81E+31 -1.72E-03 Constant: a Starting date for current trend: 7/12/2006 Calculate Attenuation Half Life (years): 1.10  $(-\ln(2)/a)/365.25$ Jan 2012 Estimated Date to Reach ESL:  $(x = \ln(y/b) / a)$ 

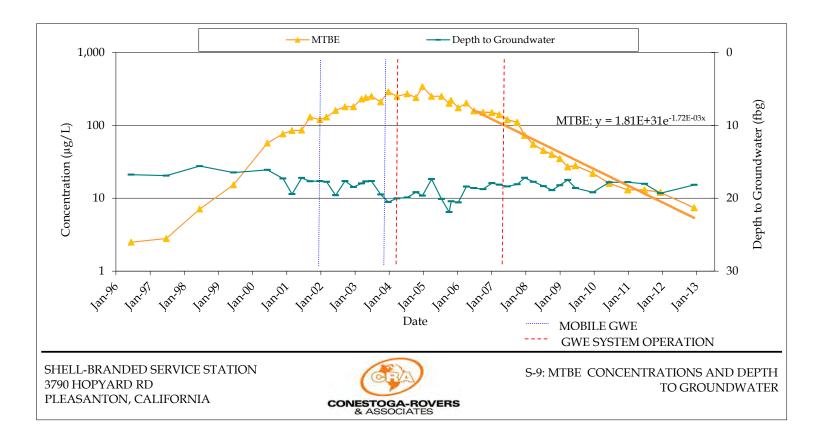
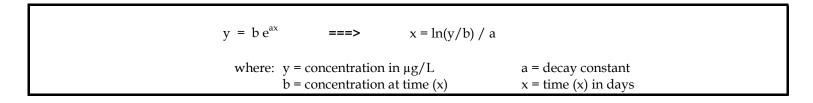


Figure 11: Predicted Time to Reach Environmental Screening Levels (ESL) in Well S-11 Shell-Branded Service Station 3790 Hopyard Rd, Pleasanton, California



Methyl Tertiary **Butyl Ether** Constituent (MTBE) Given ESL: y Constant: b 1.65E+26 Constant: a -1.44E-03 Starting date for current trend: 1/22/2007 Calculate Attenuation Half Life (years): 1.32  $(-\ln(2)/a)/365.25$ Estimated Date to Reach ESL:  $(x = \ln(y/b) / a)$ Sep 2011

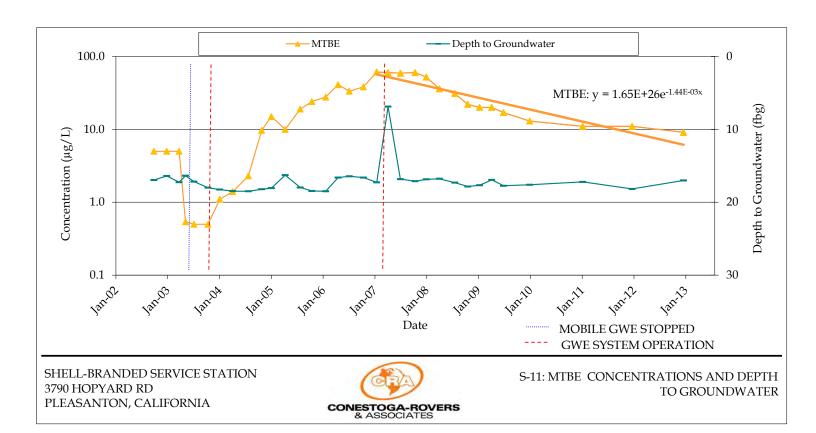


Figure 12: Predicted Time to Reach Environmental Screening Levels (ESL) in Well SR-2 Shell-Branded Service Station 3790 Hopyard Rd, Pleasanton, California

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

Given		Constituent	Methyl Tertiary Butyl Ether (MTBE)	Tert-Butyl Alcohol (TBA)
	ESL:	y	5	12
	Constant:	b	7.40E+04	7.16E+17
	Constant:	a	-2.46E-04	-9.10E-04
	Starting date for current trend:		7/9/2007	1/22/2007
Calculate				
-	Attenuation Half Life (years):	(-ln(2)/a)/365.25	7.71	2.09
	Estimated Date to Reach ESL:	$(x = \ln(y/b) / a)$	Nov 2006	Mar 2016

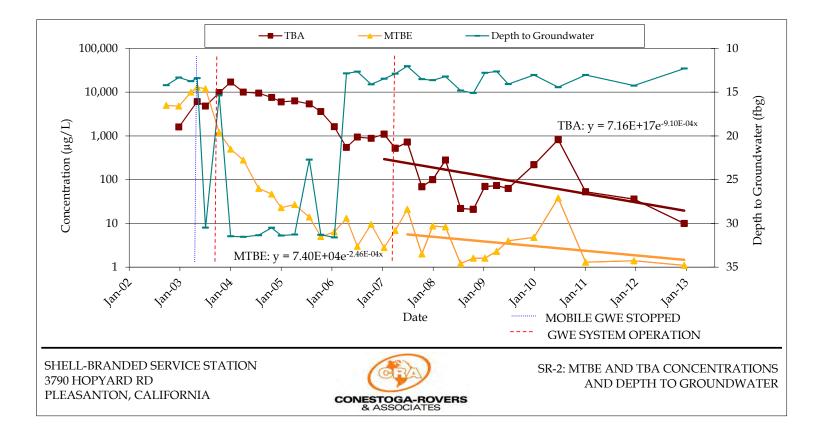
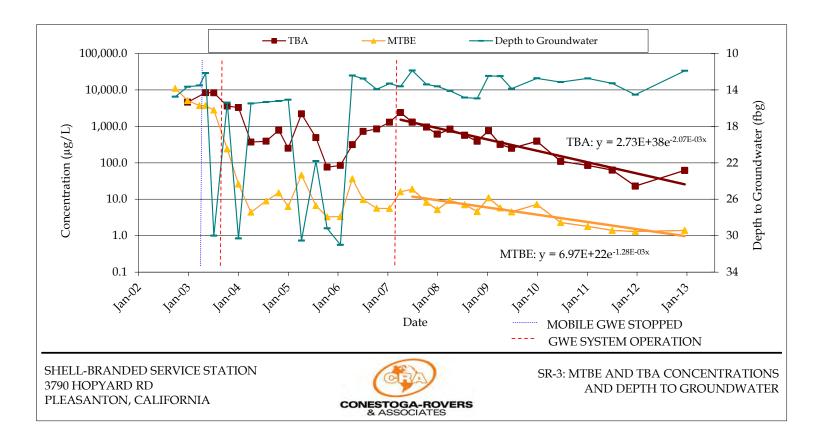


Figure 13: Predicted Time to Reach Environmental Screening Levels (ESL) in Well SR-3 Shell-Branded Service Station 3790 Hopyard Rd, Pleasanton, California

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

	Constituent	Methyl Tertiary Butyl Ether (MTBE)	Tert-Butyl Alcohol (TBA)
Given			
ESL:	y	5	12
Constant:	b	6.97E+22	2.73E+38
Constant:	a	-1.28E-03	-2.07E-03
Starting date for current trend:		7/9/2007	4/13/2007
Calculate			
Attenuation Half Life (years):	$(-\ln(2)/a)/365.25$	1.48	0.92
	( 1 ( /1 ) / )	T 2000	0.12012
Estimated Date to Reach ESL:	$(x = \ln(y/b) / a)$	Jan 2009	Oct 2013



TABLES

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# HISTORICAL SOIL ANALYTICAL DATA - OIL AND GREASE, TPH, BTEX, FUEL OXYGENATES, AND LEAD SCAVENGERS SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Depth	0&G	ТРНшо	ТРНА	ТРНд	В	T	E	X	MTBE	TBA	DIPE	ETBE	TAME	1,2- DCA	EDB	Ethanol
sumple 12	Dutt	(fbg)		(mg/kg)		Ū		(mg/kg)	(mg/kg)		(mg/kg)					(mg/kg)		
S-A	1/22/1986	7-8.5		ND														
S-B	1/22/1986	4 - 5.5				30	0.3	0.2		2.3 a								
S-B	1/22/1986	8 - 9.5				74	4.3	6.8		8.8 a								
S-B	1/22/1986	11.5 - 13				79	0.4	0.1		0.8 a								
S-C	1/22/1986	4 - 5.5				2	< 0.10	<0.1		0.8 a								
S-C	1/22/1986	7 - 8.5				5,100	14	130		1,200 a								
S-C	1/22/1986	11.5 - 13				420	4	48		110 a								
S-D	1/23/1986	4 - 5.5				2	0.2	0.2		<0.4 a								
S-D	1/23/1986	7 - 8.5				10	< 0.1	0.1		0.7 a								
S-D	1/23/1986	11.5 - 13				110	0.8	0.2		12 a								
S-E	1/23/1986	4 - 5.5				<2.0	< 0.1	< 0.1		<0.4 a								
S-E	1/23/1986	7 - 8.5				6	< 0.1	< 0.1		<0.4 a								
S-E	1/23/1986	11.5 - 13				6	0.4	< 0.1		1.0 a								
ST-1	10/28/1987	13.0 - 14.5				13	2.7	0.3		1.4								
ST-2	10/28/1987	13.0 - 14.5				23	0.22	0.7		4.3								
S-1	10/28/1987	14.0 - 15.5				57	5.3	0.3		6.8								
S-1	10/28/1987	19.0 - 20.5				9	0.43	0.1		0.8								
S-1	10/28/1987	33.5 - 35.0				<5	< 0.05	< 0.1		< 0.4								
S-2	10/28/1987	14.0 - 15.5				53	6.7	0.1		8								

TABLE 1 Page 2 of 10

# HISTORICAL SOIL ANALYTICAL DATA - OIL AND GREASE, TPH, BTEX, FUEL OXYGENATES, AND LEAD SCAVENGERS SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Depth (fbg)	TPHwo (mg/kg)	Ü	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)		1,2- DCA (mg/kg)	Ethanol (mg/kg)
S-2	10/28/1987	19.0 - 20.5	 	 5	0.07	<0.1		0.4				 		 
S-2	10/28/1987	33.5 - 35.0	 	 <5	<0.05	<0.1		<0.4				 		 
S-3	1/26/1988	19.0 - 20.5	 	 <5	<0.05	<0.1		<0.4				 		 
S-4	1/26/1988	19.0 - 20.5	 	 41	6.2	<0.1		5.9				 		 
S-5	1/26/1988	19.0 - 20.5	 	 4,700	50	170		900				 		 
A1	8/3/1988	14	 	 1,300	13	110	45	230				 		 
A1X	8/3/1988	20	 	 <1.0	<0.1	<0.1	<0.1	<0.1				 		 
A2	8/3/1988	14	 	 2,100	11	32	72	350				 		 
A2X	8/3/1988	20.5	 	 80	1.3	2.6	3.4	16				 		 
B-1	8/3/1988	14	 	 11	0.2	<0.1	<0.1	<0.1				 		 
B-2	8/3/1988	14	 	 120	5.9	5.8	3.7	19				 		 
B2X	8/3/1988	20.5	 	 1.5	<0.1	<0.1	<0.1	<0.1				 		 
C-1	8/3/1988	14	 	 110	2.8	0.4	7.8	31				 		 
C-1X	8/3/1988	16	 	 9.1	0.8	<0.1	1.1	0.6				 		 
C-2	8/3/1988	14	 	 52	4.8	0.1	4.4	3.9				 		 
A5	8/5/1988	5	 	 3	1.3	<0.1	<0.1	< 0.1				 		 

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# HISTORICAL SOIL ANALYTICAL DATA - OIL AND GREASE, TPH, BTEX, FUEL OXYGENATES, AND LEAD SCAVENGERS SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Depth	0&G	TPHwo		ТРНд	В	T	E	X	MTBE	TBA	DIPE	ETBE	TAME	1,2- DCA	EDB	Ethanol
		(fbg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
A10	8/5/1988	10				3.5	0.5	<0.1	0.2	0.2								
A15	8/5/1988	15				4.4	0.7	<0.1	0.5	0.3								
S-6-2A	10/4/1988	9 - 10.5				<b>&lt;</b> 5	0.05	<0.1	<0.1	<0.3								
S-6-3A	10/4/1988	14 - 15.5				9	< 0.05	< 0.1	< 0.1	<0.3								
S-6-4A	10/4/1988	19 - 20.5				6	0.05	< 0.1	0.1	<0.3								
S-6-5A	10/4/1988	24 - 25.5				<5	< 0.05	< 0.1	< 0.1	<0.3								
S-7-2A	10/4/1988	9 - 10.5				<5	< 0.05	< 0.1	< 0.1	< 0.3								
S-7-3A	10/4/1988	14 - 15.5				<5	< 0.05	< 0.1	< 0.1	< 0.3								
S-7-4A	10/4/1988	19 - 20.5				<b>&lt;</b> 5	< 0.05	< 0.1	<0.1	<0.3								
S-8-3A	2/24/1989	14 - 15.5				<b>&lt;</b> 5	< 0.05	<0.1	<0.1	<0.3								
S-8-4A	2/24/1989	19 - 20.5				<b>&lt;</b> 5	< 0.05	<0.1	<0.1	< 0.3								
S-9-3A	2/24/1989	14 - 15.5				<b>&lt;</b> 5	<0.05	<0.1	<0.1	<0.3								
S-9-4A	2/24/1989	19 - 20.5				<b>&lt;</b> 5	<0.05	<0.1	<0.1	<0.3								
	, ,																	
SR-1-15	8/9/1989	15				<5.0	< 0.1	< 0.1	< 0.1	<0.3								
SR-1-20	8/9/1989	20				40	5.4	< 0.1	2.5	2.7								
S-10-15	8/9/1989	15				< 5.0	< 0.05	< 0.1	< 0.1	< 0.3								
S-10-20	8/9/1989	20				<5.0	<0.05	<0.1	< 0.1	< 0.3								
SR-3-10	9/19/1989	10				< 5.0	0.98	<0.1	<0.1	<0.3								
SR-3-15	9/19/1989	15				54	3.9	< 0.2	4.2	2.7								

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# HISTORICAL SOIL ANALYTICAL DATA - OIL AND GREASE, TPH, BTEX, FUEL OXYGENATES, AND LEAD SCAVENGERS SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

																1,2-		
Sample ID	Date	Depth	O&G	TPHwo	TPHd	ТРНд	В	T	$\boldsymbol{E}$	$\boldsymbol{X}$	MTBE	TBA	DIPE	ETBE	<b>TAME</b>	DCA	EDB	Ethanol
		(fbg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
CD 2 20	0 /40 /4000	20				· <b>F</b> 0	10.05	10.4	0.2	10.0								
SR-3-20	9/19/1989	20				<5.0	< 0.05	<0.1	0.2	<0.3								
SR-2-10	9/20/1989	10				<5.0	0.05	<0.1	<0.1	<0.3								
						67												
SR-2-15	9/20/1989	15					0.11	0.1	0.1	<0.3								
SR-2-20	9/20/1989	20				8.4	< 0.05	<0.1	1.0	<0.3								
D-1	7/26/2002	3.5				<1.0	<0.005	<0.005	<0.005	<0.005	<0.5							
D-1 D-2	7/26/2002	3.5				<1.0	<0.005	<0.005	<0.005	<0.005	<0.5							
D-3	7/26/2002	3.5				4.0	<0.005	<0.005	0.012	0.011	<0.5							
D-4	7/26/2002	3.5				1.8	< 0.005	< 0.005	0.053	0.018	< 0.5							
P-1	7/26/2002	3.5				260	0.079	0.072	0.48	1.1	<0.5							
P-2	7/26/2002	3.5				<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.5							
P-3	7/26/2002	3.5				10	0.0083	< 0.005	0.26	< 0.005	< 0.5							
S-11-5.5	7/26/2002	5.5				<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.5							
S-11-10.5	7/26/2002	10.5				<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.5							
S-11-15.5	7/26/2002	15.5				<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.5							
S-11-20.5	7/26/2002	20.5				<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.5							
S-11-24.5	7/26/2002	24.5				<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.5							
S-12-5.5	9/19/2002	5.5				<1.0	< 0.005	< 0.005	< 0.005	<0.005	< 0.5							
S-12-10.5	9/19/2002	10.5				<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.5							
S-12-15.5	9/19/2002	15.5				<1.0	< 0.005	< 0.005	< 0.005	<0.005	< 0.5							
S-12-20.5	9/19/2002	20.5				<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.5							
S-12-24.5	9/19/2002	24.5				<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.5							
SB-1	10/4/2004	2.5				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.051	0.16						

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# HISTORICAL SOIL ANALYTICAL DATA - OIL AND GREASE, TPH, BTEX, FUEL OXYGENATES, AND LEAD SCAVENGERS SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

C 1 ID	ъ.	D (1	000	TDII.	TDII I	TDU		<b>T</b>	F	17	MEDE	TD 4	DIDE	EEDE	TANE	1,2-	EDD	rd 1
Sample ID	Date	Depth	0&G	TPHwo		ТРНд	В	T	E	X	MTBE	TBA	DIPE	ETBE	TAME	DCA	EDB	Ethanol
		(fbg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SB-1	10/4/2004	5				<1.0	<0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.063						
SB-1	10/4/2004	10.5				2.4	< 0.0050	< 0.0050	< 0.0050	0.019	0.091	0.035						
SB-1	10/4/2004	15.5				<4.2	< 0.021	< 0.021	< 0.021	< 0.021	< 0.021	3.6						
SB-1	10/4/2004	19.5				300	< 0.50	< 0.50	4.0	< 0.50	1.2	<2.5	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<25
SB-2	10/4/2004	2.5				<1.0	0.015	< 0.0050	0.0091	0.026	0.0053	<0.010	< 0.010	< 0.0050	< 0.0050	< 0.0050	<0.0050	< 0.1
SB-2	10/4/2004	5				<1.0	< 0.0050	< 0.0050	< 0.0050	0.0080	< 0.0050	< 0.010						
SB-2	10/8/2004	10				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.011	0.012						
SB-2	10/8/2004	15				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.34	0.14						
SB-2	10/8/2004	19.5				890	< 0.50	< 0.50	15	1.0	4.1	<2.5	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<25
SB-2	10/8/2004	25				<4.5	< 0.022	< 0.022	< 0.022	< 0.022	0.12	1.8	< 0.045	< 0.022	< 0.022	< 0.022	< 0.022	< 0.45
SB-3	10/5/2004	2.5				950	5.0	51	20	110	< 0.50	<2.5						
SB-3	10/5/2004	5				270	2.7	5.2	4.7	20	< 0.50	<2.5	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<25
SB-3	10/8/2004	10				11	0.85	1.2	0.30	1.5	< 0.021	< 0.043						
SB-3	10/8/2004	15.5				1.5	0.047	0.15	0.029	0.15	< 0.0050	0.017	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.1
SB-3	10/8/2004	19.5				<1.0	< 0.0050	0.0083	< 0.0050	0.012	< 0.0050	< 0.010	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.1
SB-3	10/8/2004	25				4.5	< 0.021	0.17	0.080	0.59	< 0.021	< 0.042						
SB-4	10/4/2004	2.5				350	< 0.50	< 0.50	3.3	< 0.50	< 0.50	<2.5	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<25
SB-4	10/4/2004	5				1.3	0.19	< 0.0050	0.50	0.0098	< 0.0050	< 0.010	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.1
SB-4	10/8/2004	10				1.1	0.019	< 0.0050	0.011	0.072	< 0.0050	0.012						
SB-4	10/8/2004	15				<1.0	< 0.0050	< 0.0050	< 0.0050	0.012	< 0.0050	0.016						
SB-4	10/8/2004	19.5				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010						
SB-4	10/8/2004	25				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	<0.010						
SB-5	10/4/2004	2.5				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010						

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# HISTORICAL SOIL ANALYTICAL DATA - OIL AND GREASE, TPH, BTEX, FUEL OXYGENATES, AND LEAD SCAVENGERS SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

									_							1,2-		
Sample ID	Date	Depth		TPHwo		U	В	T	E	X	MTBE	TBA	DIPE	ETBE	TAME	DCA		Ethanol
		(fbg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SB-5	10/4/2004	5				1.0	0.046	<0.0050	0.076	0.15	0.0070	0.011						
SB-5	10/8/2004	9.5				1.6	0.011	< 0.0050	< 0.0050	0.015	0.0081	0.029						
SB-5	10/8/2004	15				80	0.60	< 0.50	< 0.50	< 0.50	0.92	<2.5	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<25
SB-5	10/8/2004	19.5				6.1	0.040	0.050	< 0.020	0.072	0.034	0.32						
SB-7	10/5/2004	2.5				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.019	0.019						
SB-7	10/5/2004	5				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.079	0.031						
SB-7	10/7/2004	10				2.8	< 0.0050	< 0.0050	< 0.0050	0.0053	< 0.0050	0.17						
SB-7	10/7/2004	15				11	< 0.020	< 0.020	< 0.020	< 0.020	0.035	0.28						
SB-7	10/7/2004	19.5				15	0.022	< 0.013	0.25	0.014	0.12	< 0.026	< 0.026	< 0.013	< 0.013	< 0.013	< 0.013	< 0.26
SB-7	10/7/2004	25				1.7	< 0.0050	< 0.0050	0.040	0.015	0.033	0.12	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.13
SB-8	10/8/2004	5				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010						
SB-8	10/8/2004	10				<1.0	<0.0050	< 0.0050	< 0.0050	< 0.0050	0.070	0.10						
SB-9	10/5/2004	2.5				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010						
SB-9	10/5/2004	5				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.023	< 0.010						
SB-9	10/6/2004	10				<4.7	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	3.3						
SB-9	10/7/2004	15.5				96	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	14	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<25
SB-9	10/7/2004	21				<4.1	< 0.020	< 0.020	< 0.020	<0.020	< 0.020	1.6	< 0.041	< 0.020	< 0.020	< 0.020	< 0.020	< 0.41
SB-10	10/6/2004	2.5				<1.0	<0.0050	< 0.0050	< 0.0050	< 0.0050	0.055	0.057						
SB-11	10/5/2004	2.5				<1.0	<0.0050	< 0.0050	< 0.0050	<0.0050	0.023	0.035						
SB-11	10/5/2004	5				220	0.51	< 0.50	4.6	< 0.50	< 0.50	<2.5	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<25
SB-11	10/7/2004	10				<1.0	0.055	<0.0050	0.020	0.0059	0.067	0.029						
SB-11	10/7/2004	15.5				< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	14						

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# HISTORICAL SOIL ANALYTICAL DATA - OIL AND GREASE, TPH, BTEX, FUEL OXYGENATES, AND LEAD SCAVENGERS SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

																1,2-		
Sample ID	Date	Depth	O&G	TPHwo	TPHd	ТРНд	В	T	E	$\boldsymbol{X}$	MTBE	TBA	DIPE	ETBE	<b>TAME</b>	DCA	EDB	Ethanol
		(fbg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SB-11	10/7/2004	20				2.6	< 0.0050	< 0.0050	0.0098	0.0054	0.038	0.48	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.1
SB-11	10/7/2004	25				3.2	0.017	< 0.0050	0.049	< 0.0050	0.036	0.67	< 0.010	< 0.0050	<0.0050	< 0.0050	< 0.0050	< 0.1
SB-12	10/6/2004	2.5				<1.0	< 0.0050	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.010						
SB-12	10/6/2004	5				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0068	<0.010						
SB-12	10/6/2004	10				<1.0	< 0.0050	< 0.0050	< 0.0050	0.0065	0.050	0.061						
SB-12	10/6/2004	15				<5.0	< 0.025	< 0.025	< 0.025	< 0.025	0.026	8.6						
SB-12	10/6/2004	20				430	< 0.50	< 0.50	1.6	< 0.50	0.63	<2.5	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<25
SB-12	10/6/2004	24.5				<4.7	< 0.023	< 0.023	< 0.023	< 0.023	2.3	< 0.023						
SB-12	10/6/2004	26				280	< 0.50	0.71	1.3	2.7	0.51	<2.5	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<25
SB-13	10/5/2004	3				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0058	<0.010						
SB-13	10/5/2004	5				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	<0.010						
SB-13	10/6/2004	10				3.6	< 0.0050	< 0.0050	0.0068	0.013	< 0.0050	0.028						
SB-13	10/6/2004	15				2.7	0.0089	< 0.0050	< 0.0050	0.0087	0.076	0.047						
SB-13	10/6/2004	20				<1.0	< 0.0050	< 0.0050	0.0099	< 0.0050	0.046	0.025	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.1
SB-14	10/5/2004	2.5				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	<0.010						
SB-14	10/5/2004	5				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.014	0.016						
SB-14	10/7/2004	10				1.9	0.043	< 0.0050	0.024	0.013	0.0063	0.028						
SB-14	10/7/2004	15				8.2	0.041	< 0.020	0.064	0.045	0.76	0.23						
SB-14	10/7/2004	20				<50	< 0.50	< 0.50	0.56	< 0.50	0.80	3.0	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<25
SB-14	10/7/2004	25				2.3	< 0.0050	< 0.0050	0.059	0.077	0.26	0.36	< 0.010	< 0.0050	<0.0050	< 0.0050	< 0.0050	< 0.1
SB-15	10/5/2004	2.5				<1.0	<0.0050	< 0.0050	< 0.0050	< 0.0050	0.0074	<0.010						
SB-15	10/5/2004	5				5.9	< 0.0050	< 0.0050	< 0.0050	0.029	<0.0050	0.069	< 0.010	< 0.0050	<0.0050	<0.0050	< 0.0050	< 0.1
SB-15	10/7/2004	15				1.2	0.045	< 0.0050	< 0.0050	< 0.0050	0.28	0.12						

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# HISTORICAL SOIL ANALYTICAL DATA - OIL AND GREASE, TPH, BTEX, FUEL OXYGENATES, AND LEAD SCAVENGERS SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Depth	0&G	TPHwo	ТРНА	ТРНσ	В	T	E	X	МТВЕ	TBA	DIPE	ETBE	TAME	1,2- DCA	EDB	Ethanol
Sumple 1B	Duit	(fbg)		(mg/kg)		U		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)					(mg/kg)		
		ν σ,	(	(	···· <b>·············</b>							\ <b>\.</b>						
SB-15	10/7/2004	20				470	< 0.50	< 0.50	9.5	3.8	1.2	<2.5	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<25
SB-15	10/7/2004	25				<3.1	0.052	< 0.016	0.56	0.18	0.78	3.4	< 0.031	< 0.016	<0.016	< 0.016	< 0.016	< 0.31
SB-16	10/6/2004	2.5				<1.0	< 0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.010						
CDT 0	2 /45 /2005	25				4.0	10.0050	10.0050	*0.00 <b>5</b> 0	-0.0050	10 00 <b>5</b> 0	0.00						
CPT-3	2/15/2005	25				<1.0	<0.0050	<0.0050	<0.0050	<0.0050		0.33						
CPT-3	2/15/2005	35				<1.0	< 0.0050	<0.0050	< 0.0050		< 0.0050	0.56						
CPT-3	2/15/2005	45				<1.0	< 0.0050	<0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010						
CPT-5	2/18/2005	25				<1.0	< 0.0050	< 0.0050	0.018	0.020	< 0.0050	< 0.010						
CPT-5	2/18/2005	35				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010						
CPT-5	2/18/2005	45				<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010						
WO-1-9	2/14/2007	9	<1,500		< 5.0	0.88	<0.00099	0.0017	0.010	0.057	< 0.0020	< 0.020	< 0.0020	< 0.0020	<0.0020	<0.0020	< 0.0020	
SB-18 @ 10'	5/21/2010	10				30	<0.0050	<0.0050	< 0.0050	< 0.0050	<0.0050	<0.050						
SB-18 @ 15'	5/21/2010	15				30	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-18 @ 18'	5/21/2010	18				310	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-18 @ 20'	5/21/2010	20				1.3	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-18 @ 25'	5/21/2010	25				0.60	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-18 @ 30'	5/21/2010	30				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-18 @ 35'	5/21/2010	35				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-18 @ 40'	5/21/2010	40				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-18 @ 45'	5/21/2010	45				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-18 @ 50'	5/21/2010	50				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-18 @ 55'	5/21/2010	55				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-18 @ 60'	5/21/2010	60				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	<0.050						

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#### HISTORICAL SOIL ANALYTICAL DATA - OIL AND GREASE, TPH, BTEX, FUEL OXYGENATES, AND LEAD SCAVENGERS SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

																1,2-		
Sample ID	Date	Depth	O&G	TPHwo	TPHd	ТРНд	В	T	E	$\boldsymbol{X}$	MTBE	TBA	DIPE	ETBE	<i>TAME</i>	DCA	EDB	Ethanol
		(fbg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SB-17 @ 10'	6/8/2010	10				3.5	< 0.0050	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.050						
SB-17 @ 15'	6/8/2010	15				1.9	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	<0.050						
SB-17 @ 20'	6/8/2010	20				1,100	<2.0	<2.0	<2.0	<2.0	<2.0	<20						
SB-17 @ 25'	6/8/2010	25				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-17 @ 30'	6/8/2010	30				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-17 @ 35'	6/8/2010	35				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-17 @ 40'	6/8/2010	40				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-17 @ 45'	6/8/2010	45				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-17 @ 50'	6/8/2010	50				22	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-17 @ 55'	6/8/2010	55				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
SB-17 @ 60'	6/8/2010	60				< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.050						
Shallow Soi	l (≤10 fbg) ES	$5L^{b}$ :	NA	NA	500	500	0.044	2.9	3.3	2.3	0.023	0.075	NA	NA	NA	0.0045	0.00033	NA
Deep Soil (>	10 fbg) ESL <sup>b</sup>	<i>:</i>	NA	NA	580	530	0.044	2.9	3.3	2.3	0.023	0.075	NA	NA	NA	0.0045	0.00033	NA

#### Notes:

O&G = Oil and grease as hexane extractable material by EPA Method 1664 A (Modified)

TPHwo = Total petroleum hydrocarbons as waste oil, method unknown

TPHd = Total petroleum hydrocarbons as diesel by EPA Method 8015 (Modified)

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260; before August 26, 2002 analyzed by EPA Method 8015.

BTEX = Benzene, ethylbenzene, toluene, and total xylenes analyzed by EPA Method 8260; before August 26, 2002 analyzed by EPA Method 8020.

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-Dibromomethane analyzed by EPA Method 8260B

Ethanol analyzed by EPA Method 8260B

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#### HISTORICAL SOIL ANALYTICAL DATA - OIL AND GREASE, TPH, BTEX, FUEL OXYGENATES, AND LEAD SCAVENGERS SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

1,2-

Е DCAEDB Ethanol Sample ID Date Depth O&G TPHwo TPHd TPHg В  $\boldsymbol{T}$ X **MTBE** TBADIPE ETBE TAME (fbg) (mg/kg) (mg/kg) (mg/kg) (mg/kg)(mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg)

fbg = Feet below grade

mg/kg = Milligrams per kilogram

<x = Not detected at reporting limit x

--- = Not analyzed

ND = Not detected; see laboratory analytical report for constituent-specific reporting limits

ESL = Environmental screening level

NA = No applicable ESL

Shading indicates that sample location subsequently over-excavated, results are not representative of residual soil.

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

a = Result is for undifferentiated xylenes and ethylbenzene

b = 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]) - Updated May 2013.

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#### HISTORICAL SOIL ANALYTICAL DATA - CHLORINATED HYDROCARBONS, METALS, PNAS, PCP, AND PCBS SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Depth	Chlorinated Hydrocarbons	Cd	Cr	Pb	Organic Pb	Ni	Zn	PNAs	РСР	PCBs
Sumple IB	Dute	(fbg)	(mg/kg)		(mg/kg)		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
c p	1 100 1100 1					9 a	<0.1					
S-B	1/22/1986	4 - 5.5				11 a	<0.1					
S-B	1/22/1986	8 - 9.5				9 a	<0.1					
S-B	1/22/1986	11.5 - 13				) a	٧٥.1					
S-C	1/22/1986	4 - 5.5				4.9 a	<0.1					
S-C	1/22/1986	7 - 8.5				6.8 a	< 0.1					
S-C	1/22/1986					9.1 a	< 0.1					
5-0	1/22/1700	11.5 - 15										
S-D	1/23/1986	4 - 5.5				4.2 a	< 0.1					
S-D	1/23/1986	7 - 8.5				5.2 a	0.2					
S-D	1/23/1986					7.3 a	< 0.1					
	, ,											
S-E	1/23/1986	4 - 5.5				5.1 a	< 0.1					
S-E	1/23/1986	7 - 8.5				9.2 a	< 0.1					
S-E	1/23/1986	11.5 - 13				9.1 a	< 0.1					
ST-1	10/28/1987	13.0 - 14.5				4.2						
ST-2	10/28/1987	13.0 - 14.5				4.6						
S-1	10/28/1987	14.0 - 15.5				7.0						
S-1	10/28/1987	19.0 - 20.5				6.4						
S-1	10/28/1987	33.5 - 35.0				4.2						
S-2	10/28/1987	14.0 - 15.5				5.4						
S-2	10/28/1987	19.0 - 20.5				7.1						
S-2	10/28/1987	33.5 - 35.0				5.4						
WO-1-9	2/14/2007	9	ND	< 0.50	52	8.0		53	56	ND	< 0.83	< 0.096
	l (≤10 fbg) ES		Various	12	750	320	NA	150	600	Various	2.6	0.25
Deep Soil (>	10 fbg) ESL <sup>b</sup> :	:	Various	1,000	5,000	320	NA	5,000	5,000	Various	2.6	0.25

#### Notes:

Chlorinated hydrocarbons by EPA Method 8260B; see laboratory analytical report for a complete list of specific constituents

Cd = Cadmium by EPA Method 6010B

Cr = Chromium by EPA Method 6010B

Pb = Lead by EPA Method 6010B unless otherwise noted

Organic Pb = Organic lead analysis, method unknown

Ni = Nickel by EPA Method 6010B

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#### HISTORICAL SOIL ANALYTICAL DATA - CHLORINATED HYDROCARBONS, METALS, PNAS, PCP, AND PCBS SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Zn = Zinc by EPA Method 6010B

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

<x = Not detected at reporting limit x

ND = Not detected; see laboratory analytical report for constituent-specific reporting limits

--- = Not analyzed

ESL = Environmental screening level

NA = No applicable ESL

Shading indicates that sample location subsequently over-excavated, results are not representative of residual soil. Results in **bold** equal or exceed applicable ESL

#### a = Analytical method not known

b = San Francisco Bay Regional Water Quality Control Board commercial/industrial ESL for soil where groundwater is not 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]) - Updated May 2013.

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	Χ (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (µg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-1	11/06/1987	920	230	<5	150	150														
S-1	02/14/1988	3,500	1,300	<40	500	500														
S-2	11/06/1987	16,000	870	100	2,700	2,700														
S-2	02/14/1988	1,800	440	<10	140	140														
S-2	10/13/1988	550	110	1	45	15														
S-2	01/31/1989	620	170	2	62	14														
S-2	03/07/1989	1,900	260	270	130	260														
S-2	06/26/1989	320	88	1	32	10														
S-2	09/08/1989	230	80	1	30	15				<u></u>										
S-2	12/14/1989	160	56	0.5	21	3														
S-2	03/05/1990	710	57	< 0.5	< 0.5	88														
S-2	06/14/1990	110	39	0.5	11	2														
S-2	10/02/1990	290	84	1.7	160	8.1														
S-2	12/18/1990	61	18	1.4	2.2	2.4														
S-2	03/20/1991	110	30	2.2	10	7										329.21				
S-2	06/26/1991	50 a	6.3	< 0.5	3.3	1.3										329.21				
S-2	09/05/1991	90	12	3.2	2.5	2.3										329.21				
S-2	12/13/1991	< 50	12	< 0.5	< 0.5	< 0.5										329.21	15.85	313.36		
S-2	03/11/1992	<30	< 0.3	< 0.3	< 0.3	< 0.3										329.21	14.94	314.27		
S-2	06/24/1992	< 50	0.9	< 0.5	< 0.5	< 0.5										329.21	15.78	313.43		
S-2	09/17/1992	78	2.6	1.3	1.3	0.9						***				329.21	15.03	314.18		
S-2	12/11/1992	< 50	0.8	< 0.5	< 0.5	< 0.5										329.21	14.81	314.40	****	
S-2	02/04/1993	55	1.3	0.7	0.7	< 0.5										329.21				
S-2	06/03/1993	< 50	0.7	< 0.5	< 0.5	< 0.5										329.21				
S-2	09/15/1993	< 50	< 0.5	< 0.5	<0.5	< 0.5										329.21	14.63	314.58		
S-2	12/09/1993	< 50	< 0.5	< 0.5	<0.5	<0.5										329.21	14.70	314.51		
S-2	06/16/1994	< 50	0.8	< 0.5	0.7	< 0.5										329.21	14.94	314.27		
S-2	09/13/1994	< 50	< 0.5	<0.5	<0.5	<0.5	-									329.21	15.17	314.04		
S-2	06/21/1995	<50	<0.5	< 0.5	<0.5	<0.5										329.21	14.25	314.96		
S-2	06/12/1996	<50	6.1	< 0.5	<0.5	<0.5	48	*****								329.21	14.23	314.90		
S-2	06/25/1997	120	25	0.59	2.4	8.7	130									329.21	14.31 14.40	314.81		4.4
S-2	06/19/1998	450	96	<2.5	4	19	180									329.21				4.4
S-2	06/17/1999	312	74.4	2.04	1.02	<1.00	147										13.72	315.49		2.8
S-2	06/15/2000	1,050	261	< 5.00	7.54	11.4	13,500	9,850 b								329.21	13.97	315.24		3.7
S-2	11/29/2000	<250	3.75	< 2.50	< 2.50	< 2.50		10,700 b								329.21	14.25	314.96		3.3
J-4	11/2//2000	, \230	3.13	~2.50	~2.50	\Z.5U	12,400	10,700 B								329.21	14.82	314.39		2.2

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (μg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-2	03/07/2001	< 500	14.7	< 5.00	< 5.00	< 5.00	8,610									329.21	13.70	315.51		2.3
S-2	06/18/2001	<2,000	<20	<20	<20	<20		7,100								329.21	14.56	314.65		
S-2	09/17/2001	<2,000	<10	<10	<10	<10		7,500	680	<10	<10	<10			< 500	329.21	15.18	314.03		
S-2	12/31/2001	<1,000	<10	<10	<10	<10		3,800								329.21	13.19	316.02		
S-2	03/13/2002	<1,000	65	<10	13	<10		6,500								329.21	15.03	314.18		
S-2	06/18/2002	520	28	< 5.0	< 5.0	< 5.0		2,800								329.21	15.60	313.61		
S-2	09/27/2002	<1,000	<10	<10	<10	<10		4,200								328.77	14.90	313.87		
S-2	12/27/2002	<1,000	<10	<10	<10	<10		4,300	5,600	<10	<10	<10	<10	<10		328.77	14.40	314.37		
S-2	03/24/2003	<2,500	28	<25	<25	< 50		1,300								328.77	14.86	313.91		
S-2	05/09/2003	<2,500	36	<25	35	< 50		4,000	6,200							328.77	13.45	315.32		
S-2	07/08/2003	<2,000	<20	<20	<20	<40		3,200								328.77	20.10	308.67		
S-2	10/15/2003	960 d	6.9	<2.5	9.0	< 5.0		90	2,400							328.77	16.67	312.10		
S-2	01/06/2004	690	8.3	< 0.50	0.72	2.8		82	860							328.77	21.00	307.77		
S-2	04/07/2004	980 d	12	<2.5	<2.5	< 5.0		28	2,500							328.77	16.62	312.15		
S-2	07/27/2004	62	1.5	< 0.50	< 0.50	<1.0		16	550	<2.0	<2.0	<2.0			< 50	328.77	16.64	312.13		
S-2	10/29/2004	<250	<2.5	<2.5	<2.5	<5.0		22	1,800	<10	<10	<10			<250	328.77	16.43	312.34		
S-2	01/06/2005	<250	<2.5	<2.5	<2.5	< 5.0		21	2,700	<10	<10	<10	-			328.77	16.37	312.40		
S-2	04/14/2005	< 50	< 0.50	< 0.50	< 0.50	< 0.50		14	290	< 0.50	< 0.50	< 0.50			< 5.0	328.77	18.54	310.23		
S-2	07/29/2005	1,300 f	< 5.0	< 5.0	< 5.0	<10		19	1,000	<20	<20	<20			< 500	328.77	21.37	307.40		
S-2	10/20/2005	1,300	13	<1.0	9.8	2.6		26	730	<4.0	<4.0	<4.0			<100	328.77	21.88	306.89		
S-2	01/26/2006	3,820	16.3	< 0.500	5.78	< 0.500		25.8	445	< 0.500	< 0.500	< 0.500			<50.0	328.77	21.15	307.62		
S-2	04/24/2006	4,720	68.8	1.44	115	8.31		1,600	1,010	< 0.500	< 0.500	< 0.500			<50.0	328.77	13.80	314.97		
S-2	07/12/2006	< 50.0	14.4	< 0.500	< 0.500	<1.50		70.9	1,660	< 0.500	< 0.500	< 0.500			<50.0	328.77	14.19	314.58		
S-2	10/20/2006	108	5.52	< 0.500	0.690	< 0.500		17.9	382	< 0.500	< 0.500	< 0.500			<50.0	328.77	14.13	314.64		
S-2	01/22/2007	< 50	0.40 k	< 0.50	< 0.50	<1.0		16	450	<1.0	<1.0	<1.0			<150	328.77	14.05	314.72		
S-2	04/13/2007	52 i	0.53	<1.0	0.22 k	<1.0		14	660	<2.0	<2.0	<2.0			<100	328.77	14.09	314.68		
S-2	07/09/2007	97 i,j	4.6	<1.0	<1.0	<1.0		23	1,500	<2.0	< 2.0	<2.0			<100	328.77	13.33	315.44		
S-2	10/22/2007	120 i	0.23 k	<1.0	<1.0	<1.0		13	2,400	< 2.0	<2.0	<2.0			<100	328.77	14.70	314.07		
S-2	01/09/2008	66 i	1.5 k	< 5.0	< 5.0	< 5.0		12	1,500	<10	<10	<10			< 500	328.77	13.65	315.12		
S-2	04/11/2008	450	3.8	< 5.0	< 5.0	<5.0		37	4,300	<10	<10	<10			<500	328.77	14.47	314.30		
S-2	07/29/2008	370	5.3	< 5.0	< 5.0	< 5.0		18	2,300	<10	<10	<10			< 500	328.77	15.00	313.77		
S-2	10/29/2008	100	2.3	<1.0	<1.0	<1.0		11	710	<2.0	<2.0	<2.0			<100	328.77	15.10	313.67		
S-2	01/21/2009	990	37	<1.0	8.8	1.4		83	1,200	<2.0	<2.0	<2.0			<100	328.77	13.89	314.88		
S-2	04/16/2009	2,100	54	1.2	21	3.0		88	930	<2.0	<2.0	<2.0			<100	328.77	13.75	315.02		
S-2	07/09/2009	620	16	<1.0	5.6	<1.0		35	900	<2.0	<2.0	<2.0			<100	328.77	15.18	313.59		
S-2	01/11/2010	3,300	39	1.5	23	4.1		51	600	<2.0	<2.0	<2.0			<100	328.77	13.68	315.09		

Well ID	Date	TPHg (µg/L)	Β (μg/L)	Τ (μg/L)	E (µg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (μg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-2	01/21/2011	2,000	21	0.99	21	3.0		25	820	<1.0	<1.0	<1.0			<150	328.77	13.75	315.02		
S-2	07/20/2011	590	1.9	<1.0	<1.0	< 2.0		9.4	910						<300	328.77	14.61	314.16		
S-2	01/06/2012	430	2.5	<1.0	1.8	<2.0		5.6	430	<2.0	<2.0	<2.0			<300	328.77	15.91	312.86		
S-2	01/04/2013	1,200	6.7	0.53	5.6	1.1		9.1	570	<0.50	<0.50	<0.50			<150	328.77	13.30	315.47		
6.2	00 /14 /1000	<b>-</b> F0	<0.F		-1															
S-3 S-3	02/14/1988	<50	< 0.5	<1	<4	<4														
	10/13/1988	<50	< 0.5	<1	<1	<3														
S-3	01/31/1989	<50	< 0.5	<1	<1	<3														
S-3 S-3	03/07/1989	<50	< 0.5	<1	<1	<3														
S-3	06/26/1989 09/08/1989	<50 <50	<0.5 <0.5	<1	<1	<3														
S-3			<0.5 <0.5	<1	<1	<3														·
S-3	12/14/1989 03/05/1990	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5	<1			·								****			
5-3 S-3	05/05/1990				<0.5	<1														
S-3 S-3		<500	<0.5	<0.5	<0.5	<1														
	10/02/1990	<50	< 0.5	<0.5	< 0.5	1.0														
S-3	12/18/1990	<50	< 0.5	1.6	< 0.5	2.0					~~~									
S-3	03/20/1991	70 <50	2.3	8.9	4.0	23										327.67				
S-3	06/26/1991	<50	< 0.5	< 0.5	< 0.5	< 0.5										327.67				
S-3	09/05/1991	<50	< 0.5	< 0.5	< 0.5	< 0.5										327.67				
S-3	12/13/1991	<50	< 0.5	< 0.5	< 0.5	< 0.5										327.67	13.87	313.80	·	
S-3	03/11/1992	<30	< 0.5	<0.5	< 0.5	< 0.5										327.67	13.05	314.62		
S-3	06/24/1992	<50	< 0.5	<0.5	<0.5	< 0.5										327.67	13.86	313.81		
S-3	09/17/1992	<50	<0.5	< 0.5	<0.5	< 0.5										327.67	13.01	314.66		
S-3	12/11/1992	<50	<0.5	<0.5	< 0.5	< 0.5							-			327.67	13.00	314.67		
S-3	02/04/1993	<50	< 0.5	< 0.5	<0.5	< 0.5										327.67				
S-3	06/03/1993	<50	< 0.5	< 0.5	< 0.5	<0.5										327.67				
S-3	09/15/1993															327.67	13.02	314.65		
S-3	09/13/1994															327.67	15.17	312.50		
S-3	06/21/1995	50	4.1	< 0.5	20	1.2										327.67	12.49	315.18		
S-3	06/12/1996	<50	< 0.5	< 0.5	< 0.5	< 0.5	<2.5									327.67	12.53	315.14		
S-3	06/25/1997	<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5									327.67	12.64	315.03		1.8
S-3	06/19/1998	<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5									327.67	11.74	315.93		4.1
S-3	06/17/1999	<50.0	< 0.500		< 0.500	< 0.500	< 5.00									327.67	12.35	315.32		2.8
S-3	06/15/2000	<50.0	< 0.500		< 0.500	< 0.500	< 2.50									327.67	12.51	315.16		3.2
S-3	11/29/2000	<50.0	< 0.500		< 0.500	< 0.500	< 2.50									327.67	12.84	314.83		1.0
S-3	03/07/2001	<50.0	< 0.500	< 0.500	< 0.500	< 0.500	<2.50									327.67	12.42	315.25		2.8

Well ID	Date	TPHg (µg/L)	B (μg/L)	Τ (μg/L)	E (μg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (μg/L)		Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-3	06/18/2001	< 50	0.66	1.1	< 0.50	0.51		0.66								327.67	13.74	313.93		
S-3	09/17/2001	< 50	0.73	0.96	< 0.50	0.61		< 5.0				***				327.67	13.25	314.42		
S-3	12/31/2001	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0								327.67	12.38	315.29		
S-3	03/13/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0								327.67	13.16	314.51		
S-3	06/18/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0								327.67	13.55	314.12		
S-3	09/27/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0	·							327.40	13.32	314.08		
S-3	12/27/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0	< 50	< 2.0	< 2.0	< 2.0	<2.0	<2.0		327.40	12.55	314.85		
S-3	03/24/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0	·	< 5.0								327.40	12.71	314.69		
S-3	05/09/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0							327.40	12.27	315.13		
S-3	07/08/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		1.7	< 5.0							327.40	14.10	313.30		
S-3	10/15/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0							327.40	14.64	312.76		
S-3	01/06/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0							327.40	15.11	312.29		
S-3	04/07/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0							327.40	14.36	313.04		
S-3	07/27/2004	<50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0	<2.0	<2.0	<2.0			< 50	327.40	14.21	313.19		
S-3	10/29/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0	<2.0	< 2.0	< 2.0			< 50	327.40	14.03	313.37		
S-3	01/06/2005	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0	<2.0	<2.0	< 2.0				327.40	14.08	313.32		
S-3	04/14/2005	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 0.50	< 5.0	< 0.50	< 0.50	< 0.50			< 5.0	327.40	12.16	315.24		
S-3	07/29/2005	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0	<2.0	<2.0	<2.0			< 50	327.40	15.29	312.11		
S-3	10/20/2005	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0	<2.0	<2.0	<2.0			< 50	327.40	15.90	311.50		
S-3	01/26/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		< 0.500	59.5	< 0.500	< 0.500	< 0.500	-		<50.0	327.40	15.00	312.40		
S-3	04/24/2006	< 50.0	0.610	0.640	< 0.500	< 0.500		< 0.500	13.0	< 0.500	< 0.500	< 0.500			< 50.0	327.40	12.03	315.37		
S-3	07/12/2006	< 50.0	< 0.500	< 0.500	<0.500	<1.50		< 0.500	<10.0	< 0.500	< 0.500	< 0.500			<50.0	327.40	12.35	315.05		
S-3	10/20/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		< 0.500	<10.0	< 0.500	< 0.500	< 0.500			<50.0	327.40	12.46	314.94		
S-3	01/22/2007	< 50	< 0.50	< 0.50	< 0.50	<1.0		<1.0	<10	<1.0	<1.0	<1.0			<150	327.40	13.05	314.35		
S-3	04/13/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	327.40	12.50	314.90		
S-3	07/09/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	327.40	12.04	315.36		
S-3	10/22/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	327.40	13.02	314.38		
S-3	01/09/2008	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	327.40	12.21	315.19		
S-3	04/11/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	327.40	12.80	314.60		
S-3	07/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	13	< 2.0	< 2.0	< 2.0		,	170	327.40	13.25	314.15		
S-3	10/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	327.40	13.40	314.00		
S-3	01/21/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			<100	327.40	12.41	314.99		
S-3	04/16/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	327.40	12.20	315.20		
S-3	07/09/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	327.40	13.49	313.91		~~~
S-3	01/11/2010	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	< 2.0	<2.0			<100	327.40	12.39	315.01		
S-3	07/06/2010			****												327.40	12.80	314.60		

Well ID	Date		В	T	E	$\boldsymbol{X}$	8020	8260	TBA	DIPE	ETBE	<b>TAME</b>	1,2- DCA	EDB	Ethanol	TOC	Water	GW Elevation	Thickness	DO Reading
		TPHg (µg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(ft MSL)		(ft MSL)	(ft)	(mg/L)
S-3	01/21/2011	<50	< 0.50	< 0.50	< 0.50	<1.0		<1.0	<10	<1.0	<1.0	<1.0			<150	327.40	12.53	314.87		
S-3	07/20/2011													~~~		327.40	12.95	314.45		
S-3	01/06/2012	< 50	< 0.50	< 0.50	< 0.50	<1.0		<1.0	<10	<1.0	<1.0	<1.0			<150	327.40	13.84	313.56		
S-3	01/04/2013	<50	<0.50	<0.50	<0.50	<1.0		<0.50	<10	<0.50	<0.50	<0.50			<150	327.40	11.72	315.68		
S-4	02/14/1988	5,100	160	8	730	730						***								
S-4	10/13/1988	530	24	1	25	16														
S-4	01/31/1989	1,100	33	2	20	24														
S-4 (	03/07/1989	650	37	1	35	27														
S-4 (	06/26/1989	670	110	<1	85	71														
S-4 (	09/08/1989	380	32	<1	36	26														
S-4	12/14/1989	210	21	< 0.5	30	23														
S-4 (	03/05/1990	350	43	< 0.5	24	47														
S-4 (	06/14/1990	430	74	< 0.5	71	46										、				
S-4	10/02/1990	700	74	2.2	100	55	·													****
S-4	12/18/1990	1,400	180	2.9	280	230	'													
S-4 (	03/20/1991	1,200	100	< 2.0	210	130										328.53				
S-4 (	06/26/1991	220	14	< 0.5	34	17										328.53				
S-4 (	09/05/1991	580	31	0.8	53	26										328.53				
S-4	12/13/1991	370	24	0.9	1.3	46		·				,				328.53	15.20	313.33		
S-4 (	03/11/1992	1,600	23	1.2	12	20					~~~					328.53	14.37	314.16		
S-4 (	06/24/1992	480	48	<1.0	95	22										328.53	15.30	313.23		
S-4 (	09/17/1992	260	35	1.2	51	7.8										328.53	14.17	314.36		
S-4 1	12/11/1992	270	34	0.8	28	4.5										328.53	14.18	314.35		
S-4 (	02/04/1993	1,100	12	< 5.0	89	100										328.53				
S-4 (	06/03/1993	210	48	1.1	42	4										328.53				
S-4 (	09/15/1993	700	21	<1.0	110	91										328.53	13.86	314.67		
S-4 1	12/09/1993	250	39	< 0.5	3.8	2.6						*****				328.53	14.16	314.37		
S-4 (	03/04/1994	150	25	1.4	6.8	2.8									·	328.53	14.17	314.36		
S-4 (D)	03/04/1994	140	28	0.8	7.9	3.2										328.53	14.17	314.36		
S-4 (	06/16/1994	90	12	< 0.5	1.8	2.4							***			328.53	14.14	314.39		
S-4 (D)	06/16/1994	80	5.9	< 0.5	1.5	0.9										328.53	14.14	314.39		
S-4 C	09/13/1994	< 50	23	< 0.5	4.9	2.4										328.53	14.42	314.11		
S-4 (D)	09/13/1994	< 50	23	< 0.5	4.0	2.3										328.53	14.42	314.11		
S-4 0	06/21/1995	270	34	1.4	25	7.6										328.53	13.82	314.71		
S-4 (D)	06/21/1995	280	35	2.1	26	8.4										328.53	13.82	314.71		

Well ID	Date	TPHg (µg/L)	Β (μg/L)	Τ (μg/L)	E (µg/L)	Χ (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)		Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-4	06/12/1996	360	52	< 0.5	< 0.5	< 0.5	92									328.53	13.64	314.89		
S-4 (D)	06/12/1996	430	54	<1.2	72	21	96									328.53	13.64	314.89		
S-4	06/25/1997	6,700	93	1,200	240	1,300	6,900	6,800								328.53	13.74	314.79		0.6
S-4	06/19/1998	3,500	56	15	140	670	2,100									328.53	12.55	315.98		0.8
S-4 (D)	06/19/1998	3,000	51	14	110	530	2,000									328.53	12.55	315.98		0.8
S-4	06/17/1999	1,510	28.4	9.84	176	132	1,780								****	328.53	13.24	315.29		4.8
S-4	06/15/2000	< 500	12.0	< 5.00	31.0	22.8	12,200									328.53	13.65	314.88		2.1
S-4	11/29/2000	< 500	< 5.00	< 5.00	< 5.00	< 5.00	12,100				,					328.53	14.23	314.30		1.8
S-4	03/07/2001	< 500	5.44	< 5.00	6.49	< 5.00	11,400	14,500								328.53	13.15	315.38		2.4
S-4	06/18/2001	<1,000	<10	<10	<10	<10		3,500								328.53	13.81	314.72		
S-4	09/17/2001	< 500	< 5.0	< 5.0	< 5.0	< 5.0		7,700								328.53	14.29	314.24		
S-4	12/31/2001	<1,000	<10	<10	<10	<10		3,800								328.53	13.44	315.09	•	
S-4	03/13/2002	<2,500	<25	<25	<25	<25		18,000								328.53	14.42	314.11		
S-4	06/18/2002	<100	1.1	<1.0	<1.0	<1.0		530								328.53	15.19	313.34		
S-4	09/27/2002	<200	<2.0	<2.0	< 2.0	<2.0		1,100								328.11	14.32	313.79		
S-4	12/27/2002	280	3.5	<2.5	17	4.7		390.	9,000	<2.5	<2.5	< 5.0	< 2.5	<2.5		328.11	13.50	314.61		
S-4	03/24/2003	<2,500	<25	<25	<25	< 50	·	780								328.11	14.56	313.55		
S-4	05/09/2003	<2,500	<25	<25	<25	< 50		1,200	18,000							328.11	13.20	314.91		
S-4	07/08/2003	<2,500	<25	<25	<25	< 50		1,700	8,700							328.11	20.87	307.24	'	
S-4	10/15/2003	<2,500	<25	<25	<25	< 50		280	11,000						·	328.11	16.15	311.96		
S-4	01/06/2004	3,500	< 5.0	19	190	570		58	9,600							328.11	21.64	306.47		
S-4	04/07/2004	<1,000	<10	<10	<10	<20		110	9,900							328.11	20.89	307.22		
S-4	07/27/2004	<1,000	<10	<10	<10	<20		<10	10,000	<40	<40	<40			<1,000	328.11	20.78	307.33		
S-4	10/29/2004	<1,000	<10	<10	<10	<20		110	5,600	<40	<40	<40			<1,000	328.11	20.53	307.58		
S-4	01/06/2005	<1,000	<10	<10	<10	<20		<10	6,500	<40	<40	<40				328.11	20.44	307.67		
S-4	04/14/2005	<250	<2.5	<2.5	3.1	<2.5		120	6,000	<2.5	<2.5	<2.5			<25	328.11	18.60	309.51		
S-4	07/29/2005	<250	<2.5	<2.5	<2.5	<5.0		4.4	3,100	<10	<10	<10		',	<250	328.11	21.03	307.08		
S-4	10/20/2005	<250	<2.5	<2.5	<2.5	< 5.0		<2.5	2,700	<10	<10	<10			<250	328.11	21.62	306.49		
S-4	01/26/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		0.950	723	< 0.500	< 0.500	< 0.500			< 50.0	328.11	21.10	307.01		
S-4	04/24/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		79.4	1,310	< 0.500	< 0.500	< 0.500			< 50.0	328.11	13.24	314.87		
S-4	07/12/2006	<50.0	4.42	< 0.500	29.1	36.5		230	1,530	< 0.500	< 0.500	0.930			<50.0	328.11	13.45	314.66		
S-4	10/20/2006	1,150	5.30	0.990	41.5	2.79		208	2,160	< 0.500	< 0.500	< 0.500			<50.0	328.11	13.63	314.48		
S-4	01/22/2007	550	4.8	< 2.5	30	< 5.0		130	3,000	< 5.0	< 5.0	< 5.0			<750	328.11	14.32	313.79		
S-4	04/13/2007	320 i,j	0.48 k	<1.0	3.3	<1.0		18	390	<2.0	<2.0	<2.0			<100	328.11	13.68	314.43		
S-4	07/09/2007	240 i	1.5	0.32 k	6.9	<1.0		59	1,900	<2.0	<2.0	<2.0			<100	328.11	12.78	315.33		
S-4	10/22/2007	170 i	1.3 k	<5.0	3.8 k	< 5.0		36	1,600	<10	<10	<10			< 500	328.11	14.26	313.85		

Well ID	Date	TPHg (µg/L)	Β (μg/L)	. Τ (μg/L)	E (μg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (μg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-4	01/09/2008	85 i	<2.5	<5.0	1.3 k	< 5.0		26	1,700	<10	<10	<10			< 500	328.11	13.40	314.71		
S-4	04/11/2008	430	< 2.5	< 5.0	< 5.0	< 5.0		49	3,100	<10	<10	<10			< 500	328.11	14.00	314.11		
S-4	07/29/2008	190	1.1	<1.0	1.3	<1.0		24	1,500	< 2.0	< 2.0	< 2.0			<100	328.11	14.64	313.47		
S-4	10/29/2008	180	1.3	<1.0	5.7	<1.0		21	1,700	< 2.0	< 2.0	< 2.0			<100	328.11	14.73	313.38		
S-4	01/21/2009	940	4.6	< 2.0	31	<2.0		38	2,400	<4.0	<4.0	<4.0			<200	328.11	13.66	314.45		
S-4	04/16/2009	680	3.4	< 5.0	14	< 5.0		29	2,200	<10	<10	<10			< 500	328.11	13.43	314.68		
S-4	07/09/2009	280	<2.5	< 5.0	< 5.0	< 5.0		17	1,900	<10	<10	<10			< 500	328.11	15.04	313.07		
S-4	01/11/2010	580	2.8	< 2.0	6.0	<2.0		19	1,500	<4.0	<4.0	<4.0			< 200	328.11	13.75	314.36		
S-4	07/06/2010	490	1.8	<1.0	23	<1.0		11	890						<100	328.11	14.35	313.76	***	
S-4	01/21/2011	58	1.4	< 0.50	< 0.50	<1.0		13	810	<1.0	<1.0	<1.0			<150	328.11	13.85	314.26		
S-4	07/20/2011	87	< 0.50	< 0.50	< 0.50	<1.0		8.3	780						<150	328.11	14.26	313.85		
S-4	01/06/2012	< 50	<1.0	<1.0	<1.0	<2.0		3.5	420	<2.0	< 2.0	<2.0			<300	328.11	15.63	312.48		
S-4	01/04/2013	< 50	<0.50	< 0.50	< 0.50	<1.0		2.6	270	< 0.50	< 0.50	< 0.50			<150	328.11	13.10	315.01		
								,												
S-5	02/14/1988	1,000	40	86	180	180				***										
S-5	10/13/1988	560	66	20	18	36								******						
S-5	01/31/1989	180	27	8	9	13														
S-5	03/07/1989	3,800	520	530	260	570														
S-5	06/26/1989	< 50	3.8	<1	2	<3														
S-5	09/08/1989	110	25	2	2	12										~~~				
S-5	12/14/1989	1,700	300	86	67	140														
S-5	03/05/1990	1,100	100	110	79	240														
S-5	06/14/1990	600	94	36	40	62														
S-5	10/02/1990	4,500	1,400	160	260	300														
S-5	11/20/1990	16,000	4,600	720	790	1,000						<u></u>								
S-5	12/18/1990	25,000	7,600	1,100	1,300	2,300														
S-5	03/20/1991	310	39	12	18	30										329.66				
S-5	06/26/1991	1,300	250	62 ·	120	180										329.66				
S-5	09/05/1991	4,700	660	150	170	280										329.66				
S-5	12/13/1991	1,400	580	19	110	80										329.66	17.48	312.18		
S-5	03/11/1992	<30	< 0.3	< 0.3	< 0.3	< 0.3										329.66	16.22	313.44		
S-5	06/24/1992	1,800	380	52	120	180										329.66	17.47	312.19		
S-5	09/17/1992	2,200	750	91	170	170										329.66	16.84	312.82		
S-5	12/11/1992	8,700	1,600	66	48	340										329.66	16.37	313.29		
S-5	02/04/1993	150	156	0.7	4.7	4										329.66				
S-5	06/03/1993	480	140	3.4	17	14										329.66				

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-5	09/15/1993	80	2.4	0.5	1.4	2.9				·						329.66	16.20	313.46		
S-5	12/09/1993	120	0.56	< 0.5	2.2	1.2										329.66	16.26	313.40		
S-5	03/04/1994	70	< 0.5	< 0.5	< 0.5	< 0.5										329.66	16.25	313.41		
S-5	06/16/1994	< 50	< 0.5	< 0.5	< 0.5	< 0.5										329.66	16.04	313.62		
S-5	09/13/1994	< 50	< 0.5	< 0.5	< 0.5	< 0.5										329.66	11.52	318.14		
S-5	06/21/1995	< 50	< 0.5	< 0.5	< 0.5	< 0.5										329.66	14.50	315.16		
S-5	06/12/1996	< 500	6.0	< 5.0	< 5.0	< 5.0	1,400									329.66	12.53	317.13		
S-5	06/25/1997	<250	< 2.5	< 2.5	< 2.5	<2.5	1,100									329.66	15.34	314.32		1.1
S-5	06/19/1998	< 50	1.0	< 0.50	< 0.50	< 0.50	61									329.66	13.71	315.95		3.6
S-5	06/17/1999	<50.0	1.44	< 0.500	< 0.500	< 0.500	336									329.66	13.56	316.10		1.4
S-5	06/15/2000	< 50.0	0.820	< 0.500	< 0.500	< 0.500	221									329.66	15.00	314.66		2.7
S-5	11/29/2000	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	183									329.66	16.29	313.37		0.7
S-5	03/07/2001	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	7.55									329.66	15.49	314.17		2.5
S-5	06/18/2001	< 50	< 0.50	< 0.50	< 0.50	< 0.50		11						-		329.66	15.50	314.16		2.5
S-5	09/17/2001	< 50	< 0.50	< 0.50	< 0.50	< 0.50		17								329.66	16.35	313.31		
S-5	12/31/2001	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0								329.66	12.80	316.86		
S-5	03/13/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		93								329.66	16.32	313.34		
S-5	06/18/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		130								329.66	17.00	312.66		
S-5	09/27/2002	< 50	0.88	< 0.50	< 0.50	< 0.50		280								329.36	16.34	313.02		
S-5	12/27/2002	<50	1.9	< 0.50	< 0.50	< 0.50		87	<50	<2.0	<2.0	<2.0	<2.0	<2.0		329.36	15.45	313.91		
S-5	03/24/2003	<250	2.5	<2.5	<2.5	< 5.0		220				-2.0		-2.0		329.36	16.70	312.66		
S-5	05/09/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		110	17							329.36	13.16	316.20		
S-5	07/08/2003	<1,000	<10	<10	<10	<20		320	<100							329.36	19.00	310.26		
S-5	10/15/2003	1,400 d	27	<2.5	<2.5	< 5.0		180	51							329.36	19.08	310.38		
S-5	01/06/2004	84,000	1,400	1,200	<25	17,000		140	<250							329.36	20.97	308.39		
S-5	04/07/2004	20,000	70	<25	230	290		66	<250							329.36	20.97	308.55		
S-5	07/27/2004	9,900	46	<25	74	<50		43	<250	<100	<100	<100			<2,500	329.36	20.93	308.46		
S-5	08/04/2004	22,000	48	<10	63	38										329.36	20.93		0.04	
S-5	10/29/2004	14,000	93	<25	96	94		<25	<250	<100	<100	<100			<2,500	329.36	18.59	308.46	0.09	
S-5	01/06/2005	4,500	32	<10	47	86		<10	<100	<40	<40	<40			~2,300	329.36		310.77		
S-5	04/14/2005	1,700	1.0	< 0.50	8.4	16		5.6	8.1	< 0.50	< 0.50	< 0.50			<5.0	329.36	18.83	310.53		
S-5	07/29/2005	3,900	8.9	<2.5	9.8	13		21	<200	<10	<10	<40					15.03	314.33		
	10/20/2005	3,300	27	<2.5	9.1	14		6.0	32	<10	<10	<10			<1,000	329.36	19.71	309.65		
	11/11/2005	2,300	54	0.69	15	19		8.3	<5.0			<10 			<250	329.36	21.90	307.46		
S-5	01/26/2006	6,680	43.6	4.93	38.2	89.1		8.38	<10.0	< 0.500	< 0.500	< 0.500			 <50.0	329.36	22.17	307.19		
	04/24/2006	1,930	1.43	< 0.500	< 0.500	12.1		2.76	<10.0	< 0.500					<50.0	329.36	20.85	308.51		
	,,	1,,,,,,	1.10	-0.500	-0.500	14.1		∠./∪	<b>\10.0</b>	<b>~0.500</b>	< 0.500	< 0.500			<50.0	329.36	14.40	314.96		

Well ID	Date	TPHg (µg/L)	B (μg/L)	Τ (μg/L)	E (μg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-5	07/12/2006	<50.0	4.24	< 0.500	25.8	44.8		6.43	35.3	< 0.500	< 0.500	< 0.500			<50.0	329.36	15.50	313.86	:	
S-5	10/20/2006	2,890	17.5	0.760	55.1	106		3.78	<10.0	< 0.500	< 0.500	< 0.500			< 50.0	329.36	15.55	313.81		
S-5	01/22/2007	1,600	7.3	0.54	35	60		0.73 k	<10	<1.0	<1.0	<1.0			<150	329.36	15.74	313.62		
S-5	04/13/2007	1,100 i	4.6	0.47 k	18	25.9		<1.0	<10	< 2.0	<2.0	<2.0			<100	329.36	15.69	313.67		
S-5	07/09/2007	440 i	3.0	0.29 k	13	19.7		2.8	<10	< 2.0	< 2.0	<2.0			<100	329.36	15.46	313.90		
S-5	10/22/2007	6,300 i	3.1	0.41 k	21	28.3		<1.0	<10	< 2.0	<2.0	<2.0			<100	329.36	15.87	313.49		
S-5	01/09/2008	590 i	0.69	0.28 k	10	11.3		0.71 k	<10	< 2.0	<2.0	<2.0			100	329.36	14.97	314.39		
S-5	04/11/2008	470	0.76	<1.0	5.4	4.7		4.9	18	< 2.0	<2.0	<2.0			<100	329.36	16.38	312.98		
S-5	07/29/2008	350	1.1	<1.0	3.9	2.3		4.4	18	< 2.0	<2.0	<2.0			<100	329.36	16.22	313.14		
S-5	10/29/2008	630	5. <i>7</i>	<1.0	4.5	2.9		9.5	23	< 2.0	<2.0	<2.0			<100	329.36	17.50	311.86		
S-5	01/21/2009	1,200	14	<1.0	7.0	4.1		22	46	< 2.0	<2.0	< 2.0		'	<100	329.36	16.52	312.84		
S-5	04/16/2009	280	1.3	<1.0	2.7	1.4		11	35	< 2.0	<2.0	< 2.0			<100	329.36	15.95	313.41		
S-5	07/09/2009	500	4.3	<1.0	2.9	1.4		22	32	< 2.0	<2.0	< 2.0			<100	329.36	17.46	311.90		
S-5	01/11/2010	370	5.0	<1.0	4.0	<1.0		26	31	< 2.0	< 2.0	< 2.0			<100	329.36	16.68	312.68		
S-5	07/06/2010	1,300	6.5	<1.0	8.5	<1.0		49	85						<100	329.36	16.20	313.16		
S-5	01/21/2011	330	1.4	< 0.50	1.3	<1.0		21	40	<1.0	<1.0	<1.0			<150	329.36	16.27	313.09		
S-5	07/20/2011	430	3.2	< 0.50	3.0	<1.0		22	33						<150	329.36	16.76	312.60		
S-5	01/06/2012	690	5.5	< 0.50	1.5	<1.0		40	56	<1.0	<1.0	<1.0			<150	329.36	18.03	311.33		
S-5	01/04/2013	330	2.1	<0.50	0.82	<1.0		4.0	<10	< 0.50	< 0.50	<0.50			<150	329.36	14.89	314.47		
S-5B	11/08/2005															332.25	43.71	288.54		
S-5B	11/11/2005	< 50	< 0.50	< 0.50	< 0.50	<1.0		2.5	15							332.25	43.79	288.46		
S-5B	01/26/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		1.63	<10.0	< 0.500	< 0.500	< 0.500			<50.0	332.25	38.21	294.04		
S-5B	04/24/2006	< 50.0	0.540	1.18	< 0.500	< 0.500		1.88	12.2		< 0.500	< 0.500			<50.0	332.25	30.68	301.57		
S-5B	07/12/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		1.63	<10.0	< 0.500	< 0.500	< 0.500			<50.0	332.25	30.05	302.20		
S-5B	10/20/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		1.04	<10.0	< 0.500	< 0.500	< 0.500			<50.0	332.25	31.60	300.65		
S-5B	01/22/2007	< 50	0.33 k	0.36 k	0.27 k	<1.0		0.90 k	<10	<1.0	<1.0	<1.0			<150	332.25	27.79	304.46		
S-5B	04/13/2007	<50 i	0.30 k	0.28 k	<1.0	<1.0		0.73 k	<10	< 2.0	< 2.0	<2.0			79 k	332.25	24.78	307.47		
S-5B	07/09/2007	<50 i	0.37 k	<1.0	<1.0	<1.0		0.49 k	<10	< 2.0	<2.0	<2.0			<100	332.25	31.12	301.13		
S-5B	10/22/2007	66 i	0.33 k	<1.0	<1.0	<1.0		0.64 k	5.7 k	< 2.0	<2.0	<2.0			<100	332.25	29.64	302.61	and and the	
S-5B	01/09/2008	<50 i	0.29 k	<1.0	<1.0	<1.0		0.46 k	<10	<2.0	<2.0	<2.0			220	332.25	25.52	306.73		
S-5B	.04/11/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			<100	332.25	25.32	306.93		
S-5B	07/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			100	332.25	32.33	299.92		
S-5B	10/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			<100	332.25	34.51	297.74		
S-5B	01/21/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	10	<2.0	<2.0	<2.0			<100	332.25	32.27	299.98		
S-5B	04/16/2009	<50	< 0.50	<1.0	<1.0	<1.0		<1.0	14	<2.0	<2.0	<2.0			<100	332.25	29.30	302.95		

Well ID	Date	TPHg (µg/L)	Β (μg/L)	Τ (μg/L)	Ε (μg/L)	Χ (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (µg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-5B	07/09/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			200	332.25	34.41	297.84		
S-5B	01/11/2010	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			200	332.25	37.45	294.80		
S-5B	07/06/2010	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10						<100	332.25	35.18	297.07		
S-5B	01/21/2011	< 50	< 0.50	< 0.50	< 0.50	<1.0		<1.0	<10	<1.0	<1.0	<1.0			<150	332.25	36.52	295.73		
S-5B	07/20/2011	< 50	< 0.50	< 0.50	< 0.50	<1.0		<1.0	<10						<150	332.25	34.97	297.28		
S-5B	01/06/2012	< 50	< 0.50	< 0.50	< 0.50	<1.0		1.0	<10	<1.0	<1.0	<1.0			<150	332.25	36.10	296.15		~~~
S-5B	01/04/2013	<50	<0.50	<0.50	<0.50	<1.0		0.87	<10	<0.50	<0.50	<0.50			<150	332.25	45.31	286.94	·	
S-5C	11/08/2005																			
S-5C	11/11/2005	55	< 0.50	0.67	< 0.50	<1.0		0.87								332.33	43.69	288.64		
S-5C	01/26/2006	<50.0	< 0.500	< 0.500	< 0.500	<0.500			< 5.0							332.33	43.65	288.68		
S-5C	04/24/2006	<50.0	0.740	< 0.500	< 0.500	< 0.500		1.91	41.2	<0.500	< 0.500	< 0.500			<50.0	332.33	38.11	294.22		
S-5C	07/12/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		1.93	17.8	<0.500	< 0.500	< 0.500			<50.0	332.33	30.61	301.72		
S-5C	10/20/2006	<50.0	< 0.500	< 0.500				1.42	<10.0	< 0.500	< 0.500	< 0.500			<50.0	332.33	30.07	302.26		
S-5C	01/22/2007	<50.0	< 0.50	< 0.50	<0.500	<0.500		< 0.500	<10.0	<0.500	< 0.500	< 0.500			<50.0	332.33	31.67	300.66		
S-5C	04/13/2007	<50 i	0.24 k	<0.50 <1.0	< 0.50	<1.0		<1.0	9.0 g,k	<1.0	<1.0	<1.0			<150	332.33	27.90	304.43		
5-5C S-5C	07/09/2007	<50 i	<0.50		<1.0	<1.0		<1.0	12	<2.0	<2.0	<2.0			<100	332.33	24.90	307.43		
S-5C	10/22/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	5.5 k	<2.0	<2.0	<2.0			<100	332.33	31.22	301.11		
S-5C	01/09/2008	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	10	<2.0	<2.0	<2.0			<100	332.33	29.59	302.74		
S-5C	04/11/2008	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	8.8 k	<2.0	<2.0	<2.0			<100	332.33	25.51	306.82		
S-5C	07/29/2008			<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			<100	332.33	25.51	306.82		
S-5C		<50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			<100	332.33	32.48	299.85		
S-5C ·	10/29/2008	<50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			<100	332.33	36.39	295.94		
S-5C ·	01/21/2009	<50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			<100	332.33	32.20	300.13		
	04/16/2009	<50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			<100	332.33	29.29	303.04		
S-5C S-5C	07/09/2009	<50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			<100	332.33	34.51	297.82		
	01/11/2010	<50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			<100	332.33	37.45	294.88		
S-5C S-5C	07/06/2010	<50	<0.50	<1.0	<1.0	<1.0		<1.0	<10						<100	332.33	35.14	297.19		
	01/21/2011	<50	<0.50	< 0.50	< 0.50	<1.0		<1.0	<10	<1.0	<1.0	<1.0			<150	332.33	36.42	295.91		****
S-5C	07/20/2011	<50	< 0.50	< 0.50	<0.50	<1.0		<1.0	<10						<150	332.33	34.83	297.50		
S-5C	01/06/2012	<50	<0.50	< 0.50	< 0.50	<1.0		<1.0	<10	<1.0	<1.0	<1.0			<150	332.33	36.00	296.33	,	
S-5C	01/04/2013	<50	<0.50	<0.50	<0.50	<1.0		<0.50	<10	<0.50	<0.50	<0.50			<150	332.33	45.04	287.29		
S-6	10/13/1988	1100	13.0	1	42	33														
S-6	01/31/1989	340	3.8	<1	8	3														
S-6	03/07/1989	190	3.8	<1	7	3							<u></u>							
S-6	06/26/1989	480	15	<1	6	<3													´	

Well ID	Date	TPHg (µg/L)	Β (μg/L)	Τ (μg/L)	E (µg/L)	Χ (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (µg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (µg/L)	Ethanol (μg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-6	09/08/1989	270	1.3	1	7	<3														
S-6	12/15/1989	320	1.0	< 0.5	2.6	<1														,
S-6	03/06/1990	420	3.1	< 0.5	14	<1														
S-6	06/14/1990	370	3.7	0.9	4.8	3														
S-6	10/02/1990	190	6.6	1.6	1.9	2.8														
S-6	12/18/1990	430	10	0.7	1.6	1.5														
S-6	03/20/1991	130a	606	0.6	0.7	3										327.62				
S-6	06/26/1991	120a	3.8	0.8	< 0.5	1.7										327.62				
S-6	09/05/1991	60	< 0.5	0.8	< 0.5	0.5										327.62				
S-6	12/13/1991	150	2.3	< 0.5	< 0.5	150				, <del></del>						327.62	15.11	312.51		
S-6	03/11/1992	<30	< 0.3	< 0.3	< 0.5	< 0.3										327.62	16.35	311.27		
S-6	06/24/1992	170	< 0.5	< 0.5	< 0.5	< 0.5										327.62	16.51	311.11		
S-6	09/17/1992	190	< 0.5	1.6	< 0.5	1.2										327.62	14.33	313.29		
S-6	12/11/1992	180	< 0.5	0.8	< 0.5	0.7										327.62	14.48	313.14		
S-6	02/04/1993	290	< 0.5	< 0.5	< 0.5	0.7										327.62				
S-6	06/03/1993	100	1.2	< 0.5	< 0.5	< 0.5										327.62				
S-6	09/15/1993	160	1.4	< 0.5	0.9	2										327.62	14.16	313.46		
S-6	12/09/1993	130	2.3	2.6	5.1	6.2										327.62	14.68	312.94		
S-6	03/04/1994	220	< 0.5	< 0.5	< 0.5	< 0.5										327.62	14.42	313.20		
S-6	06/16/1994	60	< 0.5	< 0.5	< 0.5	< 0.5										327.62	14.92	312.70		
S-6	09/13/1994	< 50	< 0.5	6.0	< 0.5	< 0.5										327.62	14.72	312.90		
S-6	06/21/1995	270	< 0.5	< 0.5	< 0.5	< 0.5										327.62	13.86	313.76		
S-6	06/12/1996	200	2.0	< 0.5	< 0.5	< 0.5	12									327.62	13.90	313.72		
S-6	06/25/1997	180	< 0.50	0.61	< 0.50	0.77	28									327.62	13.64	313.98		1.8
S-6 (D)	06/25/1997	130	< 0.50	< 0.50	< 0.50	< 0.50	21									327.62	13.64	313.98		1.8
S-6	06/19/1998	100	7.6	< 0.50	< 0.50	< 0.50	27									327.62	13.81	313.81		1.7
S-6	06/17/1999	114	4.14	< 0.500	< 0.500	< 0.500	19.9									327.62	14.21	313.41		1.6
S-6	06/15/2000	367	17.5	< 0.500	< 0.500	< 0.500	1,050									327.62	14.51	313.11		1.8
S-6	11/29/2000	154	0.754	16.4	< 0.500	1.05	5,470									327.62	14.32	313.30		2.1
S-6	03/07/2001	183	0.971	25.1	0.636	0.996	6,830									327.62	15.39	312.23		1.7
S-6	06/18/2001	<2,000	<20	<20	<20	<20		8,200								327.62	14.72	312.90		
S-6	09/17/2001 c	< 50	< 0.50	< 0.50	< 0.50	< 0.50		5.7	< 50	< 2.0	<2.0	< 2.0			< 500	327.62	16.69	310.93		
S-6	12/31/2001	260	< 0.50	< 0.50	< 0.50	< 0.50		11,000								327.62	13.99	313.63		
S-6	03/13/2002	440	< 2.5	<2.5	< 2.5	<2.5		930								327.62	15.10	312.52		
S-6	06/18/2002	340	<1.0	<1.0	<1.0	<1.0		560								327.62	15.24	312.38		
S-6	09/27/2002	<250	<2.5	<2.5	<2.5	<2.5		580								327.26	14.34	312.92		

Well ID	Date	TPHg (µg/L)	Β (μg/L)	Τ (μg/L)	Ε (μg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (µg/L)	Ethanol (µg/L)		Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-6	12/27/2002	<500	< 5.0	< 5.0	< 5.0	< 5.0		230	10,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		327.26	14.30	312.96		
S-6	03/24/2003	<5,000	< 50	< 50	< 50	<100		< 500								327.26	14.37	312.89		
S-6	05/09/2003	<2,500	<25	<25	<25	< 50		140	12,000							327.26	14.25	313.01		
S-6	07/08/2003	<2,500	<25	<25	<25	< 50		100	8,400							327.26	15.37	311.89		
S-6	10/15/2003	<1,000	<10	<10	<10	<20		63	10,000							327.26	17.69	309.57		
S-6	01/06/2004	< 500	< 5.0	< 5.0	< 5.0	<10		27	7,600							327.26	17.19	310.07		
S-6	04/07/2004	< 500	< 5.0	< 5.0	< 5.0	<10		15	2,900							327.26	16.72	310.54		
S-6	07/27/2004	860 d	< 5.0	< 5.0	< 5.0	<10		30	5,700	<20	<20	<20			< 500	327.26	16.90	310.36		
S-6	10/29/2004	< 500	< 5.0	< 5.0	< 5.0	<10		14	2,500	<20	<20	<20			< 500	327.26	16.68	310.58		
S-6	01/06/2005	<200	<2.0	< 2.0	<2.0	<4.0		8.7	1,200	<8.0	<8.0	<8.0				327.26	16.75	310.51		
S-6	04/14/2005	180	< 0.90	< 0.90	< 0.90	< 0.90		11	2,300	< 0.90	< 0.90	< 0.90			<9.0	327.26	15.30	311.96		
S-6	07/29/2005	270 f	< 2.5	<2.5	< 2.5	< 5.0		17	2,300	<10	<10	<10			<250	327.26	16.77	310.49		
S-6	10/20/2005	570	< 2.5	<2.5	< 2.5	< 5.0		7.1	1,200	<10	<10	<10			<250	327.26	17.30	309.96		
S-6	01/26/2006	808	< 0.500	< 0.500	< 0.500	< 0.500		5.07	473	< 0.500	< 0.500	< 0.500			< 50.0	327.26	17.00	310.26		
S-6	04/24/2006	303	< 0.500	< 0.500	< 0.500	< 0.500		4.03	212	< 0.500	< 0.500	< 0.500			< 50.0	327.26	15.42	311.84		
S-6	07/12/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		13.3	609	< 0.500	< 0.500	< 0.500			< 50.0	327.26	15.15	312.11		
S-6	10/20/2006	850	< 0.500	< 0.500	< 0.500	< 0.500		26.4	1,050	< 0.500	< 0.500	< 0.500			<50.0	327.26	13.98	313.28		
S-6	01/22/2007	620	<2.0	< 2.0	<2.0	<4.0		30	2,000	<4.0	<4.0	<4.0			<600	327.26	14.14	313.12		
S-6	04/13/2007	490 i,j	<2.5	< 5.0	< 5.0	< 5.0		21	1,700	<10	<10	<10			<500	327.26	14.35	312.91		
S-6	07/09/2007	830 i,j	< 0.50	<1.0	<1.0	<1.0		29	2,300	<2.0	<2.0	<2.0			<100	327.26	14.22	313.04		
S-6	10/22/2007	810 i	<2.5	< 5.0	<5.0	< 5.0		26	2,300	<10	<10	<10			<500	327.26	14.72	312.54		
S-6	01/09/2008	220 i	<2.5	< 5.0	< 5.0	< 5.0		15	1,100	<10	<10	<10			<500	327.26	14.97	312.29		
S-6	04/11/2008	590	< 0.50	<1.0	<1.0	<1.0		13	2,000	<2.0	<2.0	<2.0			<100	327.26	14.70	312.56		
S-6	07/29/2008	1,100	<2.5	< 5.0	<5.0	< 5.0		15	1,700	<10	<10	<10			<500	327.26	15.84	311.42		
S-6	10/29/2008	1,000	<2.5	< 5.0	<5.0	< 5.0		14	3,200	<10	<10	<10			<500	327.26	16.29	310.97		
S-6	01/21/2009	600	<2.5	<5.0	<5.0	<5.0		8.1	1,900	<10	<10	<10			<500	327.26	15.80	311.46		
S-6	04/16/2009	840	<2.5	<5.0	<5.0	< 5.0		13	4,000	<10	<10	<10			<500	327.26	14.35	312.91		
S-6	07/09/2009	970	<2.5	< 5.0	<5.0	< 5.0		17	7,100	. <10	<10	<10			<500	327.26	15.02	312.24		
S-6	01/11/2010	880	<2.5	<5.0	<5.0	<5.0		8.7	4,400	<10	<10	<10			<500	327.26	14.61	312.65		
S-6	07/06/2010	950	< 0.50	<1.0	<1.0	<1.0		13	5,200						<100	327.26	14.41	312.85		
S-6	01/21/2011	490	<2.0	<2.0	<2.0	4.7		6.6	3,500	<4.0	<4.0	<4.0			<600	327.26	14.61	312.65		
S-6	07/20/2011	880	<2.5	<2.5	<2.5	<5.0		6.0	3,700						<750	327.26	14.29	312.97		
S-6	01/06/2012	660	<1.0	<1.0	<1.0	<2.0		6.3	2,300	<2.0	<2.0	<2.0			<300	327.26	15.89	311.37		
S-6	05/10/2012	610	<2.0	<2.0	<2.0	<4.0		4.0	1,200		-2.0				<600	327.26	15.32	311.94		
S-6	07/06/2012	520	<1.3	<1.3	<1.3	<2.5		4.7	2,500						<380	327.26	15.29	311.97		
S-6	10/19/2012	860	<2.5	<2.5	<2.5	<5.0		3.8	2,200						<750	327.26	16.00	311.26		
2 0	19/19/2012	000	-2.0		~0	٠٠.٠		5.0	2,200						~/30	327.20	10.00	311.20		

Well ID	Date	TPHg (µg/L)	Β (μg/L)	T (µg/L)	E (μg/L)	Χ (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (μg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-6	01/04/2013	660	<0.50	<0.50	<0.50	<1.0		3.5	1,000	<0.50	<0.50	<0.50			<150	327.26	14.95	312.31		
S-7	10/13/1988	<50	0.6	1	<1	<3														
S-7	01/31/1989	< 50	< 0.5	<1	<1	<3														
S-7	03/07/1989	< 50	< 0.5	<1	<1	<3		·										# 		
S-7	06/26/1989	< 50	< 0.5	<1	<1	<3														
S-7	09/08/1989	< 50	< 0.5	<1	<1	<3			****											
S-7	12/15/1989	< 50	< 0.5	< 0.5	< 0.5	<1													***	
S-7	03/06/1990	< 50	< 0.5	< 0.5	< 0.5	<1														
S-7	06/14/1990	< 50	< 0.5	< 0.5	< 0.5	<1														
S-7	10/02/1990	< 50	< 0.5	0.6	< 0.5	0.9														
S-7	12/18/1990	< 50	0.5	< 0.5	< 0.5	0.86			·											
S-7	03/20/1991	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.67				
S-7	06/26/1991	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.67				
S-7	09/05/1991	< 50	< 0.5	0.6	< 0.5	< 0.5				,						328.67				
S-7	12/13/1991	< 50	< 0.6	< 0.5	< 0.5	< 0.5										328.67	17.70	310.97	'	
S-7	03/11/1992	< 50	< 0.3	< 0.3	< 0.3	< 0.3					***				-	328.67	17.06	311.61		
S-7	06/24/1992	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.67	17.80	310.87		
S-7	09/17/1992	< 50	0.6	0.6	< 0.5	< 0.5										328.67	17.00	311.67		
S-7	12/11/1992	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.67	17.35	311.32		
S-7	02/04/1993	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.67				
S-7	06/03/1993	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.67				
S-7	09/15/1993															328.67	16.65	312.02		
S-7	09/13/1994															328.67	16.83	311.84		
S-7	06/21/1995	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.67	15.88	312.79		
S-7	06/12/1996	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5								·	328.67	16.22	312.45		
S-7	06/25/1997	< 50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5									328.67	16.12	312.55		3
S-7	06/19/1998	< 50	< 0.50	<.050	< 0.50	< 0.50	<2.5									328.67	14.81	313.86	·	2.6
S-7	06/17/1999	<50.0	< 0.500	< 0.500	< 0.500	< 0.500	< 5.00									328.67	15.91	312.76		5.1
S-7	06/15/2000	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	7.32									328.67	16.14	312.53		2.0
S-7	11/29/2000	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	< 2.50									328.67	16.89	311.78		3.6
S-7	03/07/2001	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	< 2.50									328.67	16.55	312.12		2.1
S-7	06/18/2001	< 50	< 0.50	< 0.50	< 0.50	< 0.50		2.5								328.67	16.30	312.37		
S-7.	09/17/2001 c	150	< 0.50	55	< 0.50	< 0.50		8,300								328.67	14.23	314.44		
S-7	12/31/2001	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0								328.67	16.28	312.39		
S-7	03/13/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		5.9								328.67	17.41	311.26		* .

Well ID	Date	TPHg (µg/L)	Β (μg/L)	Τ (μg/L)	E (μg/L)	X (µg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (µg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-7	06/18/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		12								328.67	17.63	311.04		
S-7	09/27/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		10								328.41	16.96	311.45		
S-7	12/27/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		22	< 50	< 2.0	< 2.0	< 2.0	4.1	< 2.0		328.41	16.00	312.41		
S-7	03/24/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		21								328.41	17.12	311.29		
S-7	05/09/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		31	7.3							328.41	16.14	312.27		
S-7	07/08/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		36	6.5							328.41	17.42	310.99		
S-7	10/15/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		100	< 5.0							328.41	15.49	312.92		
S-7	01/06/2004	<100	<1.0	<1.0	<1.0	<2.0		200	20							328.41	18.93	309.48		
S-7	04/07/2004	<250	< 2.5	<2.5	< 2.5	< 5.0		380	130							328.41	18.93	309:48		
S-7	07/27/2004	<250	<2.5	<2.5	<2.5	< 5.0		240	45	<10	<10	<10			<250	328.41	18.91	309.50		
S-7	10/29/2004	<250	<2.5	<2.5	< 2.5	< 5.0		270	52	<10	<10	<10			<250	328.41	18.65	309.76		
S-7	01/06/2005	<250	<2.5	< 2.5	< 2.5	< 5.0		160	<25	<10	<10	<10				328.41	18.52	309.89		
S-7	04/14/2005	< 50	< 0.50	< 0.50	< 0.50	< 0.50	·	230	130	< 0.50	< 0.50	< 0.50			< 5.0	328.41	16.22	312.19		
S-7	07/29/2005	<2,000	<20	<20	<20	<40		170	<200	<80	<80	<80			<2,000	328.41	18.57	309.84		
S-7	10/20/2005	<100	<1.0	<1.0	<1.0	< 2.0		180	32	<4.0	<4.0	<4.0			<100	328.41	19.25	309.16		
S-7	01/26/2006	75.9	< 0.500	< 0.500	< 0.500	< 0.500		172	65.1	< 0.500	< 0.500	< 0.500			< 50.0	328.41	19.05	309.36		
S-7	04/24/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		199	22.6	< 0.500	< 0.500	< 0.500			<50.0	328.41	16.91	311.50		
S-7	07/12/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		122	<10.0	< 0.500	< 0.500	< 0.500			<50.0	328.41	16.42	311.99		
S-7	10/20/2006	176	< 0.500	< 0.500	< 0.500	0.720		73.5	<10.0	< 0.500	< 0.500	< 0.500			<50.0	328.41	16.66	311.75		
S-7	01/22/2007	< 50	< 0.50	< 0.50	< 0.50	<1.0		62	6.2 g,k	<1.0	<1.0	<1.0			<150	328.41	17.24	311.17		
S-7	04/13/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		6.5	<10	< 2.0	< 2.0	<2.0			<100	328.41	17.05	311.36		
S-7	07/09/2007	52 i,j	< 0.50	<1.0	<1.0	<1.0		39	<10	< 2.0	< 2.0	<2.0			<100	328.41	16.52	311.89		
S-7	10/22/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		33	<10	<2.0	< 2.0	<2.0			<100	328.41	17.03	311.38		
S-7	01/09/2008	<50 i	< 0.50	<1.0	<1.0	<1.0		28	<10	< 2.0	< 2.0	<2.0			<100	328.41	17.00	311.41		
S-7	04/11/2008	370	< 0.50	<1.0	1.2	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	328.41	16.71	311.70		
S-7	07/29/2008	< 50	< 0.50	< 1.0	<1.0	<1.0		21	<10	< 2.0	< 2.0	<2.0			<100	328.41	17.35	311.06		
S-7	10/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		18	<10	< 2.0	< 2.0	<2.0			<100	328.41	17.85	310.56		
S-7	01/21/2009	< 50	< 0.50	<1.0	<1.0	<1.0	·	17	<10	< 2.0	<2.0	<2.0			<100	328.41	17.41	311.00		
S-7	04/16/2009	< 50	< 0.50	<1.0	<1.0	<1.0		19	<10	< 2.0	< 2.0	<2.0			<100	328.41	16.72	311.69		
S-7	07/09/2009	< 50	< 0.50	<1.0	<1.0	<1.0		20	<10	< 2.0	< 2.0	<2.0			<100	328.41	17.91	310.50		
S-7	01/11/2010	< 50	< 0.50	<1.0	<1.0	<1.0		13	<10	<2.0	<2.0	< 2.0			<100	328.41	17.41	311.00		
S-7	07/06/2010	< 50	< 50	<1.0	<1.0	<1.0		11	<10					:	<100	328.41	17.11	311.30		
S-7	01/21/2011	< 50	< 0.50	< 0.50	< 0.50	<1.0		6.9	<10	<1.0	<1.0	<1.0			<150	328.41	16.85	311.56		
S-7	07/20/2011	< 50	< 0.50	< 0.50	< 0.50	<1.0		5.9	<10						<150	328.41	16.84	311.57		
S-7	01/06/2012	< 50	< 0.50	< 0.50	< 0.50	<1.0		5.7	<10	<1.0	<1.0	<1.0		'	<150	328.41	18.30	310.11		
S-7	01/04/2013	< 50	<0.50	<0.50	<0.50	<1.0		4.0	<10	<0.50	< 0.50	< 0.50			<150	328.41	16.78	311.63		

Well ID	Date	TPHg (µg/L)	B (μg/L)	T (μg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (µg/L)	TAME (µg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)		Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-8	03/07/1989	<50	1.2	1	<1	<3														
S-8	06/26/1989	< 50	0.8	1	<1	<3														
S-8	09/08/1989	< 50	< 0.5	<1	<1	<3														
S-8	12/14/1989	< 50	< 0.5	< 0.5	< 0.5	<1														
S-8	03/05/1990	< 50	< 0.5	0.5	< 0.5	<1														
S-8	06/14/1990	< 50	< 0.5	< 0.5	< 0.5	<1														
S-8	10/02/1990	< 50	< 0.5	< 0.5	< 0.5	< 0.5														
S-8	12/18/1990	< 50	2.9	7.0	1.0	6.4														
S-8	03/20/1991	<50a	0.8	1.8	2.6	5.2										327.00				***
S-8	06/26/1991	< 50	< 0.5	< 0.5	< 0.5	< 0.5										327.00				
S-8	09/05/1991	< 50	< 0.5	< 0.5	< 0.5	< 0.5										327.00				
S-8	12/13/1991	< 50	< 0.5	< 0.5	< 0.5	< 0.5										327.00	15.73	311.27		
S-8	03/11/1992	<30	< 0.3	< 0.3	< 0.3	< 0.3										327.00	14.64	312.36		
S-8	06/24/1992	< 50	1.4	1.9	< 0.5	< 0.5										327.00	15.77	311.23	,	
S-8	09/17/1992	< 50	< 0.5	< 0.5	< 0.5	< 0.5										327.00	15.37	311.63		
S-8	12/11/1992	< 50	< 0.5	< 0.5	< 0.5	< 0.5										327.00	14.94	312.06	****	
S-8	02/04/1993	< 50	< 0.5	< 0.5	< 0.5	< 0.5										327.00				
S-8	06/03/1993	< 50	< 0.5	< 0.5	< 0.5	< 0.5										327.00				
S-8	09/15/1993															327.00	14.91	312.09		
S-8	09/13/1994			-												327.00	15.16	311.84		
S-8	06/21/1995	< 50	< 0.5	< 0.5	< 0.5	< 0.5										327.00	14.11	312.89		
S-8	06/12/1996	< 50	< 0.5	< 0.5	< 0.5	< 0.5	<2.5									327.00	14.20	312.80		
S-8	06/25/1997	170	< 0.50	< 0.50	< 0.50	< 0.50	<2.5									327.00	14.42	312.58		0.5
S-8	06/19/1998	< 50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5									327.00	13.49	313.51		2.2
S-8	06/17/1999	<50.0	< 0.500	< 0.500	< 0.500	< 0.500	< 5.00									327.00	14.07	312.93		0.9
S-8	06/15/2000	Well ina	ccessible													327.00				
S-8	06/21/2000	<50.0	< 0.500	< 0.500	< 0.500	< 0.500	21.0									327.00	14.43	312.57		
S-8	11/29/2000	<50.0	< 0.500	< 0.500	< 0.500	< 0.500	9.46									327.00	14.44	312.56		2.2
S-8	03/07/2001	<50.0	< 0.500	< 0.500	< 0.500	< 0.500	4.21									327.00	13.69	313.31		2.1
S-8	06/18/2001	< 50	0.55	0.92	< 0.50	0.51		13						·		327.00	14.60	312.40		
S-8	09/17/2001	Unable t	o sample													327.00	15.07	311.93		
S-8	09/18/2001	Unable t	-													327.00				
S-8	12/31/2001	< 50	1.1	1.4	< 0.50	<0.50		8.4								327.00	14.02	312.98		
S-8	03/13/2002	Unable t														327.00	14.92	312.08		
S-8	06/18/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		19								327.00	15.37	311.63		
	-																			

Well ID	Date	TPHg (µg/L)	B (µg/L)	Τ (μg/L)	Ε (μg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (µg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-8	09/27/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		19								326.14	14.60	311.54		
S-8	12/27/2002	Well ina	ccessible													326.14				
S-8	01/07/2003	Well ina	ccessible													326.14				
S-8	03/24/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		25								326.14	14.58	311.56		
S-8	05/09/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		24	< 5.0							326.14	13.45	312.69		
S-8	07/08/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		46	< 5.0							326.14	15.19	310.95		
S-8	10/15/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		42	< 5.0							326.14	16.58	309.56		
S-8	01/06/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		50	< 5.0							326.14	16.27	309.87		
S-8	04/07/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		33	< 5.0							326.14	16.12	310.02		
S-8	07/27/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		18	< 5.0	<2.0	<2.0	<2.0			< 50	326.14	16.26	309.88		
S-8	10/29/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		25	< 5.0	<2.0	<2.0	<2.0			<50	326.14	15.93	310.21		
S-8	01/06/2005	< 50	< 0.50	< 0.50	< 0.50	<1.0		21	< 5.0	<2.0	<2.0	<2.0				326.14	15.79	310.35		
S-8	04/14/2005	< 50	< 0.50	< 0.50	< 0.50	< 0.50		11	< 5.0	< 0.50	< 0.50	< 0.50			<5.0	326.14	14.78	311.36		
S-8	07/29/2005	< 50	< 0.50	< 0.50	< 0.50	<1.0		13	< 5.0	<2.0	<2.0	<2.0			<50	326.14	16.51	309.63		
S-8	10/20/2005	< 50	< 0.50	< 0.50	< 0.50	<1.0		11	< 5.0	<2.0	<2.0	<2.0			<50	326.14	17.38	308.76		
S-8	01/26/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		9.65	<10.0	< 0.500	< 0.500	< 0.500			<50.0	326.14	16.55	309.59		
S-8	04/24/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		5.94	<10.0	< 0.500	< 0.500	< 0.500			<50.0	326.14	14.18	311.96		
S-8	07/12/2006	<50.0	< 0.500	< 0.500	< 0.500	<1.50		7.00	<10.0	< 0.500	< 0.500	< 0.500			<50.0	326.14	14.52	311.62	<u></u> '	
S-8	10/20/2006	<50.0		< 0.500	< 0.500	< 0.500		8.54	<10.0	< 0.500	< 0.500	< 0.500			<50.0	326.14	14.30	311.84		
S-8	01/22/2007	< 50	< 0.50	< 0.50	< 0.50	<1.0		11	<10	<1.0	<1.0	<1.0			<150	326.14	15.07	311.07		
S-8	04/13/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		9.0	<10	<2.0	<2.0	<2.0			<100	326.14	14.31	311.83		
S-8	07/09/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		12	<10	<2.0	<2.0	<2.0			<100	326.14	14.38	311.76		
S-8	10/22/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		22	<10	<2.0	<2.0	<2.0			<100	326.14	14.50	311.64		
S-8	01/09/2008	<50 i	< 0.50	<1.0	<1.0	<1.0		14	<10	<2.0	<2.0	<2.0			180	326.14	13.88	312.26		
S-8	04/11/2008	51	< 0.50	<1.0	<1.0	<1.0		25	<10	<2.0	<2.0	<2.0			<100	326.14	14.46	311.68		
S-8	07/29/2008	<50	< 0.50	<1.0	<1.0	<1.0		14	<10	<2.0	<2.0	<2.0			<100	326.14	15.45	310.69		
S-8	10/29/2008	<50	< 0.50	<1.0	<1.0	<1.0		12	<10	<2.0	<2.0	<2.0			<100	326.14	15.69	310.45		
S-8	01/21/2009	<50	< 0.50	<1.0	<1.0	<1.0		8.7	<10	<2.0	<2.0	<2.0			<100	326.14	14.91	311.23		
S-8	04/16/2009	<50	< 0.50	<1.0	<1.0	<1.0		8.1	<10	<2.0	<2.0	<2.0			<100	326.14	14.95	311.19		
S-8	07/09/2009	<50	< 0.50	<1.0	<1.0	<1.0		9.7	<10	<2.0	<2.0	<2.0			<100	326.14	15.36	310.78		
S-8	01/11/2010	< 50	< 0.50	<1.0	<1.0	<1.0		6.7	<10	<2.0	<2.0	<2.0			<100	326.14	14.98	311.16		
S-8	07/06/2010															326.14	14.75	311.39		
S-8	01/21/2011	< 50	< 0.50	< 0.50	< 0.50	1.2		5.3	<10	<1.0	<1.0	<1.0			<150	326.14	14.53	311.61		
S-8	07/20/2011														<150	326.14	14.85	311.29		
S-8	01/06/2012	< 50	< 0.50	< 0.50	< 0.50	<1.0		5.8	<10	<1.0	<1.0	<1.0			<150	326.14	16.02	310.12		
S-8	01/04/2013	<50	< 0.50	< 0.50	< 0.50	<1.0		3.5	<10	< 0.50	<0.50	< 0.50			<150	326.14	13.92	312.22		

Well ID	Date	TPHg (μg/L)	B (μg/L)	T (μg/L)	Ε (μg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-9	03/07/1989	<50	<0.5	<1	<1	<3														
S-9	06/26/1989	< 50	< 0.5	<1	<1	<3														
S-9	09/08/1989	< 50	1.7	2	<1	<3														
S-9	12/15/1989	< 50	0.5	< 0.5	< 0.5	<1				·									·	
S-9	03/06/1990	< 50	< 0.5	< 0.5	< 0.5	<1								'						
S-9	06/14/1990	< 50	< 0.5	< 0.5	< 0.5	<1														
S-9	10/02/1990	< 50	< 0.5	< 0.5	< 0.5	< 0.5					·				<del></del>	· 				
S-9	12/18/1990	< 50	20	27	7.1	35														
S-9	03/07/1989	< 50																		
S-9	06/26/1989	< 50																		
S-9	09/08/1989	< 50																		
S-9	12/15/1989	< 50																		
S-9	03/06/1990	< 50																		
S-9	06/14/1990	< 50																		
S-9	12/02/1990	< 50																		
S-9	12/18/1990	< 50															***			
S-9	03/20/1991	70a	0.7	0.7	< 0.5	1										328.24				
S-9	06/26/1991	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.24				
S-9	09/05/1991	<50	< 0.5	0.8	< 0.5	< 0.5		·								328.24				
S-9	12/13/1991	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.24	18.18	310.06		
S-9	03/11/1992	<30	< 0.3	< 0.3	< 0.3	< 0.3										328.24	17.37	310.87		
S-9	06/24/1992	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.24	18.45	309.79		
S-9	09/17/1992	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.24	17.88	310.36		
S-9	12/11/1992	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.24	17.34	310.90		
S-9	02/04/1993	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.24				
S-9	06/03/1993	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.24				
S-9	09/15/1993														سدجوهي	328.24	17.42	310.82		
S-9	12/09/1993	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.24	16.89	311.35		
S-9	03/04/1994	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.24	17.22	311.02		
S-9	06/16/1994	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.24	17.46	310.78		
S-9	09/13/1994	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.24	17.59	310.65		***
S-9	06/21/1995	< 50	< 0.5	< 0.5	< 0.5	< 0.5										328.24	17.03	311.21		
S-9	06/12/1996	< 50	< 0.5	< 0.5	< 0.5	<0.5	<2.5									328.24	16.76	311.48		
S-9	06/25/1997	< 50	< 0.50	< 0.50	< 0.50	< 0.50	2.8									328.24	16.89	311.35		1
S-9	06/19/1998	< 50	< 0.50	< 0.50	< 0.50	< 0.50	7.1									328.24	15.59	312.65		3.8

W	Vell ID	Date	TPHg (μg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
	S-9	06/17/1999	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	15.3									328.24	16.47	311.77		1.9
	S-9	06/15/2000	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	57.2									328.24	16.11	312.13		1.1
	S-9	11/29/2000	<50.0	< 0.500	< 0.500	< 0.500	< 0.500	76.5									328.24	17.30	310.94		1.1
	S-9	03/07/2001	<50.0	< 0.500	< 0.500	< 0.500	< 0.500	84.9									328.24	19.42	308.82		1.1
	S-9	06/18/2001	< 50	< 0.50	< 0.50	< 0.50	< 0.50		86								328.24	17.22	311.02		
	S-9	09/17/2001	< 50	< 0.50	< 0.50	< 0.50	< 0.50		130								328.24	17.66	310.58		
	S-9	12/31/2001	< 50	< 0.50	< 0.50	< 0.50	< 0.50		120								328.24	17.65	310.59	****	
	S-9	03/13/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		130								328.24	17.75	310.49		
	S-9	06/18/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		160								328.24	19.59	308.65		
	S-9	09/27/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		180								327.85	17.65	310.20		
	S-9	12/27/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		180	< 50	<2.0	<2.0	<2.0	2.8	<2.0	-	327.85	18.45	309.40		
	S-9	03/24/2003	<250	<2.5	<2.5	<2.5	<5.0		230								327.85	17.97	309.88	·	
	S-9	05/09/2003	<250	< 2.5	< 2.5	< 2.5	< 5.0		240	<25							327.85	17.68	310.17		
	S-9	07/08/2003	<250	< 2.5	< 2.5	< 2.5	< 5.0		250	<25		-					327.85	17.65	310.20		
	S-9	10/15/2003	<100	<1.0	<1.0	<1.0	< 2.0		210	<10							327.85	19.49	308.36		
	S-9	01/06/2004	<100	<1.0	<1.0	<1.0	< 2.0		290	<10							327.85	20.51	307.34		
	S-9	04/07/2004	<100	<1.0	<1.0	<1.0	< 2.0		250	<10							327.85	20.02	307.83		
	S-9	07/27/2004	<250	<2.5	9.1	2.7	9.8		270	<25	<10	<10	<10			<250	327.85	19.89	307.96		
	S-9	10/29/2004	<100	<1.0	<1.0	<1.0	< 2.0		240	<10	<4.0	<4.0	<4.0			<100	327.85	19.17	308.68		
	S-9	01/06/2005	<250	<2.5	<2.5	<2.5	< 5.0		340	<25	<10	<10	<10				327.85	19.65	308.20		
	S-9	04/14/2005	< 50	< 0.50	< 0.50	< 0.50	< 0.50		250	< 5.0	< 0.50	< 0.50	1.4			< 5.0	327.85	17.38	310.47		
	S-9	07/29/2005	<100	<1.0	<1.0	<1.0	< 2.0		250	<10	<4.0	<4.0	<4.0			<100	327.85	20.09	307.76		
	S-9	10/20/2005	<100	<1.0	<1.0	<1.0	< 2.0		200	<10	<4.0	<4.0	<4.0			<100	327.85	21.89	305.96		
	S-9	11/11/2005	<100	<1.0	<1.0	<1.0	<2.0		220	25							327.85	20.41	307.44		
	S-9	01/26/2006	55. <i>7</i>	< 0.500	< 0.500	< 0.500	< 0.500		174	<10.0	< 0.500	< 0.500	2.50			<50.0	327.85	20.56	307.29		
	S-9	04/24/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		202	<10.0	< 0.500	<0.500	2.29			< 50.0	327.85	18.39	309.46		
	S-9	07/12/2006	< 50.0	< 0.500	< 0.500	< 0.500	<1.50		158	<10.0	< 0.500	< 0.500	2.06			<50.0	327.85	18.60	309.25		
	S-9	10/20/2006	212	< 0.500	< 0.500	< 0.500	< 0.500		151	<10.0	< 0.500	< 0.500	1.25			<50.0	327.85	18.75	309.10		
	S-9	01/22/2007	82 h	< 0.50	< 0.50	< 0.50	<1.0		150	20 g	<1.0	<1.0	1.4			<150	327.85	17.92	309.93		
	S-9	04/13/2007	70 i,j	< 0.50	<1.0	<1.0	<1.0		140	26	< 2.0	<2.0	1.0 k			<100	327.85	18.14	309.71		
	S-9	07/09/2007	70 i,j	< 0.50	<1.0	<1.0	<1.0		120	<10	<2.0	< 2.0	1.2 k			<100	327.85	18.37	309.48		
	S-9	10/22/2007	59 i,j	< 0.50	<1.0	<1.0	<1.0		110	8.2 k	<2.0	<2.0	<2.0			<100	327.85	18.08	309.77		
		01/09/2008	<50 i	< 0.50	<1.0	<1.0	<1.0		73	<10	<2.0	<2.0	<2.0			130	327.85	17.20	310.65		
		04/11/2008	73	< 0.50	<1.0	<1.0	<1.0		55	<10	<2.0	<2.0	<2.0			<100	327.85	17.74	310.11		
		07/29/2008	85	< 0.50	<1.0	<1.0	<1.0		45	<10	<2.0	<2.0	<2.0			230	327.85	18.33	309.52		
	S-9	10/29/2008	58	< 0.50	<1.0	<1.0	<1.0		40	<10	<2.0	<2.0	<2.0			<100	327.85	18.89	308.96		

Well ID	Date	TPHg (µg/L)	Β (μg/L)	T (µg/L)	E (μg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-9	01/21/2009	51	< 0.50	<1.0	<1.0	<1.0		35	<10	<2.0	<2.0	<2.0			<100	327.85	18.21	309.64		
S-9	04/16/2009	< 50	< 0.50	<1.0	<1.0	<1.0		27	<10	< 2.0	<2.0	< 2.0			<100	327.85	17.48	310.37		
S-9	07/09/2009	< 50	< 0.50	<1.0	<1.0	<1.0		28	<10	<2.0	< 2.0	< 2.0			<100	327.85	18.60	309.25		
S-9	01/11/2010	< 50	< 0.50	<1.0	<1.0	<1.0		22	<10	< 2.0	< 2.0	< 2.0			<100	327.85	19.18	308.67		
S-9	07/06/2010	< 50	< 0.50	<1.0	<1.0	<1.0		16	<10						<100	327.85	17.81	310.04		
S-9	01/21/2011	< 50	< 0.50	< 0.50	< 0.50	1.8		13	<10	<1.0	<1.0	<1.0			<150	327.85	17.79	310.06		
S-9	07/20/2011	< 50	< 0.50	< 0.50	< 0.50	<1.0		13	<10						<150	327.85	18.02	309.83		
S-9	01/06/2012	< 50	< 0.50	< 0.50	< 0.50	<1.0		12	<10	<1.0	<1.0	<1.0			<150	327.85	19.31	308.54		
S-9	01/04/2013	< 50	< 0.50	< 0.50	< 0.50	<1.0		7.4	<10	< 0.50	< 0.50	< 0.50			<150	327.85	18.16	309.69		
S-9B	11/08/2005															330.47	43.12	287.35		
S-9B	11/11/2005	< 50	< 0.50	2.0	< 0.50	<1.0		23	< 5.0							330.47	45.25	285.22		
S-9B	01/26/2006	<50.0	< 0.500	1.68	< 0.500	< 0.500		20.6	<10.0	< 0.500	< 0.500	< 0.500			< 50.0	330.47	38.19	292.28		
S-9B	04/24/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		10.5	<10.0	< 0.500	< 0.500	< 0.500			< 50.0	330.47	30.31	300.16		
S-9B	07/12/2006	<50.0	< 0.500	< 0.500	< 0.500	<1.50		4.98	<10.0	< 0.500	< 0.500	< 0.500			<50.0	330.47	29.01	301.46		
S-9B	10/20/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		5.89	<10.0	< 0.500	< 0.500	< 0.500			< 50.0	330.47	31.25	299.22		
S-9B	01/22/2007	< 50	< 0.50	< 0.50	< 0.50	<1.0		4.9	<10	<1.0	<1.0	<1.0			<150	330.47	26.78	303.69		
S-9B	04/13/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		3.5	<10	< 2.0	<2.0	< 2.0			<100	330.47	23.51	306.96		
S-9B	07/09/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		3.0	<10	< 2.0	< 2.0	< 2.0			<100	330.47	30.15	300.32		
S-9B	10/22/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		5.8	<10	< 2.0	<2.0	< 2.0			<100	330.47	28.44	302.03		
S-9B	01/09/2008	<50 i	< 0.50	<1.0	<1.0	<1.0		2.9	<10	< 2.0	<2.0	< 2.0			190	330.47	24.22	306.25		
S-9B	04/11/2008	< 50	< 0.50	<1.0	<1.0	<1.0		3.1	<10	< 2.0	< 2.0	< 2.0			<100	330.47	24.20	306.27		
S-9B	07/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		4.1	<10	< 2.0	< 2.0	< 2.0			<100	330.47	31.69	298.78		
S-9B	10/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		4.1	<10	< 2.0	<2.0	< 2.0			<100	330.47	35.86	294.61		
S-9B	01/21/2009	< 50	< 0.50	<1.0	<1.0	<1.0		3.7	<10	<2.0	< 2.0	<2.0			<100	330.47	31.31	299.16		
S-9B	04/16/2009	< 50	< 0.50	<1.0	<1.0	<1.0		3.1	<10	< 2.0	< 2.0	< 2.0			<100	330.47	28.10	302.37		
S-9B	07/09/2009	< 50	< 0.50	<1.0	<1.0	<1.0		3.8	<10	< 2.0	< 2.0	<2.0			<100	330.47	33.76	296.71		
S-9B	01/11/2010	< 50	< 0.50	<1.0	<1.0	<1.0		4.7	<10	< 2.0	<2.0	<2.0			<100	330.47	36.93	293.54		
S-9B	07/06/2010															330.47	34.49	295.98		
S-9B	01/21/2011	< 50	< 0.50	0.73	0.58	3.2		2.9	<10	<1.0	<1.0	<1.0	<u>:</u>		<150	330.47	35.85	294.62		
S-9B	07/20/2011															330.47	33.95	296.52		
S-9B	01/06/2012	< 50	< 0.50	< 0.50	< 0.50	<1.0		4.1	<10	<1.0	<1.0	<1.0			<150	330.47	35.40	295.07		
S-9B	01/04/2013	<50	<0.50	<0.50	< 0.50	<1.0		3.8	<10	<0.50	< 0.50	<0.50			<150	330.47	45.16	285.31		
S-9C	11/08/2005														****	330.77	40.80	289.97		
S-9C	11/11/2005	<50	< 0.50	< 0.50	< 0.50	<1.0		10	< 5.0							330.77	42.87	287.90		
	-,, <b>-</b>			00	2.00	0			0.0							555.77	12.07	201.70		

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (μg/L)	Χ (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (µg/L)	Ethanol (µg/L)		Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-9C	01/26/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		7.05	<10.0	< 0.500	< 0.500	< 0.500			<50.0	330.77	37.40	293.37		
S-9C	04/24/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		4.86	<10.0	< 0.500	< 0.500	< 0.500			<50.0	330.77	28.04	302.73		
S-9C	07/12/2006	< 50.0	< 0.500	< 0.500	< 0.500	<1.50		1.94	<10.0	< 0.500	< 0.500	< 0.500			<50.0	330.77	28.96	301.81		
S-9C	10/20/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		1.06	<10.0	< 0.500	< 0.500	< 0.500			<50.0	330.77	30.47	300.30		
S-9C	01/22/2007	< 50	< 0.50	< 0.50	< 0.50	<1.0		0.64 k	<10	<1.0	<1.0	<1.0			<150	330.77	26.52	304.25		
S-9C	04/13/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		0.54 k	<10	< 2.0	< 2.0	< 2.0			<100	330.77	23.70	307.07		
S-9C	07/09/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		0.34 k	<10	< 2.0	< 2.0	< 2.0			<100	330.77	30.28	300.49		
S-9C	10/22/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		0.33 k	<10	< 2.0	< 2.0	< 2.0			<100	330.77	17.03	313.74		
S-9C	01/09/2008	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	< 2.0	< 2.0			150	330.77	24.20	306.57		
S-9C	04/11/2008	< 50	< 0.50	<1.0	<1.0	<1.0	·	<1.0	<10	< 2.0	< 2.0	< 2.0			<100	330.77	24.25	306.52		
S-9C	07/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			<100	330.77	31.55	299.22		
S-9C	10/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	330.77	35.54	295.23		
S-9C	01/21/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			<100	330.77	31.11	299.66		
S-9C	04/16/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			<100	330.77	28.29	302.48		
S-9C	07/09/2009	<50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			<100	330.77	33.62	297.15		
S-9C	01/11/2010	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			<100	330.77	36.55	294.22	·	
S-9C	07/06/2010															330.77	34.34	296.43		
S-9C	01/21/2011	< 50	< 0.50	1.0	0.79	4.2		<1.0	<10	<1.0	<1.0	<1.0			<150	330.77	35.59	295.18		
S-9C	07/20/2011			·												330.77	33.92	296.85		
S-9C	01/06/2012	< 50	< 0.50	< 0.50	< 0.50	<1.0		<1.0	<10	<1.0	<1.0	<1.0			<150	330.77	35.10	295.67		
S-9C	01/04/2013	<50	<0.50	<0.50	<0.50	<1.0		<0.50	<10	<0.50	<0.50	<0.50			<150	330.77	44.46	286.31		
S-10	08/11/1989	<50	<0.5	<1	<1	<3						***							·	
S-10	09/08/1989	< 50	< 0.5	<1	<1	<3											,			
	12/15/1989	< 50	< 0.5	< 0.5	< 0.5	<1														
S-10	03/06/1990	< 50	< 0.5	< 0.5	< 0.5	<1														
S-10	06/14/1990	< 50	< 0.5	< 0.5	< 0.5	<1														
S-10	10/02/1990	< 50	< 0.5	< 0.5	< 0.5	1.0								****		'				
S-10	12/18/1990	< 50	< 0.5	< 0.5	< 0.5	1.4														
S-10	03/20/1991	< 50	< 0.5	< 0.5	< 0.5	< 0.5										326.55				
S-10	06/26/1991	50	1.8	5.8	1.9	13				,						326.55				
S-10	09/05/1991	< 50	< 0.5	< 0.5	< 0.5	< 0.5			·							326.55				
S-10	12/13/1991	< 50	< 0.5	< 0.5	< 0.5	< 0.5										326.55	14.77	311.78		
S-10	03/11/1992	<30	< 0.3	< 0.3	< 0.3	< 0.3										326.55	14.16	312.39		
S-10	06/24/1992	< 50	< 0.5	< 0.5	< 0.5	< 0.5										326.55	14.83	311.72		
S-10	09/17/1992	< 50	< 0.5	< 0.5	<0.5	< 0.5										326.55	13.85	312.70		

Well ID	Date	TPHg (µg/L)	Β (μg/L)	T (µg/L)	E (µg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (µg/L)	Ethanol (µg/L)	TOC (ft MSL)		GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-10	12/11/1992	< 50	< 0.5	< 0.5	< 0.5	< 0.5										326.55	13.90	312.65		
S-10	02/04/1993	< 50	< 0.5	< 0.5	< 0.5	< 0.5										326.55				
S-10	06/03/1993	< 50	< 0.5	< 0.5	< 0.5	< 0.5										326.55				
S-10	09/15/1993															326.55	13.66	312.89		
S-10	09/13/1994															326.55	13.84	312.71		
S-10	06/21/1995															326.55	13.08	313.47		
S-10	06/12/1996	< 50	< 0.5	< 0.5	< 0.5	< 0.5	<2.5		***							326.55	13.34	313.21		
S-10	06/25/1997	< 50	< 0.50	< 0.50	< 0.50	< 0.50	2.8									326.55	13.28	313.27		2.4
S-10	06/19/1998	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5									326.55	12.41	314.14		1.8
S-10	06/17/1999	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	< 5.00									326.55	12.81	313.74		2.0
S-10	06/15/2000	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	< 2.50									326.55	13.27	313.28		2.1
S-10	11/29/2000	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	< 2.50									326.55	13.98	312.57		2.4
S-10	03/07/2001	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	< 2.50									326.55	13.40	313.15		2.5
S-10	06/18/2001	< 50	< 0.50	< 0.50	< 0.50	< 0.50		3.7								326.55	13.29	313.26		
S-10	09/17/2001	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0		~~~						326.55	13.61	312.94		
S-10	12/31/2001	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0								326.55	13.48	313.07		
S-10	03/13/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0								326.55	14.66	311.89		
S-10	06/18/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0								326.55	14.59	311.96		
S-10	09/27/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0								325.87	13.21	312.66		
S-10	12/27/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0	< 50	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0		325.87	13.50	312.37		
S-10	03/24/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 5.0								325.87	16.60	309.27		
S-10	05/09/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		1.7	< 5.0							325.87	13.07	312.80		
S-10	07/08/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		1.7	< 5.0							325.87	14.10	311.77		
S-10	10/15/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		0.69	< 5.0							325.87	14.75	311.12		
S-10	01/06/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		0.51	< 5.0							325.87	15.28	310.59		
S-10	04/07/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0							325.87	15.39	310.48		
S-10	07/27/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0	< 2.0	<2.0	<2.0			< 50	325.87	15.25	310.62		
S-10	10/29/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0	< 2.0	<2.0	< 2.0			< 50	325.87	15.23	310.64		
S-10	01/06/2005	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0	< 2.0	< 2.0	< 2.0				325.87	15.47	310.40		
S-10	04/14/2005	< 50	< 0.50	< 0.50	< 0.50	< 0.50	,	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50			< 5.0	325.87	13.24	312.63		
S-10	07/29/2005	< 50	< 0.50	< 0.50	< 0.50	<1.0	·	< 0.50	< 5.0	< 2.0	<2.0	< 2.0			< 50	325.87	15.08	310.79		
S-10	10/20/2005	<50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0	< 2.0	< 2.0	< 2.0			< 50	325.87	15.45	310.42		
S-10	01/26/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		< 0.500	<10.0	< 0.500	< 0.500	< 0.500			<50.0	325.87	14.85	311.02	,	-
S-10	04/24/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		< 0.500	<10.0	< 0.500	< 0.500	< 0.500			<50.0	325.87	13.90	311.97		
S-10	07/12/2006	<50.0	< 0.500	< 0.500	< 0.500	<1.50		< 0.500	<10.0	< 0.500	< 0.500	< 0.500			< 50.0	325.87	13.00	312.87		
S-10	10/20/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		< 0.500	<10.0	< 0.500	< 0.500	< 0.500			< 50.0	325.87	13.15	312.72		

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (µg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-10	01/22/2007	<50	< 0.50	< 0.50	< 0.50	<1.0		<1.0	<10	<1.0	<1.0	<1.0			<150	325.87	14.45	311.42		
S-10	04/13/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	< 2.0			<100	325.87	15.49	310.38		
S-10	07/09/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			<100	325.87	14.00	311.87		
S-10	10/22/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	<2.0	< 2.0			<100	325.87	14.11	311.76		
S-10	01/09/2008	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			<100	325.87	14.08	311.79		
S-10	04/11/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			<100	325.87	14.38	311.49		:
S-10	07/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	14	< 2.0	< 2.0	< 2.0			320	325.87	14.50	311.37		
S-10	10/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	< 2.0	<2.0			<100	325.87	14.80	311.07		
S-10	01/21/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	325.87	14.53	311.34		
S-10	04/16/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	325.87	13.92	311.95		
S-10	07/09/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	< 2.0	<2.0			<100	325.87	14.84	311.03		
S-10	01/11/2010	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	325.87	14.35	311.52		
S-10	07/06/2010															325.87	14.40	311.47		
S-10	01/21/2011	< 50	< 0.50	1.1	0.78	3.7		<1.0	<10	<1.0	<1.0	<1.0			<150	325.87	13.90	311.97		
S-10	07/20/2011															325.87	14.69	311.18		
S-10	01/06/2012	51	< 0.50	< 0.50	< 0.50	<1.0		<1.0	<10	<1.0	<1.0	<1.0			<150	325.87	14.35	311.52		
S-10	01/04/2013	<50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	<10	<0.50	< 0.50	< 0.50			<150	325.87	14.33	311.54		
S-11	09/23/2002																16.93			
S-11	09/27/2002	<50	< 0.50	< 0.50	< 0.50	< 0.50		< 5.0									16.95			
S-11	12/27/2002	< 50	< 0.50	< 0.50	< 0.50	< 0.50		<5.0	< 50	<2.0	<2.0	< 2.0	< 2.0	<2.0		327.48	16.40	311.08		
S-11	03/24/2003	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 5.0								327.48	17.25	310.23		
S-11	05/09/2003	<50	< 0.50	< 0.50	< 0.50	<1.0		0.54	< 5.0							327.48	16.37	311.11		
S-11	07/08/2003	<50	< 0.50	< 0.50	< 0.50	<1.0	'	< 0.50	< 5.0							327.48	17.17	310.31		
S-11	10/15/2003	<50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0							327.48	18.01	309.47		
S-11	01/06/2004	<50	< 0.50	1.4	< 0.50	<1.0		1.1	< 5.0							327.48	18.25	309.23		
S-11	04/07/2004	<50	< 0.50	< 0.50	< 0.50	<1.0		1.4	< 5.0							327.48	18.48	309.00		
S-11	07/27/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		2.3	< 5.0	< 2.0	< 2.0	< 2.0			< 50	327.48	18.49	308.99		
S-11	10/29/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		9.7	< 5.0	< 2.0	< 2.0	< 2.0			< 50	327.48	18.22	309.26		
S-11	01/06/2005	< 50	< 0.50	< 0.50	< 0.50	<1.0		15	< 5.0	<2.0	< 2.0	< 2.0				327.48	18.07	309.41		
S-11	04/14/2005	< 50	< 0.50	< 0.50	< 0.50	< 0.50		10	< 5.0	< 0.50	< 0.50	< 0.50			< 5.0	327.48	16.28	311.20		
S-11	07/29/2005	<50	< 0.50	< 0.50	< 0.50	<1.0		19	<5.0	<2.0	< 2.0	<2.0			< 50	327.48	17.98	309.50		
S-11	10/20/2005	<50	< 0.50	< 0.50	< 0.50	<1.0		24	< 5.0	<2.0	<2.0	<2.0			< 50	327.48	18.45	309.03		
S-11	01/26/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		27.7	<10.0	< 0.500	< 0.500	< 0.500			< 50.0	327.48	18.50	308.98		-
S-11	04/24/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		41.0	<10.0	< 0.500	< 0.500	< 0.500			< 50.0	327.48	16.61	310.87		
S-11	07/12/2006	<50.0	< 0.500	< 0.500	< 0.500	<1.50		33.3	<10.0	< 0.500	< 0.500	< 0.500			<50.0	327.48	16.44	311.04		

Well ID	Date	TPHg (µg/L)	Β (μg/L)	T (µg/L)	Ε (μg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-11	10/20/2006	53.5	< 0.500	< 0.500	< 0.500	< 0.500		38.2	<10.0	< 0.500	< 0.500	< 0.500			<50.0	327.48	16.61	310.87		
S-11	01/22/2007	< 50	< 0.50	< 0.50	< 0.50	<1.0		61	6.1 g,k	<1.0	<1.0	<1.0			<150	327.48	17.27	310.21		
S-11	04/13/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		60	<10	<2.0	<2.0	<2.0			<100	327.48	6.88	320.60		
S-11	07/09/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		59	<10	<2.0	<2.0	<2.0			<100	327.48	16.84	310.64		
S-11	10/22/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		60	6.2 k	<2.0	<2.0	<2.0		-	<100	327.48	17.11	310.37		
S-11	01/09/2008	<50 i	< 0.50	<1.0	<1.0	<1.0		52	<10	<2.0	<2.0	<2.0			<100	327.48	16.85	310.63		
S-11	04/11/2008	< 50	< 0.50	<1.0	<1.0	<1.0		36	<10	<2.0	<2.0	<2.0			<100	327.48	16.78	310.70		
S-11	07/29/2008	58	< 0.50	<1.0	<1.0	<1.0		31	<10	< 2.0	<2.0	<2.0			<100	327.48	17.31	310.17		
S-11	10/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		22	<10	<2.0	<2.0	<2.0			<100	327.48	17.85	309.63		
S-11	01/21/2009	< 50	< 0.50	<1.0	<1.0	<1.0		20	<10	<2.0	<2.0	< 2.0			<100	327.48	17.66	309.82		
S-11	04/16/2009	< 50	< 0.50	<1.0	<1.0	<1.0		20	<10	< 2.0	<2.0	< 2.0			<100	327.48	16.93	310.55		
S-11	07/09/2009	< 50	< 0.50	<1.0	<1.0	<1.0		17	<10	< 2.0	< 2.0	< 2.0			<100	327.48	17.74	309.74		
S-11	01/11/2010	< 50	< 0.50	<1.0	<1.0	<1.0		13	<10	< 2.0	<2.0	< 2.0			<100	327.48	17.61	309.87		
S-11	07/06/2010															327.48	17.17	310.31		
S-11	01/21/2011	< 50	< 0.50	< 0.50	< 0.50	<1.0		11	<10	<1.0	<1.0	<1.0			<150	327.48	17.21	310.27		
S-11	07/20/2011															327.48	17.10	310.38		
S-11	01/06/2012	< 50	< 0.50	< 0.50	< 0.50	<1.0		11	<10	<1.0	<1.0	<1.0			<150	327.48	18.18	309.30		
S-11	01/04/2013	< 50	< 0.50	< 0.50	<0.50	<1.0		9.1	<10	<0.50	<0.50	< 0.50			<150	327.48	17.01	310.47		
0.10												٠								
S-12	09/23/2002																14.74			
S-12	09/27/2002	<50	< 0.50	< 0.50	< 0.50	< 0.50		<5.0									17.95			
S-12	12/27/2002	<50	< 0.50	< 0.50	< 0.50	< 0.50		<5.0	<50	<2.0	<2.0	<2.0	<2.0	<2.0		322.76	16.92	305.84		
S-12	03/24/2003	<50	< 0.50	< 0.50	< 0.50	<1.0		<5.0								322.76	16.53	306.23		
S-12	05/09/2003	<50	< 0.50	< 0.50	< 0.50	<1.0		1.5	< 5.0							322.76	17.73	305.03		
S-12	07/08/2003	<50	< 0.50	< 0.50	< 0.50	<1.0		1.2	< 5.0							322.76	17.18	305.58		
S-12	10/15/2003	<50	< 0.50	< 0.50	< 0.50	<1.0		1.1	< 5.0							322.76	17.54	305.22		
S-12	01/06/2004	<50	< 0.50	1.1	< 0.50	<1.0		1.1	< 5.0							322.76	17.45	305.31	·	
S-12	04/07/2004	<50	< 0.50	< 0.50	< 0.50	<1.0		0.76	<5.0							322.76	16.85	305.91		
S-12	07/27/2004	<50	< 0.50	< 0.50	< 0.50	<1.0		0.65	< 5.0	<2.0	<2.0	<2.0			< 50	322.76	17.89	304.87		
S-12	10/29/2004	<50 e	< 0.50	< 0.50	< 0.50	<1.0		1.3	<5.0	<2.0	<2.0	<2.0		~~~	< 50	322.76	17.84	304.92		
S-12	04/14/2005	<50	< 0.50	< 0.50	< 0.50	< 0.50		0.79	< 5.0	< 0.50	< 0.50	< 0.50			< 5.0	322.76	15.98	306.78		
S-12	07/29/2005	< 50	< 0.50	< 0.50	< 0.50	<1.0		0.69	< 5.0	<2.0	< 2.0	<2.0			< 50	322.76	17.32	305.44		
S-12	10/20/2005	<50	< 0.50	< 0.50	< 0.50	<1.0		0.66	<5.0	< 2.0	<2.0	<2.0			<50	322.76	16.58	306.18		
S-12	01/26/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		< 0.500	<10.0	< 0.500	< 0.500	< 0.500			<50.0	322.76	15.94	306.82		
S-12	04/24/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		0.740	<10.0	< 0.500	< 0.500	< 0.500			<50.0	322.76	17.31	305.45		
S-12	07/12/2006	<50.0	< 0.500	< 0.500	< 0.500	<1.50		< 0.500	<10.0	< 0.500	< 0.500	< 0.500			< 50.0	322.76	16.70	306.06		

Well ID	Date	TPHg (µg/L)	B (μg/L)	Τ (μg/L)	E (μg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (µg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (μg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-12	10/20/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		0.520	<10.0	< 0.500	< 0.500	< 0.500			<50.0	322.76	17.63	305.13		
S-12	01/22/2007	<50	< 0.50	< 0.50	< 0.50	<1.0		0.70 k	<10	<1.0	<1.0	<1.0			<150	322.76	17.05	305.71		
S-12	04/13/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		0.70 k	<10	< 2.0	< 2.0	< 2.0			<100	322.76	17.12	305.64		
S-12	07/09/2007	51 i,j	< 0.50	<1.0	<1.0	<1.0		0.59 k	<10	<2.0	< 2.0	< 2.0			<100	322.76	16.85	305.91		
S-12	10/22/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		0.92	<10	< 2.0	< 2.0	< 2.0			<100	322.76	16.40	306.36		
S-12	01/09/2008	<50 i	< 0.50	<1.0	<1.0	<1.0		0.67 k	<10	< 2.0	< 2.0	< 2.0			<100	322.76	16.50	306.26		
S-12	04/11/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	<2.0	< 2.0		·	<100	322.76	16.30	306.46		
S-12	07/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			140	322.76	17.00	305.76		
S-12	10/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	<2.0	< 2.0			<100	322.76	17.61	305.15		
S-12	01/21/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	<2.0	< 2.0			<100	322.76	17.59	305.17		
S-12	04/16/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	<2.0	< 2.0			<100	322.76	16.74	306.02		
S-12	07/09/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	<2.0	< 2.0			<100	322.76	17.25	305.51		
S-12	01/11/2010	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			<100	322.76	16.88	305.88		
S-12	07/06/2010															322.76	17.65	305.11		
S-12	01/21/2011	< 50	< 0.50	< 0.50	< 0.50	<1.0		<1.0	<10	<1.0	< 1.0	<1.0			<150	322.76	17.08	305.68		
S-12	07/20/2011															322.76	17.77	304.99		
S-12	01/06/2012	< 50	< 0.50	< 0.50	< 0.50	<1.0		<1.0	<10	<1.0	<1.0	<1.0			<150	322.76	17.17	305.59		
S-12	01/04/2013	< 50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	<10	< 0.50	< 0.50	< 0.50			<150	322.76	17.80	304.96		,
S-14	11/08/2005															324.90	17.45	307.45		
S-14	11/11/2005	<50 e	< 0.50	< 0.50	< 0.50	<1.0		< 0.50	< 5.0							324.90	17.63	307.27		
S-14	04/24/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		< 0.500	<10.0	< 0.500	< 0.500	< 0.500	****		< 50.0	324.90	15.56	309.34		
S-14	07/12/2006															324.90	16.77	308.13		
S-14	10/20/2006	< 50.0	0.560	1.08	< 0.500	0.630		< 0.500	<10.0	< 0.500	< 0.500	< 0.500			<50.0	324.90	17.26	307.64		
S-14	01/22/2007															324.90	17.54	307.36		
S-14	04/13/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			<100	324.90	17.10	307.80		
S-14	10/22/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	<2.0	<2.0			<100	324.90	17.56	307.34		
S-14	04/11/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			<100	324.90	17.23	307.67		
S-14	07/29/2008															324.90	18.30	306.60		
S-14	10/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			<100	324.90	18.62	306.28		
S-14	04/16/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			<100	324.90	17.40	307.50		
S-14	07/09/2009	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	< 2.0	< 2.0			<100	324.90	18.46	306.44		
S-14	01/11/2010	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100	324.90	18.45	306.45	·	
S-14	07/06/2010															324.90	18.62	306.28		
S-14	01/21/2011	< 50	< 0.50	< 0.50	< 0.50	1.6		<1.0	<10	<1.0	<1.0	<1.0			<150	324.90	17.80	307.10		
S-14	07/20/2011															324.90	18.19	306.71		

Well ID	Date	TPHg (µg/L)	B (μg/L)	Τ (μg/L)	E (μg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (μg/L)		Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-14	01/06/2012	< 50	< 0.50	< 0.50	< 0.50	<1.0		<1.0	<10	<1.0	<1.0	<1.0			<150	324.90	19.91	304.99		
S-14	01/04/2013	<50	<0.50	<0.50	<0.50	<1.0		<0.50	<10	<0.50	<0.50	<0.50			<150	324.90	17.44	307.46		
S-15	04/24/2006	<50.0	< 0.500	<0.500	<0.500	<0.500		<0.500	<10.0	<0.500	< 0.500	<0.500			<50.0	***	24.00			
S-15	07/12/2006																23.85			
S-15	10/20/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		< 0.500	<10.0	< 0.500	< 0.500	< 0.500			<50.0		23.87			
S-15	01/22/2007	·															26.03			
S-15	04/13/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	<2.0	< 2.0	< 2.0			<100		24.29			
S-15	10/22/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	< 2.0			<100		24.34			
S-15	04/11/2008	< 50	< 0.50	<1.0	<1.0	<1.0		<1.0	<10	< 2.0	< 2.0	<2.0			<100		23.90			
S-15	07/29/2008																23.91			
S-15	10/29/2008																24.02			
S-15	04/16/2009	Insufficie	ent water	r													24.42			
S-15	07/09/2009	Insufficie	ent water														23.98			
S-15	01/11/2010	Insufficie	ent water	1													23.91			
S-15	07/06/2010																23.90			
S-15	01/21/2011	Insufficie	ent water														23.00			
S-15	07/20/2011																23.86			
S-15	01/06/2012	< 50	< 0.50	< 0.50	< 0.50	<1.0		<1.0	<10	<1.0	<1.0	<1.0			<150		23.91			
S-15	01/04/2013	Insuffici	ent wate	er												329.35	24.10	305.25		
SR-1	10/11/1989	200	100	<1	<10	10														
SR-1	12/14/1989	500	210	< 0.5	16	16														
SR-1	03/05/1990	64	20	< 0.5	1.5	4.0														
SR-1	06/14/1990	60	17	< 0.5	1.9	1.0														
SR-1	10/02/1990	< 50	5.0	< 0.5	< 0.5	< 0.5														,
SR-1	12/18/1990	< 5.0	28	5.5	4.5	4.5							·							
SR-1	03/04/1994					·				;						329.78	16.34	313.44		
SR-1	06/16/1994															329.78	16.72	313.06		
SR-1	12/31/2001															329.78	15.31	314.47		
SR-1	04/07/2004															328.33	30.79	297.54		
SR-1	07/27/2004	< 500	< 5.0	< 5.0	< 5.0	11		44	3,000	<20	<20	<20			< 500	328.33	30.72	297.61		
SR-1	08/04/2004	62	< 0.50	< 0.50	2.6	13										328.33	30.77	297.56		
SR-1	10/29/2004	< 500	< 5.0	< 5.0	< 5.0	<10		11	1,400	<20	<20	<20			< 500	328.33	30.85	297.48		
SR-1	01/06/2005	<250	< 2.5	<2.5	6.8	31		20	2,800	<10	<10	<10				328.33	30.92	297.41		
SR-1	04/14/2005	170	12	< 0.90	11	1.5		190	2,200	< 0.90	< 0.90	< 0.90			<9.0	328.33	30.73	297.60		·

Well ID	Date	TPHg (µg/L)	Β (μg/L)	T (µg/L)	Ε (μg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
SR-1	07/29/2005	<100	<1.0	<1.0	<1.0	3.7		7.6	1,500	<4.0	<4.0	<4.0			<100	328.33	24.53	303.80		
SR-1	10/20/2005	190	<1.0	<1.0	5.4	35		4.3	1,200	<4.0	<4.0	<4.0			<100	328.33	31.00	297.33		
SR-1	01/26/2006	<50.0	4.65	< 0.500	1.79	18.8		4.25	556	< 0.500	< 0.500	< 0.500			< 50.0	328.33	30.89	297.44		^_
SR-1	04/24/2006	<50.0	2.76	< 0.500	1.36	< 0.500		42.8	180	< 0.500	< 0.500	< 0.500			<50.0	328.33	14.94	313.39		
SR-1	07/12/2006	<50.0	0.950	< 0.500	< 0.500	<1.50		3.24	171	< 0.500	< 0.500	< 0.500			<50.0	328.33	14.71	313.62		
SR-1	10/20/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		< 0.500	<10.0	< 0.500	< 0.500	< 0.500			<50.0	328.33	15.84	312.49		
SR-1	01/22/2007	< 50	0.48 k	< 0.50	0.60	<1.0		0.70 k	46	<1.0	<1.0	<1.0			<150	328.33	15.25	313.08		
SR-1	04/13/2007	61 i	0.43 k	<1.0	0.26 k	<1.0		9.4	62	< 2.0	< 2.0	< 2.0			<100	328.33	14.78	313.55		
SR-1	07/09/2007	<50 i	0.44 k	<1.0	0.69 k	<1.0		3.5	19	< 2.0	< 2.0	<2.0			<100	328.33	14.44	313.89		
SR-1	10/22/2007	<50 i	< 0.50	<1.0	0.56 k	<1.0		9.6	31	<2.0	<2.0	<2.0			<100	328.33	15.31	313.02		
SR-1	01/09/2008	53 i	< 0.50	<1.0	3.5	2.6		5.6	12	< 2.0	<2.0	<2.0			<100	328.33	14.39	313.94		
SR-1	04/11/2008	< 50	< 0.50	<1.0	<1.0	<1.0		4.7	16	<2.0	<2.0	<2.0			<100	328.33	15.00	313.33		
SR-1	07/29/2008	100	< 0.50	<1.0	1.7	<1.0		4.4	23	<2.0	<2.0	<2.0			<100	328.33	15.70	312.63		
SR-1	10/29/2008	54	< 0.50	<1.0	<1.0	<1.0		8.3	61	<2.0	<2.0	<2.0			<100	328.33	16.05	312.28		
SR-1	01/21/2009	68	< 0.50	<1.0	<1.0	<1.0		26	310	<2.0	<2.0	<2.0			<100	328.33	15.02	313.31		
SR-1	04/16/2009	62	< 0.50	<1.0	<1.0	<1.0		8.0	38	<2.0	<2.0	<2.0			<100	328.33	14.69	313.64		
SR-1	07/09/2009	87	< 0.50	<1.0	<1.0	<1.0		26	150	<2.0	<2.0	<2.0			<100	328.33	15.91	312.42		
SR-1	01/11/2010	< 50	< 0.50	<1.0	<1.0	<1.0		12	230	<2.0	<2.0	<2.0			<100	328.33	15.25	313.08		
SR-1	07/06/2010	< 50	< 0.50	<1.0	<1.0	<1.0		15	300						<100	328.33	15.28	313.05		
SR-1	01/21/2011	< 50	< 0.50	< 0.50	< 0.50	<1.0		3.2	85	<1.0	<1.0	<1.0			<150	328.33	15.02	313.31		
SR-1	07/20/2011	< 50	< 0.50	< 0.50	< 0.50	<1.0		8.3	180						<150	328.33	15.42	312.91		
SR-1	01/06/2012	<50	< 0.50	< 0.50	< 0.50	<1.0		2.4	60	<1.0	<1.0	<1.0		,	<150	328.33	16.56	312.91		
SR-1	01/04/2013	59	< 0.50	< 0.50	<0.50	<1.0		4.4	160	< 0.50	<0.50	< 0.50			<150	328.33	14.39	313.94		
	, , , ,				0.00	2.0			100	0.00	10.00	10.00			130	320.33		313.71		
SR-2	10/11/1989	880	<10	1.0	29	33														
SR-2	12/14/1989	1100	17	< 0.5	100	67														
SR-2	03/05/1990	140	3.0	<0.5	12	7.0														
SR-2	06/14/1990	<50	<0.5	<0.5	2.6	<1														
SR-2	10/02/1990	<50	<0.5	<0.5	0.5	<0.5														
SR-2	12/18/1990	<50	1.6	1.4	1.6	2.7														
SR-2	03/04/1994			1. <del>1</del>												220.25	14.20	212.06		
SR-2	06/16/1994															328.35	14.39	313.96		
SR-2	12/31/2001															328.35	14.48	313.87		
SR-2 SR-2	09/27/2002		<10	~10	 <10	 -10		 E 000								328.35	13.62	314.73		
SR-2 SR-2		<1,000		<10	<10	<10		5,000	1 (00							327.91	14.20	313.71		
	12/27/2002	<1,000	<10	<10	<10	<10		4,800	1,600	<10	<10	<10	<10	<10		327.91	13.33	314.58		
SR-2	03/24/2003	<5,000	<50	<50	< 50	<100		10,000								327.91	13.75	314.16		

Well ID	Date	TPHg (µg/L)	B (µg/L)	Τ (μg/L)	E (μg/L)	Χ (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
SR-2	05/09/2003	<5,000	< 50	< 50	80	290		13,000	6,100							327.91	13.40	314.51		
SR-2	07/08/2003	<5,000	< 50	< 50	< 50	<100		12,000	4,800							327.31	30.48	296.83		
SR-2	10/15/2003	< 500	< 5.0	< 5.0	< 5.0	20		1,200	9,800							327.31	15.38	311.93		
SR-2	01/06/2004	<1,300	<13	<13	<13	<25		500	17,000							327.31	31.47	295.84		
SR-2	04/07/2004	<1,300	<13	<13	<13	<25		280	10,000							327.31	31.54	295.77		
SR-2	07/27/2004	<1,300	<13	<13	<13	<25		63	9,500	< 50	< 50	< 50			<1,300	327.31	31.35	295.96		
SR-2	10/29/2004	<1,300	<13	<13	<13	<25		47	7,600	< 50	< 50	< 50			<1,300	327.31	30.50	296.81		
SR-2	01/06/2005	<1,300	<13	<13	<13	<25		23	6,000	< 50	< 50	< 50				327.31	31.38	295.93		,
SR-2	04/14/2005	<150	<1.5	<1.5	<1.5	1.7		27	6,300	<1.5	<1.5	<1.5		`	<15	327.31	31.28	296.03		
SR-2	07/29/2005	< 500	< 5.0	< 5.0	<5.0	<10		14	5,400	<20	<20	<20	·		< 500	327.31	22.71	304.60		
SR-2	10/20/2005	< 500	< 5.0	<5.0	< 5.0	<10		< 5.0	3,600	<20	<20	<20			< 500	327.31	31.31	296.00		
SR-2	01/26/2006	< 50.0	< 0.500	< 0.500	1.56	7.72		6.37	1,620	< 0.500	< 0.500	< 0.500			<50.0	327.31	31.60	295.71		
SR-2	04/24/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		13.1	544	< 0.500	< 0.500	< 0.500			< 50.0	327.31	12.86	314.45		
SR-2	07/12/2006	<50.0	0.950	< 0.500	< 0.500	<1.50		3.00	941	< 0.500	< 0.500	< 0.500			< 50.0	327.31	12.65	314.66		
SR-2	10/20/2006	96.0	< 0.500	< 0.500	< 0.500	< 0.500		9.56	881	< 0.500	< 0.500	< 0.500			< 50.0	327.31	14.10	313.21		
SR-2	01/22/2007	< 50	< 0.50	< 0.50	< 0.50	<1.0		2.8	1,100	<1.0	<1.0	<1.0			<150	327.31	13.47	313.84		
SR-2	04/13/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		6.9	520	< 2.0	< 2.0	< 2.0			<100	327.31	12.89	314.42		
SR-2	07/09/2007	58 i,j	0.14 k	<1.0	<1.0	<1.0		21	720	<2.0	<2.0	< 2.0			<100	327.31	12.03	315.28		
SR-2	10/22/2007	<50 i	< 0.50	<1.0	<1.0	<1.0		2.0	69	< 2.0	<2.0	<2.0			<100	327.31	13.51	313.80		
SR-2	01/09/2008	<50 i	0.17 M	<1.0	<1.0	<1.0		8.7	100	< 2.0	< 2.0	< 2.0			<100	327.31	13.63	313.68		
SR-2	04/11/2008	< 50	< 0.50	<1.0	<1.0	<1.0		8.3	280	< 2.0	< 2.0	<2.0			<100	327.31	13.21	314.10		
SR-2	07/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		1.2	22	< 2.0	<2.0	<2.0			<100	327.31	14.81	312.50		
SR-2	10/29/2008	< 50	< 0.50	<1.0	<1.0	<1.0		1.6	21	< 2.0	<2.0	<2.0			<100	327.31	15.10	312.21		
SR-2	01/21/2009	< 50	< 0.50	<1.0	<1.0	<1.0		1.6	70	< 2.0	< 2.0	<2.0			<100	327.31	12.79	314.52		
SR-2	04/16/2009	< 50	< 0.50	<1.0	<1.0	<1.0		2.3	73	<2.0	< 2.0	<2.0			<100	327.31	12.64	314.67		
SR-2	07/09/2009	< 50	< 0.50	<1.0	<1.0	<1.0		4.0	63	< 2.0	<2.0	<2.0			<100	327.31	14.07	313.24		
SR-2	01/11/2010	83	< 0.50	<1.0	<1.0	<1.0		4.8	220	< 2.0	< 2.0	<2.0			<100	327.31	13.04	314.27		
SR-2	07/06/2010	2100	28	< 2.0	21	< 2.0		38	820						<200	327.31	14.43	312.88		
SR-2	07/06/2010															327.31	13.19	314.12		
SR-2	01/21/2011	< 50	< 0.50	< 0.50	< 0.50	<1.0		1.3	53	<1.0	<1.0	<1.0			<150	327.31	13.04	314.27		
SR-2	07/20/2011															327.31	13.44	313.87		
SR-2	01/06/2012	< 50	< 0.50	< 0.50	< 0.50	<1.0		1.4	36	<1.0	<1.0	<1.0			<150	327.31	14.25	313.06		
SR-2	01/04/2013	<50	<0.50	<0.50	<0.50	<1.0		1.1	<10	<0.50	<0.50	<0.50			<150	327.31	12.30	315.01		
SR-3	12/11/1989	500	92	10	43	100														
SR-3	12/14/1989	2,400	310	27	170	340														

Well ID	Date	TPHg (µg/L)	Β (μg/L)	T (µg/L)	E (μg/L)	X (µg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (μg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
SR-3	03/05/1990	70	15	0.8	5.8	10														
SR-3	06/14/1990	470	59	2.3	35	50														
SR-3	10/02/1990	1,700	91	6.2	7.0	100														
SR-3	12/18/1990	140	10	0.8	7.5	14														
SR-3	03/04/1994															329.11	14.66	314.45		
SR-3	06/16/1994															329.11	14.96	314.15		
SR-3	12/31/2001															329.11	13.60	315.51		
SR-3	09/27/2002	<2,500	<25	<25	<25	<25		11,000								328.65	14.75	313.90		
SR-3	12/27/2002	<2,000	<20	<20	<20	<20		5,100	4,600	<20	<20	<20	<20	<20		328.65	13.65	315.00		
SR-3	03/24/2003	<2,500	<25	<25	<25	< 50		3,700								328.65	13.52	315.13		
SR-3	05/09/2003	<1,000	15	<10	19	48		3,700	8,400							328.65	12.15	316.50		
SR-3	07/08/2003	<1,000	<10	<10	<10	<20		2,800	8,300						· 	327.50	30.00	297.50		
SR-3	10/15/2003	310	3.2	<2.5	9.1	30		240	3,600							327.50	15.39	312.11		
SR-3	01/06/2004	< 500	< 5.0	< 5.0	< 5.0	<10		26	3,300							327.50	30.29	297.21		
SR-3	04/07/2004	< 50	< 0.50	< 0.50	< 0.50	<1.0		4.4	370							327.50	15.49	312.01		
SR-3	07/27/2004	<50	< 0.50	< 0.50	< 0.50	<1.0	·	9.0	390	<2.0	<2.0	<2.0			< 50	327.50	15.34	312.16		
SR-3	10/29/2004	<100	<1.0	<1.0	<1.0	<2.0		15	780	<4.0	<4.0	<4.0			<100	327.50	15.22	312.28		~~~
SR-3	01/06/2005	<50	< 0.50	< 0.50	< 0.50	<1.0		6.3	250	<2.0	<2.0	<2.0				327.50	15.08	312.42		
SR-3	04/14/2005	58	0.76	< 0.50	1.5	< 0.50		46	2,200	< 0.50	< 0.50	< 0.50			< 5.0	327.50	30.53	296.97		
SR-3	07/29/2005	< 50	< 0.50	< 0.50	< 0.50	<1.0		6.7	490	<2.0	<2.0	<2.0			<50	327.50	21.81	305.69		
SR-3	10/20/2005	< 50	< 0.50	< 0.50	< 0.50	<1.0		3.3	76	<2.0	<2.0	<2.0			<50	327.50	29.19	298.31		
SR-3	01/26/2006	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500		3.34	84.9	< 0.500	< 0.500	< 0.500			<50.0	327.50	31.00	296.50		
SR-3	04/24/2006	< 50.0	1.67	< 0.500	0.640	< 0.500		36.4	315	< 0.500	< 0.500	< 0.500			<50.0	327.50	12.42	315.08		
SR-3	07/12/2006	< 50.0	0.950	< 0.500	< 0.500	<1.50		9.73	724	< 0.500	< 0.500	< 0.500			<50.0	327.50	12.75	314.75		
SR-3	10/20/2006	73.3	< 0.500	< 0.500	< 0.500	< 0.500		5.64	847	< 0.500	< 0.500	< 0.500			<50.0	327.50	13.93	313.57		
SR-3	01/22/2007	56	< 2.0	< 2.0	<2.0	<4.0		5.6	1,300	<4.0	<4.0	<4.0			<600	327.50	13.31	314.19		
SR-3	04/13/2007	66 i,j	< 5.0	<10	<10	<10		16	2,400	<20	<20	<20			<1,000	327.50	13.61	313.89		
SR-3	07/09/2007	150 i,j	0.97	<1.0	0.33 k	<1.0		19	1,300	<2.0	<2.0	<2.0			<100	327.50	11.87	315.63		
SR-3	10/22/2007	51 i	< 0.50	<1.0	<1.0	<1.0		8.3	950	<2.0	<2.0	<2.0			<100	327.50	13.40	314.10		
SR-3	01/09/2008	<50 i	< 0.50	<1.0 ·	<1.0	<1.0		5.2	610	<2.0	<2.0	<2.0			<100	327.50	13.61	313.89		
SR-3	04/11/2008	66	< 0.50	<1.0	<1.0	<1.0		9.3	830	<2.0	<2.0	<2.0			<100	327.50	14.11	313.39		
SR-3	07/29/2008	60	< 0.50	<1.0	<1.0	<1.0		7.1	570	<2.0	<2.0	<2.0			<100	327.50	14.85	312.65		and and and
SR-3	10/29/2008	52	< 0.50	<1.0	<1.0	<1.0		4.6	390	<2.0	<2.0	<2.0			<100	327.50	14.03	312.56		
SR-3	01/21/2009	320	4.0	<1.0	1.8	<1.0		11	760	<2.0	<2.0	<2.0			<100	327.50	12.47	315.03		
SR-3	04/16/2009	80	0.59	<1.0	<1.0	<1.0		5.8	320	<2.0	<2.0	<2.0			<100	327.50	12.49	315.01		
SR-3	07/09/2009	54	< 0.50	<1.0	<1.0	<1.0		4.5	250	<2.0	<2.0	<2.0			<100	327.50	13.87	313.63		
	-														100	52,.00	10.01	310.00		

Well ID	Date	TPHg (µg/L)	Β (μg/L)	T (µg/L)	E (μg/L)	X (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (µg/L)	Ethanol (μg/L)		Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
SR-3	01/11/2010	190	1.7	<1.0	<1.0	<1.0		7.2	390	<2.0	< 2.0	< 2.0			<100	327.50	12.73	314.77		
SR-3	07/06/2010	100	< 0.50	<1.0	<1.0	<1.0		2.3	110						<100	327.50	13.14	314.36		
SR-3	01/21/2011	63	< 0.50	< 0.50	< 0.50	<1.0		1.8	85	<1.0	<1.0	<1.0			<150	327.50	12.74	314.76		
SR-3	07/20/2011	< 50	< 0.50	< 0.50	< 0.50	<1.0		1.4	63	<u></u> -					<150	327.50	13.28	314.22		
SR-3	01/06/2012	< 50	< 0.50	< 0.50	< 0.50	<1.0		1.3	23	<1.0	<1.0	<1.0			<150	327.50	14.53	312.97		<del></del>
SR-3	01/04/2013	110	<0.50	<0.50	<0.50	<1.0		1.4	62	<0.50	<0.50	<0.50			<150	327.50	11.91	315.59		
T-1	06/18/2002	<5,000	<50	<50	<50	<50		20,000		· 			, and , and , and				12.31			
T-2	09/17/2001	<5,000	<25	<25	<25	<25	·	29,000									11.48			
T-2	12/31/2001	<5,000	< 50	< 50	< 50	< 50		31,000			****						4.96			
T-2	03/13/2002	<5,000	< 50	< 50	< 50	< 50		48,000									9.76			
T-2	06/18/2002	<20,000	<200	<200	< 200	<200		100,000								·	12.58			
T-2	09/27/2002	240	0.55	2.8	1.8	2.6		39									8.15			
T-2	12/27/2002	2,100	7.8	17	< 0.50	11		790	1,200	<2.0	< 2.0	2.7	< 2.0	<2.0			6.75			
T-2	03/24/2003	550	<2.5	<2.5	< 2.5	< 5.0		310									11.68			
T-2	05/09/2003	220	0.66	0.55	< 0.50	1.8		100	92								6.40			
T-2	07/08/2003	< 500	13	7.4	< 5.0	22		990	120								8.16			
T-2	10/15/2003	220 d	< 0.50	< 0.50	< 0.50	<1.0		13	23								11.15			
T-2	01/06/2004	710	< 0.50	< 0.50	< 0.50	1.2		14	9.2								9.10			
T-2	04/07/2004	570 d	5.4	< 0.50	< 0.50	1.2		5.6	11								10.54			
T-2	07/27/2004	270	17	1.2	< 0.50	2.0		2.9	7.9	< 2.0	<2.0	< 2.0			< 50		9.89			
T-2	10/29/2004	180	< 0.50	< 0.50	< 0.50	<1.0		4.2	23	< 2.0	< 2.0	< 2.0			< 50		9.42		·	
T-2	01/06/2005	1,100	0.83	< 0.50	< 0.50	3.5		3.0	12	<2.0	<2.0	<2.0					7.98			
T-3	06/18/2002														***************************************		Dry			
T-4	06/18/2002	<10,000	<100	<100	<100	<200		97,000									13.50			
T-4	12/27/2002	550	5.3	16	0.60	39		140	120	< 2.0	<2.0	<2.0	<2.0	<2.0			7.65			
T-4	03/24/2003	1,400	< 0.50	1.0	1.2	3.6		15		***							12.88			
T-4	05/09/2003	< 50	< 0.50	< 0.50	< 0.50	1.6		14	5.2								7.59			
T-4	07/08/2003	730	26	8.9	10	19		1,000	150								9.33			
T-4	10/15/2003	1,200	15	6.1	2.8	11		310	980			***					11.80			
T-4	01/06/2004	68	1.1	< 0.50	< 0.50	<1.0		12	< 5.0								9.78			
T-4	04/07/2004	1,600	5.1	0.57	< 0.50	2.3		6.1	< 5.0								11.15			
T-4	07/27/2004	590	5.3	0.83	0.52	2.2		4.8	7.5	< 2.0	<2.0	< 2.0			< 50		10.93			
T-4	10/29/2004	83	< 0.50	< 0.50	< 0.50	<1.0		1.2	< 5.0	<2.0	<2.0	< 2.0			< 50		10.06			

Well ID	Date	TPHg (µg/L)	Β (μg/L)	Τ (μg/L)	E (μg/L)	Χ (μg/L)	MTBE 8020 (μg/L)	MTBE 8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)	Ethanol (μg/L)		Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
T-4	01/06/2005	430 f	<0.50	<0.50	<0.50	<1.0		9.6	<5.0	<2.0	<2.0	<2.0					8.69			
C-1	05/09/2003															331.33	28.50	302.83		
C-1	07/08/2003															331.33	28.50	302.83		
C-1	10/15/2003															331.33	28.52	302.81		
C-1	01/06/2004					_ <u></u> _										331.33	28.21	303.12		
C-1	04/07/2004															331.33	28.54	302.79		
C-1	07/27/2004															331.33	28.58	302.75		
C-1	10/29/2004															331.33	28.58	302.75		
C-1	01/06/2005															331.33	28.55	302.78		
C-1	04/14/2005															331.33	28.55	302.78		
C-1	07/29/2005								·							331.33	28.54	302.79		
C-1	10/20/2005															331.33	31.11	300.22		
C-1	01/26/2006															331.33	31.15	300.18		
C-1	04/24/2006															331.33	32.07	299.26		
C-1	07/12/2006															331.33	29.30	302.03		
C-1	10/20/2006															331.33	31.64	299.69		
C-1	01/22/2007															331.33	30.03	301.30		
C-1	04/13/2007							·								331.33	30.21	301.12		
C-1	07/09/2007									~~~						331.33	33.38	297.95		
C-1	10/22/2007															331.33	33.18	298.15		
C-1	01/09/2008												-			331.33	28.21	303.12		
C-1	04/11/2008															331.33	33.52	297.81		
C-1	07/29/2008															331.33	30.91	300.42		
C-1	10/29/2008															331.33	31.02	300.31		
C-1	01/21/2009															331.33	30.54	300.79		
C-1	04/16/2009			-												331.33	30.61	300.72		
C-1	07/09/2009															331.33	30.74	300.59		
C-1	01/11/2010															331.33	30.83	300.50		
. C-1	07/06/2010	920	230	<5	150	150										331.33	30.92	300.41		
C-1	01/21/2011															331.33	34.46	296.87		
C-1	07/20/2011															331.33	30.82	300.51		
C-1	01/06/2012															331.33	30.97	300.36		
C-1	01/04/2013														·	331.33	30.38	300.95		

Notes:

							MTBE	MTBE					1,2-				Depth to	GW	SPH	DO
Well ID	Date	ТРНд	$\boldsymbol{B}$	T	E	$\boldsymbol{X}$	8020	<i>8260</i>	TBA	. DIPE	ETBE	<b>TAME</b>	DCA	EDB	Ethanol	TOC	Water	Elevation	Thickness	Reading
		(μg/L)	(μg/L)	(μg/L)	(μg/L)	(µg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(ft MSL)	(ft TOC)	(ft MSL)	(ft)	(mg/L)

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; prior to June 18, 2001, analyzed by EPA Method 8015 unless otherwise noted.

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

MTBE = Methyl tertiary-butyl ether analyzed by method noted

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 8260

EDB = 1,2-dibromoethane analyzed by EPA Method 8260

Ethanol analyzed by EPA Method 8260.

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

GW = Groundwater

SPH = Separate-phase hydrocarbons

DO = Dissolved oxygen

 $\mu$ g/L = Micrograms per liter

ft = Feet

MSL = Mean sea level

mg/L = Milligrams per liter

- < x =Not detected at reporting limit x
- --- = Not analyzed or not available
- (D) = Duplicate sample
- a = Compounds detected within the chromatographic range of gasoline but not characteristic of the standard gasoline pattern.
- b = Analyzed outside of the EPA recommended holding time.
- c = Samples for wells S-6 and S-7 may have been switched.
- d = Hydrocarbon does not match pattern of laboratory's standard.
- e = The concentration reported reflects individual or discrete unidentified peaks not matching a typical fuel pattern.
- f = Quantity of unknown hydrocarbon(s) in sample based on gasoline.
- g = Due to the low levels of analyte found in the sample, the analyte was qualitatively identified based on the compound's retention time and the presence of a single mass ion.
- h = Hydrocarbon result partly due to individual peak(s) in quantitation range.
- i = Analyzed by EPA Method 8015B (M).
- j = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.
- k = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

Corrected groundwater elevation when SPHs are present = TOC - Depth to Water + (0.8 x Hydrocarbon Thickness).

							MTBE	MTBE					1,2-				Depth to	GW	SPH	DO
Well ID	Date	TPHg	$\boldsymbol{B}$	T	$\boldsymbol{E}$	$\boldsymbol{X}$	8020	<i>8260</i>	TBA	DIPE	ETBE	<b>TAME</b>	DCA	EDB	Ethanol	TOC	Water	Elevation	Thickness	Reading
		(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(ft MSL)	(ft TOC)	(ft MSL)	(ft)	(mg/L)

Well T-2 is a backfill well.

Beginning September 23, 2002 depth to water referenced to TOC

All wells except S-11, S-12, and T-1 through T-4 surveyed March 11, 2002 by Virgil Chavez Land Surveying

Survey data for wells S-11 and S-12 provided by Cambria Environmental Technology, Inc.

C-1 surveyed March 18, 2003 by Virgil Chavez Land Surveying

Wells SR-1, SR-2, and SR-3 surveyed September 22, 2003 by Virgil Chavez Land Surveying

4Q05 survey data for wells S-5B, S-5C, S-9B, S-9C, and S-14 provided by Delta Environmental Consultants, Inc.

Well S-15 surveyed April 20, 2012 by Virgil Chavez Land Surveying

#### HISTORICAL GRAB GROUNDWATER ANALYTICAL DATA SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

												Otlassa	1 2		Chlorinated						ъ.		
Sample ID	Date	Depth	0&G	ТРНа	TPHg	В	T	E	X	MTBE	TBA	Other OXYs	1,2- DCA	EDB	Hydro- carbons	Cd	Cr	Pb	Ni	Zn	Benzoic Acid	PCP	PCBs
•		$(f\dot{b}g)$	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)		(μg/L)		(μg/L)				(μg/L)		Ατια (μg/L)	μg/L)	rebs (μg/L)
CPT-1-66	7/26/2002	66			<50	< 0.50	1.6	< 0.50	< 0.50	<5.0				_	-		Ū		. 0	. 0		. 0	
CPT-1-79	7/26/2002	<i>7</i> 9			<50	< 0.50	1.6	< 0.50	< 0.50	<5.0													
ODD 2024																							
	a 11/25/2002				<50	<0.50	<0.50	<0.50	<0.50	< 5.0													
	a 11/25/2002 a 11/25/2002				<50	<0.50	<0.50	< 0.50	<0.50	<5.0					:								·
	a 11/25/2002 a 11/25/2002				<50 <50	<0.50 <0.50	<0.50	<0.50	< 0.50	<5.0									'				****
	a 11/25/2002 a 11/25/2002				<50	< 0.50	<0.50 <0.50	<0.50 <0.50	<0.50	<5.0										<del></del>			
CI 1 2000 8	11/23/2002	. 00			<b>\30</b>	<b>\0.50</b>	<b>\0.50</b>	<0.50	< 0.50	<5.0													
SB-5-W	10/8/2004				3,300	14	1.1	150	7.9	45	290				********								
SB-7-W	10/8/2004				900	15	<5.0	46	<10	67	1600					-							
SB-9-W	10/7/2004				13,000	17	5.2	91	57	390	3,000								_				
SB-12-W	10/6/2004				17,000	37	<25	460	<50	2,600	9,500			-									
SB-13-W	10/7/2004				30,000	<100	<100	3,300	<200	10,000	8,200									<del></del> .			
CPT-4	2/16/2005	55-60			<50	1.2	<0.50	3.0	3.0	0.54	<5.0												
CPT-4	2/16/2005				<50	< 0.50	< 0.50	1.1	1.3	< 0.50	<5.0												
										0.00			_										
CPT-5	2/18/2005				150	0.64	< 0.50	1.7	1.3	1.2	6.8												
CPT-5	2/18/2005	76-80			620	16	0.66	32	14	19	39												
CPT-6	2/18/2005	59_63			<50	<0.50	<0.50	<0.50	-10	<0.F0	< <b>F</b> 0												
CPT-6	2/18/2005				<50	< 0.50	< 0.50	< 0.50	<1.0 <1.0	<0.50 <0.50	<5.0 <5.0												
	_,,				-50	10.00	10.50	٧٥.٥٥	1.0	<b>\0.50</b>	<b>\5.0</b>												
CPT-7	2/16/2005	20-35			< 50	< 0.50	< 0.50	< 0.50	<1.0	160	< 5.0												
CPT-7	.2/16/2005	60-63			< 50	< 0.50	< 0.50	< 0.50	<1.0	< 0.50	< 5.0												
CPT-7	2/16/2005	<i>7</i> 5-80			< 50	< 0.50	< 0.50	< 0.50	<1.0	< 0.50	< 5.0								<del></del>				
CPT-8	2/16/2005	60.62			<b>-</b> F0	40 F0	-0.50	.0.50	-1.0		- 0												
CPT-8	2/16/2005 2/16/2005	60-63			<50	<0.50	< 0.50	<0.50	<1.0	<0.50	<5.0												
CF 1-6	2/16/2005	75-80			<50	<0.50	< 0.50	< 0.50	<1.0	< 0.50	< 5.0												
CPT-9	2/18/2005	58-62			<50	< 0.50	< 0.50	< 0.50	<1.0	<0.50	<5.0												
CPT-9		74-77			<50	< 0.50	<0.50	<0.50	<1.0	< 0.50	<5.0				!								
	,,				.00	-0.00	-0.00	-0.00	-1.0	~0.50	٠٠.٥												
CPT-10	2/17/2005	20-38			<100	<1.0	<1.0	<1.0	<2.0	200	11												
CPT-10	2/17/2005	62-64		<del></del>	< 50	< 0.50	< 0.50	< 0.50	<1.0	< 0.50	< 5.0												
CRA :	200497 (6)					-																	

#### HISTORICAL GRAB GROUNDWATER ANALYTICAL DATA SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

	•		*									Other	1,2-		Chlorinated Hydro-						Benzoic		
Sample ID	Date		O&G (μg/L)		TPHg (μg/L)	B (μg/L)	Τ (μg/L)	E (μg/L)	Χ (μg/L)	MTBE (μg/L)	TBA (μg/L)	OXYs (μg/L)	DCA (μg/L)	EDB (μg/L)	carbons (µg/L)	Cd	Cr (ug/L)	Pb	Ni (ug/L)	Zn (µg/L)	Acid (μg/L)	PCP (μg/L)	PCBs (μg/L)
		9-01	(I-Ø -/	(FØ =)	(FØ =)	(Fg/ 2)	(Fg L)	(Fg 2)	(48/2)	(43/2)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(HS/L)	(µyL)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
CPT-10	2/17/2005	76-80			<50	< 0.50	< 0.50	< 0.50	<1.0	< 0.50	<5.0												
CPT-11	2/17/2005	63			<50	< 0.50	< 0.50	< 0.50	<1.0	< 0.50	<5.0												
CPT-11	2/17/2005	70-74			<50	< 0.50	< 0.50	< 0.50	<1.0	< 0.50	< 5.0												
CPT-5A@65'	9/9/2005	61-64			<50	0.84	<0.5	1.4	2.8	1.4	<5.0												
CPT-5A@78'	9/9/2005	74-78			<50	<0.5	< 0.5	<0.5	<1.0	< 0.5	<5.0												
WO-W	2/14/2007		<4,700	<480	<50	0.67	0.75	0.73	<1.0	1.6	<10	ND	<2.0	<0.50	ND	<5.0	47	9.4	130	500	32	<20	<0.94
Groundwate	r ESL <sup>b</sup> :		NA	100	100	1.0	40	30	20	5.0	12	NA	0.50	0.050	Various	0.25	180	2.5	8.2	81	NA	1.0	0.014

#### Notes:

O&G = Oil and grease as hexane extractable material by EPA Method 1664 A (Modified)

TPHd = Total petroleum hydrocarbons as diesel by EPA Method 8015 (Modified)

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

Other OXYs = Di-isopropyl ether, ethyl tertiary-butyl ether, and tertiary-amyl methyl ether by EPA Method 8260B

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

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

Chlorinated hydrocarbons by EPA Method 8260B; see laboratory analytical report for a complete list of specific constituents

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

Benzoic acid by EPA Method 8270C. No other polynuclear aromatics detected; 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

 $\mu$ g/L = Micrograms per liter

<x = Not detected at reporting limit x

ND = Not detected; see laboratory analytical report for constituent-specific reporting limits

--- = Not analyzed

< x =Not detected at reporting limit x

ESL = Environmental screening level

NA = No applicable ESL

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

#### HISTORICAL GRAB GROUNDWATER ANALYTICAL DATA SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

															Chlorinatea	l							
												Other	1,2-		Hydro-						Benzoic	•	
Sample ID	Date	Depth	O&G	TPHd	<i>TPHg</i>	$\boldsymbol{B}$	T	E	$\boldsymbol{X}$	MTBE	TBA	OXYs	DCA	EDB	carbons	Cd	Cr	Pb	Ni	Zn	Acid	PCP	PCBs
		(fbg)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)

a = Labeled as CPT-1 in laboratory reports

b = San Francisco Bay Regional Water Quality Control Board Environmental Screening Level for groundwater 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]) - Updated May 2013.

### HISTORICAL SOIL VAPOR ANALYTICAL DATA SHELL-BRANDED SERVICE STATION 3790 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	TPHg (µg/m³)	$B$ $(\mu g/m^3)$	$T$ $(\mu g/m^3)$	Ε (μg/m³)	$X = (\mu g/m^3)$	MTBE (µg/m³)
T-2	4/29/2002	<20,000	<160	<190	<220	360	<360
T-3	4/29/2002	<20,000	<160	450	<220	520	<360
T1-N	7/18/2002	25,000,000	5,800	<3,800	<4,300	<4,300	1,300,000
Т2-Е	7/18/2002	41,000,000	13,000	3,800	<4,300	5,200	1,700,000
. T3-S	7/18/2002	29,000,000	4,200	<3,800	<4,300	<4,300	2,800,000
T4-W	7/18/2002	16,000,000	<3,200	<3,800	<4,300	<4,300	610,000
Commercial la	nd use ESLs a:	1,200,000	420	1,300,000	4,900	440,000	47,000

#### Notes:

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

 $\mu g/m^3$  = Micrograms per cubic meter

< x =Not detected at reporting limit x

a = San Francisco Bay Regional Water Quality Control Board (RWQCB) shallow soil gas screening level for evaluation of potential vapor intrusion concerns - commercial/industrial land use from RWQCB's Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater, California Regional Water Quality Control Board, Interim Final - November 2007 (Revised May 2008) - Updated May 2013.

APPENDIX A

SITE HISTORY

#### **SITE HISTORY**

1986 Subsurface Investigation: In January 1986, Emcon Associates (Emcon) advanced five soil borings (S-A through S-E) to profile soil impacts for soil disposal during anticipated underground storage tank (UST) replacement. A soil sample from boring S-A located adjacent to the waste oil UST at 7 to 8.5 feet below grade (fbg) was analyzed for waste oil only, and no waste oil was detected. Borings S-B through S-E were drilled in the vicinity of the three fuel USTs. Soil samples collected from these borings contained up to 5,100 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPHg), 14 mg/kg benzene, 130 mg/kg toluene, and 1,200 mg/kg total xylenes. A temporary well was installed in boring S-C. A 1/16-inch film of separate-phase hydrocarbons was observed in the well 9 days after the temporary well was installed. Emcon's March 21, 1986 report details this investigation.

1987 Subsurface Investigation: In October 1987, Pacific Environmental Group, Inc. (PEG) installed two UST backfill wells (ST-1 and ST-2) and two groundwater monitoring wells (S-1 and S-2). Soil samples contained up to 57 mg/kg TPHg and 6.7 mg/kg benzene. PEG's December 4, 1987 report provides well installation details.

1988 Subsurface Investigations: In January 1988, PEG installed three groundwater monitoring wells (S-3 through S-5). Soil samples collected from the well borings contained up to 4,700 mg/kg TPHg, 50 mg/kg benzene, 170 mg/kg toluene, and 900 mg/kg total xylenes. PEG's March 10, 1988 report provides well installation details.

In April 1988, Woodward-Clyde Consultants (Woodward-Clyde) conducted a soil investigation prior to removal of the fuel USTs.

1988 UST Removal: In August 1988, three gasoline USTs were removed. Kaprealian Engineering, Inc. (Kaprealian) collected six soil samples (A-1, A-2, B-1, B-2, C-1, and C-2) beneath the tanks at 14 fbg. The soil samples contained up to 2,100 mg/kg TPHg, 13 mg/kg benzene, 110 mg/kg toluene, 72 mg/kg ethylbenzene, and 350 mg/kg total xylenes. The UST excavation was then over-excavated up to 20.5 fbg, and Kaprealian collected four additional soil samples (A1X, A2X, B2X, and C-1X) at 16 to 20.5 fbg. These soil samples contained up to 80 mg/kg TPHg, 1.3 mg/kg benzene, 2.6 mg/kg toluene, 3.4 mg/kg ethylbenzene, and 16 mg/kg total xylenes. In addition, well S-1 was properly destroyed due to the construction. A new UST pit was excavated, and three fuel USTs were subsequently installed. Three soil samples (A5, A-10, and A-15) were collected during the tank pit excavation. These soil samples contained up to 4.4 mg/kg TPHg and 1.3 mg/kg benzene.

October 1988 Subsurface Investigation: Woodward-Clyde installed two groundwater monitoring wells (S-6 and S-7) to further delineate groundwater impacts down gradient. Soil samples collected from the well borings contained up to 9 mg/kg TPHg, 0.05 mg/kg benzene, and 0.1 mg/kg ethylbenzene. Woodward-Clyde's January 18, 1989 Environmental Assessment Report provides well installation details.

February 1989 Subsurface Investigation: Woodward-Clyde installed two groundwater monitoring wells (S-8 and S-9). Soil samples collected from the well borings did not contain TPHg or benzene, toluene, ethylbenzene, and total xylenes (BTEX). Woodward-Clyde's May 11, 1989 report presents well installation details.

August and September 1989 Subsurface Investigation: Geostrategies Inc. (Geostrategies) installed a monitoring well (S-10) and three extraction wells (SR-1 through SR-3). No TPHg or BTEX was detected in soil samples collected from well S-10. Soil samples from the recovery well borings contained up to 67 mg/kg TPHg and 5.4 kg/kg benzene. Geostrategies December 4, 1989 Quarterly Report July –September 1989 details the well installations.

1990 Aquifer Test: In February 1990, Geostrategies conducted a constant-rate pump test using well SR-3, and slug tests on wells SR-3, S-2, S-3, S-5, and S-7 through S-10. Calculated hydraulic conductivity values ranged from 1.0 to 10.5 feet per day based on SR-3 pump test results, and from 3.2 to 58.2 feet per day based on slug test results. Geostrategies May 25, 1990 Aquifer Test Report presents pump test and slug test results.

1997 Risk Assessment: In January 1997, Cambria Environmental Technology, Inc. (Cambria) submitted a risk evaluation noting that the site data met criteria for a low-risk groundwater site. Cambria's January 15, 1997 report provides details of the risk assessment.

1998 Fuel System Upgrades: In June 1988, Gettler-Ryan added secondary containment to the gasoline UST fill ports and removed the waste oil remote fill piping. Cambria inspected the UST pit, stockpiled pea gravel, and waste oil UST remote fill piping removal. No field indications of hydrocarbons, such as staining or odor, were observed during the site visit. Cambia's September 22, 1998 1998 Upgrade Site Inspection Report presents inspection details.

2001-2003 Mobile Groundwater Extraction (GWE): In May 2001, Advanced Cleanup Technologies Inc. (ACT) conducted three weekly 8-hour mobile GWE events using site monitoring wells S-2 and S-4 and tank backfill well T-2. In August 2001, ACT conducted three additional GWE events. In April 2002, Onyx Industrial Service (Onyx)

initiated semi-monthly events extracting from tank backfill well T-2. Between June 2002 and September 2002, Onyx also extracted groundwater from well S-4. Extraction from well S-4 was discontinued due to low extraction volumes. Tank backfill well T-4 was added to the semi-monthly extraction events in October 2002. Through the end of February 2003, an estimated 0.96 pounds of TPHg and 9.31 pounds of methyl tertiary-butyl ether (MTBE) were removed via GWE. Mobile GWE details are provided in Cambria's groundwater monitoring reports for this period.

2002 and 2003 Sensitive Receptor Surveys: In April 2002, Cambria submitted a sensitive receptor survey for the site. Based on a review of Department of Water Resources records, six wells were identified within a one-half-mile radius of the site, including one active municipal well (Hopyard 6), one destroyed municipal well (Hopyard 1), one abandoned irrigation well (which could not subsequently be located), one destroyed irrigation well, and two wells of unknown use. The active municipal well is located approximately one-quarter-mile south of the site. The nearest surface water body identified is the Arroyo Mocho Canal located approximately 400 feet south of the site. Based on utility survey results, utilities in the site vicinity are not expected to affect groundwater flow or to provide preferential groundwater migration pathways. Cambria's April 9, 2002 Sensitive Receptor Survey Report summarizes the survey data. Cambria's March 28, 2003 Subsurface Investigation Report provides a revised utility survey.

2002 Soil Vapor Investigation: In April and July 2002, Cambria conducted a soil gas survey in the UST backfill wells (T-1 through T-4). Soil vapor samples contained up to 41,000,000 micrograms per cubic meter ( $\mu g/m^3$ ) TPHg, 13,000  $\mu g/m^3$  benzene, 450  $\mu g/m^3$  toluene, 5,200  $\mu g/m^3$  total xylenes, and 2,800,000  $\mu g/m^3$  MTBE. Ethylbenzene was not detected in the soil vapor samples.

2002 Dispenser and Piping Upgrades: In July 2002, Paradiso Mechanical, Inc. (Paradiso) replaced and upgraded the fuel dispensers and product, vapor, and vent lines. Additionally, Paradiso added dispenser pans under the new dispensers and replaced the UST fuel fill port sumps and all associated piping in the tank pit area above the USTs. Cambria collected three piping samples (P-1 through P-3) and four dispenser samples (D-1 through D-4). Soil samples contained up to 260 mg/kg TPHg and 0.079 mg/kg benzene. MTBE was not detected in the soil samples. Cambria's January 21, 2003 Dispenser and Piping Upgrade Soil Sampling Report summarizes soil sampling results.

2002 Subsurface Investigation: Between July 2002 and September 2002, Cambria installed two down-gradient groundwater monitoring wells (S-11 and S-12) and drilled

two cone penetrometer test (CPT) borings (CPT-1 and CPT-2). Soil samples from the well borings did not contain TPHg, BTEX, or MTBE. Grab groundwater samples from CPT borings did not contain TPHg, BTEX, or MTBE with the exception of 1.6 micrograms per liter (µg/L) toluene detected in samples from CPT-1. Cambria's March 28, 2003 Subsurface Investigation Report provides well installation and CPT boring data.

2003-2006 GWE: From July 2003 until May 2006, Cambria and then Delta Consultants (Delta; beginning in February 2005) operated a GWE system using three groundwater recovery wells (SR-1 through SR-3) and one UST backfill well (T-3). The GWE system extracted and treated an estimated 3,142,212 gallons of water containing an estimated 15.7 pounds of MTBE. Delta's July 15, 2006 Second Quarter 2006 Quarterly Monitoring and Remediation Status Report summarizes GWE operation details.

2003 Agency Response, Site Conceptual Model (SCM), and Work Plan: Cambria's April 29, 2003 Site Investigation Work Plan included responses to the Alameda County Environmental Health's (ACEH's) February 27, 2003 letter, an SCM, and a corrective action plan.

2004 Agency Response, Revised SCM, and Modified Work Plan: Cambria's June 30, 2004 Agency Response, Revised SCM, and Modified Work Plan responded to the ACEH's May 5, 2004 letter, provided a revised SCM, and provided a modified work plan. The SCM included a discussion of the occurrence of tertiary-butyl alcohol (TBA) as a biodegradation byproduct of MTBE.

2004 Subsurface Investigation: In October 2004, Cambria drilled 13 soil borings (SB-1 through SB-5, SB-7 through SB-9, and SB-11 through SB-15) to assess the vertical extent of soil and groundwater impacts on site. Soil samples from the borings contained up to 950 mg/kg TPHg, 5.0 mg/kg benzene, 4.1 mg/kg MTBE, and 14 mg/kg TBA. Grab groundwater samples collected from borings SB-5, SB-7, SB-9, SB-12, and SB-13 contained up to 30,000  $\mu$ g/L TPHg, 37  $\mu$ g/L benzene, 10,000  $\mu$ g/L MTBE, and 9,500  $\mu$ g/L TBA. Cambria's February 8, 2005 Subsurface Investigation Report provides investigation details.

2005 Subsurface Investigation: In February 2005, Delta drilled nine CPT borings to further investigate the vertical extent of groundwater impacts. Grab groundwater samples collected from the CPT borings contained up to 620  $\mu$ g/L TPHg, 16  $\mu$ g/L benzene, 200  $\mu$ g/L MTBE, and 38  $\mu$ g/L TBA. In addition, soil samples were collected from borings CPT-3 and CPT-5. These samples contained up to 0.018 mg/kg ethylbenzene, 0.020 mg/kg total xylenes, and 0.56 mg/kg TBA. No TPHg, benzene,

toluene, or MTBE was detected in the soil samples. Delta's March 24, 2005 *CPT Soil and Groundwater Investigation Report* provides details of this investigation.

2005 Subsurface Investigation: In September 2005, Delta drilled one CPT boring (CPT-5A) and in October 2005, Delta installed six groundwater monitoring wells (S-5B, S-5C, S-9B, S-9C, S-14 and S-15) to further investigate the vertical extent of groundwater impacts. Grab groundwater samples collected from boring CPT-5A contained up to  $0.84~\mu g/L$  benzene and  $1.4~\mu g/L$  MTBE. No TPHg, toluene, or TBA was detected in the grab groundwater samples. Delta's November 21, 2005 Well Installation Report provides details of this investigation.

2007 Waste Oil UST Removal: In February 2007, Wayne Perry, Inc. (Wayne Perry) removed one 550-gallon, single-wall fiberglass waste oil UST. Cambria observed the UST removal and collected soil and grab groundwater samples from the UST excavation. The soil sample (WO-1-9) collected from the UST excavation contained 0.88 mg/kg TPHg, 0.0017 mg/kg toluene, 0.010 mg/kg ethylbenzene, 0.057 mg/kg total xylenes, 52 mg/kg chromium, 8.0 mg/kg lead, 53 mg/kg nickel, and 56 mg/kg zinc. The grab water sample (WO-W) collected from the UST excavation contained 0.67  $\mu$ g/L benzene, 0.75  $\mu$ g/L toluene, 0.73  $\mu$ g/L ethylbenzene, 1.6  $\mu$ g/L MTBE, 47  $\mu$ g/L chromium, 9.4  $\mu$ g/L lead, 130  $\mu$ g/L nickel, 500  $\mu$ g/L zinc, and 32  $\mu$ g/L benzoic acid. Based on these concentrations, Shell submitted an Underground Storage Tank Unauthorized Release (Leak)/Site Contamination Report on March 7, 2007. Cambria's May 23, 2007 UST Removal Report presents the UST removal details.

2010 Subsurface Investigation: In May and June 2010, Delta drilled two soil borings (SB-17 and SB-18) to further define the source area. Soil samples collected from the borings contained up to 1,100 mg/kg TPHg. No BTEX, MTBE, or TBA was detected in the soil samples. Delta's July 16, 2010 Second Quarter 2010 Quarterly Feasibility Study and Site Investigation Report provides details of this investigation.

2010 Magnesium Sulfate (MgSO<sub>4</sub>) Injection Feasibility Study: In May and August 2010, Delta conducted a MgSO<sub>4</sub> injection feasibility study on wells S-2 and S-4. Approximately 75 gallons of MgSO<sub>4</sub> solution were gravity-fed into each well during each event. Based on subsequent groundwater sampling, Delta concluded that the MgSO<sub>4</sub> injections were of limited effectiveness. Delta's November 15, 2010 Third Quarter 2010 Semiannual Groundwater Monitoring Report & FS Report presents MgSO<sub>4</sub> injection details.

1987-Present Groundwater Monitoring: Groundwater monitoring was initiated in November 1987 and is currently conducted semiannually during the first and third

quarters. Historical depth to shallow groundwater has typically ranged between 12 and 19 fbg, and groundwater flow direction is generally south-southeast to southeast.

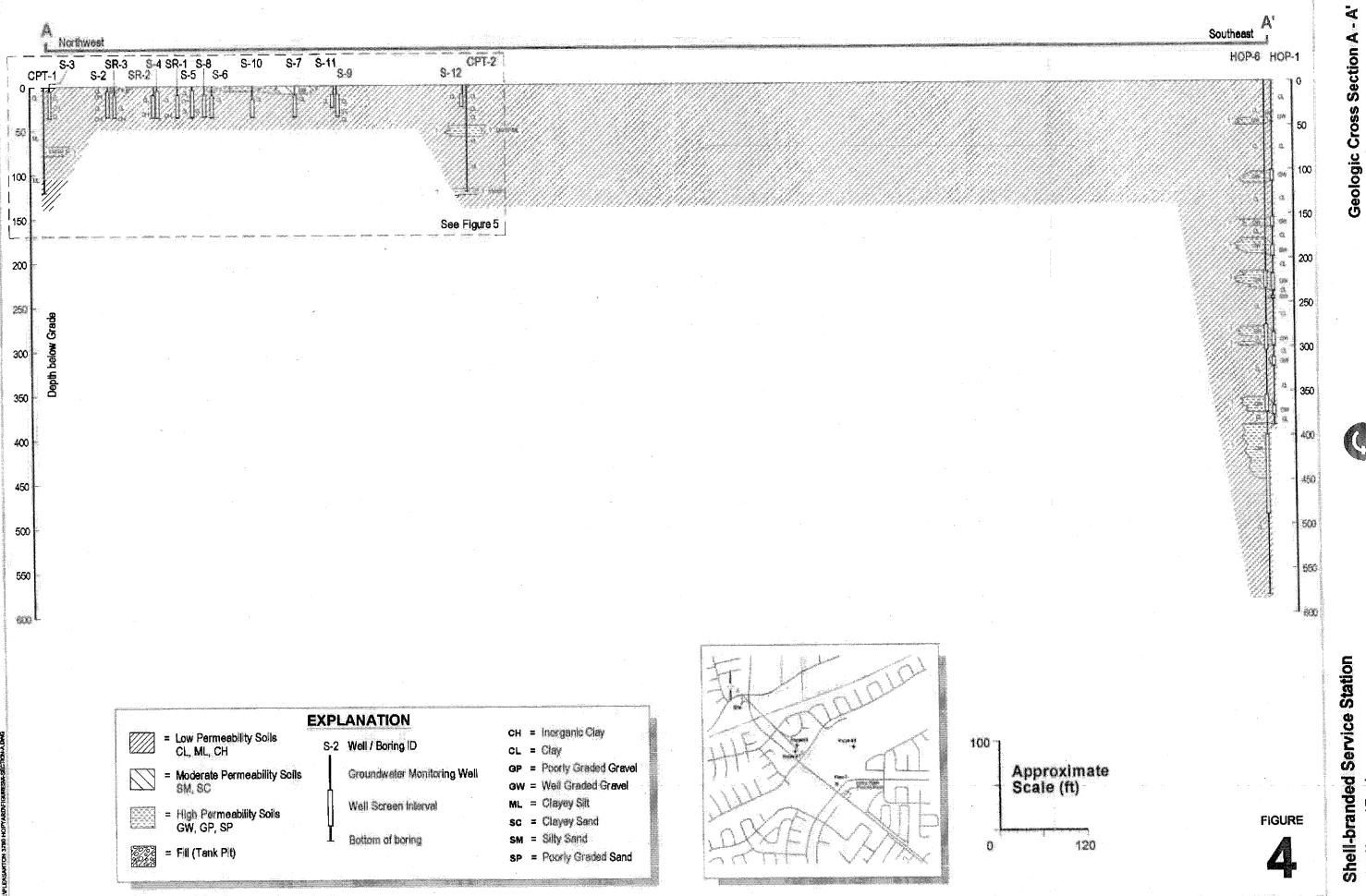
### APPENDIX B

CROSS SECTIONS AND EXPLORATORY BORING LOGS



Municipal Well Location Map

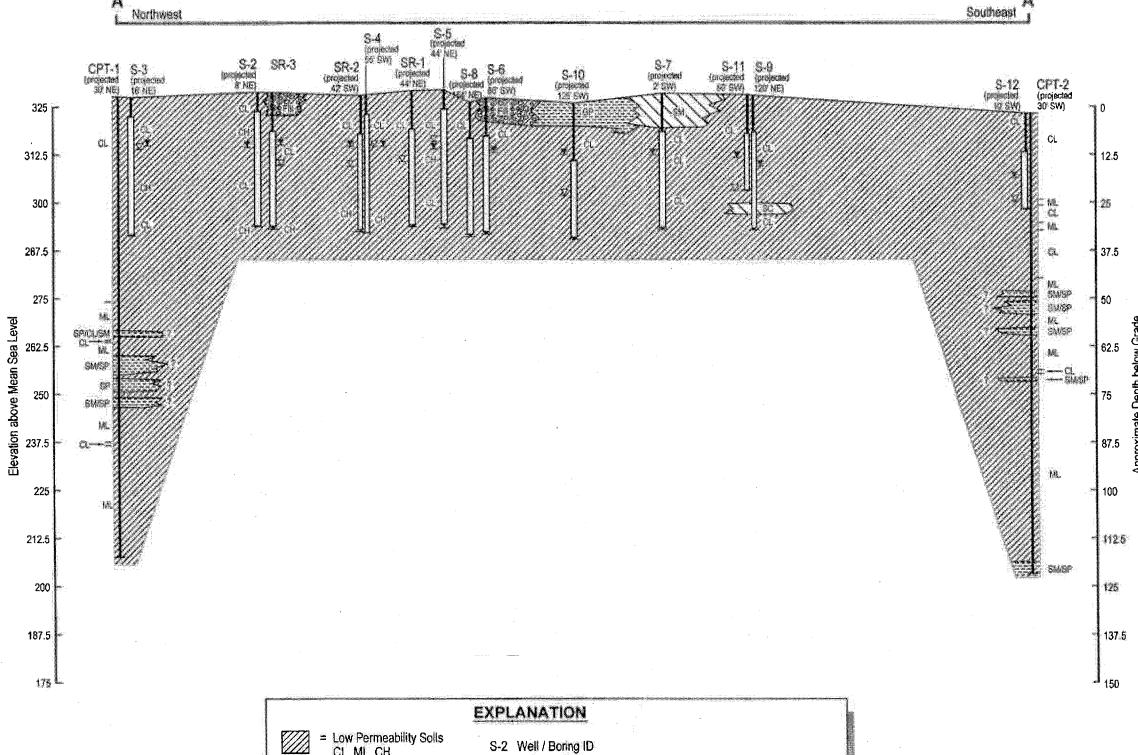
Shell-branded Service Station 3790 Hopyard Road Pleasanton, California Incident #98995842



CAMBRI

Shell-branded Service Station

3790 Hopyard Road Pleasanton, Califomia Incident #98995842



### = Low Permeability Solls CL, ML, CH

= Moderate Permeability Soils SM, SC

= High Permeability Soils GW, GP, SP

Groundwater Monitoring Well

Well Screen Interval

Bottom of boring

Initial Groundwater depth

Depth of Groundwater on December 27, 2002

сн = Inorganic Clay

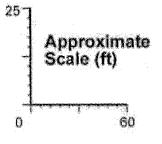
cL = Clay

GP = Poorly Graded Gravel gw = Well Graded Gravel

ML = Clayey Sit

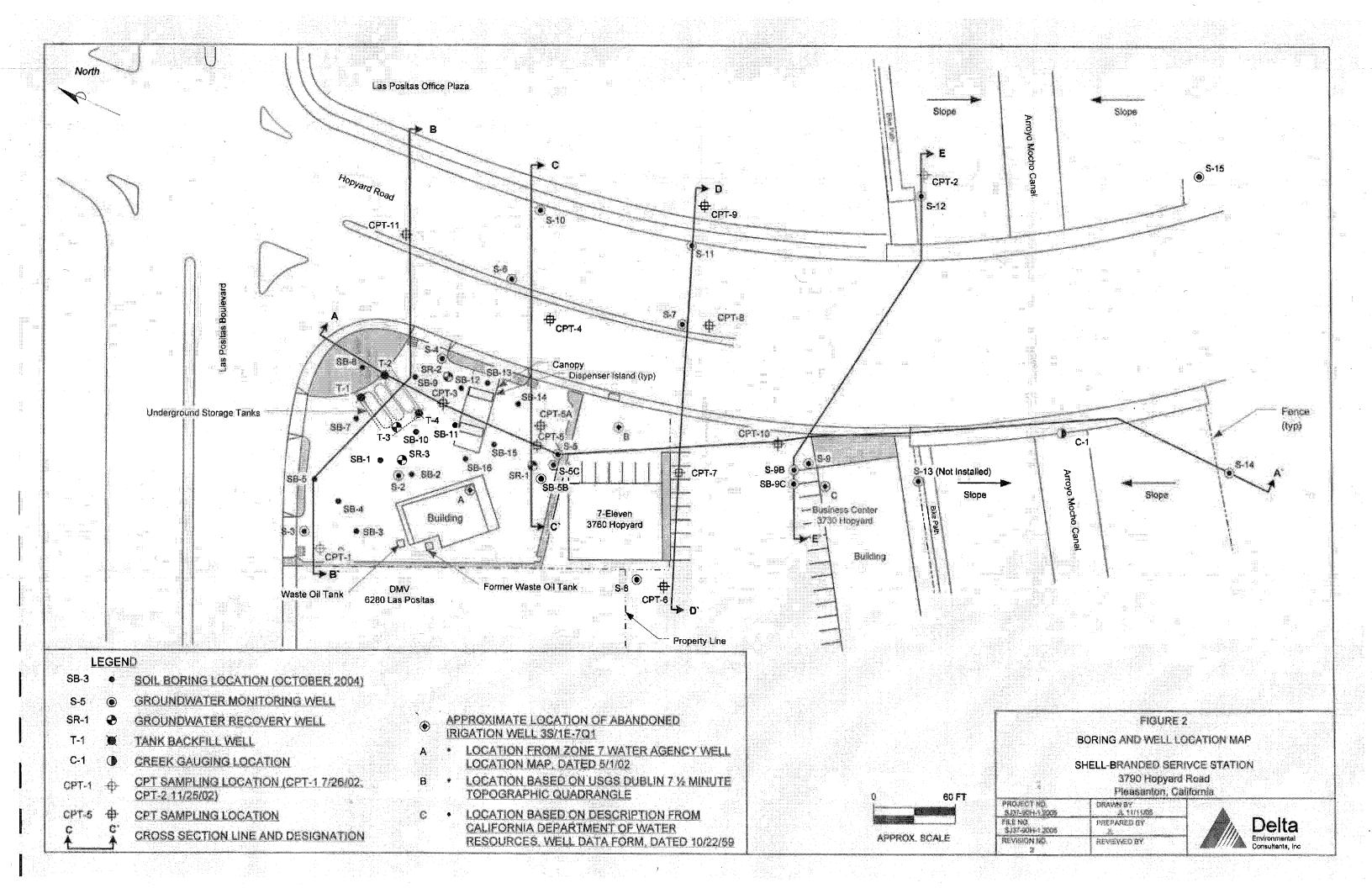
sc = Clayey Sand SM = Silty Sand

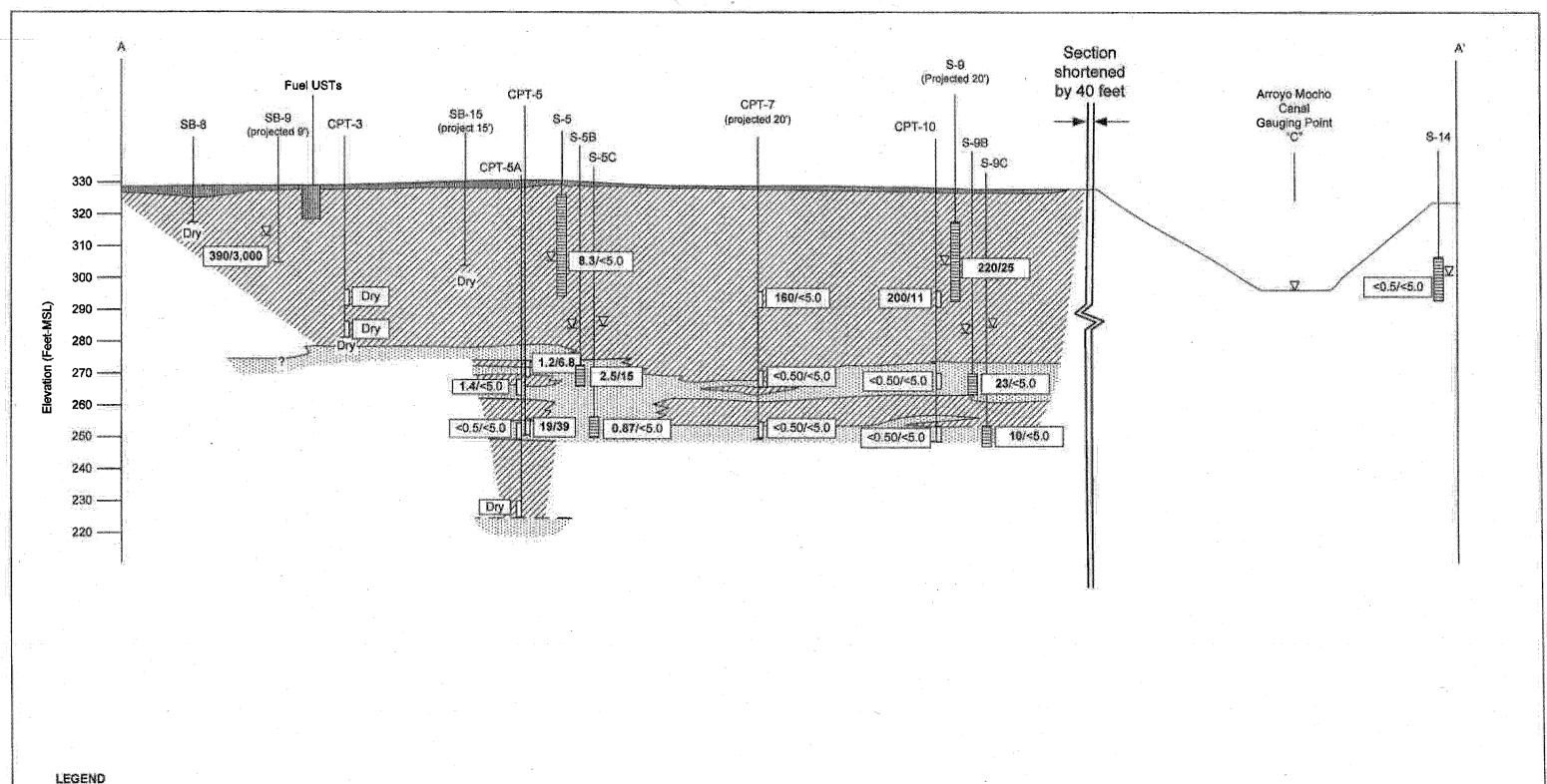
sp = Poorly Graded Sand



**FIGURE** 

Shell-branded Service Station 3790 Hopyard Road Pleasanton, California Incident #98995842







**CLAY AND/OR SILT** 

SAND

Dry

SURFACE MATERIALS (FILL, ASPHALT, ETG.)

**GROUNDWATER LEVEL** 

NA NOT ANALYZED

> BOREHOLE WAS DRY OR CONTAINED INSUFFICIENT WATER FOR SAMPLE COLLECTION

WELL.

SCREENED INTERVAL

BORING

**GROUNDWATER SAMPLE** 

<10/<100

MTBE/TBA CONCENTRATIONS IN **GROUNDWATER (ug/L)** ("SEE EXPLANATION FOR SAMPLING DATES)

\*\*SB Borings Drilled and Sampled October 2004 CPT Borings CPT-3 through CPT 11 Drilled and Sampled February 2005 CPT Boring CPT-5A Drilled and Sampled September 2005 Wells S-5, S-58, S-5C, S-9, S-98, S-9C, S-14 Sampled November 11, 2005



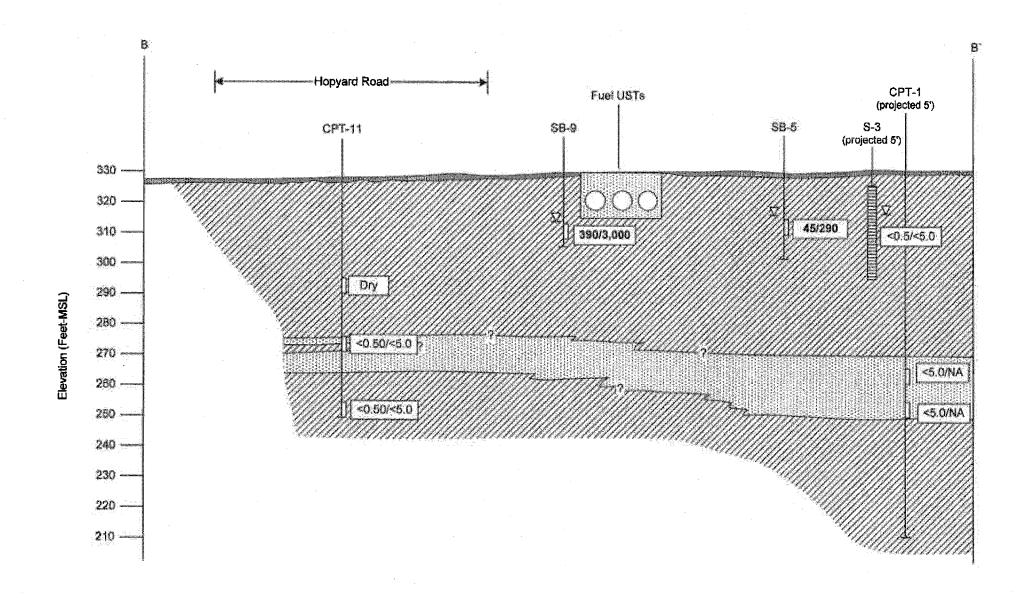
APPROX SCALE

### FIGURE 3 CROSS SECTION A TO A'

SHELL-BRANDED SERVICE STATION 3790 Hopyard Road Pleasanton, California

DRAWN BY JE 11/11/05 PROJECT NO SJa7-9014-1-2006 FILE NO. PREPARED BY SJ37-00H-1.2005 REVISION NO. REVIEWED BY





LEGEND

SAND

Dry

SURFACE MATERIALS (FILL, ASPHALT, ETC.)

立 GROUNDWATER LEVEL

NA NOT ANALYZED

BOREHOLE WAS DRY OR CONTAINED INSUFFICIENT WATER FOR SAMPLE COLLECTION . .

<10/<100°

BORING

GROUNDWATER SAMPLE

MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L): \$8 BORINGS DRILL OCTOBER 2004, CPT BORINGS DRILLED FEBRUARY 2005



WELL

SCREENED INTERVAL

MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L), WELL SAMPLED 07/29/05



APPROX SCALE

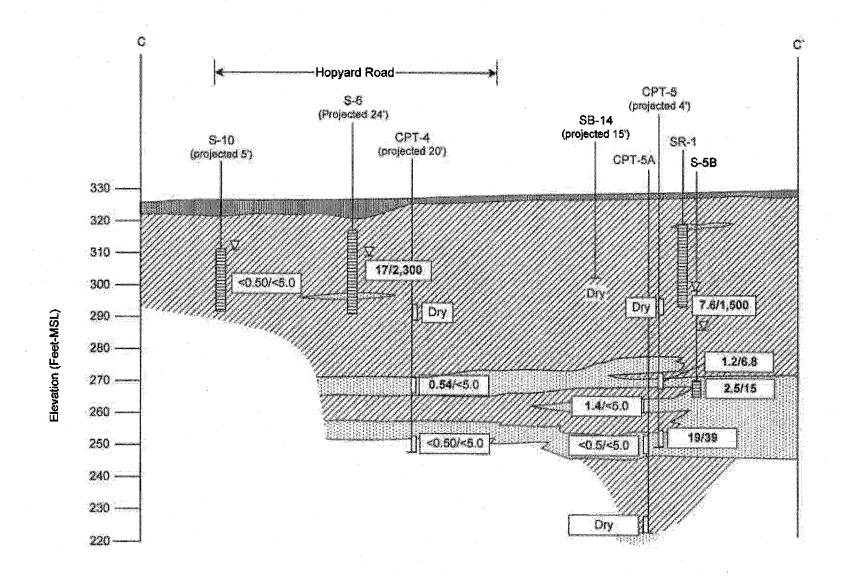
### FIGURE 4

CROSS SECTION B TO B'

SHELL-BRANDED SERVICE STATION 3790 Hopyard Road Pleasanton, California

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\$,07-90H-1,3056	A 11/11/05
FILE 140	PARSPARED BY
\$,557-90H-1,2005	NEASSASOBA
REVISION NO	F.C
9	7,10







CLAY AND/OR SILT

SAND

SURFACE MATERIALS (FILL, ASPHALT, ETC.)

**GROUNDWATER LEVEL** 

NOT ANALYZED

**BOREHOLE WAS DRY OR** CONTAINED INSUFFICIENT WATER FOR SAMPLE COLLECTION

BORING

<10/<100

**GROUNDWATER SAMPLE** 

MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L); SB BORINGS DRILL OCTOBER 2004, CPT BORINGS **DRILLED FEBRUARY 2005** (WITH THE EXCEPTION OF CPT-5A (9/05))



<10/<100

WELL

SCREENED INTERVAL

MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L), WELLS 5-6 AND S-10 SAMPLED 7/29/05; WELL S-5B SAMPLED 11/11/05



APPROX. SCALE

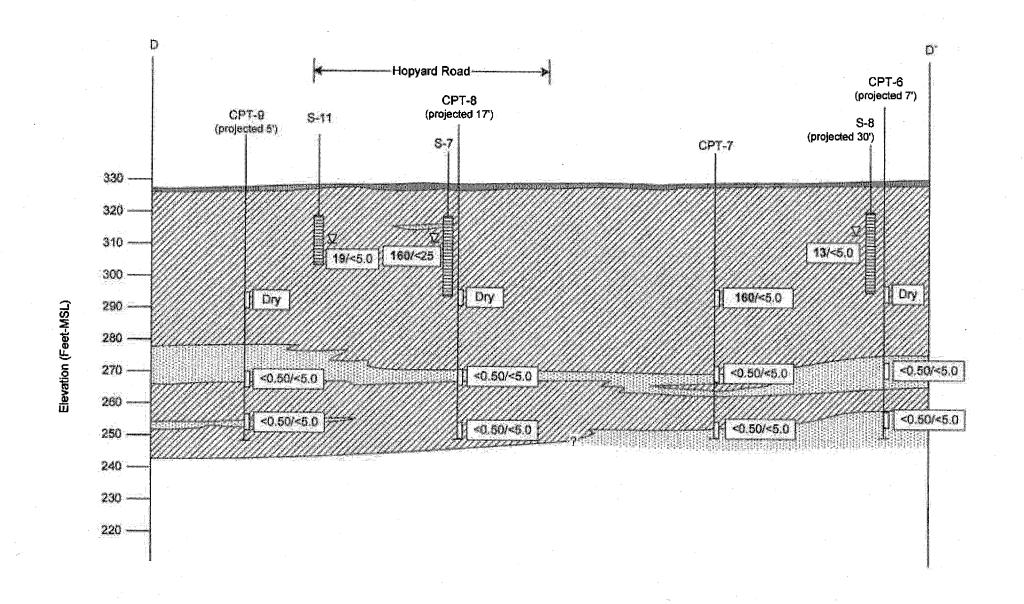
### FIGURE 5 CROSS SECTION C TO C'

SHELL-BRANDED SERVICE STATION

3790 Hopyard Road Pleasanton, California

PROJECT NO.	DRAWW BY
5J37-90H-1 2005	JL 11/11/05
FILE NO.	PREPARED BY
SU37-90H-1-2005	LO
REVISION NO	REVIEWED BY
4	







CLAY AND/OR SILT

SAND

SURFACE MATERIALS (FILL, ASPHALT, ETC.)

□ GROUNDWATER LEVEL

NA NOT ANALYZED

DIY BOREHOLE WAS DRY OR CONTAINED INSUFFICIENT WATER FOR SAMPLE COLLECTION

\* ...

<10/<100

BORING

GROUNDWATER SAMPLE

MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L); SB BORINGS DRILL OCTOBER 2004, CPT BORINGS DRILLED FEBRUARY 2006



<10/<100

WELL

SCREENED INTERVAL

MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L), 07/29/05



#### FIGURE 6

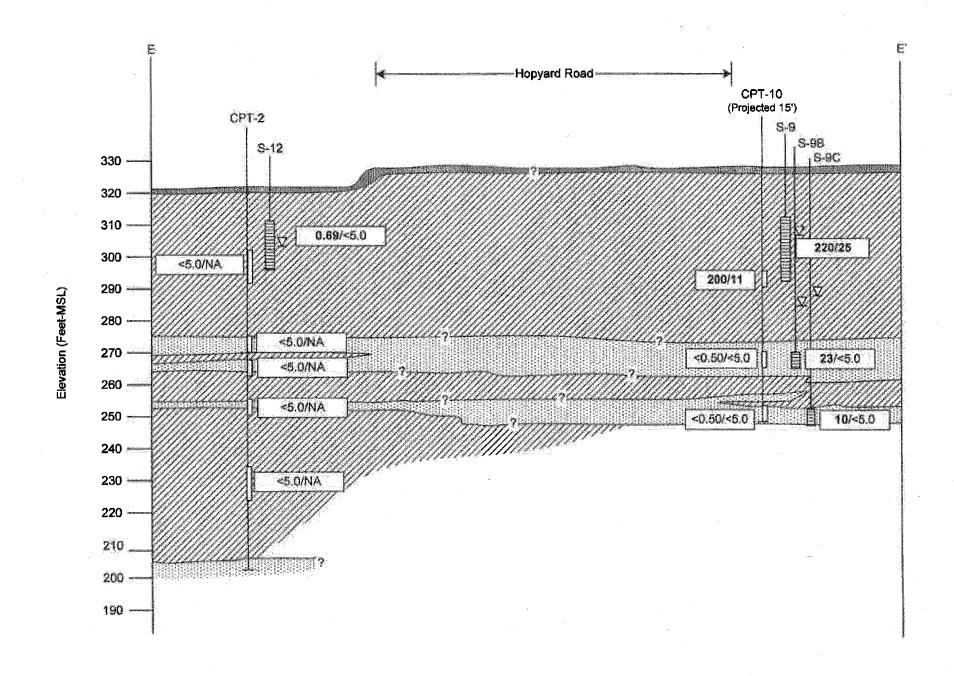
CROSS SECTION D TO D'

SHELL-BRANDED SERVICE STATION 3790 Hopyard Road Pleasanton, California

PROJECT NO DRAWN BY SIST-909-1-2006 JL 11/11/05

FILE NO PREPARED BY LO REVISION NO REVIEWED BY





LEGEND

CLAY AND/OR SILT

SAND

SURFACE MATERIALS (FILL, ASPHALT, ETC.)

☑ GROUNDWATER LEVEL

NA NOT ANALYZED

BOREHOLE WAS DRY OR CONTAINED INSUFFICIENT WATER FOR SAMPLE COLLECTION

BORING

<10/<100

GROUNDWATER SAMPLE

MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L): SB BORINGS DRILL OCTOBER 2004, CPT BORINGS DRILLED FEBRUARY 2005

<10/<100

WELL

SCREENED INTERVAL

MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L). S12 - 07/29/05; S-9, S-9B AND S-9C - 11/11/05

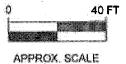


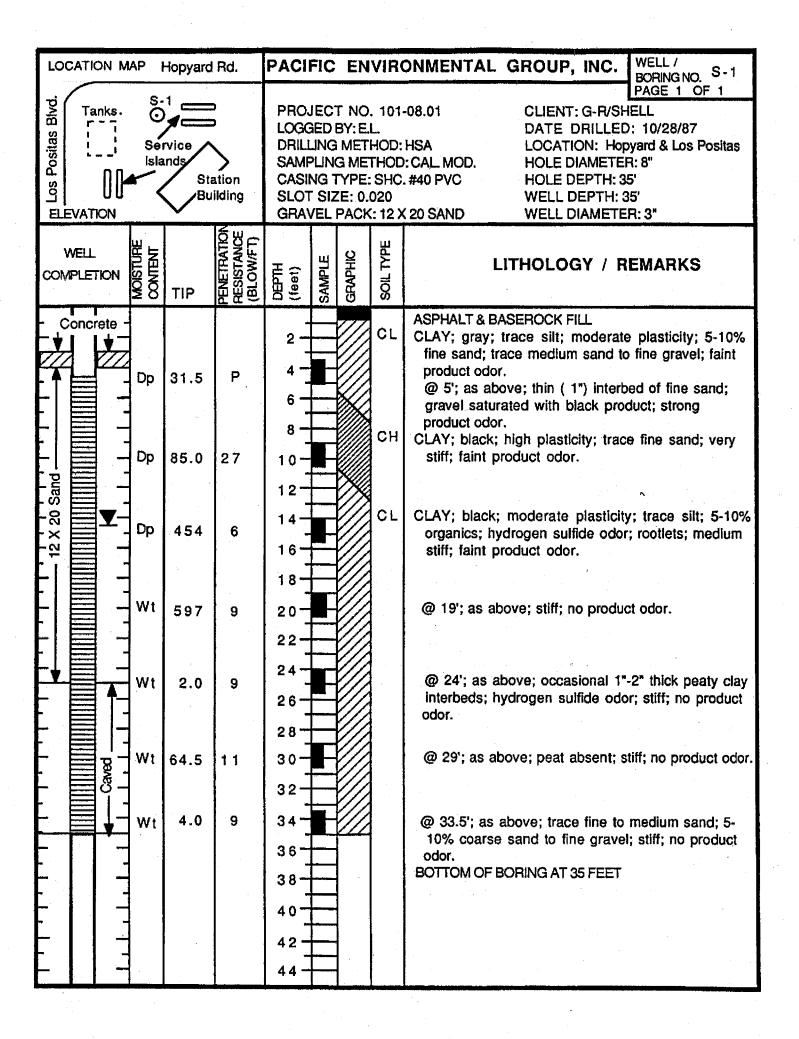
FIGURE 7

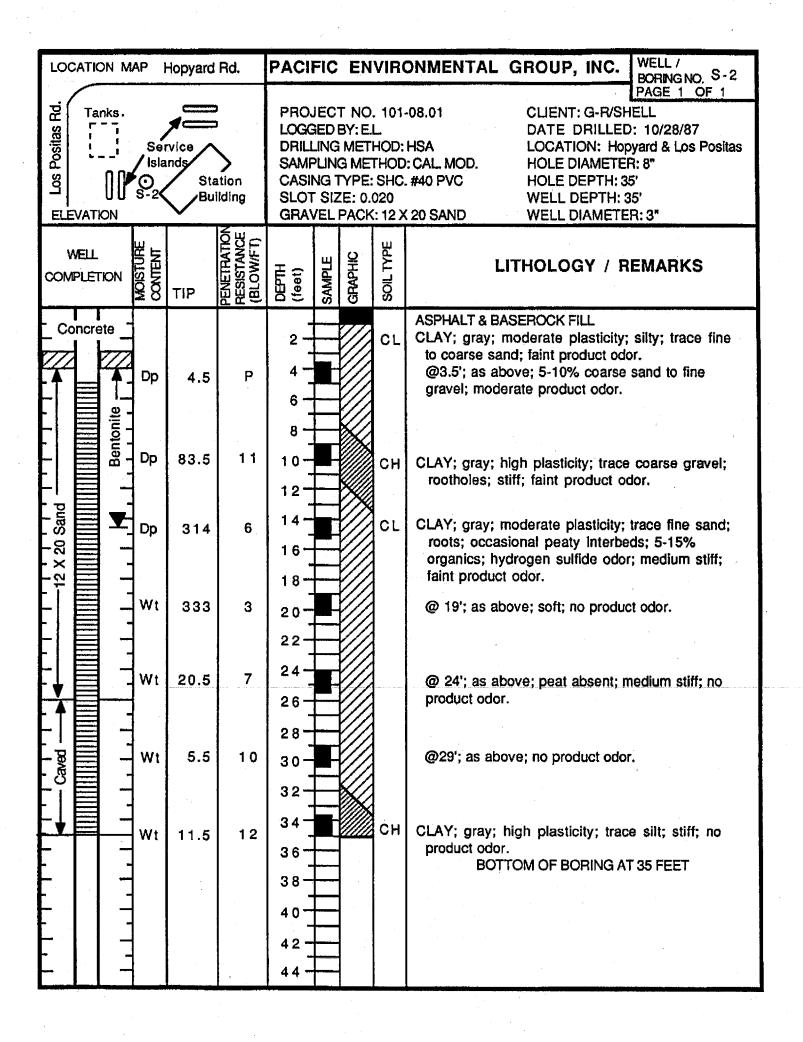
CROSS SECTION E TO E'

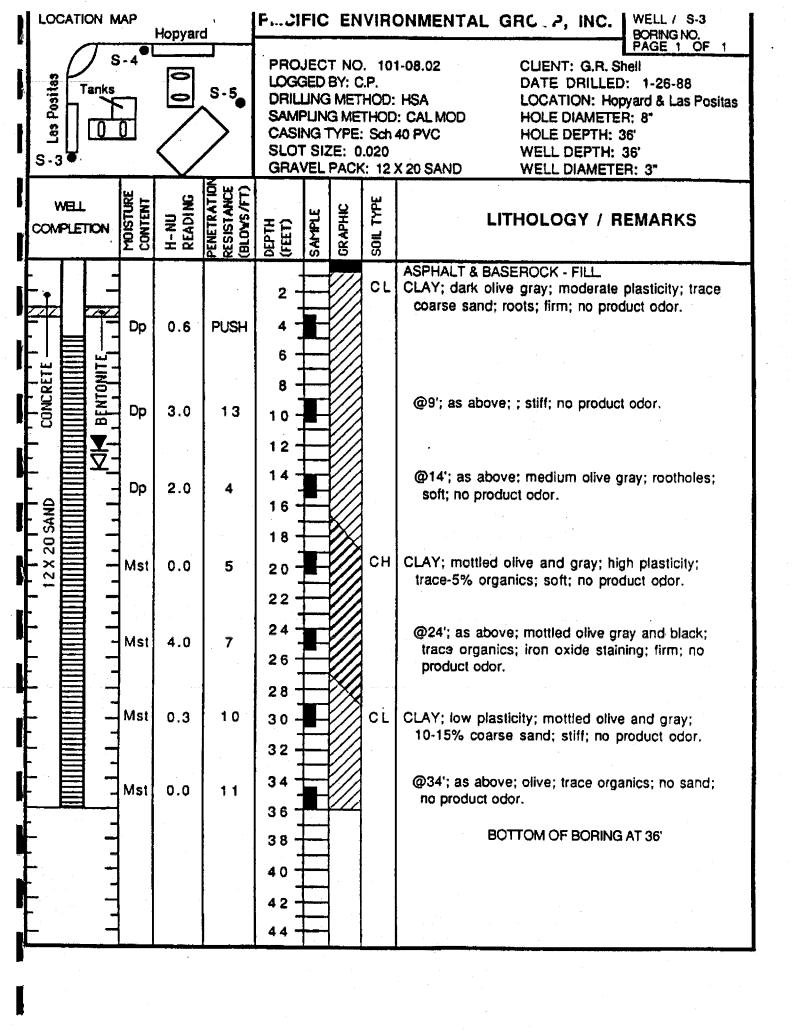
SHELL-BRANDED SERVICE STATION 3790 Hopyard Road Pleasanton, California

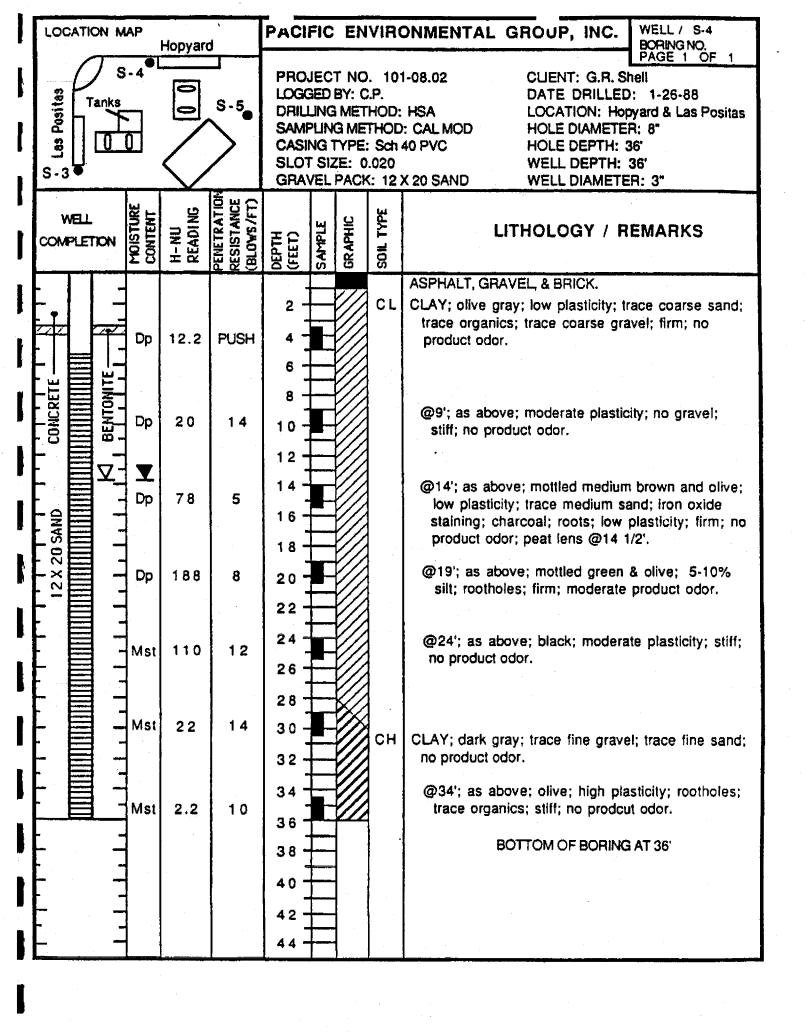
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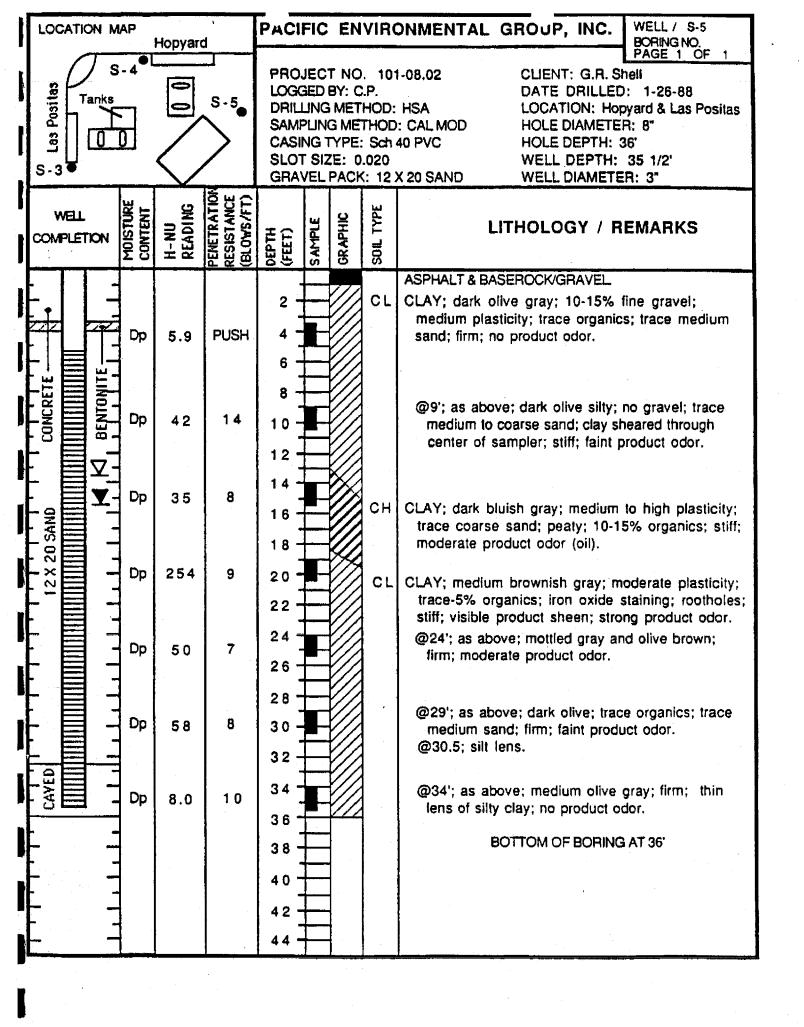












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Dorta	Sampling	Method:	CA Mod	. Split-Shoe	Hole	Depth:	77.5 feet	Please se	ee site map
Environmental	Casing T	ype:	Sched. 4	10 PVC	Well	Diameter	r: 4 inch		·
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	wet	U. I					SW	Coarse Grained SAN	vo: same a	as above
	· Wet			76			SC	Clayey SAND: same	as above	grev
								Clayof Critical Collino	40 40010,	9.09
			50 for 5"	77			•			······································
			,	70	Giran			Boring terminated at	77.5 feet b	elow ground surface
				78						
	`			79						a contraction of the first of the contraction of th
				80	<u> </u>					
				<u>.                                      </u>				<u> </u>		, resemble
·				81				INFORMATION AND ADMINISTRATION ADMINISTRATION AND A	•	
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				82	+	<u> </u>		4. 1.5 <del>14 </del>		·
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				83—						
				84 —						
				85	<b> </b>		; ;			
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				87	-					
				88	<del> </del> ;				,	
, , ,										

	Project N	lo:	SJ37-90	H-1		Client	: -	Shell Oil Products U	UŞ	Well No: \$-5b
	Logged E	Ву:	Heather	Buckinghan	n	Locati	lon:	3790 Hopyard Road	d	Page 1 of 3
		•	Gregg				Drilled:	10/28/2005	Location Map	
Jalta	DING.	ا مطلحة ا							Focesion Mish	
Delta	Drilling N		HSA				Diameter	i	1	
1	Sampling	Method:	CA Mod.	Split-Shoe		Hole (	Depth:	62.5 feet	Please se	ee site map
nvironmental	Casing T	ype:	Sched. 4	10 PVC		Well [	Diameter	: 4 inch		·
nsultants, Inc			0.02				Depth:	62 feet		
nounding, int	- 1		#3				-			
	Gravel P		#3	<del></del>			g Sticku		4	
		Elevation		'	North	ıng	}	Easting		4
Completion	. 6	PID Reading (ppm)	8.0	<b>₽</b>	San	nple	<u>.</u>		I	
Stati		Bad (E	Penetration (blows/6")	Depth (feet)			Sail Type	1 17	.ከሀ፣ ህርሊ	/ DESCRIPTION
Water C	.   Sio (	8, 9°	§ iet	뒱	Recovery	Interval	- 등	LII	HULUUT	/ DESCRIPTION
ä lew	'  ³ '	<u> </u>	4 g	8	ğ		Ø			
<del></del>		<u></u>	<u> </u>		<u>œ</u>	_		2 to A inch conhalt with	th approx	2 inches of base rock
			1	-			AF	5 to 4 men asphalt wi	iii approx.	Z mones of base fock
			-	1 1			.		<del> </del>	
				-				,		
<b>]</b>    1				2	. 1		CL	Sandy Lean CLAV	dark brown	n, 5-15% gravels up to
			× 7	1 -						medium grained sand, lo
			2 2	3						
			air knifed & hand augered	,				to moderate plasticity	, some sm	nali roots
	1.		<u> </u>	,	7			s, se se <u>se</u> com <u>se de la companya del companya de la companya del companya de la companya de l</u>		
			를 D	4					··· ; · · · · · · · · · · · · · · ·	
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<b>■</b>   —	] -		-	5		to the same		0 11 0 11		have alayers bus 4-
										bove, darker brown to
			1	آ ۾ ا				black, 30-40%mediur	m grained	sand
	1 .			6		Ш		Encountered 2-3" asp		
				1 -		$\vdash \vdash \vdash \vdash$	<b> </b>			<del></del>
			▼	7			4			
				1 4			. /		···	
				,	1	. 7	)**			
			1	8		$\vdash$	·			
			6	-				<del>,</del>		
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	damp	68.6	13	_#					ı grey, ∼10	% fine grained sand, low
			15	10				plasticity, very stiff		-
				''					. —	
			1	-		<u>-</u>				
				11—						
	.			1 -						
			1	12-						
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				1 -1						
	1		1	13				•		
					1.94.00	Section 1				
		1	4	14						· · · · · · · · · · · · · · · · · · ·
	damp	60.4	8	'**				(same as abov	ve, trace fi	ne grained sand, moderate
			11	-				plastictly, stiff)		
		1	''	15		MENTANTA		piaduotiy, dtiii)		
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		· .	7				1	10		
	damp	1,305	6	19			CL	Sandy Lean Cl AV	light grev	with medium grey mottling
	Laguip	1,000		-			"			
		Ì	11	20				30-35% fine grained	sand, mod	iciale plasticity, sum
				-			]		1	
							1			
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	1			22	-	-	1	- · · · · · · · · · · · · · · · · · · ·		
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		Project N	lo:	SJ37-90	NJ 1	Clien	I.	Shell Oil Products	HS	Well No: S-5b
•		Logged B			Buckingham	Local		3790 Hopyard Roa		Page 2 of 3
	•	Driller:	-y-	Gregg	POCKIIĞHSILI		uon: Drilled:	10/28/2005	Location Map	1. ago z. a. a.
Del	to	Drilling M	lethod:	HSA			Diameter:	10/20/2003	Popularios meh	
ノロ	la	Sampling			. Split-Shoe		Depth:	62.5 feet	Please	see site map
Environm	ental	Casing T		Sched. 4			Diameter:	4 inch	T TOGGO V	soo dito imap
onsultant		Slot Size:		0.02			Depth:	62 feet		
Onountain		Gravel Pa		#3			ng Stickup:	n/a	,	
			Elevation		N	orthing		Easting	i i	
	<del>1 ,                                   </del>	1		<del> </del>	ļ		<u> </u>			
II Completion	Static Water	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	. 00 1	Sample	Soil Type	LI'	THOLOG	Y / DESCRIPTION
Casing	Level	§ 8	g Old g)	Pen (blo	Dept	Recovery	Soi			
			-	,			/			
					23—				· · · · · · · · · · · · · · · · · · ·	3
				8			<b>'</b>			
		damp	10.3	8	24		CL L	ean CLAY dark or	ev with so	me black mottling, ~10%
	1		, 0,0	9				ne grained sands, r		
	1		,	[ ·	25					
					26		. –			
					27			,		·
					1 -					<u> </u>
	-				28—		_	7,174		
							<b>!</b>  -			
	ł	wet	0.3	13	29-		·	forma na aba	vo no dar	k grey mottling, very stiff)
-		wet	0.3	13	_		-	(same as abo	ve, no dar	k grey mouning, very sun,
	1	1	0.3	13	30 —					
		-			+		<del> </del>			
					31—		<u> </u>			
				1 .	100		1			
					32		1			
			· t		33-					
	]					-			100	
			•	6	34					
		damp	0.1	8						rown, 30-35% fine to mediur
		moist		9	35		9	rained sand, mode	rate to hig	n plasticity, stiff
	1	[			-	_			<del></del>	
	1				36		<b>┤</b>			
	-				+		1 -			
	1	1			37 —		┤╶/┼			
	1				_ +		<b> </b>			
	1	] .			38-		†			
	1	1		7	39					
	].	moist	0.1	8	38 <u> </u>		CL	ean CLAY: mediu	m brown, i	medium to high plasticity, sti
	_			10	40					
							4 L	· · · · · · · · · · · · · · · · · · ·		
				1	41—	_ _	<b>↓</b>	<u> </u>		
<b>     </b> -	1	1.			-		<b>↓</b>			
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<b>    -</b>	-						<b>┤</b> ├		,	<u> </u>
,		1			43					<del></del>
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A000004 1	I	-1	<u> </u>	5	44		<b>i</b>			

		Project I	No	SJ37-90	NU 4	01	ient:	Chall Oil Deadord	- 110	Well No: S-5b
e e e e e e e e e e e e e e e e e e e		Logged			n-1 Buckingh	•	ient: ication:	Shell Oil Product 3790 Hopyard Ro		Page 3 of 3
		Driller:	ωy.		Packudi		ication. ate Drilled:	10/28/2005		Inage of U.S.
Delt	7	Drilling N	دام ما المالية	Gregg					Location Map	•
しらに	a	i		HSA			ole Diameto		BI	
			g Method:		. Split-Sh		ole Depth:	62.5 feet	Please s	ee site map
Environment		Casing 1		Sched.	40 PVC		ell Diamete			
Consultants,		Slot Size		0.02			ell Depth:	62 feet	į.	
		Gravel F		#3	<del></del>		sing Stick		_	
			Elevation			Northing	3	Easting		
Well Completion			Đ <sub>C</sub>	5 0	<u> </u>	Sampl			<del></del>	
, , ,	Static	Moisture Content	ig gg	Penetration (blows/6")	Depth (feet)		1 5		THE COL	// DEGGDIDEIGN
.75 ⊑  .	Vater Level	lois Cont	% <u>g</u>	e de le	뒽	§ §		L	HOLOGY	/ / DESCRIPTION
	-0.01	20	PID Reading (ppm)	¶ <b>&amp;</b> ⊕.	ا ق	Recovery	Soil Ty			
		moist	0.1	5			CL	Lean CLAY: same a	as above	
	<del></del> -		,	6	45					
					-	-				
					46 —		$\dashv$ ,			
					-   47	<del>                                     </del>	7			
		,			<del>4</del>		] _			
					48				·	4 (A + 1.12)
_				7	_					
		moist	0.1	11	49 —		CL	Lean CLAY with Sa	ı <b>nd</b> : liaht br	own mottled with light grey,
		• •		13				15-25% fine grained		
Grout					50				· · · · · · · · · · · · · · · · · · ·	
					51 —					
					-		_			
					52	+	$\dashv$		w	·
	١.		2		53					
							111052			
				40 50 for 5"	54		sc	Fine Crained SAND	) with Clay	: medium brown, 15-25%
		damp		30 101 3	_		30	clay, very dense		
σ			0.3	27	55			l say, vary dames		A STATE OF THE STA
Bentonite	* *.			54	56					
Be -	ļ			16	_		SP		lium Grain	ed SAND: dark tan,
		wot		16	57			medium dense		11
	1	wet		40	. –		sw	Wall Graded SAND	ton and m	nedium brown, ~10% fines,
				50 for 5"	58		SVV	medium dense	, tan anu m	ledidin brown, ~10% lines,
					_	. 140000 0000	1000	, , , , , , , , , , , , , , , , , , ,		
Sand					59			No recovery (	sluff)	
Ж					60		4.			
				1	-		أممر إ	No recovery (		
Execution of the control of the cont					61—	1	<del> </del> -			<u> </u>
		wet			62		GW	Well Graded GRAV 10-20% well graded		and: grey, 1/4 to 1.5" gravel se
					63—			Boring terminated at	62.5 feet b	oelow grade
-					-		_		· · · · · · · · · · · · · · · · · · ·	
					64	+	$\dashv$	-		
					65 -	+-+				
		•			65—					
		-			66—	<u> </u>	_			<del></del>
			l	1 :						

dark gray day, very stiff, plastic

layer coarse gravel and some coarse sand, poorly sorted, wet

GFAVEL

6

30

"HNU=4.5ppm"

- Ne Hydrecarton eder-

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<del>, `                                     </del>	<del></del>	7				7
4 (1)	Samples	Brown	MATERIAL DESCRIPTION		1.80	A COMPANY COMP
35 -	7	\$	CLAY dark gray day with trace gravel, soft, plastic, wer	HNU = 1.5 ppm No Hydrocarbon odbr ==	a.	1
-	1	7		No hyddaiddiad —		
-	1		Total Depth = 35.5 feet	-		
-	1		· = Lab Sample			
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<b>85</b> –						
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70 -				4		
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1100	/ (A.Y)		-Ciyue C	Olisuidiks			7 (19)		THU	JECT NAME		W MINA	<u>'</u> '	0. 00	301171
MONT	TORII	4G WI	LL LOCATION	Los Poetes and	Hoppard, Please	ton, Çi	1	<u>.</u> .		ELEVATIO		TUM	***		
DRALL	ING /	CEN	⊒γ Beyt	Lend Drilling Co.	DRELER		Kuri			DATE STA		10/4/6/	6		
DALL	ING E	QUIP!	MENT	Truckmounted CME - 75						COMPLET	ON	36	SAMPLER	Mod Calit	
DRILL	ING I	ETH	00 6Hz	section at the work	DRILL BI	7				NO, OF SAMPLES	DIST.	7	UNDIST.		
SOZE A	JAD T	YPE (	of Casing	3" PVC Threaded	FROM	35	TO	0	pilla.	WATER	FIRST		COMPL.	24	HRS.
TYPE	OF PE	RFOF	LATION (	0.020° Sto1	FROM	35	то	10	FT.	LOGGED B	Y:		CHECKED	BY;	
SIZE A	NO T	YPE C	P PACK	2712 Lonester Send	FROM	35	TO		FT.	K	Sovers		H 1	Bortow	Si4
•		<del></del>	10.1 Benz	· · · · · · · · · · · · · · · · · · ·	FROM	8			FT.	<b>E</b>					
TYPE SE		-					<u> </u>	6.5		-					
• • •		1	10. 2 Cono		FROM	5.5	TO	<u> </u>	FT.			<del> </del>	1	<del>.</del>	
Cepth (10 pt)	Samples	Bone			MATE	RIAL	DESCF	PTX	XV					252	Construction
	T		Asphalt a	and Gravel Base										1	记
-							,							- aw	
-														$\dashv$	
_ ,	1	250 pa	SAND								HNU-			┤ॣ	
5 '-		128	sity s	evere error diw basi	l, bose, poor	ly scort	ed, dry				No Hyd	o nacinador	octor .	-  a	1:3
	.													]	
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	, <del> </del>	. E	_ CLAY	pray clay with some g	raval entirel		·				Ĥ <b>N</b> u=0	iron -		£	
p - 1		20 Per										o nochsoon	da .	$\frac{1}{\alpha}$	
	ļ			. •									•	_	
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4			- 'CAYEY	SAND			;	-مد						1_	
<del>ن</del> چ. – اُ		3	clayey CLAY	y sand with title grave	ol bose, poo	ńy son	ted, mai	st			HNJ=0	ostpou o Doui	oox 🐠	PT	
٧-	.		dark g	yray ctay with black m	otting, trace	sand .	and <del>gra</del>	vel,	× .		•			٦ ٦	
			mediu	im stiff, low plasticity			<b>.</b>					-		7	
			P <del>E</del> AT		=	· · ·	• • •		-					_	
æ - ⁴	·	3	peat v	with trace clay, root m	aterial, moist						HNU=0	ocarpou o Ocarpou o	rdor f	4.	
		<u> </u>	CAY	gray clay, trace roots a	ecd mad imaa	<del></del> -	ne etitl	oda c+i			1011,0		•	-	
-	. :			Nay only, vace roots		<del>0000</del>	1 124 24114	hasv	•				•	-	
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s – 5		2	dark g	gray clay	*						HNU=0	ррті		1	
֓֟֟֟֟֟֟֟ <u>֟</u>		7		. •					: د		No Hydr	ocarbon o	dor •	]	
			•												
4													•	4	
4		4	mottle	id brown, black, gray i	cłav with con	acino:	al oravel				HNU=0	ppm		-	
o -  <sup>6</sup>		5	moist	to wer, soft with occa	sional streak	s of wi	nie Piera	,			No Hydr	ocarbon o	<del>-</del> σον σον σον σον σον σον σον σον σον σον	-	
7														4	
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		1												]	
													•	7	

Per P	Se de la constant de	A	MATERIAL DESCRIPTION	253	Construction
<b>35</b>	7		dark green day with trace gravel, soft, plastic, moist to wer No Hydrocarbon odor —	α	
			Total Depth = 35,5 feet		
40 -					;
- - 45 -					
-					,
50  					•
25					
- C					
5 -					
0 -					ı
5 -					
0					

<del></del>			Rd, Pleasanton, C	A (5-4	3) <sup>*</sup>		<del>- </del>		ATUM 100.	00" site detu	m	
DRILLING	AGENCY	8aylands	DRILLER	K. Voss	·····		DATE STA		2/24/89 2/24/89			· · · · · · · · · · · · · · · · · · ·
DRILLING	EQUIPMEN	IT Truck-mounted CME-75					COMPLETI DEPTH	ON 35	i <del>-</del>	SAMPLER	Califo	
DRILLING	METHOD	8" hollow stem auger	DRILL BIT	CME C	arbide		NO. OF	DIST.		UNDIST.	7	
SIZE AND	TYPE OF C	ASING 3" PVC	FROM 34	5 TO	0.5	FT,	WATER	FIRST	16' Approx.	COMPL.	24 1	HRS.
TYPE OF P	ERFORATI	ION 020 slotted	-ROM 34	.5 TO	9,5	FT.	LOGGED B	ı <b>Y</b> ;		CHECKED	BY:	· · · · · · · · · · · · · · · · · · ·
SIZE AND	TYPE OF P	ACK 8 X 16	FROM 35.	от с	7.5	FT.						
TYPE OF	NO. 1	Bentanite	FROM 7.5	ΤO	6.5	FT.	С.	. Parten		,	4. Bonko	owski
SEAL	NO. 2	Grout	FROM 6.5	то	surface	ਾ ਜਾ.	1					
(feet) Samples	Blows		MATERI	AL DE	SCRIP"	TION					SOSA	Well Construc-
41		3" Asphaii; base, gray bro	wn SANDY C	LAY w	ith SAN	D			· · · · · · · · · · · · · · · · · · ·		-	H
-			•								- CL	
	50											
7	انممأ	SILTY CLAY grayish brown, damp, me	edium firm, so	me roo	ts					<u> </u>	CL	
	)										-	
-											-	Z
7											7	
, _ 2		SILTY CLAY gray brown mottled, med	um liem						HNu = 0	- 20m	CL	=
		gray olown modes, mee	Oto inta						/ // <b>4</b> G = 0	ppisis -	-	
											4	
										•	_	
3	1	SILTY CLAY as above							HNu = 0	- nom	CL	
4									( 1140 = 0	<b>Y</b>		
-										•	-	
			-							. •	1	
4		SILTY CLAY gray and brown mottling,	Uranna snach	las IIca	uk liba h	niek\	rante		EIND: 0			E
		damp, medium firm	oranide sherk	iss (IUC	יה וועם ל	ni (N)	, 100(3,		HNu ≖ 0	hbw _	CL	E
$\dashv$											-	
]											-	
5		SILTY CLAY gray and brown mottling,	damo mediur	n firm					HNu = 0	, nam		
		gray wild drown mounty,	camp, mediai	o min						י אטרוי –	d Cr	盂
-											4	
7 1 1										. •	-	
6	3	SILTY CLAY							ONI A		1	
		as above							HNu = 0	ppin =	CL	E
4										•		
- [		SILTY CLAY									-	E
7 [	3	gray and brown mottling, d	amp to moist	mediu	m firm					-	-	

PROJECT NAME GETTLER - RYAN NO. \_\_\_\_

MON	MORI	NG WE	LL LOCATION 3790 Hopperd Rd, F	Heasenton,	CA (	S-9)	JECT NA		ELEVATIO	N AND DAT		4' site datum		
ORIL	LING	AGENO	Y Baylands	ORILLI	R X	Voss			DATE STA		24789 24/89			<del></del>
DRIL	LING I	EQUIPA	MENT Truck-mounted CME-75		<del></del>				COMPLETI		o.	SAMPLER	Califo	
DRIL	LING I	<b>KETHO</b>	O B" Hollow-stern auger	DRILL	BIT C	ME C	mide		NO. OF	DIST.		UNDIST.	7	
SIZE	AND T	YPE O	F CASING 3° PVC	FROM	34.5	TO	0.5	FT.	WATER	FIRST		COMPL.	241	IRS.
TYPE	OF PI	ERFOR	Denote 020 NOTA	FROM	34.5	10	0.5	FT.	LOGGED B	Y:	<del></del>	CHECKED E	3Y;	
SIZE	AND T	YPE O	FPACK 8 X 16	FROM	35	то	7.5	FT.	1					
	E OF	N	D. 1 Bentonite pellets	FROM	7.5	то	6.5	FT.	C, F	arten		м. в.	onkaws	ki
SI	AL	NC	). 2 Grout	FROM	6.5	то	suriace	FΣ.		_				
(100)	Samples	Blows		МУЛ	rerial	. DES	SCRIPT	ION					USCS	Well Construc-
_			Asphall (3" thick), base, sitly day to	T									1	1
-,												-		1344
												-		
-	1	Push	SILTY CLAY with GRAVEL	<b></b>			o.,			1-1	Nu = 0 p		CL	
		250	gray brown, medium firm sandy in upper ponion of		ĝrave:	ι <b>ο</b> 17	2				'	` ; <u>-</u>		
										<del></del>		=	1	$\mathbf{Z}$
-												-	]	
, 4	2	<del>-</del>	SILTY CLAY to SANDY CLA gray brown to greenish b	YY rown, me	edium I	firm, d	amp			Н	Nu = 0 p	om	CL	
1 -												-		
		-						<del>-</del>				=	ĺ	
-	129	2	SILTY CLAY									-		
5-	3	2	gray brown with black mo	πling, so	tt, moi:	si, so	me cha	rcoa	H	Н	Nu = 0 p	pm <u> </u>	. CL	
					·							_		
4												_		
-	. 2		SILTY CLAY	•								-		
			gray brown mottling, soft	, brick fra	agmen	is an	d roots		•	Н	INu = 0 p	opm —	CL	
$\neg$														
-				1								_		H
5	5		SILTY CLAY											
]			gray brown mottling, me	dium firn	n, dam	þ				Н	1Nu = 0 p	pm		
4												• • • • • • • • • • • • • • • • • • •		
$\dashv$		-	·	<del>-</del>		<u> </u>	_			· <u> </u>		=		
	6		SANDY CLAY to CLAYE sifty clay at bottom of sa							Н	Nu = 0 p	pm _	CL- SC	
		-		_ <del>_</del>							<del></del>		30	
4														
+		6	SILTY CLAY gray brown mottled, me	dium fier	n dam	n				Н	.Nυ <b>=</b> 0 p	ppm	CL	
, –	7	•	2   wishin morney, me	जन्ममा (स)	., can						er Total	4	54	

_			- 1 - 77		0 107 001			Δ0A		Shell Oil Products U	10	Well No: S-9b
			Project No		SJ37-90			Client Locati		3730 Hopyard Road		Page 1 of 3
			Logged B	<b>y</b> :		3uckingham						I age 1 of 5
	~I-	1	Driller:		Gregg				Drilled:	· · · · · ·	Location Mep	
De	$\pm 11$	La	Drilling Mo		HSA				Diameter:		Diagno er	ee site map
			Sampling			Split Shoe			Depth:	61 feet	Please se	ee site map
Envir	ronme	ental	Casing Ty	/pe:	Sch. 40 l	PVC			Diameter			
Consu	ıltantı	s, Inc.	Slot Size:		0.02				Depth:	61 feet		
			Gravel Pa		#3				g Sticku			
				Elevation		N	lorth	ling		Easting		
ell Com	pletion	Otatia	w +-	<u> </u>	no (;	et)	San	nple	ė,			
Backfill Casing		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery	Interval	Soil Type	LIT	HOLOGY	DESCRIPTION
					<b>A</b>				AF	3 to 4 inch asphalt wi	th approx.	2 inches of base rock
						1—				7.111		
			'					ļ		I am Ol AV. dade and	wich house	n trans coarse arained
						2		Quantum de la composition della  <u> </u>	Lean CLAY: dark gre	eyisii browl	n, trace coarse grained	
					Ъ				CL	sand, gravels up to ~	xa-a mmc	is diameter, medium
					air knifed & hand augered	3-		<u></u>		plasticity		tiii
			1		Tec la			<u> </u>	(sc		prown, fine	to medium grained sand,
		'			<u>a</u> <u>E</u>	4			133	20-30% clay		/
	_		1		aj =				CL			6 gravels up to ∼5mm
				0.1	ا " اِدّ	5		<u> </u>	***.	b-axis diameter, med	lium plasti	city
		!			1 1				``			
		1				6—			SC	Clayey SAND: brown	to yellow	ish brown, fine to medium
		1				0			]	grained sand, 15-25%	% clay	
	-	1			↓	<sub>7</sub>			]			
		Ì			1	'			<b>}</b> 、			
	i –					1 , 🕇		T	1 ```			
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		1	1 1		5							
		1	slight	0.1	8	9			CL	Lean CLAY with Sa	nd: dark g	rey, sand pockets ~0.5cm
		-	damp	021	12					with fine to medium	grained sa	nd (10-15%), low to
<b>****</b>		1	1		'-	10	*****		1	moderate plasticity,	2-3" clayey	y sand layer within fine
10015	-	1				1 +		1	1	grained sand, stiff		
5		1				11-		<del>                                     </del>	1	3		
	-	1			-	\ <del> </del>		+	┧、			
		1			1	12-	•••	+	<b>†</b> ```.			
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		4			1	13-		₩	-			
	_	4			1 ~	-	asu.	In the second				
	<b>I</b> —	1	1		6	14	0494		13.	Loop Cl AV. dork or	con with h	rown mottling, trace fine
	-	-	damp	0.1	8				CL	grained sand, mediu		
		4			9	15	<b>1088</b>		11	grained sand, mediu	in to riigh	pidauoity, auri
	-	4	,			_	• •	<del> </del>	4			
	1	4				16			-		,	
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		_				17		—	4			
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						18-		<b>_</b>	վ ՝			
		_					Tabu an	37 (188				
	1_ <sup>-</sup>				6	19						400/ fine and
				0.1	7					(same as abo	ve, orange	e mottling, ~10% fine graine
	_			1	7	20—				sand, mediun	n to high p	lasticity)
						20			╛		·	
	-	1				21 —						
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20000000	. 1		1		1	22	<del>                                     </del>		<b>⊣</b> i	***		

<del></del>		Project No	v.	SJ37-90	4_1	Client:		Shell Oil Products U	JS	Well No: S-9b
		Logged By			u Buckingham			3730 Hopyard Road		Page 2 of 3
		Driller:	•	Gregg	- a c	Date D			Location Map	
$J \sim I$	t^	Drilling Me		HSA			Diameter:		·	
Del	la				Calif Chan	Hoie D		61 feet	Please se	e site map
		Sampling			Split Shoe		Diameter:	*	1 10000	
Invironm		Casing Ty	pe:	Sch. 40 I	PVC			61 feet		
onsultant	s, inc.	Slot Size:	_	0.02		Well E	-			
		Gravel Pa		#3		Vasing	g Stickup	Easting	}	
			Elevation		r	vortning		Casting		
Il Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery S Interval ald	Soil Type	LIT	HOLOGY	/ DESCRIPTION
. O		<u> </u>	о.			<u>~ =  </u>		Lean CLAY (continue	ed)	
	-					<del></del>	、	Lean OLFT (Continue		
	-				23 —		```\	<del></del>		
<b></b>	- ·	1		6			-			
	-	damp	0.9	8	24		CL I	Lean CLAY with Sai	nd: dark b	rown with red brown
<b>    -</b> -	1	Samp	0.0	9	-		ļ.	mottling (end at 15')	dark grey v	with light grey sand
				"	25		, F	pockets 10-20% fine	grained s	and, moderate plasticity,
	-				-			very stiff		
	-				26—		ŀ	TOIT OUIT		
<b>   </b>   _	-			1	-		<del> </del>			
I	-	1 1			27-		```.			
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<b>I</b> 1					28					
	1									
	_[			9	29		_		دالم حاسم	row 20 250/ fine areined
	_	damp	0.5	11			CL	Sandy Lean CLAY:	medium g	rey, 30-35% fine grained
				12	30			sand, moderate plas	ticity, very	SUIT
	_]			1	~~		ļ [			
			i		31		[ [	,		
		1		1			]			
<b>*</b>	7	1.		1	32-					
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	_			1	33		]			
_				7	24					
<del>  -</del>	-  ·	damp	0.3	9	34					
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				1	38		4			
		.			-	RESIDENT HORSE				
	_		20	8	39					
<b>-</b>	_	damp	0.2	15						
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	-	-			43			· ·		
	7	- 1			45					
				11	144					
D000000 I		damp	I	9	44					•

		• •					
	Project No:	SJ37-90	H-1	Client		Shell Oil Products	US Well No: S-9b
	Logged By:		Buckingham	Locati		3730 Hopyard Roa	l l
	Driller:	Gregg			Drilled:	10/26/2005	Location Map
Delta	Drilling Method:	HSA		Hole [	Diameter	: 10 inch	
Della	Sampling Metho		. Split Shoe	Hole (	Depth:	61 feet	Please see site map
Environmental	Casing Type:	Sch. 40		Well I	Diameter	: 4 inch	·
Consultants, Inc.	Slot Size:	0.02		Well [	Depth:	61 feet	
<b>-</b>	Gravel Pack:	#3			g Sticku		
	Elevat	ion	No	rthing		Easting	
Well Completion Static	a t in in in in in in in in in in in in in	ion (f)	G get	ample	₹ <u>8</u>	·	
© Static Water Cevel	Moisture Content PID Reading	Penetration (blows/6")	Depth (feet)	Interval	Soil Type	Li	THOLOGY / DESCRIPTION
m o	damp 0.1				CL	Sandy Lean CLAY (	continued)
		- 7	45		,		
			46	-			2
			47				
		e	- -		***	·	
			48-				
			49				
	wet 0.2	2 7	50-				
		10	51-		CL	Lean CLAY with Sa moderate plasticity,	nd: grey, 15-20% fine grained sand,
d d	damp	11 7	52			moderate pidotiony,	1017 031
Grout		9	F2				
		9 12	- 6			(same as abo	ve, grey mottling)
<u>a</u>	damp	18 7	54				
Bentonite	0.	1 11	55			Dl. Craded Ein	o Grained SAND with Clay: grey
	damp	18 5	56		SC	80-85% fine grained	e Grained SAND with Clay: grey, I sand, 15-20% fines, medium dense
	wet	17	57-			50-55 % file graines	
		11 15				Poorly Graded Med	dium to Coarse Grained SAND with
Sand		25	58		SP	Gravel: grey, 10-15	% gravel, trace fine grained sand, den
Sar	wet	33	59				ed Grained Sand with Clay: same
	0	.8 17	60-		SC	as above, dense	dium to Coarse Grained SAND with
	1,404	18 27			SP	Poorly Graded Me Gravel: same as at	dium to Coarse Grained SAND with pove, very dense
	wet	21	61	greuski ditest	3, 3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	STATUTE GALLIE	
-			62 —				
			63-		].		
			64		7		
			65				
The second			_				
	· ·		66				

-		Project No	D:	SJ37-90	H-1	С	lient:		Shell Oil Products t	JS	Well No: S-9c
		Logged B	y;	Heather I	Buckingha	m L	ocatio	on:	3730 Hopyard Road		Page 1 of 4
_	14_	Driller:		Gregg		D	ate C	rilled:	10/25/2005	Location Map	
) <i>(</i>	elta	Drilling M	ethod:	HSA		H	iole D	)iameter			90
	/ I CO	Sampling	Method:		Split Shoe	• н	lole C	epth:	79 feet	Please se	ee site map
Enviro	nmental	Casing T		Sch. 40 l	PVC			iameter		]	
onsult	ants, Ind			0.02				epth:	79 feet		
		Gravel Pa		#3				Sticku		-	
			Elevation			Northir	ng		Easting		
Casing Casing	etion Stati Wate Leve	er   sistu onte	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery S	Interval a	Soil Type			/ DESCRIPTION
				<b>↑</b>				AF	3 to 4 inch asphalt wi	th approx.	2 inches of base rock
	<u> </u>				1 1		$\dashv$				
		1 1		1 1		+	$\dashv$		Lean CLAY: dark gre	eyish brow	n, trace coarse grained
				'_	2-	9		CL	sand, gravels up to ~	5mm b-ax	is diameter, medium
	7			∞ <u>9</u>	3-				plasticity		
				fed Jge	3			ͺsc`		brown, fine	e to medium grained sand,
				air knifed & and augere	4-			3000	20-30% clay	P 4F0	/ emanala um ta . Emana
				air knifed & hand augered	-			CL	Lean CLAY: dark bro	own, 5-15%	% gravels up to ∼5mm
			0.1	ا اح	5-		Negy (100)		b-axis diameter, med	num piasti	City
	$\dashv$				-	1-1		66	Clavey CAND: brow	n to vellou	ish brown, fine to medium
				-	6	++		SC	grained sand, 15-25		isi biowii, inio to modiam
						+++	_		grained saild, 13-23	70 Glay	
				▼	7	╂──┼					No.
	-				-	+++		****		<del></del>	
			,		8						
		İ		5	-						
	<del></del>	slight	0.1	8	9—			CL	Lean CLAY with Sa	ınd: dark g	grey, sand pockets ~0.5cm
		damp		12	10				with fine to medium		
					10—					2-3" claye	y sand layer within fine
		.		1	11				grained sand, stiff		
					' ' -						
		Ì			12-	-		***.			
					-	11		<b>`</b> `		<del></del>	
				-	13—	-		1			
					-	MAKEN	<u>Uguna</u>	,			
		 	0.4	6	14			CL	Lean CL AV: dark o	reen with h	prown mottling, trace fine
	$\dashv$	damp	0,1	8	-				grained sand, medit	ım to hiah	plasticity, stiff
		1	1	"	15	111159	10.000	4	Station Carry, mount	· · · · · · · · · · · · · · · · · · ·	
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				1	16—			1			
	-				47			1			· · · · · · · · · · · · · · · · · · ·
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		1		1	18—			1			
				-	'0	111222	W (1802)				`
				6	19				/		a mattling -10% fine grain
			0.1	7				ii ii	(same as abo	ove, orang	e mottling, ~10% fine grain
				7	20-				sana, mediui	ii to mga t	prastitity)
								-			
					21 —	-	┼─	4	1		
	-		1		ļ.		-	-			A
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					0" - (		Shell Oil Products U	IC	Well No: S-9c
*	Project No		SJ37-90I		Client:		3730 Hopyard Road		Page 2 of 4
	Logged By	y:		Buckingham			· · · · · · · · · · · · · · · · · · ·		Fage 2 OI 4
7~1+~	Driller:		Gregg		Date D		10/25/2005	Location Map	
Delta	Drilling Me		HSA			)iameter:			ita
_ VILU	Sampling	Method:	CA Mod.	Split Shoe	Hole D	Depth:	79 feet	Please se	ee site map
Environmental	Casing Ty	/ре:	Sch. 40 !	PVC	Well [	Diameter	: 4 inch		
onsultants, Inc.	Slot Size:		0.02		Well [	Depth:	79 feet		
Onduitanto, mo.	Gravel Pa		#3		Casin	g Sticku	p: NA		
		Elevation		, N	lorthing		Easting		
ell Completion	1			<u> </u>	Samula			<u> </u>	· · · · · · · · · · · · · · · · · · ·
Static  Static  Water  Level	1 W W 1	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery S Interval el	Soil Type	LIT	THOLOGY	I DESCRIPTION
í Ö		<u>n</u>	L -		<del>2</del> -		Lean CLAY (continue	ed)	
-				+	_	`,,	LEGIT OLAT (COMMING	<del></del>	
				23—					
			6	24-					
	damp	0.9	8	4-7		CL	Lean CLAY with Sa	nd: dark b	rown with red brown
			9	25—			mottling (end at 15')	dark grey v	with light grey sand
	1 1			25				grained s	and, moderate plasticity,
				26			very stiff		
				26-					
			,						
				27—		3000			
			1			Ì			
				28					
			9						
	dame	0.5	11	29-	eries legitarii Caba legitarii	CL	Sandy Lean Cl AV	medium a	rey, 30-35% fine grained
	damp	0.5	12	-			sand, moderate plas	ticity very	stiff
			12	30-		1	Sanu, moderate plas	Livity, voiy	
			1	-		•			
				31		1			
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		] .	7	24					
	damp	0.3	9	34				·	
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<b></b>	7		1	38		4			
	-			-	STATISTICS CONTROLS	#			
			8	39					
	damp	0.2	15	-				<del> </del>	
			16	40			_ 24***		
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	<b>1</b> .	1	1 44	_				***************************************	
		1		44				-	
	damp		11 9	44					

						×			OL ILOU Conducto	ue.	Well No: S-9c
			Project No		SJ37-90		Clie		Shell Oil Products		Page 3 of 4
			Logged B	y:		Buckingham		ation:	3730 Hopyard Roa		11 498 0 01 7
	_ I.	4	Driller:		Gregg			te Driffed:	10/25/2005	Location Map	
De	-	la	Drilling Me		HSA		•	le Diametei		Diogeo e	ee site map
			Sampling			. Split Shoe		le Depth:	79 feet	Please S	ee site map
Envir	onme	ental	Casing Ty		Sch. 40	PV¢		ell Diameter	· ·		j
Consu	Itants	s, inc.	Slot Size:		0.02			Il Depth:	79 feet		
			Gravel Pa		#3			sing Sticku		-	
	•			Elevation		N	orthing		Easting		
Well	<u> </u>			<b>D</b> )	Τ					J	
Comple	ition	Static	Moisture Content	PID Reading (ppm)	Penetration (blows/6")		Sample >-	1 🛬 1	1 17	THAL ACY	/ / DESCRIPTION
in gri		Water	ts of	Read (ppm)	netr lows	뒾	(ecovery Interval		L-11	HOLOGI	/ DESCRIPTION
Backfill Casing		Level	50	8	\$ €	8	Recovery	₹	•		
			damp	0.1	9			CL	Sandy Lean CLAY (	continued)	)
					7	45					
						<mark>│</mark> .→	-	-			
				٠		46		-	<u> </u>		
						+		-			
					1	47		<b>-</b> [```.			
	-					48		<b>]</b> ]			· .
						40					
		]	1			49	$\dashv$		-		
	_					<del></del>					
		-	wet	0.2	7	50				<del> </del>	
			Mer	Ų.Z	10			CL	Lean CLAY with Sa	nd: grey,	15-20% fine grained sand,
	<u> </u>	1			111	51 —			moderate plasticity,		
++		1	damp		7					T	
Grout		1	""""		9	52-					
· O 3	-	1			8	50					
		1			9	53			(same as abo	ve, grey m	nottling)
	i –	1			12	54 —					
		·	damp		18						
					7	55-					
	_	<u> </u>		0.1	11	-			D I. Candad Sine	Crolmod	SAMD with Clay: crey
	l	1	damp		18	56-		SC	Poorly Graded Fine	cond 45	SAND with Clay: grey, 20% fines, medium dense
	1	4			5				Tine grained	Sailu, 10-	-20 /0 (III les), I lieuloi i delise
		1	wet	[	17	57-					
	1				11	-					
		-		]	25	58		SP	Poorly Graded Med	ium to C	oarse Grained SAND with
	-	-	wet		33	-		J.	Gravel: grev. 10-15	% gravel.	trace fine grained sand, dense
		+	Mer		7	59——					
	-	1	1	0.8	17			SC	Poorly Graded Fine	ed Graine	d Sand with Clay: same
					18	60 —			as above, dense	-	<u> </u>
	-	-1	wet		27	61—		SP	Poorly Graded Med	dium to C	oarse Grained SAND with
					50 for 8	5" 51			Gravel: same as ab	ove, very	dense
					17	62					
			wet		33					- C!	EAND with Clav. came ac
			1		40	63		sc		e Grainet	SAND with Clay: same as
	1 -	_			17	_		CVA	above, very dense	ea Graina	d SAND with Gravel: grey,
		4			19	64		SW	35_40% 1/4" gravel	trace larc	ge gravels up to 1", 60-65%
		-	wet	1	30 12	_			sand dense		
	_	-		0.1	19	65 —			Graded SAND, CL	AY and G	RAVEL with Fine Grained
200000000000000000000000000000000000000	1 -	-	wet	1 0.1	20			GC	Sand: grey. ~15-20	% fine gra	ained sands, ~25-30% fines,
							-montoneridi 4 di				

···		Project No	0:	SJ37-90	H-1	Clien	t:	Shell Oil Products	US	Well No: S-9c
		Logged B			Buckingha	n Locat	tion:	3730 Hopyard Roa	ad	Page 4 of 4
		Driller:	•	Gregg			Drilled:	10/25/2005	Location Map	<del></del>
			- 4h 1 ·	HSA		,	Diameter:			
Deli	La	Drilling M							Please	see site map
		Sampling			Split Shoe		Depth:	79 feet	1 10020	occ alto, map
Environme	ntal	Casing Ty	ype:	Sch. 40	PVC		Diameter:		1	
onsultants	, Inc.	Slot Size:		0.02			Depth:	79 feet		
	•	Gravel Pa	ack:	#3		Casi	ng Stickup		1	
			Elevation			Northing		Easting		
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Completion	Static	Moisture Content	ig c	) He (1)	fee.	Sample >>	Sail Type			V / DECCRIPTION
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Casing	Level	≱ၓ	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery Interval	တိ			
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		dry	0.1	6	' -					
		slight		8	71			(same as abo	ve, brown	with tan mottling, very stiff)
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		maint	0.1	14	-		sc	Poorly Graded Fine	e Grainer	SAND: medium brown,
	-[	moist	Ų. I	14	75			10-15% fines, dense		
	4			28	-			TO-TO WILLIAM		
	1				76 —					
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		}		28	77—			CA	ND with C	Clay: medium brown, 15-20%
				50 for 8	5"		SC	Poorly Graded SAI	ND WILL C	and alight placticity done
				18	78 —			fines, 80-85% fine g	irained sa	nd, slight plasticity, dense
				33	' _		sw	Well Graded SAND	): tannish	brown, trace gravel (~5%)
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THORN THE	ocation of boring:								Date:	08/09/89	Sonno No:	
•	(See Plate 2)						Client:	Shell Oil Co			-	
		(S	ee Plate	2)			•	Location:	3790 Hopya			Sheet 1
								City:	Pleasanton.	Driller:	Bayland	of 2
								Casing install	J. Vargas	LATINOT.	Daylariu	1 0, 2
		l tallan f	330 - A					Casing menan		e Well Const	niction Deta	al .
lote die	method:	Hollow-S		iger			·····	Top of Box E		s TYON CONSI	Datum:	101.
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	Blows/8. Or Pressure (psi)	F-60	νž	å	S		Soil Group Symbol (USCS)	Cate	1 00/11/00	Description	·	
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	<u> </u>			7	-					y; 20% silt;		
				1 '	-				y; no chemi			······································
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JOB NUMBER REVIEWED BY PIGCEG DATE REVISED DATE REVISED DATE 7632 CAMP CEG 1262 08/89

1000	allion of I	ooring,						Project No.:	7632	<del> </del>	08/09/89	- sound v
		14	) Di	. ~				Client;	Shell Oil Co			- S-10
•		(5	See Plate	2)				Location:	3790 Hopya		<del></del>	
								City:	Pleasanton	California Driller:	Daylord	Sheet
								Logged by: Casing install		CARRET:	Bayland	of
illina s	nethod;	Mollani	Stom Au	000				Casing install		e Well Const	ruotion Data	.21
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	Blows/ft. or Pressure (p.s)	~ .	2.5	€		_	\$ <u>\$</u>	Water Level			1	
CIL de la Cil	Blows/ft. or essure (p	Type of Sample	Semple	Depth (ft.)	Semple	V ved	0.2	Date			-	
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	3	S&H	1		<b>.</b>	ļ <del>-</del>	V//	trace co	arse sand; i	no chemical	odor.	<del> </del>
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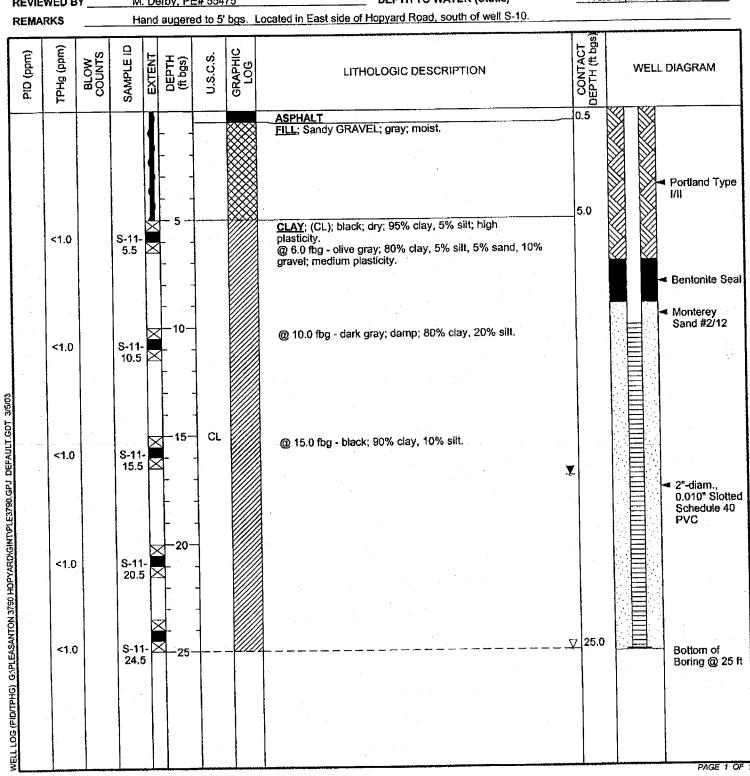
JOS NUMBER 7632 REVIEWED BY AGOEG
(LWP) CEG 1262 DATE 08/89 REVISED DATE PEVISED DATE

## **BORING/WELL LOG**



Cambria Environmental Technology, Inc. 5900 Hollis Street, Suite A Emeryville, CA 94608 Telephone: (510) 420-0700 Fax: (510) 420-9170

		BORING/WELL NAME S-11
CLIENT NAME	Shell Oil Products US	
JOB/SITE NAME	Shell-branded service station	DRILLING STARTED 26-Aug-02
LOCATION	3790 Hopyard Road, Pleasanton, California	DRILLING COMPLETED 26-Aug-02
PROJECT NUMBER	244-0497	WELL DEVELOPMENT DATE (YIELD) 23-Sep-02
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION 328.04
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION 327.48 ft
BORING DIAMETER	8"	SCREENED INTERVAL 10 to 25 ft bgs
LOGGED BY	S. Dalle	DEPTH TO WATER (First Encountered) 25.0 ft (26-Aug-02)
REVIEWED BY	M. Derby, PE# 55475	DEPTH TO WATER (Static) 16.9 ft (23-Sep-02)
REMARKS	Hand augered to 5' bgs. Located in East side of	Hopyard Road, south of well S-10.
	<u> </u>	MAROUNI HAM
(ppm)	파 [원] 끝(하) 역 [모급]	OLOGIC DESCRIPTION LE WELL DIAGRAM



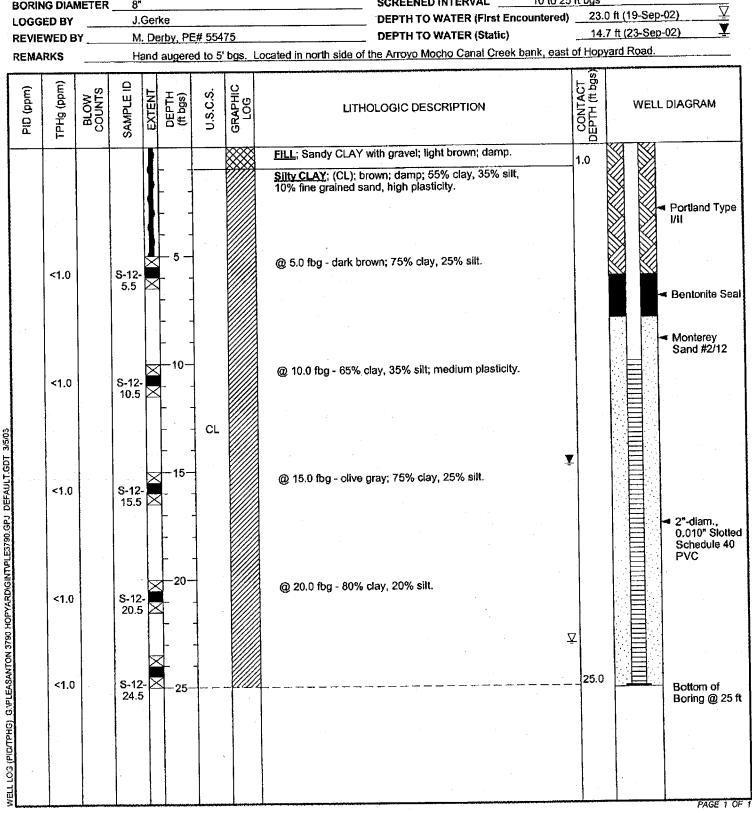
## **BORING/WELL LOG** ·



Cambria Environmental Technology, Inc. 5900 Hollis Street, Suite A Emeryville, CA 94608 Telephone: (510) 420-0700

Fax: (510) 420-9170

S-12 **BORING/WELL NAME** Shell Oil Products US **CLIENT NAME** 19-Sep-02 DRILLING STARTED JOB/SITE NAME Shell-branded service station DRILLING COMPLETED 19-Sep-02 3790 Hopyard Road, Pleasanton, California LOCATION 23-Sep-02 WELL DEVELOPMENT DATE (YIELD) 244-0497 PROJECT NUMBER 323.20 **GROUND SURFACE ELEVATION** DRILLER Gregg Drilling TOP OF CASING ELEVATION 322.76 ft DRILLING METHOD Hollow-stem auger 10 to 25 ft bgs SCREENED INTERVAL **BORING DIAMETER** 



		<u> </u>	5 IN 501		Ol:		Shell Oil Products	: LIS	Well No: S-14
	Project No		SJ37-90		Clie	ent: :ation:	Trailgate # 7 & 8	, 50	Page 1 of 2
	Logged By			Buckinghan			10/28/2005	Location Mag	
Delta	Driller:		Gregg	* .		le Drilled:		LUCATION WAS	<b>-</b>
Dena	Drilling Me		HSA			e Diamete	*	Diegeo	see site map
	Sampling		Geoprob	9		e Depth:	25 feet	Flease	see alte mop
Environmental	Casing Ty	•	PVC			Il Diamete			
Consultants, Inc.			0.01			ell Depth:	25 feet	1.	•
:	Gravel Pa		#2/12			sing Sticku	up: NA Easting	-	
		Elevation		1	Northing		Easing		
ਛੂ ੲ Water	Static   岩色   岩色		Depth (feet)	Recovery Surface Surfa	- 1 ₩	LITHOLOGY / DESCRIPTION			
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				2		CL	Lean CLAV with C	ravel: da	rk brown, 15-25% gravel (up
		•	<u>,                                    </u>	_			to 10mm haviel tr	ace medi	um grained sands, medium
			S S	3			plasticity	Joo IIIoak	<b>3</b>
			ife Sugar	! -			Piasticity		
			air knifed and auge	4	-	-			
			air knifed & hand augered	. —	$\vdash$	$\dashv$			
				5			Lean CLAY dark h	prown 10-	-20% medium grained sand,
- Carout						Louis	medium plasticity	J. J. 111, 10	
5				6		con	medium plasticity		
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	l		▼	7		CL	Loan CLAY: brown	with oral	ngish brown mottling, ~10%
	damp			-			fine grained sand,	medium t	o high plasticity
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								Shell Oil Products	ic.	Well No. S-14
	1	Project No		SJ37-90		Client:			US .	Page 2 of 2
		Logged By	<b>y</b> :	Heather I	Buckingham		,	Trailgate # 7 & 8		ILAGE Z OL Z
	Į	Driller:		Gregg		Date D	rill <b>e</b> d:	10/28/2005	Location Map	
Delta		Drilling Me	ethod:	HSA		Hole D	iameter	: 10 inch	ļ	
		Sampling		Geoprob	e	Hole D	epth:	25 feet	Please se	ee site map
Environment	T I	Casing Ty		PVC	•		)iameter	: 4 inch		
		Slot Size:		0.01		Well C		25 feet		
Consultants, I		Gravel Pa		#2/12			Sticku		, ·	
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ell Completion	-		<u>p</u>	<u> </u>	ę.	Sample	•		-	
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Casing Casing	.evel	≥ ∪	윱	& &	å	Recovery	Ø			·
<b>       </b>		moist					CL	Sandy Lean CLAY:	light grey,	25-35% fine grained
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					<u> </u>			Boring terminated at	25 feet be	low ground surface
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Delta Environmental consultants, Inc.	Project No: Logged By: Driller: Drilling Method: Sampling Method: Casing Type: Slot Size: Gravel Pack: Elevation	HSA Hole Diameter: 10 inch od: Geoprobe Hole Depth: 25 feet PVC Well Diameter: 4 inch 0.01 Well Depth: 25 feet #2/12 Casing Stickup: NA ation Northing Easting				Location Map	Well No: S-15 Page 1 of 2 ee site map			
Completion Static Water	Mater ontent Ppm Seadi		1 45 1	Recovery 69 Interval eldumos Soil Type.		LITHOLOGY / DESCRIPTION				
Sand	damp 0.1		5 6 7 8 9 10 11 12 13 14 15 16 17			slightly less grand bearing to the state of	ravel  as above,	sley packed. 70-80% i-10% gravels up to 15mm city  ed with orangish brown,  dark brown mottled with brown mottled with light sand, moderate plasticity		

			74							and the second s
			Project No Logged B		SJ37-90l	-1 3u¢kinghan	Clien		Shell Oil Products trailgate #7 and #8	JS Well No: S-15 Page 2 of 2
De		2	Driller: Drilling M		Gregg HSA	Juokingilai	Date	Drilled: Diamete	10/28/2005	Location Map
			Sampling	Method:	Geoprob	3		Depth:	. 25 feet ar: 4 inch	Please see site map
Envir Consu	onme		Casing Ty Slot Size:		PVC 0.01	J		Diamete Depth:	25 feet	
COHSU	ii taii ta	, 1110.	Gravel Pa	ack:	#2/12		Casi	ng Sticki		
				Elevation			Northing		Easting	
Backfill Backfill Casing		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery S Interval ald	Soil Type	LIT	THOLOGY / DESCRIPTION
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Sand						24				
				0.1					Boring terminated at	25 feet below ground surface
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***			a Olas	. ~				Client:	Shell Oil C		· · · · · · · · · · · · · · · · · · ·		
. 1 .		(\$	See Plate	e 2)				Location: 3790 Hopyard Road					
								City: Pleasanton, California Sheet Logged by: J. Vargas Priller: Bayland of					
								Casing install		(Crimot)	Bayland	of 2	
n goillos	nathod:	Hallaur	Stem Au	·oor		<del></del>		Casing metal		e Well Cons	truction Net	ail	
ole dia		12-inch		idei			····	Top of Box E		e Well Colls	Datum:	211	
		12-111011		1	Τ-		- G	Water Level	1.		1	<del></del>	
- <del>-</del> -	£ \$	7 5	2.5	15		-=	35	Time		1	<del> </del>		
Ord [mdd]	Blows/ft. of Pressure (p.u.)	Type of Sample	Semple	Depth (ft.)	Sample	Vetall Detail	Soil Group Symbot (USCS)	Date		<del></del>		<del>-</del>	
	. E			^	1	1	8 6		<u> </u>	Description			
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				0		]							
				]			1	PAVEM	ENT SECT	ON - 1.0 100			
				1		]	7.0						
						Į				_) - dark olive			
				2.	-					ticity; 20% s			
	<del></del>			1	-					s, trace fine		led brown;	
				3	<u> </u>		V///	green si	aining; no	chemical od	or.		
				4			Y///					· · · · · · · · · · · · · · · · · · ·	
	250	S&H		1				COLOR	CHANGE 1	o black (5Y	2.5/1) at 4.5	feet.	
	250	push	<del>                                     </del>	5									
0	400		SR-1-5	1			1777	CLAYE	SAND (S	C) - dark gra	/ (5Y 4/1), m	edium den	
				6						nd; 40% clay			
				]						_) - black (5Y			
	_			7				medium	plasticity; 8	30% clay; 20	% silt; no ch	nemical odd	
							1//					<u> </u>	
		7274		8									
<u></u>		<del></del>		1_					A	72.7	140 - 6 6 4		
	400	0011	6010	9						o olive (5Y 4			
	400 400	S&H	SR-1-9	10	<b>-</b>			chemica		o black (5Y	23) at 9.5 ie	et, no	
ns T	450	push		110	/	*  -	<i>Y//</i>	CHEINICE	ii Odol.	<del> </del>	<del></del>	<del></del>	
1	450	<del></del>		11	<del> -1</del> -		Y///						
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i				12									
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1					<u> </u>		1///						
				14			Y///						
	3	S&H					Y//X						
	5		00 + +=	15				stiff; no	chemical o	aor.	<del></del>		
0	10		SR-1-15										
			_	16	<b>  </b>					·	· · · · · · · · · · · · · · · · · · ·	<del></del>	
<del></del>  -				47	L			<del></del>		<del> </del>			
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					-	$\bar{\Delta}$	1//						
marks;	Drilled v	vith 8-ind	h Hollov	w-St	em A		on 08/09/	89.					
							ow-Stem			•			
							Log of E						

SR-1

JOB NUMBER 7632 REVIEWED BY AGICEG DATE 08/89 REVISED DATE REVISED DATE

Field loc	lo notes	boring:						Project No.:		Date:	08/09/89	Bonng No:
		,	O = = 51=+	- 01				Client:	Shell Oil Co		· · · · · · · · · · · · · · · · · · ·	SR-1
		. (	See Plate	e 2)				Location:	3790 Hopya		·	
								City:	Pleasanton,			Sheet 2
ĺ								Logged by:		Driller	Bayland	of 2
Drilling	method:	Hollow	-Stem Au	ICAL		· · · · · · · · · · · · · · · · · · ·	<del></del>	Casing instell		Well Cons	ruction Deta	it
Hole die		12-inch		<u>ige</u> i				Top of Box E		TTEILOUIS	Datum:	
	इ		T -		1		দূ	Water Level			<del>-</del>	1
OF	Flowedly, or Pressure (pst)	0 8	2.5	Depth (R.)	90	<u> </u>	Soff Group Symbol (USCS)	Time	· · · · · ·	i		<del> </del>
Old Old		Type of Semple	Sample	1	Semple	Wed	# A	Date				
	Æ		1				Sys			Description		
	3	S&H					777	SANDY	CLAY (CL) -	olive gray (	5Y 4/2), stiff,	saturated;
	5			20					plasticity; 60			vn-gray
13.6	8		SR-1-20	•			<i>Y//</i>	mottling	; roots; mod	erate chemi	cal odor.	
	ļ	ļ	-	21							· · · · · · · · · · · · · · · · · · ·	
	ļ	<u> </u>	<del> </del> -	-			1//					·
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			-	24								
	Ō	S&H							,	<del>*                                    </del>		<del></del>
	1			25				CLAY w	ith SILT (CL)	- black (5Y	2.5/1), saft.	damp.
0	4_		SR-1-25		$Z^{-1}$				plasticity; 10			
				26					; no chemica			
				'								
				27								
								moist cla	ay to sand int	erbed at 24	feet.	
		q <del></del>		28 [					<del></del>			
								· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	<del></del>
	4	S&H	<del></del>	29				<del></del>				
	4	San	<u> </u>	30				etifft pate	restor condu	Jamina at 2	O E foot Inc	ropend
0	6	<del></del> ,	SR-1-30	30					urated sandy ottled; no ch			reaseu
	<del></del>	<del></del>	011100	31	-			30110, 111	otaca, no on	ennear boor	·	
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				33		ľ						
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				34		-						
	3	S&H				ł		<del> </del>			<del>,</del>	
	5			35		<b>}</b>		saturate	d at 34.5 to 3	5 feet; no c	hemical odd	<u>ζ.</u>
0	7		SR-1-35	20		ļ.	///4	·		<del></del>	<del></del>	
		<del>-, -  </del>		36		1	-					<del></del>
				37				Dottom -	of boring at 3	E E foct		····
	<del></del>	· .	-	3' F	{				of sample at 3		<del></del>	<del></del>
				38			}-	09/20/89		IEEL.		
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				39	$\dashv$	. ]	-	· · · · · · · · · · · · · · · · · · ·			·········	
lemarks:	<del></del>	<del></del>		<u> </u>								
									• • •			
	555						og of B				· · · · · · · · · · · · · · · · · · ·	BORING NO

GeoStrategies Inc.

08 NUMBER 1632

REVIEWED BY AGROEG CLAMP CRE(, 1262

DATE 08/89

FIEVISED DATE

REVISED DATE

Field loc	ation of b	xonng:							7632	Dave,	09/20/09	- DOING 140.
									Shell Oil Co			Special
		(\$	See Plate	2)				Location:	3970 Hopya	ard Road		
		,		•				City:	Pleasanton,	California		Sheet 2
								Logged by:	D. Ferreira	Driller:	Bayland	of 2
								Casing installs				
<b>6</b> 70		1 Indiana	Ctom Au							e Well Const	ruction Deta	il
Drilling			Stem Au	Gei			<del></del>	Top of Box El		J	Detum:	
Hole dia	meter:	12-inch	es	· · ·	<del></del>				1	<del></del>	1	
	7		1	3	_ :		Soil Group Symbol (USCS)	Water Level			<del>                                     </del>	
PO (mod)	\$ × 5	Type of Semple	Semple	Depth (ft.)	Sample	Y SE	85	Time		<del> </del>	<del> </del>	
£ 3	Blows/it. or Pressure (pail)	2.3	苏克	å	\$	> 4	1 3 A	Date	<u> </u>		<del> </del>	
	6		}				க்			Description		142
	3	S&H		}			Y///			o dark gray (		
	4			20			<i>Y///</i>			city; trace ve		l; trace silt;
81	5		SR-2-20	į.			Y///	trace or	ganics; wea	k sulfur odor		
				21			<i>Y///</i>					
				1			Y///					
				22		i	Y///					
	<del> </del>	<del> </del>	<del>                                     </del>	1			Y///					
<del></del>	<del>}</del>	<del> </del>	<del>                                     </del>	23			Y///	·				
	ļ ———	1			}		Y///	<del>                                     </del>			,,	
	<del> </del>	1	+	24			Y///	COLOB	CHANGE to	very dark g	ray (5Y 3/1)	moist low
	1 2	S&H	-	4			Y///	plasticia	r trace very	fine sand; ti	ace silt: tra	e organics
<del>,</del>	2	San		00			Y///	plasticity	od tracevery	ts; rootholes	filled with s	illu clan.
	5	ļ	0000	25			Y///			ks, roomoles	inica waars	inty ciay,
73	6	1	SR-2-25				Y///	weak so	lfer odor			
				26			Y///					
	<u> </u>	ļ	<u> </u>				Y///		· · · · · · · · · · · · · · · · · · ·			
			1	27			1///			<del></del>	<del></del>	
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			1	28								
			!									· · · · · · · · · · · · · · · · · · ·
		1	i	29				CLAY (	CH) - dark gi	ray (5Y4/1) -	stiff, moist,	high
	3	S&H				1		plasticity	y; trace very	fine to fine :	sand; trace :	silt; trace
	6	<del></del>	1	30				organics	: oxidation	filling rooth <mark>o</mark>	les; modera	te sulfur
45	9		ISR-2-30					odor.			,	
77		1	1	31							**	
	<u> </u>	1	1	٥.								
	<u> </u>	<u> </u>	1	32				<del></del>				
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, <u>.</u>	i	<u> </u>	<del>-</del>	20				}				
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	1	<u> </u>	1			·		<u> </u>				
	<u> </u>		1	34						ontinit:	· · · · · · · · · · · · · · · · · · ·	
	6	S&H	<u> </u>					modera	te tó high pl	asticity.	· ,	
	6	1		35								
4	9		SR-2-35						of boring at			
				36					of sample a	35.5 feet.		
				]				09/20/89	9			
		1	<u> </u>	37			1					
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Remarks	1	!	1 .	1 28	<u> </u>			<u> </u>				······································
. rott kaj rija	••.											
						<del></del>						
	888						Log of	Boring				BORING NO

GSI

GeoStrategies Inc.

SR-2

JOB NUMBER 7632 REVIEWED BY AGICEG

DATE 09/89

REVISED DATE

PIEVISED DATE

100 IOC.	allion of b	orang;						Project No.:		Deto:	09/20/89	Borning No:
•				_					Shell Oil Co			- 38.2
		(5	See Plate	2)				Location:	3970 Hopya			Sheet 1
									Pleasanton,	Driller:	Bayland	of 2
								Casing install	D. Ferreira	( Dilliot.	Baylanu	1 01 2
			O4 4					Casing installe		Wall Const	ruction Deta	ill
orilling r			Stem Au	ger				Top of Box El		VVGII COTISI	Datum:	
tote dia		12-inch	es	ī	<del></del>		6	Water Level	1	·		
	2 6	7.2	2 5	2		_ ==	<u> </u>	Time	<u> </u>	<u> </u>		+
	20 2	Type of Sample	Sample	Depth (ft.)	Sample	Well	2 2	Date				<u> </u>
136	Blows/it. or Pressure (psf)	F-0	ØŽ	క	) <b>°</b> [	-	Solf Group Symbol (USCS)		L	Description	<u></u>	<del></del>
		<u> </u>	1	1			<del> </del>					·
	-	<u> </u>		0					·			
		-	·	1			2					
			<del>                                     </del>	1				PAVEM	ENT SECTIO	N - 0.6 feet		
		<del> </del>	<u> </u>	2			1//		-			
				]					ith GRAVEL			
				3			V//	low plas	ticity; 15% g	ravel; 10%	sand; no ch	emical odor
							V/A		CLAY (CL) -			
.,				4			1-1/	plasticity	/; increasing	sand to 30	%; no chem	ical odor.
	100	S&H	<u> </u>				Y///			·		· · · · · · · · · · · · · · · · · · ·
	100	push	<u> </u>	5			Y///		·		D/d) madius	m abitt dam
0	100		SR-2-5		$\mu$		1///	CLAY (C	CL) - very da	rk gray (5 Y	3/1), mediur	n sını, dam
		<u> </u>		6					ticity; 5% fin			ganics; trac
								pebbles	roots; weal	c chemical c	ouor.	
			<u> </u>	7					<del></del>			
		[ 	1					<u></u>			<del> </del>	
		l I	<u> </u>	8			V///					
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	150	S&H		9			Y///			······································		
	150	push	<del> </del>	10				COLOR	CHANGE to	dark grav	(5Y 4/1); me	dium
5	150	pusit	SR-2-10				1///		/; no chemic			
	1,00	l	0.,_,	11	-							
<del></del> -		<u> </u> 		İ								
				12				,	A CONTRACTOR		-	
 I			1				V///					
			1	13			Y///					
j							Y///					·
				14			1///					
	0	S&H		]			1///					
	2	]	}	15				COLOR	CHANGE to	very dark	gray (5Y 3/1	), low
12	4		SR-2-15					plasticit	y; 10% silt; v	veak chemi	cal odor.	
	,			16			V//.					· · · · · · · · · · · · · · · · · · ·
	1						V//					
				17			Y//					
		1		]	<u> </u>		Y///		·			
		ļ		18	<b> </b>		Y///		·	· • · · · · · · · · · · · · · · · · · ·		
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				19		<u>\$</u>	Y///	1				
emarks:							Augers 09 w-Stem A					
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SR-2

JOB NUMBER 7632

REVIEWED BY AGOEG

DATE 08/89

REVISED DATE

REVISED DATE

		ioring:							7632			~ 1
									Shell Oil Co		· · · · · · · · · · · · · · · · · · ·	- 39.0
		(\$	See Plate	2)					3970 Hopya			Sheet 2
									Pleasanton,	Cainornia Driller:	Bayland	of 2
	,						,	Logged by: Casing installs	D. Ferreira	Ortifor.	Daylallu	1 2
			<u> </u>			·		Casing install		Well Const	nuction Data	ä
			Stem Au	ger			<del> </del>	Top of Box El		YYEN CONST	Detum:	H
diam	eter:	12-inche	es	,	<del></del> ,		<u>-</u>		evauon.	<u> </u>		<del>-1</del>
	7	١		2			38	Water Level				<del> </del>
E de	Blowarft Or pegure (	Type of Sample	Semple	Depth (ft.)	Sample	West Petall	8 5	Time				
4	Blows/ft. or Pressure (psi)	F.38	3.₹	E	8		Soil Group Symbol [USCS]	Date	<u> </u>	Description	<del></del>	
		0011	<u> </u>				1	COLOR	CHANGE to		5V 4/1\ me	dium stiff
	<u> 0</u>	S&H		20				coturate	d; trace foss	ils: trace ca	leium nodule	es: no
5	<u>2</u> 5	ļ	SR3-20	20				chemica		,,,o, 1. doc 01		
3	. 3		30320	21				CHETTICS				<del></del>
							1/1				<del></del>	
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		İ					1/1/					
一十	· · ·			24			Y/!/					
$\neg \uparrow$												
	6	S&H		25					ist, medium	plasticity; tra	ace silt; trac	e organics;
	5	· · · · · ·						weak Ha	S odor.	:	· · · · · · · · · · · · · · · · · · ·	· ·
4	7		SR3-25	26			1//					
							1/19		· · · · · · · · · · · · · · · · · · ·			
				27			1/1/				w	· · · · · · · · · · · · · · · · · · ·
							1/1/	<b></b>		· · · · · · · · · · · · · · · · · · ·		
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					<u> </u>		1///				<del></del>	
				29								
<del> </del>							1/1/	60105	CHANGE to	oray HOVE	3 5/1) damr	medium to
	3	S&H	-	30			1//	high ala	sticity, satur	ated roothol	es: small m	ollusk fossi
_	6		  SR3-30	24			1///	red ovid	ation at 30 f	eet: no cher	nical odor	
5	U	ļ	30330	ונ	-		1///	180 0010				
		-		32			1///	<del></del>				
+		1	<del>  </del>	عد			1/1/	<del></del>				
-+		<del></del>	<del> </del> -	33			1/1//		· · · · · · · · · · · · · · · · · · ·	· , · · · · · · · · · · · · · · · · · ·		·
								1				
<del>-  -</del>	<del></del>		<del>                                     </del>	34	i							
	4	S&H		'								
	5			35				CLAY (	CH) - dark gi	тву (10YR 4,	(1), stiff, moi	st, high
5	7		SR-3-35					plasticit	y; saturated	rootholes; 1	0% organic	matter; tra
				36				sand; tr	ace silt; trac	e cobbles; r	no chemical	odor.
							1					<u></u>
				37					of sample at			· •
							1		of boring at	35.5 feet.		
				38				09/19/89	9			
							1					
				39			1			·-		····
arks:												

JOB NUMBER 7632

GeoStrategies Inc.

REVIEWED BY AGOEG

CHAP CEG 1262

DATE 9/89

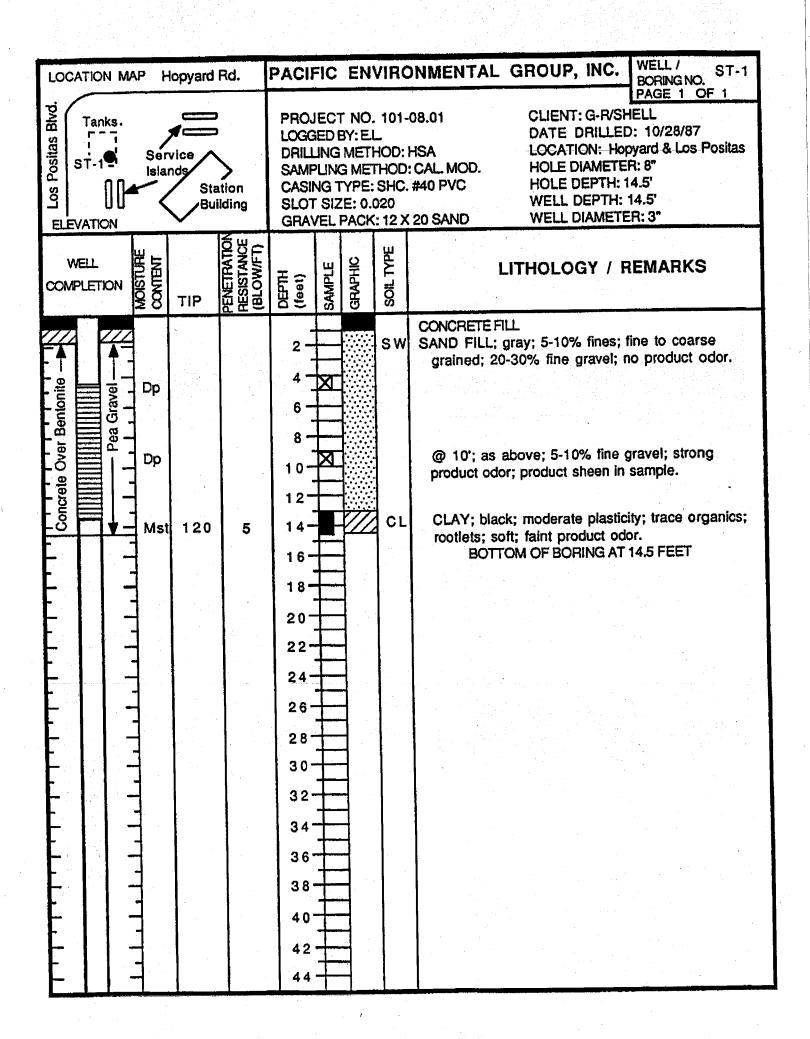
REVISED DATE

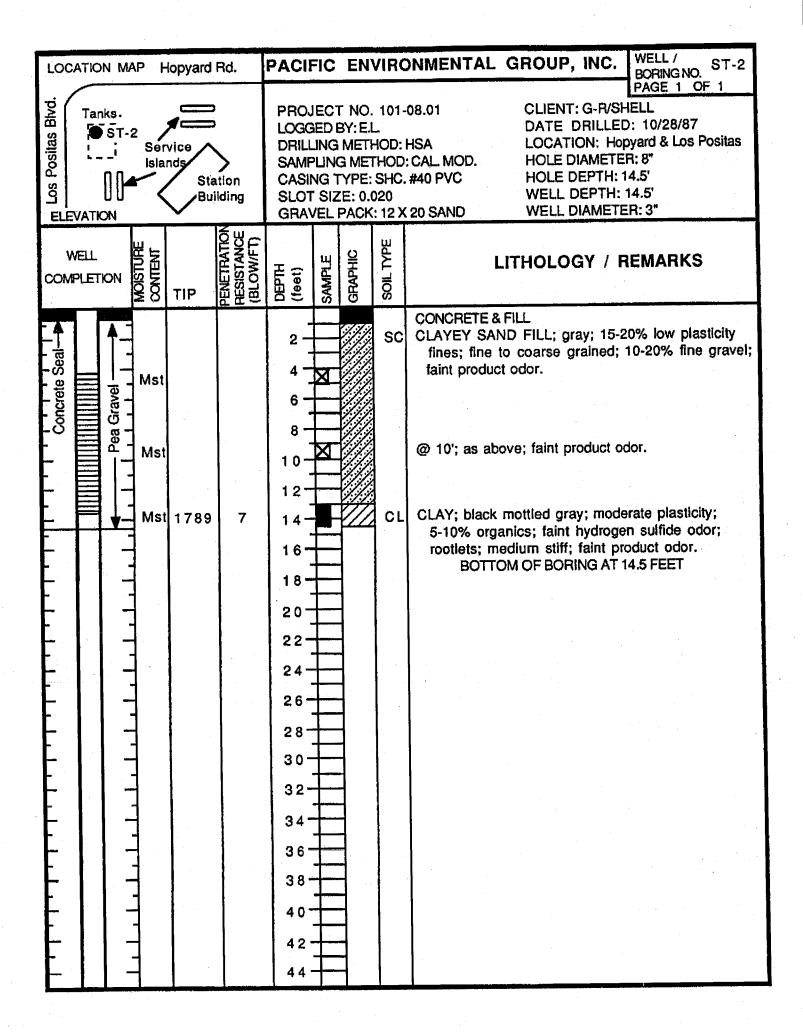
REVISED DATE

Field loc	ation of a	oonng:						Project No.:		Dale.	US/ 19/09	
•									Shell Oil Co			- 273
		(5	See Plate	2)				Location:	3970 Hopya			400
								City:	Pleasanton,		<u> </u>	Sheet 1
									D. Ferreira	Oriller:	Bayland	of 2
							······································	Casing install		141-11 0		.11
Drilling I			Stem Au	ger				45-6		Well Cons	ruction Deta	3()
Mole die		12-inch	es		<del>,                                    </del>			Top of Box E	evauon:		Design.	
	7 8			2	.		38	Water Level		<del></del>	-	
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Type of Sample	Sample	Depth (P.)	Sample	Well	8 5	Time				<del> </del>
** <u>\$</u>	Blows/ft. or Pressure (ps)	≥8	8 2	Ž	8	-0	Soll Group Symbol (USCS)	Date	<u></u>	Description	<u> </u>	
	-	<del> </del>		<u> </u>			- w	<del> </del>		Coscipation	<del></del>	
	-		<del>-  </del>	0								·/
	<del> </del>	<del> </del>	+	1	$\vdash$			PAVEM	ENT SECTIO	N - 0.8 feet		
	ļ <u>.</u>	-	<del>                                     </del>	1	$\vdash$		-	4	<u> </u>			
		<del>                                     </del>		'	-		17/	FILL - C	lay (CL) - vei	v dark gray	(2.5Y N3/),	stiff, damp
	l .	<del> </del>	<del>                                     </del>	2				medium	to high plas	ticity; no ch	emical odor	
		<del>                                     </del>		-	<b> </b>			1				
		<b> </b>	1	3			V//	10% gra	vel; cobbles	at 2 feet; tr	ace sand; o	xidation
<del>,_,-</del>		1					V//		2.5 feet in re			
			1	4			V//					
	150	S&H		]								
	250	push	<u>i</u>	5				FILL - G	ravel (GP) -	dark gray (2	2.5Y N4/), m	edium den
50	150		ISR-3-10	i					d (perched z	one); asph	alt fragment	s; asphalt
			, , , , , ,	6			19.36	odor.	2		<u> </u>	
			1	į	<u> </u> i		12///					
		ļ		7		•	Y///	1				
		<u> </u>		_			1///	1			· · · · · · · · · · · · · · · · · · ·	
		<u> </u>	1	8			1///	1	·			
	· · · · · · · · · · · · · · · · · · ·	<del>!</del>	!					]		· · · · · · · · · · · · · · · · · · ·		
	100	S&H	!	9	<u> </u>			CLAY (	CL) - very da	rk oray (5Y	3/1) mediu	m stiff dan
	100	push	1,	10			V//	medium	plasticity; tr	ace sitt we	ak chemical	odor.
50	150	pusit	ISR-3-10					1116010111	Diastiony, tri	300 O.K. 110		1
30	150	<del> </del>	011-0-10	11			Y///	<del>                                     </del>				
	<del></del>	<u> </u>	1		<del>   </del>		1///	1				
		1.	i i	12	$\vdash \neg i$		1///	1	· · · · · · · · · · · · · · · · · · ·	,		
		†					1/11	1				
			1	13			1///	]				
			l		$\Box$		1//				************	
				14								· · · · · · · · · · · · · · · · · · ·
	2	S&H				=	Y//	CLAY (	CL-CH) - blac	k (2.5Y N2	/), stiff, mois	st, medium
	3			15			1///		sticity; trace	silt; slightly	mottled; ro	otholes;
220	6		SR-3-15				1///	modera	te H <sub>2</sub> S odor.			
				16			1///	1		<del></del>		
								1		· · · · · · · · · · · · · · · · · · ·		
				17			1//	]				
		<u>                                     </u>	ļ					]		100	· ·	
			<del> </del>	18	$\sqcup$		V//					
		-	1		$\sqsubseteq$	<del></del>		<b></b>				
		<u> </u>		19		又	V	1				
rements			9/19/89 v									
	Comple	eted on (	v9/19/89	with	12-1	nch Ho		m Augers.				
		-Ctrotor	ion lan				Log of	Boring				BORII

SR-3

JOB NUMBER 7632 DATE 08/89 REVISED DATE REVIEWED BY ROCCEG CHIVP CEG 1262 FIEVISED DATE





## LOG OF EXPLORATOR BORING

PROJECT NUMBER 800-02.01

BORING NO. S-A

PROJECT NAME Gettler-Ryan, Shell, W. Las Positas Ave. and

PAGE 1 OF 1

BY JDB. DATE 1/22/86

Hopyard Rd., Pleasanton SURFACE ELEV. 320±

1	000			.,	,		
TORVANE (TSF)	POCKET PENETRO- METER (TSF)	PENETRA- TION (Blows/ Ft.)	CROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO- GRAPHIC COLUMN	DESCRIPTION
				- 0 -		18.30	ASPHALT and GRAVEL - FILL.
		•		5		CL	CLAY; very dark grayish brown (2.5Y, 3/2); 5-10% fine to coarse sand; slightly silty; stiff; very moist; no product odor.  @4': dark gray (5Y, 4/1); 10-15% fine to coarse gravel; very stiff; moist; slight product odor.
1			[		_		
1.		]	}			\ \//	
	2.5	21	-  -  -  -				07': very stiff; moist to wet; no product odor.
			_ _ _	10	_		
			  -  -		_		
			t				
		İ				] <i> ///</i>	
		-			7		@14': wet; no product odor.
	3.0	24	<b>F</b>	15			
			t		<del></del>	1 1//	1
	1	1			_	1 ///	1
			-				@18½': stiff; wet; no product odor.
	1.25	16		<b></b> 2∩			BOTTOM OF BORING AT 20 FEET.

REMARKS Drilled by 5-inch solid-stem auger; samples collected with 2-inch California modified split-spoon sampler. Borehole backfilled with soil cuttings to 12 foot; concrete to surface.



## LOG OF EXPLORATOR & BORING

PROJECT NUMBER 800-02.01

BORING NO. S-B

PROJECT NAME Gettler-Ryan, Shell, W. Las Positas Ave. and
Hopyard Rd., Pleasanton

PAGE 1 OF 1

BY JDB

DATE 1/22/86

SURFACE ELEV. 320±

		₩/\					
TORVANE (TSF)	POCKET PENETRO- METER (TSF)	PENETRA- TION (Blows/ FU)	CACOUND WATER LEVELS	E M HE MI	SYNAMIES	LITHO- CRAPHIC COLUMN	DESCRIPTION
c	1.75	16		5		SC	CONCRETE and GRAVEL - FILL. SAND - FILL; dark olive gray (5Y, 3/2); fine to coarse grained; dense; moist.  CLAYEY SAND - FILL; gray (5Y, 5/1); 15-25% fines; fine to coarse sand; 20-30% fine to medium gravel; moist; very slight gasoline odor.  CLAY; dark gray (5Y, 4/1); slightly silty; stiff; moist to wet; no gasoline odor.  011½': stiff; wet; no gasoline odor 013': no gasoline odor.  BOTTOM OF BORING AT 13 FEET.

REMARKS Drilled by 8-inch continuous-flight, hollow-stem auger; samples collected with 2-inch California modified split-spoon sampler. Borehole backfilled with soil cuttings to ½ foot; concrete to surface.



## LOG JF EXPLORATOR. BORING

PROJECT NUMBER 800-02.01

BORING NO. S-C

PROJECT NAME Gettler-Ryan, Shell, W. Las Positas Ave. and

PAGE 1 OF 1

Hopyard Rd., Pleasanton SURFACE ELEV. 320± DATE 1/22/86 JDB BY

DI		, <u>U</u> r	\   E	/			SORFACE ELLY, SES-
TORVANE (TSF)	POCKET PENETRO- METER (TSF)	PENETRA- TION (Blows/ FL)	CROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO- GRAPHIC COLUMN	DESCRIPTION
	2.0	7	· · · · · · · · · · · · · · · · · · ·	5 · 10		SW	CONCRETE and GRAVEL - FILL.  SAND - FILL; dark gray (5Y, 4/1); fine to coarse sand; 20-30% coarse gravel; loose; moist; no gasoline odor.  @7': medium dense; wet; strong gasoline odor.  CLAY; dark gray (5Y, 4/1); slightly silty; stiff; wet; no gasoline odor.  BOTTOM OF BORING AT 13 FEET.

REMARKS Drilled by 8-inch continuous-flight, hollow-stem auger; samples collected with 2-inch California modified split-spoon sampler. Borehole converted to a temporary monitoring well with the installation of 2-inch PVC screens from 121/2 feet to the surface; well backfilled with sand cuttings to 12-foot, concrete to the surface.



# LOG \_F EXPLORATOL BORING

PROJECT NUMBER 800-02.01

BORING NO. S-D

PROJECT NAMEGettler-Ryan, Shell, W. Las Positas: Ave. and

PAGE 1 OF 1

BY JDB DATE 1/23/86

Hopyard Rd., Pleasanton SURFACE ELEV. 320±

TORVANE (TSF)	POCKET PENETRO- METER (TSF)	PENETRA- TION (Blows/ FL)	CROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO- GRAPHIC COLUMN	DESCRIPTION
		8	₩ ₩	5-	2	SW	CONCRETE and GRAVEL - FILL.  SAND - FILL; dark gray (5Y, 4/1); fine-to coarse-grained; loose; moist; no gas-oline odor.  07': moderate gasoline odor.  09': medium dense; wet; moderate gasoline odor.  011½': slight gasoline odor.  BOTTOM OF BORING AT 13 FEET.
				- 20			

REMARKS Drilled by 5-inch continuous -flight, hollow-stem auger; samples collected with 2-inch California modified split-spoon sampler; Borehole backfilled with soil cuttings to & foot; concrete to surface.



## LOG \_F EXPLORATOL BORING

PROJECT NUMBER 800-02.01

BORING NO. S-E

PROJECT NAME Gettler-Ryan, Shell, W. Las Positas Ave. and

PAGE 1 OF 1

BY JDB

DATE 1/23/86

Hopyard Rd., Pleasanton SURFACE ELEV. 320\*

TORVANE (TSF)	POCKET PENETRO- METER (TSF)	PENETRA- TION (Blows/ FL)	CROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO- CRAPHIC COLUMN	DESCRIPTION
	1.5	6		0- 5-		SW	CONCRETE and GRAVEL - FILL.  SAND - FILL; dark gray ( 5Y, 4/1); fine to coarse sand; 10-20% fine to coarse gravel; loose; moist; no gasoline odor.  @7': slight gasoline odor.  CLAY; dark gray (5Y, 4/1); slightly silty; stiff; wet; no gasoline odor.  @11½': no gasoline odor.  BOTTOM OF BORING AT 13 FEET.

REMARKS Drilled by 5-inch continuous-flight, hollow-stem auger; samples collected with 2-inch California modified split-spoon sampler. Borehole backfilled with soil cuttings to ½ foot; concrete to surface.







CLIENT NAME	Shell Oil Products Company	BORING/WELL NAME SB-1	
	3790 Hopyard, Pleasanton	DRILLING STARTED 04-Oct-04	
	3790 Hopyard Road, Pleasanton, CA	DRILLING COMPLETED 08-Od-04	
PROJECT NUMBER	246-0497	WELL DEVELOPMENT DATE (YIELD) NA	
DRILLER	Vironex	GROUND SURFACE ELEVATION	_
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION NA	
BORING DIAMETER	2"	SCREENED INTERVAL NA	
LOGGED BY	Ron Barone	DEPTH TO WATER (First Encountered) NA	<u> </u>
REVIEWED BY	Ana Friel	DEPTH TO WATER (Static) NA	

Sample Tube Moist at 12 fbg; No Groundwater Recharged in Temporary Casing Left Overnight REMARKS CONTACT DEPTH (ft bgs) SAMPLE ID GRAPHIC LOG TPHg (ppm) PID (ppm) DEPTH (ft bgs) U.S.C.S. EXTENT WELL DIAGRAM LITHOLOGIC DESCRIPTION 0.7 CONCRETE CLAY (CL); gray; stiff; dry to moist; 75% clay, 20% silt, 5% gravet; low to medium plasticity. SB-1-2.5 <1.0 99  $\underline{\text{CLAY}}$  (CL); gray; stiff; dry to moist, 95% clay, 5% silt; low to medium plasticity. SB-1 <1.0 21 5.0 CLAY (CL); dark gray; very stiff; dry; 100% clay; low plasticity. 19 2.4 SB-1-10.5 Portland Type VII CL CLAY (CL); dark gray; very stiff; moist; 100% clay; low plasticity. SB-1 9 <4.2 15.5 WELL LOG (PID/TPHG) G.PLEASA-4/GINT3/380HO-1.GPJ DEFAULT.GDT 2/1/05 CLAY (CL); dark gray; hard; dry; 100% clay; low plasticity. 147 300 19.5 24.2 Bottom of Boring @ 24.2 ft PAGE 1

#### **BORING/WELL LOG**

PAGE 1 OF



CLIENT NAME JOB/SITE NAME LOCATION PROJECT NUMBER DRILLER DRILLING METHOD BORING DIAMETER LOGGED BY REVIEWED BY REMARKS	Vironex Hydraulic push 2" Ron Barone	asanton d, Pleasanton, CA	BORING/WELL NAME SB-2  DRILLING STARTED 04-Oct-04  DRILLING COMPLETED 08-Oct-04  WELL DEVELOPMENT DATE (YIELD)  GROUND SURFACE ELEVATION NA  TOP OF CASING ELEVATION NA  SCREENED INTERVAL NA  DEPTH TO WATER (First Encountere  DEPTH TO WATER (Static)	d) NA NA	
PID (ppm) TPHg (ppm) BLOW COUNTS	EXTENT DEPTH (ft bgs) U.S.C.S.	GRAPHIC LOG LOG	OLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
99 <1.0 21 <1.0 12 <1.0 11 <1.0 194 890 24.5	SB-2- 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 -	CLAY (CL); gray; stimedium plasticity.  CLAY (CL); gray; verblasticity.  CLAY (CL); gray; verblasticity.  CLAY (CL); gray; verblasticity.	if; dry to moist; 80% clay, 20% silt; low to fi; dry-moist, 85% clay, 15% silt; low to any stiff; dry; 100% clay; no to low ery stiff; dry; 100% clay; low to medium ery stiff; dry; 100% clay; low to medium ery stiff; dry; 100% clay; low plasticity.	26.2	Bottom of Boria





CLIENT NAME JOB/SITE NAME JOB/SITE NAME JOB/SITE NAME LOCATION JOB/SITE NAME LOCATION JOB/SITE NAME LOCATION JOB/SITE NAME LOCATION JOB/SITE NAME LOCATION JOB/SITE NAME LOCATION LOCAT							santon I, Pleasa	anton, CA	BORING/WELL NAME SB-3  DRILLING STARTED 05-Oct-04  DRILLING COMPLETED 08-Oct-04  WELL DEVELOPMENT DATE (YIELD) NA  GROUND SURFACE ELEVATION  TOP OF CASING ELEVATION NA  SCREENED INTERVAL NA  DEPTH TO WATER (First Encountered) NA  DEPTH TO WATER (Static) NA				
PID (ppm)	ТРНд (ррт)	SAMPLE ID EXTENT DEPTH (ft bgs) U.S.C.S. GRAPHIC LOG							LITHOLOGIC DESCRIPTION  NOITHING (# pags)				
11 100 (PIOTPHG) G/PLEASA-4/GINTS780HO-1/GPJ DEFAULTGT7 2/105	950 270 11 4.5		SB-3- 5.0 SB-3- 10.0 SB-3- 19.5		- 10	CL		CLAY (CL); gray; stirmedium plasticity.  CLAY (CL); gray; stirmedium plasticity.  CLAY (CL); gray; stirmedium (CLAY); gray; stirmedium (CLAY); gray with 100% clay; medium	th some brown mottling: s	6 slit;  Jum plasticity.  Jum plasticity.	22.0		Portland Type   //    Bottom of Borin ② 26.1 ft
ELL LOG (PID/TP)													



CLIENT NAME	Shell Oil Products Company	BORING/WELL NAME	SB-4				
JOB/SITE NAME	3790 Hopyard, Pleasanton	DRILLING STARTED _	04-Oct-04		<u> </u>		
LOCATION	3790 Hopyard Road, Pleasanton, CA	DRILLING COMPLETED_					
PROJECT NUMBER_	246-0497	WELL DEVELOPMENT DA		<u> </u>			
DRILLER	Vironex	GROUND SURFACE ELE					
DRILLING METHOD_	Hydraulic push	_ TOP OF CASING ELEVAT	TON NA				
BORING DIAMETER_	2"	SCREENED INTERVAL	<u>NA</u>				
LOGGED BY	Ron Barone	DEPTH TO WATER (First			<del>_</del>		
REVIEWED BY	Ana Friel	DEPTH TO WATER (Statio	c) _	NA	<u>-</u>		
	All St. In the Parkers						

		METER			<del></del>			DEPTH TO WATER (First Encountered) NA					
	ED BY			_	Barone				NA		¥		
	WED E	Y		na F				DEPTH TO WATER (Static)	117		<del></del>		
REMA	RKS		N	o Gi	roundw	ater R	echarge		NA-38-10-00-00-00-00	*****************	****		
PID (ppm)	тРНg (ррт)	BLOW	SAMPLEID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (# bgs)	WELL D	IAGRAM		
				15			100	CONCRETE	0.5				
353	350		SB-4- 2.5			SM		Sity SAND(SM); gray; dry; 30% silt, 70% sand; no plasticity.	4.0				
90	1.3		SB-4- 5.0	<u> </u>	- 5 <del>-</del>			CLAY (CL); gray stiff; dry-molst; 70% clay, 30% silt; medium plasticity.					
56													
5	1.1		SB-4- 10.0	-	-10-	CL		CLAY (CL); dark gray; very stiff; dry; 100% clay; no to low plasticity;					
	<1.0		SB-4	-	-15-			CLAY (CL); dark gray; very stiff; dry; 100% clay; low			Portland Typ  /		
			15.0	)  -	† -	<u> </u> 		plasticity;  CLAY (CH); dark gray with some brown brown mottling; stiff; dry; 100% clay; medium to high plasticity.	17.5				
1	<1.0		SB-4 19.5	5	20-	СН					,		
					-								
0	<1.0		SB- 19	4-	25-			CLAY (CH); brownish gray; stiff; dry; 100% clay; medium to high plasticity.	26.2	1 1	Bottom of Bo @ 26.2 ft		
		1											
Ė	-			-	1			A MANAGEMENT AND AND AND AND AND AND AND AND AND AND			PAGE		

PAGE TOF



CLIENT NAME JOB/SITE NAME LOCATION PROJECT NUMBER DRILLER DRILLING METHOD BORING DIAMETER LOGGED BY REVIEWED BY REMARKS	3790 Hopyar 3790 Hopyar 246-0497 Vironex Hydraulic pu 2" Ron Barone		DRILLING STARTED 04-Oct Inton, CA DRILLING COMPLETED 08-Oct WELL DEVELOPMENT DATE (YIE GROUND SURFACE ELEVATION TOP OF CASING ELEVATION NA SCREENED INTERVAL NA	DRILLING STARTED 04-Oct-04  DRILLING COMPLETED 08-Oct-04  WELL DEVELOPMENT DATE (YIELD) NA  GROUND SURFACE ELEVATION  TOP OF CASING ELEVATION NA  SCREENED INTERVAL NA  DEPTH TO WATER (First Encountered) NA  DEPTH TO WATER (Static) 14.7 ft (08-Oct-04)				
PID (ppm) TPHg (ppm) BLOW COUNTS	SAMPLE ID EXTENT DEPTH (ft bgs)	U.S.C.S. GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM			
4 <1.0 57 1.00	SB-5-20-15-15-15-0	GL.	CONCRETE Silty SAND (ML); brown; dry-molst; 5% clay, 30% silt, 60 sand, 5% gravel; no to low plasticity.  CLAY(CL); gray; dry to molst; 70% clay, 25% silt, 5% sand; medium plasticity.  CLAY(CL); dark gray; stiff; dry; 100% clay; low to mediu plasticity.  CLAY(CH); dark gray; stiff; molst; 100% clay; medium to high plasticity.  CLAY(CH); dark gray; stiff; dry to molst; 100% clay; medium to high plasticity.  CLAY(CH); brown; very stiff.	70.3 4.0	■ Portland Type  I/I  Bottom of Borin @ 27.8 ft			



CLIENT NAME  JOB/SITE NAME  JOB/SITE NAME  A 3790 Hopyard, Pleasanton  3790 Hopyard Road, Pleas  PROJECT NUMBER  246-0497  DRILLER  Vironex  Hydraulic push  BORING DIAMETER  LOGGED BY  REVIEWED BY  REMARKS  SLIVER  SULVEY						d, Plea	santon I, Pleasa		BORING-WELL NAME DRILLING STARTED DRILLING COMPLETED WELL DEVELOPMENT DO GROUND SURFACE ELECTOP OF CASING ELEVAT SCREENED INTERVAL DEPTH TO WATER (First DEPTH TO WATER (Stational)	ATE (YIELD) VATION IION NA NA Encountered	) NA 22.3	3 ft (08-Oct-(	)4) <u>¥</u>
PID (ppm)	ТРН9 (ррт)	BLOW	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	·	OLOGIC DESCRIPTION		DEPTH (fl bgs)	WELL	DIAGRAM
7	<1.0		SB-7- 2.5 SB-7- 5.0		5-	сн		plasiticy.	ff; diy; 95% clay, 5% silt; me		7.5		
10	2.8		SB-7- 10.0		10					<b>.</b>			✓ Portland Type I/II
135	11		SB-7-15.0		- -	CL		plasticity.	ay; very stiff; dry; 100% clay; ay; very stiff; dry; 100% clay;	<b>. : .</b>			
77 52 52			19.5		-20-				ay; very stiff; dry; 100% clay;	.3			
ELL [OG [PID/TPHG] G-IP! EASA-4/GN/TS/30HC-1.GPJ	1.7		SB-7 25.0		-25-			CLAY (CL); dark gr medium plasticity.	ay; very stiff; dry; 100% clay	, low to	28.0		Bottom of Borin @ 27.9 ft TEST
TOG (PIC													10000000000000000000000000000000000000



#### **BORING/WELL LOG**

JOB/S LOCA PROJI DRILL DRILL BORIN LOGG REVIE REMA	ECT NU ER ING ME IG DIAI ED BY EWED E	ME IMBER ITHOD METER	37 37 24 Vii Ha 4" Ro Ar	90   90   6-04 rone and na F	lopyard lopyard 197 EX Auger arone riel	i, Plea	Difficulti	anton, CA	BORING/WELL NAME DRILLING STARTED DRILLING COMPLETED WELL DEVELOPMENT GROUND SURFACE EL TOP OF CASING ELEV/ SCREENED INTERVAL DEPTH TO WATER (Fir DEPTH TO WATER (State of the surface of	DATE (YIELD) EVATION _ ATION NA _ NA _ st Encounteredic)	red) NA NA NA Auger at 10 fbg.		
PID (ppm)	TPHg (ppm)	BLOW	SAMPLEID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG		LOGIC DESCRIPTION		CONTACT DEPTH (# bgs)	L DIAGRAM	
0 4	<1.0		SB-8- 5.0		-5-	CL	1 1 2 3	medium plasticity. <u>CLAY</u> (CL); brownish medium plasticity.	gray; very stiff; dry; 100%	6 clay; low to	3.3		✓ Portland Type I/II
1.1.0G (PID/TPHG) G/PLEASAVGN/1378UHC-1.cP/J VETAULi.SEV. Z.BOS.	<1.0		SB-8-10.0					CLAY(CL); brownish	gray; very stiff; dry; 1009	& clay; low to	11.0		Bottom of Boring



LIENT NAME	Shell Oil Products Company	BORING/WELL NAME SB-9	_
	3790 Hopyard, Pleasanton	DRILLING STARTED 05-Oct-04	_
OB/SITE NAME		DRILLING COMPLETED 07-Oct-04	
OCATION _	3790 Hopyard Road, Pleasanton, CA	WELL DEVELOPMENT DATE (YIELD) NA	_
PROJECT NUMBER_	246-0497	GROUND SURFACE ELEVATION	
ORILLER	Vironex		
ORILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION NA	_
BORING DIAMETER_	2"	SCREENED INTERVAL NA	Ž
LOGGED BY	Ron Barone	DEPTH TO WATER (First Elleganteres)	
	Ana Friel	DEPTH TO WATER (Static) 15.9 ft (07-Oct-04)	Ł
REVIEWED BY	Analite	•	

REMARKS CONTACT DEPTH (ft bgs) GRAPHIC LOG SAMPLEID TPH9 (ppm) PID (ppm) BLOW COUNTS U.S.C.S. DEPTH (ft bgs) WELL DIAGRAM LITHOLOGIC DESCRIPTION 0.6 1.0 CONCRETE

FILL gravels with slit matrix

CLAY with gravel(CL); brownish gray; stiff; dry to moist;
80% clay, 5% slit, 15% gravel; low to medium plasticity. SB-9-2.5 1.6 <1.0 CLAY (CL); gray; stiff; dry to moist; 95% clay, 5% silt; medium plasticity. SB-9-1.7 <1.0 5,0 CLAY (CL); gray; stiff; dry to moist; 100% clay; low plasticity. SB-9-<4.7 10.0 Portland Type CLAY (CL); gray; stiff, dry to moist; 100% clay; low plasticity. SB-9-15.5 36 96 WELL LOG (PID/TPHG) G:VLEASA-4/GINT/3780HO-1 GPJ DEFAULT.GDT 2/1/05 CLAY (CL); gray; stiff; moist; 100% clay; medium plasticity. SB-9-6 <4.1 21.0 立 24.0 **Bottom of Boring** @ 24 ft PAGE 1 OF

#### **BORING/WELL LOG**



JOE LOC PRO DRI DRI BOI LOC REV	ATIO DJEC LLEF LLIN RING GGEI VIEW	T NU R IG ME I DIAN D BY IED B		37 37 24 Vi Hy 2" Ro	90 H 90 H 6-04 rone vdrav	497 ex ulic pus larone riel	d, Plea d Road	san'	ton	inton, CA	BORING/WELL NAME SB-11  DRILLING STARTED 05-Oct-04  DRILLING COMPLETED 07-Oct-04  WELL DEVELOPMENT DATE (YIELD) NA  GROUND SURFACE ELEVATION  TOP OF CASING ELEVATION NA  SCREENED INTERVAL NA  DEPTH TO WATER (First Encountered) NA  DEPTH TO WATER (Static) NA				
REI (maa) ald	MARI	KS (mdd) BHJ1	BLOW	SAMPLEID	EXTENT	OEPTH (# bgs)	S O S O	GRAPHIC	····	LITH	DLOGIC DESCRIPTION		CONTACT DEPTH (ft bgs)	WELL	DIAGRAM
eset an unconstant state and another second second		<1.0		SB-11 -2.5		5	ML			gravels; no plasticity	f dry to moist: 85% clay, 10		0.6 4.0		
7.	9	<1.0		SB-11 -5.0 SB-1 -10.0		10-				<u>CLAY</u> (CL); gray; sti	ff; dry; 95% clay, 5% silt; low	v plasticity.			
banda a a a a a a a a a a a a a a a a a a	37	<50.0		SB-1 -15.	1=	- - 15-	CL			CLAY(CL); gray; st	iff, dry, 100% clay; low plasti	icity.			▼ Portland Type     VII
DEFAULT.GDT 2/1/05	16	2.6		SB-1 -20.	0	20-	+ + + + + + + + + + + + + + + + + + + +			<u>CLAY</u> (CL); dark gr	ay; stiff, dry; 100% clay; low	plasticity.			
(SA-4KGINT)3790HO-1,GPJ	103	3.2		5B- -25	11	25				<u>CLAY</u> (CL); dark go plasticity.	ay; stiff; dry; 100% clay; low	to medium.	28.1		Bottom of Borin
WELL LOG (PID/TPHG) G/PLEASA-WGINTI3780HO-1,GPJ DEFAULT.GDT 24/05									~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					Messes and the second s	PAGE 1 OF

#### **BORING/WELL LOG**



CLIENT JOB/SI LOCAT PROJE DRILLI DRILLI BORIN LOGGI REVIE REMAI	37: 37: 24: Vii Hy 2": Ro	90 l 90 l 6-0- one	Hopyard Hopyard 497 ex	i, Plea i Road		anton, CA	BORING/WELL NAME SB-12  DRILLING STARTED 06-Oct-04  DRILLING COMPLETED 06-Oct-04  WELL DEVELOPMENT DATE (YIELD) NA  GROUND SURFACE ELEVATION  TOP OF CASING ELEVATION NA  SCREENED INTERVAL NA  DEPTH TO WATER (First Encountered) NA  DEPTH TO WATER (Static) 23.0 ft (06-Oct-04)						
PID (ppm)	тРНд (ррт)	BLOW	SAMPLEID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG		OLOGIC DESCRIPTION		o contact o DEPTH (ft bgs)	WELL	DIAGRAM
0	<1.0		SB-12 -2.5 SB-12 -5.0	I	- 5 -	GC		15% clay, 35% sand	th ClayGC); brownish gray; loose , 50% gravel, no plasticity. Iff; dry; 95% clay, 5% gravels; m	e; dry;	4.0		
11	<1.0		SB-12 -10.0		10-			<u>CLAY</u> (CL); gray; ve plasticity	ery stiff; dry; 100% clay; no to low	,			# Portland Type 1/11
89	<5.0		SB-11 -15,0		-15- -	CL		CLAY (CL); gray; very plasticity.	ery stiff; dry; 100% clay; no to lov	v			
DEFAULT.GOT 24/05	430		SB-1 -20.1	2	20-			<u>CLAY</u> (CL); gray; v plasticity.	ery stiff; dry; 100% clay; medlum				
MELL LOG (PID/TPHG) CYPLEASA-4/GINT3790HO-1, GP.) DEFAULT GDT 2/1/05  1 17 99 99	<4.7 280		SB-1 -24. SB-1 -26.	5	-25			minotinih.	very stiff; dry; 100% clay; medium		27.0		Bottom of Borin @ 27 ft
VELL LOG (PID/TPHC										<del>0000000000000000000000000000000000000</del>		nome throughout the same of th	PAGE 1 OF





CLIENT NAME	Shell Oil Products Company	BORING/WELL NAME	SB-13					
JOB/SITE NAME	3790 Hopyard, Pleasanton	DRILLING STARTED	05-Oct-04					
LOCATION	3790 Hopyard Road, Pleasanton, CA	DRILLING COMPLETED_						
PROJECT NUMBER	246-0497	WELL DEVELOPMENT DATE (YIELD) NA						
DRILLER	Vironex	GROUND SURFACE ELE	MOITAV					
DRILLING METHOD_	Hydraulic push	TOP OF CASING ELEVAT	TION NA					
BORING DIAMETER	2"	SCREENED INTERVAL _	NA		<del></del>			
LOGGED BY	Ron Barone	DEPTH TO WATER (First	Encountered)_	NA .	<del></del>			
REVIEWED BY	Ana Friel	DEPTH TO WATER (Stati	DEPTH TO WATER (Static)					
	- 144 H O 1 1 B O - O	Car Occupativator Pacharge						

REMARKS Temporay Well Casing Left Open Overnight For Groundwater Recharge CONTACT DEPTH (ft bgs) SAMPLE ID GRAPHIC LOG TPHg (ppm) BLOW PID (ppm) U.S.C.S. DEPTH (ft bgs) EXTENT WELL DIAGRAM LITHOLOGIC DESCRIPTION 0.6 CONCRETE

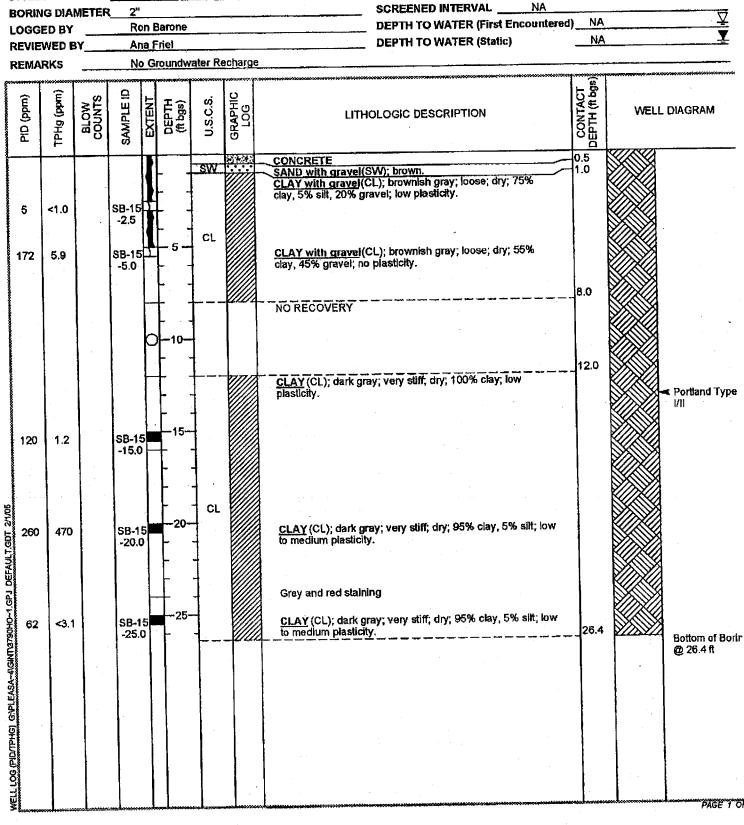
CLAY (CL); brownish gray; stiff; dry; 90% clay, 10% silt; medium plasticity. SB-13 -3.0 <1.0 2 <u>CLAY</u>(CL); gray; stiff; 95% clay, 5% gravels; medium plasticity. <1.0 SB-13 -5.0  $\underline{\text{CLAY}}(\text{CL});$  dark gray; very stiff; dry; 100% clay; low plasticity. SB-13 -10,0 27 3.6 Portland Type I/II CLAY (CL); dark gray; very stiff; dry; 100% clay; low plasticity. SB-13 2.7 17 -15.0 WELLLOG (PIDATPHG) GAPLEASA-AAGINT3780HO-1,GPJ DEFAULT.GDT 24/06 CLAY (CL); dark gray; very stiff; dry; 100% clay; low plasticity. SB-13 -20.0 298 101 <1.0 24.0 Bottom of Boring 24 ft PAGE T OF

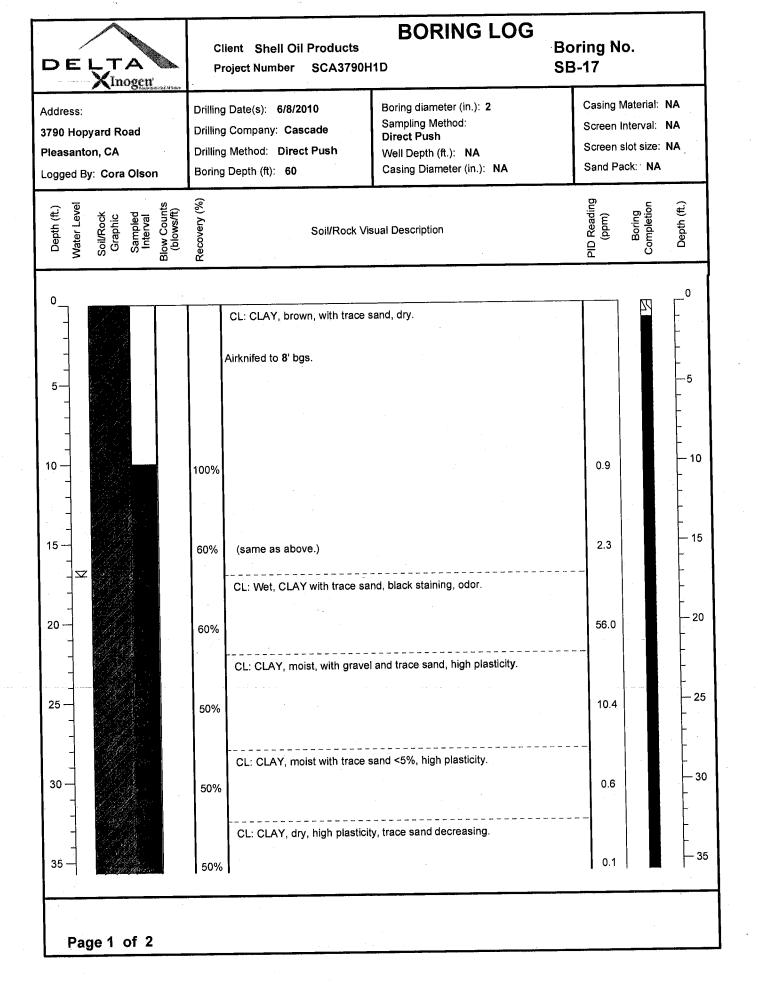


												١.	
LIENT	r Nami	E	Sh	ell C	il Proc	lucts C	ompan	Y	BORING/WELL NAME			<del></del>	
OB/SI	TE NA	ME	379	90 H	lopyare	t, Plea	santon			05-Oct-04			
OCAT	TION		37	90 <u> </u>	lopyare	Road	l, Pleas	anton, CA	DRILLING COMPLETED		NA		
PROJE	CT NU	MBER	24	6 <b>-</b> 04	197				WELL DEVELOPMENT		NA		
RILLE	ER		Vir	one	<u> </u>			<u> </u>	GROUND SURFACE ELE				
RILLI	NG ME	COHT	Ну	drau	ılic pus	sh			TOP OF CASING ELEVA				
ORIN	G DIA	METER	2"					<del></del>	SCREENED INTERVAL		N NA	<del></del>	Σ̈́
,oggi	ED BY		Ro	n B	arone		<del></del>		DEPTH TO WATER (Firs				<u> </u>
REVIE	WED B	Y	An	a Fı	riel				DEPTH TO WATER (Stat	ic)	<u>NA</u>		
REMAI	RKS		No	Gre	oundw	ater R	echarge	<del></del>				000000000000000000000000000000000000000	***
РІД (ррт.)	ТРНд (ррм)	BLOW	SAMPLEID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITH	OLOGIC DESCRIPTION		CONTACT DEPTH (ft bgs)	WELL	DIAGRAM
<del></del> -}							200	CONCRETE		E0/	0.6		
Ì								CLAY (CL); brown; 7 medium plasticity.	'0% clay, 20%silt, 5% sand,	อ% gravei;			
				1				•		. 400/			
2	<1.0		SB-14					CLAY with gravel(C gravel; medium plas	CL); gray; stiff; dry; 90% clay ficity.	7, 10%			
4.			-2.5					grater, mediam pad	<del>,</del>				
		}	DD 44	H	- 5 -			CLAY/CLV aravi ve	ry stiff; dry to moist; 100% o	ay; no to			
	<1.0	•	SB-14 -5.0	州	4			low plasticity.	ry sun, dry to moist, 10070	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1		
				1 [									
			1										
	ł		•	П							1		
ł			}	1		Ì							
21	1.9		SB-14		<b>10</b>	1		CLAY (CL); gray; ve	ery stiff, dry to moist; 100% o	clay; no to	Į.		
		1	-10.0		<u>.                                    </u>	1		low plasticity.			1		
		ļ		H	-	1			•				
	1		ì		-	l cr							■ Portland Type VII
					-	1							VII
	١		l		-15-	1		DE SMICE VE APOUT W	ery stiff; dry to moist; 100%	clay: no to			
113	8.2		SB-14		L.	1		low plasticity.	sty still, dry to moiot, 100 %	olay, no lo	1		
	}	1			Ļ			, ,			Į.		
					L								·
	1	1			Γ '			CLAY (CL); gray; v	ery stiff; dry to moist; 100%	ciay; low to			
		1				1		medium plasticity.					
144	<50		SB-1		20-	1		CLAY (CL); gray; v	ery stiff; dry to moist; 100%	clay; low to			
			-20.0	7	ļ	1		medium plasticity.					
		1		١.	<b>F</b>	4							
		1			-	4							
				<u> </u>	+	4		Light Green Stainir	าต		OF O		
		1	L		-25-	<del> </del>	-4///		ery stiff; dry to moist; 100%	dav:	25.0		
5	2.3	1	SB-1 -25.		<b>1</b>	↓ C⊦		medium to high pla	isticity.		26.5		D-#45
	1		1	<b>`</b>  -	1						7		Bottom of Bo @ 26.5 ft
) 66 66 67						1	-				•		W
80000					Î	1							
ander	1				1								
diagona	1	1											
9													
Ch.									*				
180												ľ	
3		1			1	-	1				1	1	



, delá	(5030m	Fa	ax: (5	10) 42	0-9170	0						
CLIENT NAME JOB/SITE NAME LOCATION PROJECT NUMBER DRILLER DRILLING METHOD BORING DIAMETER LOGGED BY REVIEWED BY REMARKS			37 37 24 VI H1 2" R0	16-0497 ronex ydraulic	yard, F yard R push	Pleasar oad, P	nton	DRILLING STARTED DRILLING COMPLETED WELL DEVELOPMENT I GROUND SURFACE ELI TOP OF CASING ELEVA SCREENED INTERVAL DEPTH TO WATER (Star	•			
PID (ppm) TPHg (ppm) BLOW COUNTS			SAMPLEID	EXTENT	DEPTH (ff bgs) U.S.C.S. GRAPHIC LOG			LITHOLOGIC DESCRIPTION	LITHOLOGIC DESCRIPTION			
					12	W S		CONCRETE		0.5		

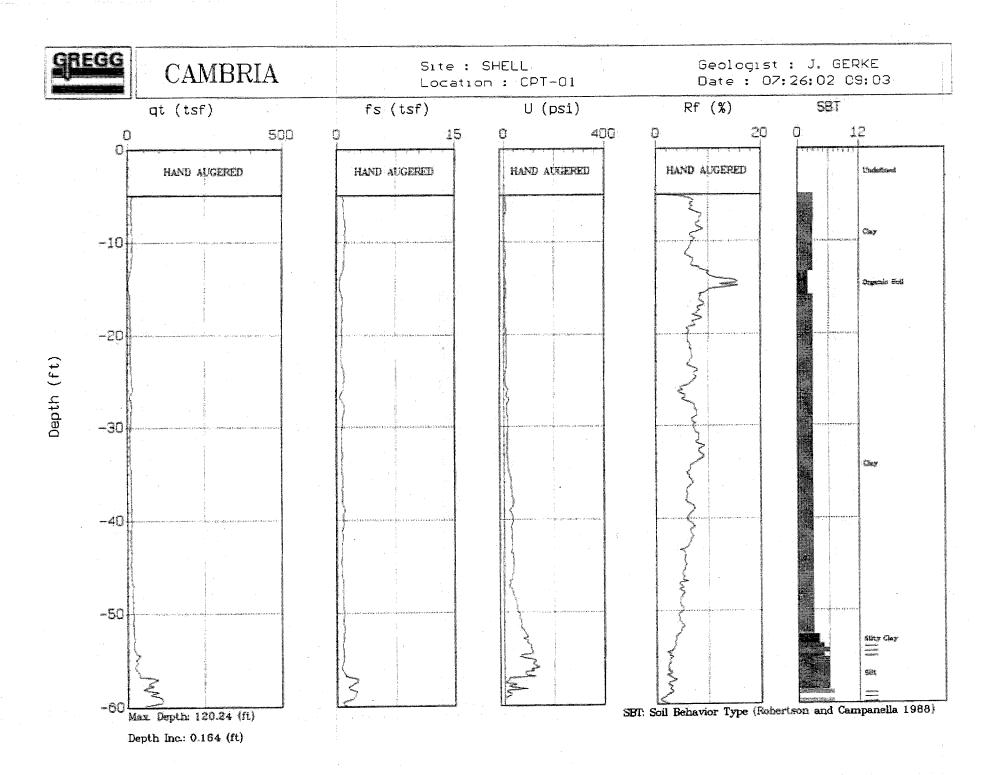




#### **BORING LOG** Boring No. Client Shell Oil Products **SB-17 Project Number** SCA3790H1D Casing Material: NA Boring diameter (in.): 2 Drilling Date(s): 6/8/2010 Address: Sampling Method: Screen Interval: NA Drilling Company: Cascade 3790 Hopyard Road **Direct Push** Screen slot size: NA Drilling Method: Direct Push Pleasanton, CA Well Depth (ft.): NA Sand Pack: NA Casing Diameter (in.): NA Boring Depth (ft): 60 Logged By. Cora Olson PID Reading (ppm) Recovery (%) Water Level Depth (ft.) Soil/Rock Graphic Soil/Rock Visual Description (same as above.) 1.5 40 30% CL: CLAY with some gravel, dry, high plasticity, brown. 45 45 8.0 40% 50 0.5 50 (as above, hard clay.) 50% CL: CLAY with trace sand, brown, hard clay, high plasticity. 55 0.1 55 80% CL: CLAY with sand, with 20% sand, wet, gray. CL: Sandy CLAY, 40% sand, wet, dark gray. 60 0.0 60 65 65 Page 2 of 2

DELTA XInogen	Client Shell Oil Products Project Number SCA3790H	Boring No. SB-18				
dress: 90 Hopyard Road easanton, CA gged By: Matt Lambert	Drilling Date(s): 5/21/2010 Drilling Company: Cascade Drilling Method: Direct Push Boring Depth (ft): 60	Boring diameter (in.): 2 Sampling Method: Direct Push Well Depth (ft.): NA Casing Diameter (in.): NA	Casing Material: NA Screen Interval: NA Screen slot size: NA Sand Pack: NA			
Usepur (t.) Water Level Soil/Rock Graphic Sampled Interval Blow Counts (blows/ft)	Recovery (%)	sual Description	PID Reading (ppm)  Boring  Completion  Depth (ft.)			
5	(as above, dark gray with lig (as above, dark gray with gray) (as above, trace sand and gray) (as above, trace sand and gray) (as above, trace sand and gray), trace as above, greenish gray, trace as above, black with green GC: Clayey GRAVEL, light brace grayel, trace medium plasticity, very mois (as above, with trace iron or grayel)  100% (as above, with trace medium)	ay, medium plasticity, moist.  gray, low to medium plasticity, moist.  ht gray patches.)  een patches.)  ravel dark gray to black.)  ravel dark gray to black.)  oots, very moist.)  ace medium grained sand and roots.)  and iron oxide mottling.)  orown with black and green, very moist  e fine grained sand, dark brown and grait.  xide, medium to high plasticity.)				
35 —		gravel, dark brown with light green, me	dium - 1.0			

#### **BORING LOG** Boring No. Client Shell Oil Products **SB-18 Project Number** SCA3790H1D Casing Material: NA Boring diameter (in.): 2 Drilling Date(s): 5/21/2010 Address: Sampling Method: Screen Interval: NA 3790 Hopyard Road Drilling Company: Cascade **Direct Push** Screen slot size: NA Pleasanton, CA Drilling Method: Direct Push Well Depth (ft.): NA Sand Pack: NA Casing Diameter (in.): NA Boring Depth (ft): 60 Logged By: Matt Lambert PID Reading (ppm) Depth (ft.) Soil/Rock Graphic Soil/Rock Visual Description 20.4 to high plasticity, moist. (as above, dark gray, medium high plasticity, wet.) 1.4 40 40 11.5 100% (as above, increasing fine sand, gray with green and black specks.) 2.8 0.3 45 45 100% CL: CLAY, trace fine sand. 5.5 (as above, increasing plasticity.) 1.8 50 50 0.4 100% 2.5 CL: CLAY with sand, light brown, wet. (as above, dark gray increasing, medium grained sand.) 0.3 55 55 100% 1.3 1.7 (as above, light brown and gray.) 60 60 0.3 100% End of boring at 60' bgs. 65 Page 2 of 2

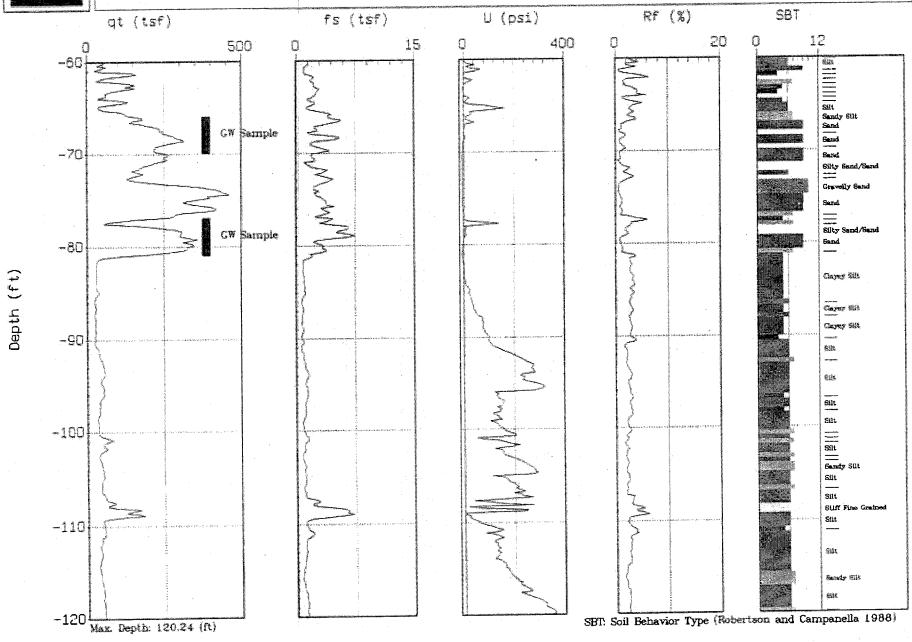




**CAMBRIA** 

Depth Inc. 0.164 (ft)

Site: SHELL Location: CPT-01 Geologist : J. GERKE Date : 07:26:02 09:03

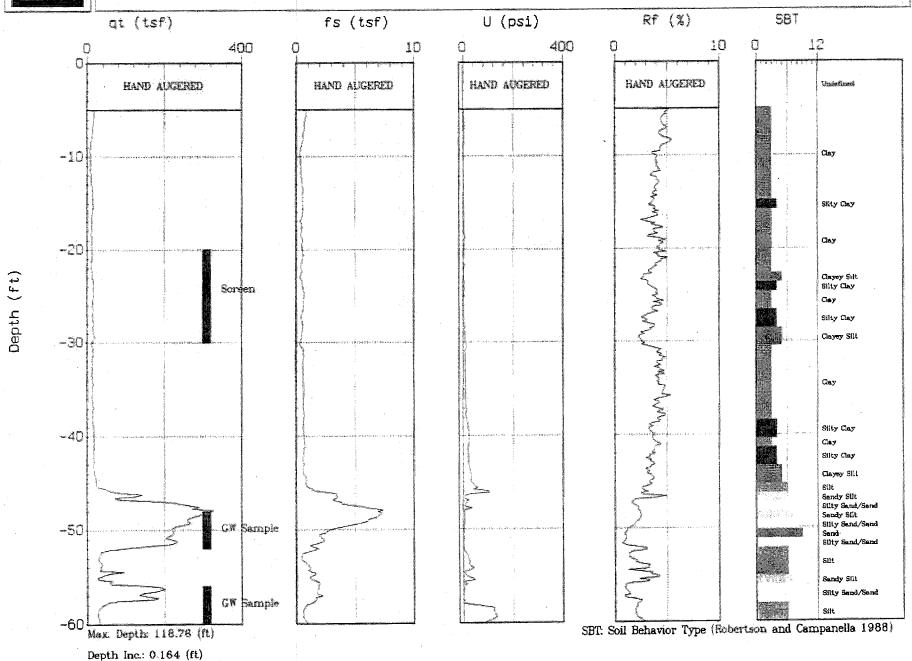


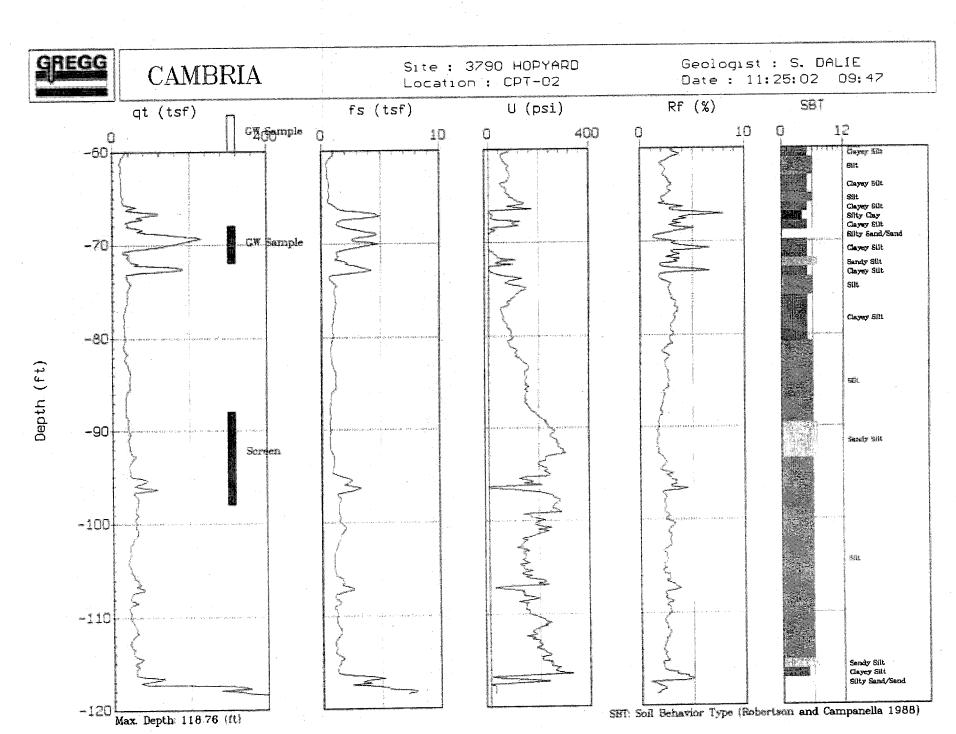


CAMBRIA

Site: 3790 HOPYARD Location: CPT-02

Geologist : S. DALIE Date : 11:25:02 09:47



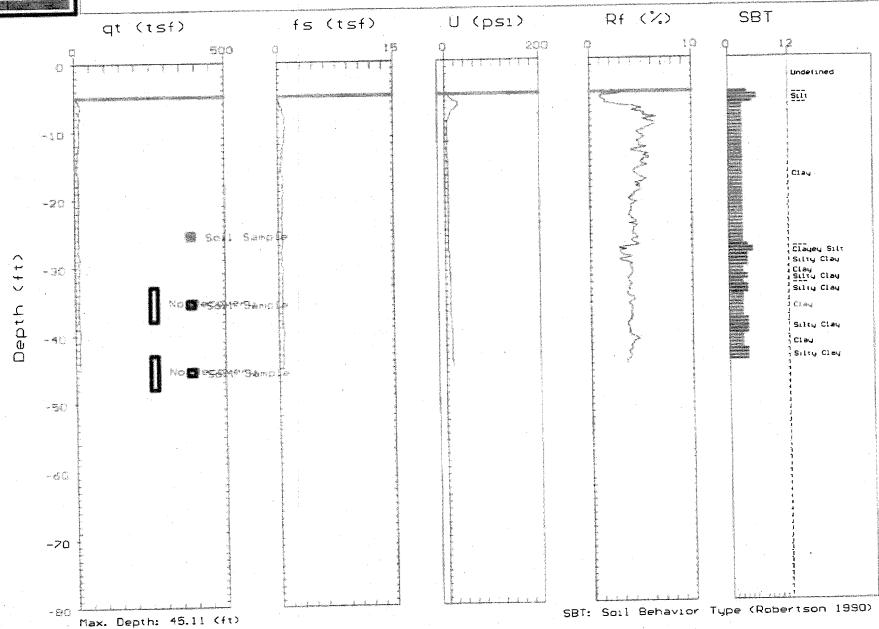


Depth Inc.: 0.164 (ft)



Depth Inc.: 0.164 (ft)

Site:3790 HOPYARD Location:CPT-03 Geologist:L. DOOLEY Date: 02:15:05 09:05

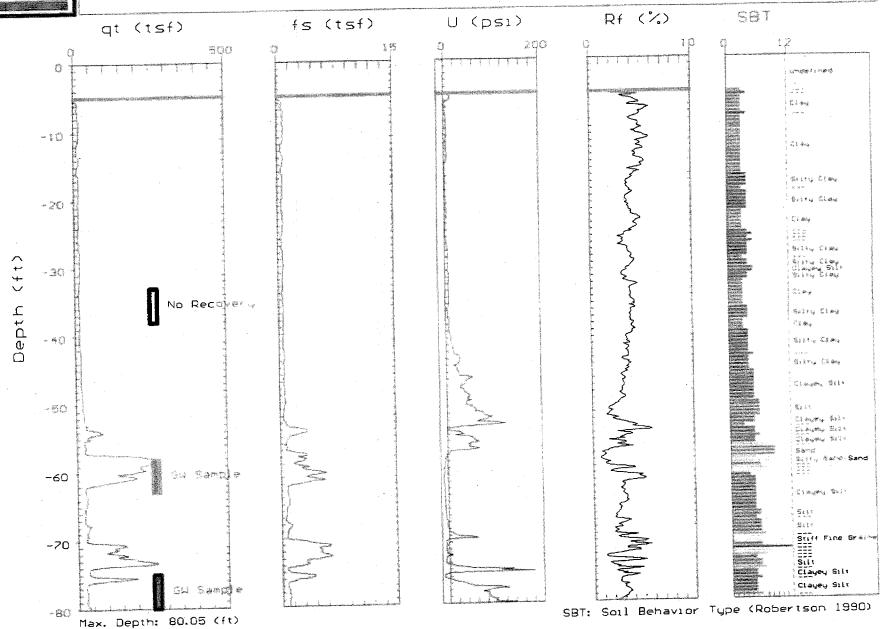


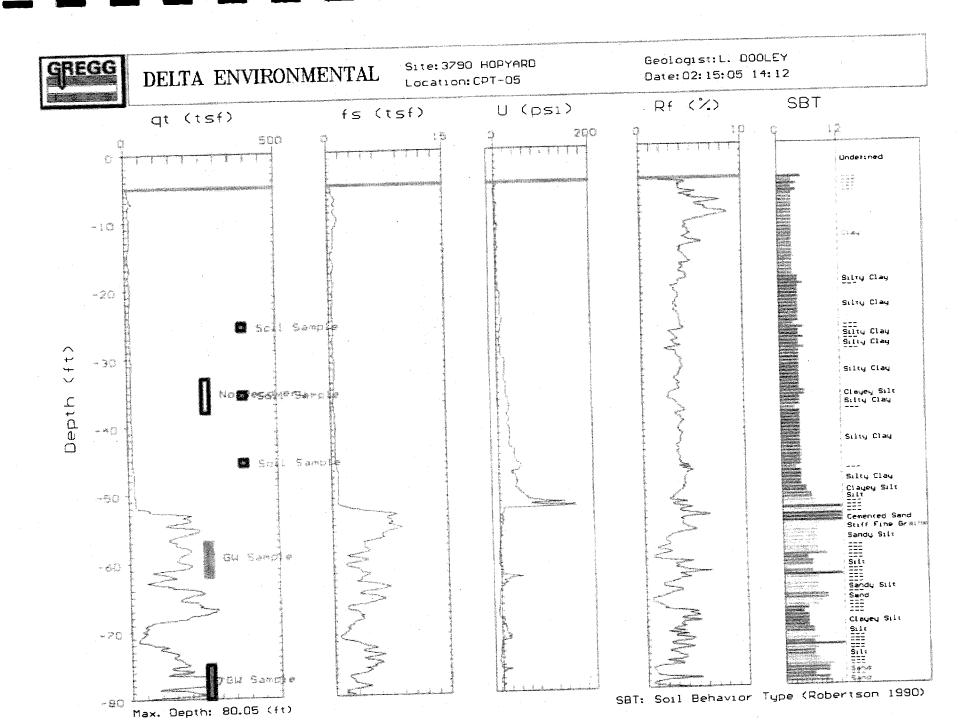


Depth Inc.: 0.164 (ft)

Site: 3790 HOPYARD Location: CPT-04

Geologist: L. DOOLEY Date: 02: 15: 05 12: 43





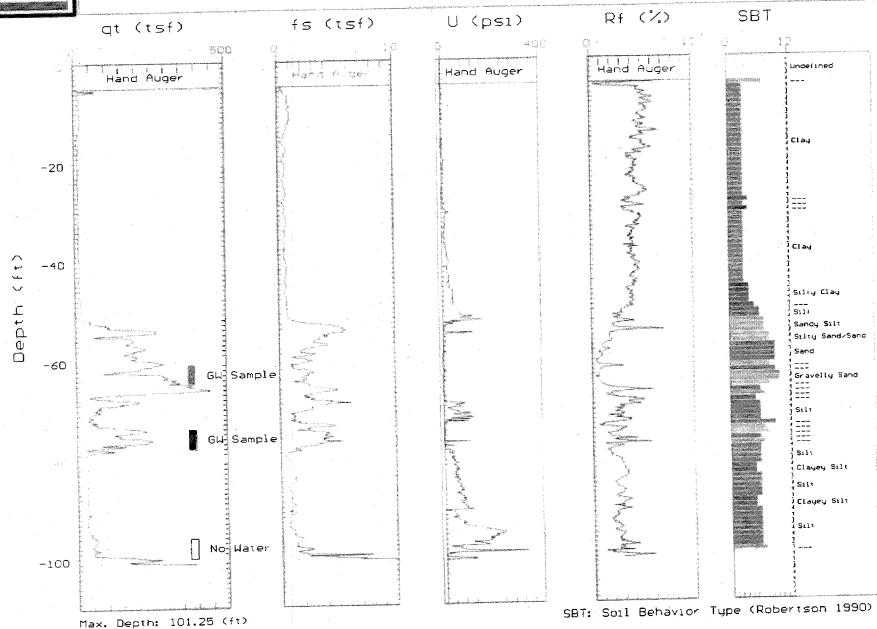
Depth Inc.: 0.164 (ft)



### DELTA ENV.

Depth Inc.: 0.066 (ft)

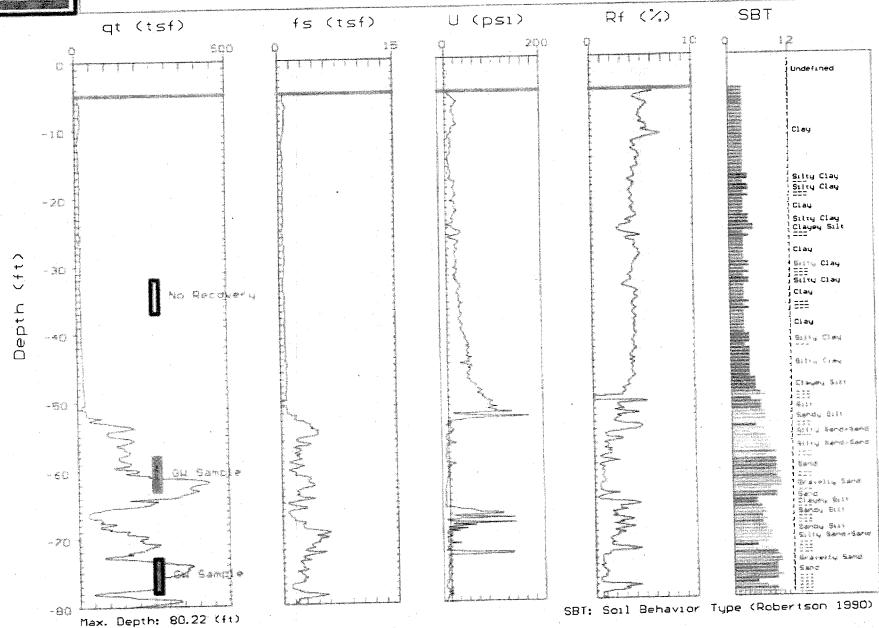
Site:3790 HOPYARD RD. Location:CPT-05a Engineer: H.BUCKINGHAM Date: 09: 09: 05 10: 15





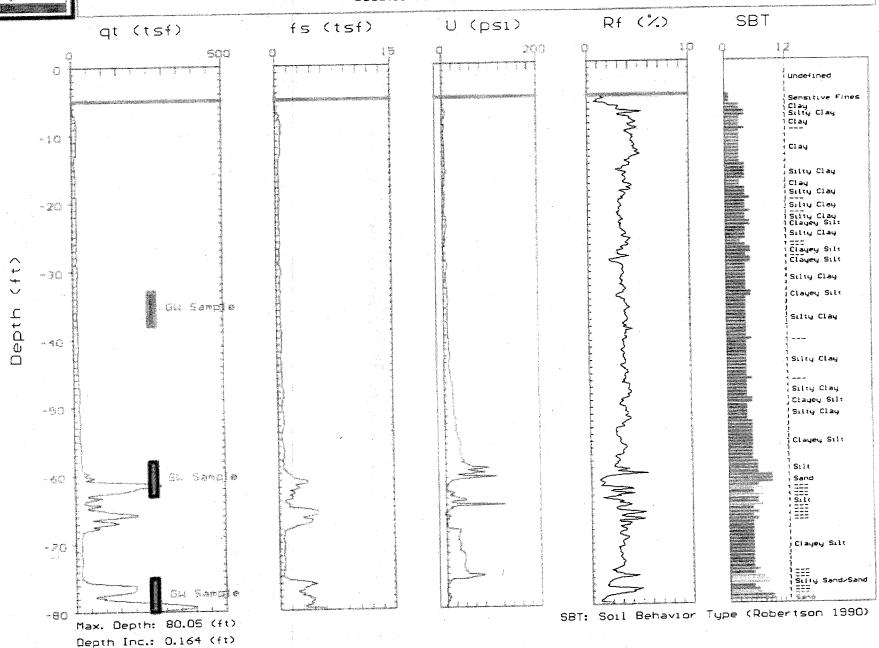
Depth Inc.: 0.164 (ft)

Site: 3790 HOPYARD Location: CPT-06 Geologist:L. DOOLEY Date: 02:18:05 10:01





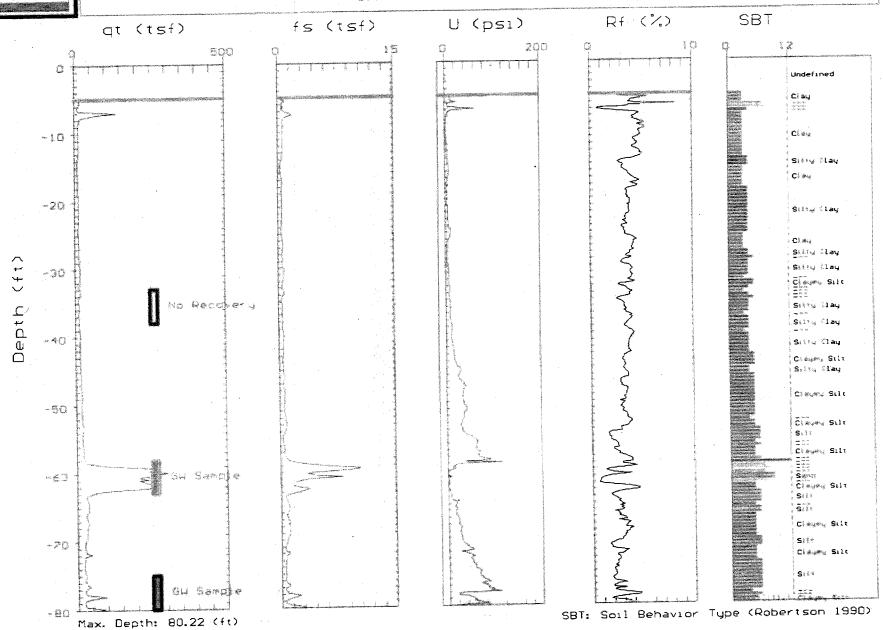
Site: 3790 HOPYARD Location: CPT-07 Geologist:L. DOCLEY
Date: 02: 16: 05 D6: 20





Depth Inc.: 0.164 (ft)

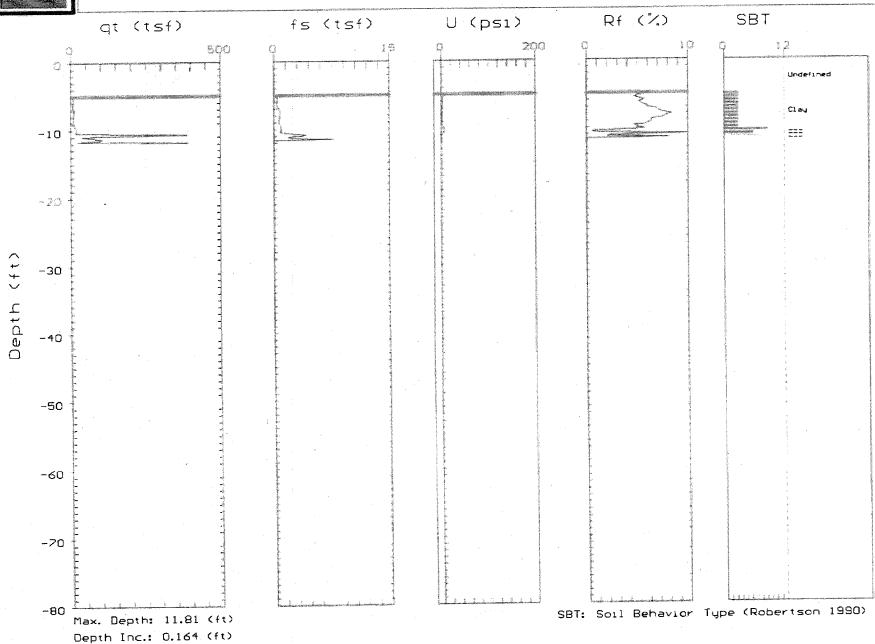
Site: 3790 HOPYARD Location: CPT-08 Geologist:L. BOOLEY
Date: 02: 16: 05 11: 51





Site: 3790 HOPYARD Location: CPT-09

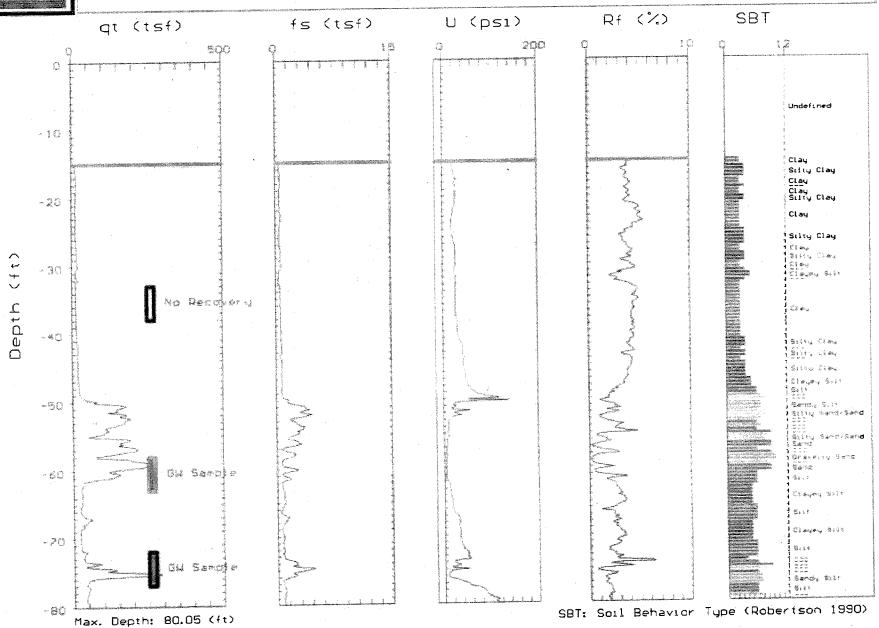
Geologist:L. BOOLEY
Date: 02:17:05 15:27





Bepth Inc.: 0.164 (ft)

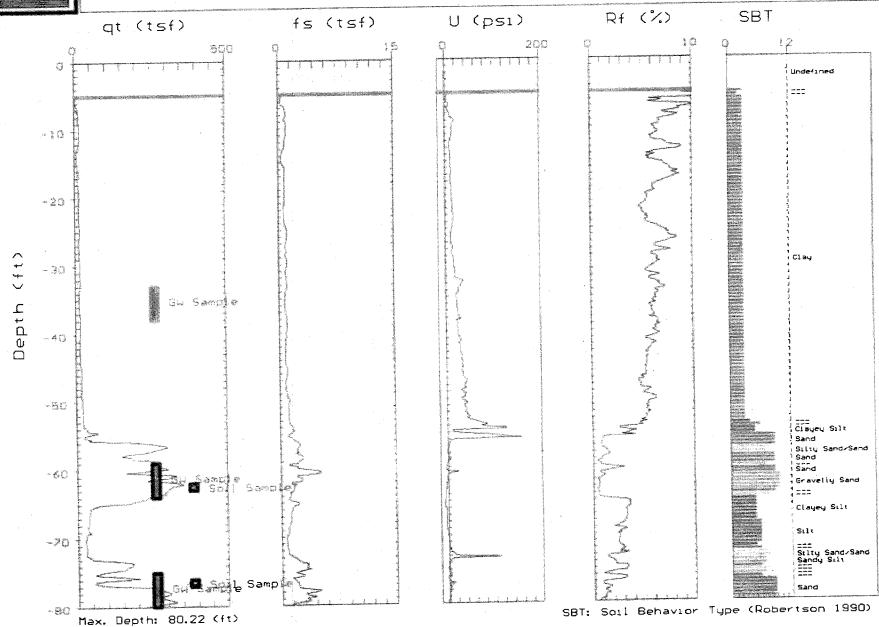
Site: 3790 HOPYARD Location: CPT-09A Geologist:L. DOOLEY
Date: 02:17:05 16:04





Depth Inc.: 0.164 (ft)

Site: 3790 HOPYARD Location: CPT-10 Geologist:L. DOGLEY Date: 02:17:05 08:25

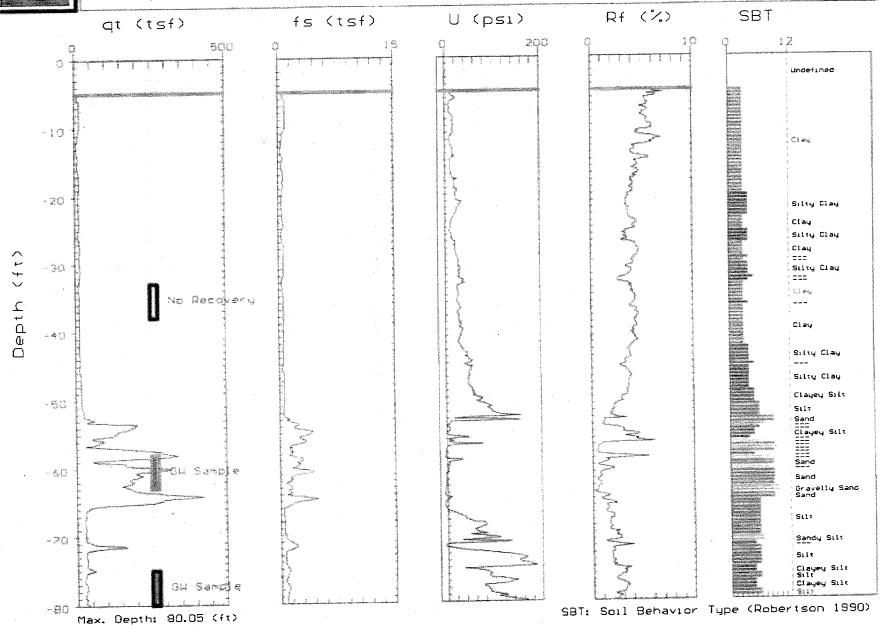




Depth Inc.: 0.164 (ft)

Site: 3790 HOPYARD Location: CPT-11

Geologist:L. DOOLEY Bate: 02:17:05 09:50



APPENDIX C

REMEDIATION DATA TABLES

TABLE 1
Groundwater Extraction - System Analytical Results
Shell-branded Service Station, Incident #98995842
3790 Hopyard Road, Pleasanton, California

			2,249,276,2		Ar		AP AP				18 19 19 19 19 19 19 19 19 19 19 19 19 19			\$474.65 			
		INFL	UENT				Mil	D-1		•	MI	<b>)-2</b>			EFF	LUENT	
Sample	трн-G	TPH-D	Benzene	MTBE	TBA.	TPH-G	TPH-D	Benzene	MTBE	TPH-G	TPH-D	Benzene	MTBE	TPH-G	TPH-D	Benzene	MTBE
Date	Conc.	Conc.	Conc	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc	Conc.
(mm/dd/yy)	(ppb)	(ppb)	(ppb)	(ppb)	(appb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
07/01/03	<2,500	810 1	<25	3,400	NA	<50	-	<0.50	<0.50	<50	-	<0.50	<0.50	<50	200 1	<0.50	< 0.50
07/21/03	<2,500	67	<25	5,400	NA	<500		<5.0	160	<250		<2.5	<2.5	<50	<50	<0.50	<0.50
08/01/03	<1,300	57 1	<13	3,700	NA	<250	-	<2.5	190	54 <sup>2</sup>	_	<0.50	<0.50	<b>&lt;</b> 50	<50	< 0.50	<0.50
08/15/03	<1.000	470 1	<10.	2,200	NA	<250		<2.5	380	<100	-	<1.0	<1.0	<50	76 <sup>1</sup>	<0.50	< 0.50
09/11/03	<1,000	<50	<10	2,400	NA	<50	-	<0.50	<5.0	<50		< 0.50	<5.8	<50	<50	<0.50	<5.0
09/25/03	<1,000	NA	<10	2,600	NA	<250	-	<2.5	<25	<250		<2.5	<25	<50	NA	<0.50	<5.0
10/10/03	<5,000	67 <sup>1</sup>	<50	1,800	NA	<100		<7.0	85	<100	_	<10	<10	<100	<10	<1.0	<10
10/24/03	<500	NA	<5.0	1,500	NA	<500	-	<5.0	75	<500	· -	<5.0	<5.0	<500	NA	<5.0	<5.0
11/21/03	<1,000	<50 <sup>3</sup>	<10	1,300	NA	<250	-	<2.5	25	<250		<2.5	<2.5	<50	<50 <sup>3</sup>	<0.50	<0.50
12/05/03	<1,000	<50	<10	1,200	NA	<250	_	<2.5	110	<50		<0.50	<5.0	<50	<50	<0.50	<5.0
12/19/03	<1,000	NA	<10	950	NA	<250	-	<2.5	150	<50	annori .	<0.50	<5.0	<50	NA	<0.50	<5.0
01/16/04	<50	220 <sup>1</sup>	<0.50	57	NA	<50		<0.50	<5.0	<50		<0.50	<5.0	<50	<50	< 0.50	<5.0
01/30/04	<500	NA	<5.0	460	NA	<50	-	<0.50	<5.0	<50		<0.50	<5.0	<50	MA	<0.50	<5.0
02/06/04	<500	<b>5</b> 6 <sup>1</sup>	<5.0	350	NA	<50	. —	<0.50	<5.0	<50		< 0.50	<5.0	<50	<50	<0.50	<5.0
03/05/04	<500	<50	<5.0	370	NA	<50	_	<0.50	<5.0	<50		<0.50	<5.0	<50	<50	<0.50	<5.0
04/02/04	<1,000	230 1	<10	200	NA	<50	_	<0.50	<5.0	<50		<0.50	<5.0	<50 .	<50	<0.50	<5.0
05/14/04	<1,000	<50	<10	110	NA	<50		<0.50	<5.0	<50	-	<0.50	<5.0	<50	<50	<0.50	<5.0
06/04/04	<1,000	<50	<10	<100	NA	<50		<0.50	<5.0	<50		<0.50	<5.0	<50	<50	<0.50	<5.0
07/16/04	<1,000	<50	<10	<100	NA	<50		<0.50	<5.0	<50	_	<0.50	<5.0	<50	<50	<0.50	<5.0
08/06/04	<1,000	<50	<10	<100	NA	<50		< 0.50	<5.0	<50		<0.50	<5.0	<50	<50	<0.50	<5.0
09/03/04	<1,000	<50	<10	<100	NA.	. 75 4	-	<0.50	9.0	170 4		<0.50	<5.0	57	<50	<0.50	<5.0
10/08/04	<50	<50	< 0.50	29	NA ·	<50	_	<0.50	<5.0	<50	-	<0.50	<5.0	<50	<50	<0.50	<5.0
11/05/04	<50	110 1	<0.50	5.2	NA	<50		<0.50	<5.0	<50		< 0.50	<5.0	<50	<50	<0.50	<5.0
12/03/04	<250	<50	<2.5	<25	NA	<b>&lt;</b> 50		<0.50	<5.0	<50	_	<0.50	<5.0	<50	<50	<0.50	<5.0
01/07/05	150	170 1	0.95	18	NA	<50		<0.50	<5.0	<b>&lt;</b> 50	-	<0.50	<5.0	<50	<50	<0.50	<5.0
02/28/05	100	560	< 0.50	< 0.50	-NA	57	<210	< 0.50	<5.0	<50	<50	<0.50	<0.50	<50	54	<0.50	<5.0
03/09/05	<50	< <del>5</del> 0	<0.50	<0.50	NA	<50	<50	<0.50	<5.0	<50	<50	<0.50	<0.50	<50	<50	<0.50	<5.0

# **Groundwater Extraction - System Analytical Results**

Shell-branded Service Station, Incident #98995842 3790 Hopyard Road, Pleasanton, California

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		INFL	LUENT		- 0		Mil	D-1			MII	3-2			EFF	LUENT	
Sample	TPH-G	TPH-D	Benzene	MTBE	TBA	TPH-G	TPH-D	Benzene	MTBE	TPH-G	TPH-D	Benzene	MTBE.	TPH-G	TPH-D	Benzene	MTBE
Date	Conc.	Conc.	Conc	Conc.	Coric.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc	Conc.
(mm/dd/yy)	(ppb)	(ppb)	(dad)	(ppb)	(apb)	(dqq)	(dqq)	(ppb)	(oʻqq)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(opb)	(ppb)	(ppb)
04/08/05	120	490	2.0	310	NA	<50	<50	<0.50	<5.0	<50	<50	<0.50 ·	<0.50	<50	<50	<0.50	<5.0
04/27/05	<50	<50	<0.50	31	760	<50	<50	<0.50	<5.0	<50	<50	<0.50	<0.50	<50	<50	< 0.50	<5.0
05/11/05	<50	<50	<0.50	28	1800	<50	<50	<9.50	<0.50	<50	<50	<0.50	<0.50	<50	<50	<0.50	<0.50
06/03/05	<50	<50	<0.50	12	30 ·	92	<50	<0.50	<0.50	<50	<50	<0.50	<0.50	<50	<50	< 0.50	<0.50
07/01/05	<50	<50 1	< 0.50	11	NA	<50	<50	<0.50	<0.50	<50	<50	< 0.50	<0.50	<50	<50 ⋅	<0.50	<0.50
07/29/05	<50	<50	< 0.50	10	NA	<50	<50	<0.50	<0.50	<50	<50	<0.50	<0.50	<50	<50	<0.50	<0.50
8/5/2005 <sup>5</sup>	<50	<50	<0.50	6.6	1400 <sup>6</sup>	<50	<50	<0.50	<0.50	<50	<50	<0.50	<0.50	<50	<50	<0.50	< 0.50
09/01/05	<50	<50 <sup>1</sup>	< 0.50	4.9	880	<50	<50	< 0.50	<0.50	<50	<50	<0.50	<0.50	<50	<50	<0.50	< 0.50
10/07/05	<50	<50 1	<0.50	4.2	1200	<50	<50	< 0.50	<0.50	<50	<50	<0.50	<0.50	<50	<50	<0.50	<0.50
11/04/05	<50	70 <sup>1</sup>	<0.50	2.9	180	<50	<50	<0.50	0.54	<50	<50	<0.50	<0.5	<50	<50	< 0.50	<0.50
12/13/05	230	61	2.1	3.0	700	<50	<50	<0.50	<0.50	<50	<50	<0.50	<0.50	<50	<50	<0.50	<0.50
01/06/06	<50	<50	1.1	3.7	460	<50	<50	<0.50	<0.50	<50	<50	<0.50	<0.50	<50.	<50	<0.50	<0.50
02/02/06	<50	130	1.1	5,6	590	<50	<50	<0.50	<0.50	<50	<50	<0.50	<0.50	<50	<50	<0.50	< 0.50
03/03/06	55	<50	0.6	29	510	<50	<50	<0.50	<0.50	<50	<50	<0.50	<0.50	<50	<50	<0.50	<0.50
04/10/06	<50	<417	< 0.50	6.90	483	<50	<417	<0.50	<0.50	<50	<417	<0.50	<0.50	<50	K417	<0.50	<0.50
05/04/06	53	<50	1.7	25	310	<50	<50	<0.50	1.3	<b>&lt;</b> 50	<b>&lt;</b> 50	<0.50	<0.50	<50	<50	<0.50	<0.50

### Abbreviations & Notes:

TPH-G/D = Total purgeable hydrocarbons as gasoline/diesel

MTBE = Methyl tent-butyl ether

ppb = parts per billion

TPH-G, benzene and MTBE analyzed by EPA Method 8260

TPH-D analyzed by EPA Method 8015M.

Discharge Limits: TPH-G & TPH-D = 15.0 mg/L, STEX = 1.00 mg/L, MTBE = not applicable

"-" - No Data Provided

NA = Not analyzed

- 1 = Hydrocarbon reported does not match the laboratory standard diesel pattern
- 2 = Hydrocarbon reported as gasoline does not match the laboratory gasoline standard
- 3 = The initial analysis failed QA/QC. A second analysis was conducted outside of hold time for which QA/QC passed. Both analyses reported similar results (<50ppb).
- 4 = The sample contains discrete peaks in the gasoline range.
- 5 = Influent samples were extracted out of hold time due to re-analysis. Initial analysis used higher reporting limits than required.

Groundwater Extraction - System Analytical Results Shell-branded Service Station, Incident #98995842 3790 Hopyard Road, Pleasanton, California

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-	INFL	JENT				Mi	D-1			MI	3-2			EFF	LUENT	
TPH-G	TPH-D	Benzene	MTBE	TBA	TPH-G	TPH-D	Benzene	MTBE	TPH-G	TPH-D	Senzene	MTBE	TPH-G	TPH-D	Benzene	MTBE
Conc.	Conc.	Conc	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc	Conc.
(dqq)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(dqq)	(ppb)	(ppb)	(ppb)	(dqq)	(dad)	(ppb)	(ppb)	(ppb)	(dad)	(ppb)
-	Conc.	TPH-G TPH-D Conc. Conc.	Conc. Conc. Conc	TPH-G TPH-D Benzene MTBE Conc. Conc. Conc. Conc.	TPH-G TPH-D Benzene MTBE TBA Conc. Conc. Conc. Conc. Conc.	TPH-G TPH-D Benzene MTBE TBA TPH-G Conc. Conc. Conc. Conc. Conc. Conc.	TPH-G TPH-D Benzene MTBE TBA TPH-G TPH-D Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc.	TPH-G TPH-D Benzene MTBE TBA TPH-G TPH-D Benzene Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc.	TPH-G TPH-D Benzene MTBE TBA TPH-G TPH-D Benzene MTBE Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc.	TPH-G TPH-D Benzene MTBE TBA TPH-G TPH-D Benzene MTBE TPH-G Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc.	TPH-G TPH-D Benzene MTBE TBA TPH-G TPH-D Benzene MTBE TPH-G TPH-D Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc.	TPH-G TPH-D Benzene MTBE TBA TPH-G TPH-D Benzene MTBE TPH-G TPH-D Benzene Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc.	TPH-G TPH-D Benzene MTBE TBA TPH-G TPH-D Benzene MTBE TPH-G TPH-D Benzene MTBE Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc.	TPH-G TPH-D Benzene MTBE TBA TPH-G TPH-D Benzene MTBE TPH-G TPH-D Benzene MTBE TPH-G Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc. Conc.	TPH-G TPH-D Benzene MTBE TBA TPH-G TPH-D Benzene MTBE TPH-G TPH-D Benzene MTBE TPH-G TPH-D Conc.	TPH-G TPH-D Benzene MTBE TBA TPH-G TPH-D Benzene MTBE TPH-G TPH-D Benzene MTBE TPH-G TPH-D Benzene Conc. Con

6 = Estimated Value. The concentration exceeded calibration of analysis.

TABLE 2
Groundwater Extraction - Mass Removal Data
Shell-branded Service Station, Incident #98995842
3790 Hopyard Road, Pleasanton, California

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N. 67 1	A STATE OF THE STA	A Transfer of the section of the sec	THE PARTY OF THE P	A. C. C. C. C. C. C. C. C. C. C. C. C. C.	75.,7		TPH-G			Senzene			MTBE	
1	Flow Meter	Period	Flow	Flow	Comulative	TPH-G	Period	Cumulative	Benzene	Penod	Cumulative	MTSE	Period	Comulative
Site Visit	Reading	Volume	Rate	Rate	Volume	Conc.	Removal	Removal	Conc.	Removal	Removal	Conc.	Removal	Removal
1 1	_			(pod)	(gail)	(dedd)	(pounds)	(pounds)	(ppb)	(ocunds)	(counds)	(mob)	(pounds)	(pounds)
(mm/dd/yy)	(gal)	(gal)	(gom)	Access to the second			6,000	0.000	<25	0.000	0.000	3,406	0.000.0	0.000
07/01/03	447	<b>(3</b> )	0	<b>1</b>	0	<2,500		1.081	<25	0.011	0.011	5,400	4.670	4,670
07/21/03	104,030	163,533	3.68	5,182	103,633	<2,500	1,081	1,370	<13	0.083	0.014	3,700	1.643	6,313
CB/01/03	157,301	53,221	2.36	4,838	156,854	<1,360	0.289			0.001	D.C14	2,200	0.277	6,590
08/15/03	172,392	15,091	0.75	1,078	171,945	<1,000	€.063	1.433	<10			. NS	0.908	7.498
08/29/03	221,836	49,444	2.45	3,532	221,389	NS	0.265	1.636	NS	0.062	Ø/016	1		8.796
09/1/03	286,780	64.944	3.47	4,995	286,333	<1,000	0.271	7.910	<16	0.003	0.019	2,400	1.301	10,229
09/25/03	352,750	65,970	3.27	4,712	352,303	<1,000	0.275	2.185	<10	0.903	0.022	2,600	1.431	19.243
10/10/03	420,240	67,490	3.12	4,459	419,793	<5,000	7.408	3,593	<50	0.014	0.036	1,800	1.014	
10/24/03	423,410	3,170	0.16	226	422,963	<500	0.007	3.600	<5.0	2.000	0.036	1,500	0.040	11.283 12.425
11/12/03	514,680	91,270	3.34	4,884	514,233	ns	0.190	3.790	NS	0.002	0.038	NS	1.142	12.877
11/21/03	556,306	41,626	3.21	4,625	555,659	<1,000	0.174	3.964	<10	6,062	0.640	1,300	0.452	
12/05/03	518,906	62,600	3.11	4,471	618,459	<1,000	0.261	4.225	<10	0.003	8.042	1,200	0.627	13.503
12/19/03	680,821	61,915	3.07	4,423	580,374	<1,000	0.258	4.483	<b>~10</b>	0.963	0.045	950	0.491	13.994
01/05/04	745,460	64,639	2.49	3,591	745,013	145	0.270	4.753	NS	2.083	0.048	NS	0,512	14.507
01/16/04	784,010	36,550	2.68	3,855	783,563	<50	3.008	4.761	<0.50	0.000	0.048	57	0.018	14.525
01/30/04	848,560	64,570	3,20	4,512	848,133	<500	0.735	4,696	<5.0	0.001	0.049	450	0.248	14.773
02/06/04	879,575	30,995	3.07	4,426	879,128	<500	0.055	4.960	<5.0	0.00:	0.650	350	0.091	14,963
02/20/04	929,280	49,705	2.47	3,550	926,833	NS	0.104	5,064	NS	0.001	0.051	i ws	0.145	15,009
03/05/04	973,690	44,410	2.20	3,172	973,243	<500	0.093	5.157	<5.0	0.001	0.652	370	0.137	15.146
03/19/64	1,008,001	34,311	1.70	2,451	1,007,554	NS	0.072	5.228	NS	0.001	0.052	NS	0.106	\$5.252
04/02/04	1,030,183	22,182	1.10	1,584	1,029,736	<1,000	0.093	5,321	<10	0.001	0.053	200	0.037	15.289
64/16/04	1,052,225	22.042	1.09	1,574	1,051,778	NS	0.035	5.413	NS	0.501	0.054	NS	0.037	15,325
04/30/04	1,085,954	33,729	1.57	2,409	1,085,507	NS	0.141	5,553	NS	9.001	0.056	NS	0.056	15.382
05/14/04	1,118,933	32,979	1.64	2,356	1,118,486	<1,060	0.138	5,691	<10	0.001	0,057	110	0.030	15.412
05/24/04	1,142,083	23,150	1,61	2.315	1,141,636	NS	0.097	5.788	NS	10,000	0.058	NS NS	0.021	15,433
06/04/04	1,168,145	26,062	1.65	2.359	1,167,698	<1,000	0.109	5,896	<10	DANT.	0.039	<160	0.011	15.444
06/18/04	1,200,909	32,764	1.63	2,340	1,200,462	NS	0.137	5.033	NS	0.007	0.060	NS	0.014	15.458
06/29/04	1.228,340	27,431	1.73	2,494	1,227,893	NS	0.114	6.147	₩S	0.001	0.061	NS	0.011	15.469
07/16/04	1,265,550	37,210	1.52	2.189	1,265,163	<1.000	0.155	6.503	<10	0.002	0.063	<100	0.015	75.485
07/30/04	1,289,040	33,490	1.68	2,392	1,298,593	NS	0.140	6,442	NS	0.001	9.064	₩S	0.014	75.499
3 4	1,315,300	15,260	1,51	2,323	1,314,853	<1,000	0.068	6.510	<10	0.001	0.965	<100	0.007	15,505
08/06/04		32,570	1,62	2,326	1,347,423	NS	0.136	6.646	NS	0.001	0.066	NS	0.014	15.519
58/20/04	1,347,870	32,850 32,850	1.62	2,332	1,380,073	<1,000	0.136	5.782	<10	0.001	40.068	<160	0.014	15,533
09/03/04	1,380,520	ಮಲ್ಪಣವರ .0	0.00	2,332 10	1,380,073	NS	0.000	6.782	NS	0.000	0.068	NS	9,000	15,533
09/17/04	1,380,520			2,385	1,413,468	NS	D.139	6.922	NS	9.901	0,059	NS.	0.014	15.547
10/01/04	1,413,915	33,395	1.56		1,429,595	√50	0.063	6,925	<6.50	0.000	Ø,669	29	9.604	15_551
10/08/04	1,430,142	1/6,227	7.61	2,318 53	1,430,441	NS	0.000	6,925	NS	0.000	0.069	NS	000.5°	15,551
10/22/04	1,430,888	746	0.04	ລວ 1,983	1,458,233	<50	9.096	6,931	<0.50	0.000	0.069	5.2	0.001	15.552
11/05/04	1,458,650	27,762	1.38	2,475	1,492,852	NS	0.097	5.938	NS	0.000	0,069	l NS	0,002	15,553
17/19/04	1,483,299	34,649	1.72			≈250	D.034	6,972	<2.5	0.000	0.070	<25	0.003	15.557
12/03/04	1,525,750	32,451	1.61	2316	1,525,303	~Z0U	19.49.34	10,31L	1 762	به دوره و و و	ARCHE IN	-		

TABLE 2 Groundwater Extraction - Mass Removal Data Shell-branded Service Station, Incident #98955842 3790 Hopyard Road, Pleasamon, California

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Dais 2		200	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	270000	137, and the same of the same	, A. S. T. Terrolle and	TPH-6			Benzane			MTBE	
Site	Flow Weter	Period	Ficw	Flow	Cumulative	TPH-G	Period	Cumulative	Seszene	Period	Cumulative	MTBE	Period	Cumulative
Visit	Reading	Volume	Rate	Rate	Volume	Conc.	Removal	Removel	Conc.	Removal	Removal	Conc.	Removal	Removel
(mm/dd/yy)	(gal)	(mail)	(gpm)	(000)	(gel)	(ppb)	(pounds)	(pounds)	(opid)	(ocunds)	(pounds)	(dop)	(pounds)	(pounds)
12/17/04	1,559,338	33,588	1.57	2,399	1,558,891	NS	0,035	7.007	MS	0.000	0.070	NS	0.004	15,560
01/07/05	1,614,590	55,252	1.83	2,631	1,614,143	150	0.069	7.076	0.95	0.000	0.071	18	0.008	15,569
02/28/05	1,676,214	1,624	0.02	31	1,615,767	100	0.002	7.578	<0.50	0.000	2.071	<0.50	0.000	15.569
03/04/05	1,616,492	278	0.05	<del>69</del>	1,616,045	NS	0.000	7,079	NS	0:000	0,071	NS	0.000	15.569
03/08/05	1,623,641	7,149	1.24	1,787	1,523,194	<50	0.001	7.080	<0.50	0.000	0.074	<0.50	0.000	15,569
03/24/05	1,658,651	35,210	1.53	2,201	1,658,404	NS	0.007	7.087	NS	0.000	0.071	NS	0.020	15,569
03/28/05	1,676,677	11,226	1.95	2,806	1,669,630	NS	0.002	7.090	as	0.000	0.071	NS	0,000	15.569
04/98/05	1,673,205	3,128	0.20	284	1,672,758	<50	0.631	7.690	<0.50	0.063	0.071	<9.50	0.000	15,569 15,569
04/13/05	1,673,618	414	Ø:06	83	1,673,171	NS	0,000	7.091	NS	0.000	6,071	NS	0.000	15,569
04/15/05	1,595,550	12,932	4.49	6,466	1,686,103	NS	0.003	7,093	NS	3.000	0.071	2M	0.000	
04/21/05	1,719,745	33,195	3.84	5,533	1,719,298	NS	0.007	7.106	NS	0.750	0:07t	142	0.000	15.569
04/27/05	1,751,546	31,801	3,68	5,300	1,751,099	<50	0.007	7.107	<0.59	0.000	0.071	31.0	0.008	15.577
05/11/05	1,752,139	593	0.03	42	1,751,692	<50	0.000	7_107	<0.56	0.000	0.071	25.0	0.000	15.577
05/20/05	1,795,728	43,589	3.36	4,343	1,795,281	NS	0.009	7.116	NS	DAGG	9.071	NS	0.010	15.588
06/03/05	7,854,820	59,092	3.43	4,935	1,864,373	<50	0.014	7.130	<0.50	0.000	0.071	12.0	0.007	15,595
06/06/05	1,874,014	S, 194	2.13	2,065	1,873,567	NS	0.002	7.132	MS	42.80E	0.071	NS	0,001	15.596
06/17/05	1,874,045	30	0.00	3	1,873,598	NS	10,000	7:132	NS	0.000	6,071	NS	0.000	15,596
06/28/05	1,924,672	50,627	3.20	4,602	1,924,225	NA	0.011	7_143	· NA	2000	0 <i>01</i> 71	NA	0.005	15,601
07/01/05	1,939,227	14,555	3.37	4,852	1,938,780	<50	0.003	7.146	<0.50	0.000	0.071	4.3	0.001	15,602
07/15/05	1,594,064	54,637	2.72	3,917	1,993,617	NS	0.011	7.157	ns	0.080	0.071	NS	0.005	15.607
07/29/05	2,057,260	63,196	3.53	4,514	2,056,813	<50	8.013	7.171	<0.50	5.558	0.571	10	0. <b>005</b>	15.612
08/05/05	2,089,074	39,814	3.16	<b>4,545</b>	2,088,627	<50	0.007	7.177	<0.50	0.000	0.072	6.5	0.002	15.614
08/22/05	2,161,402	72,328	2.95	4,255	2,160,955	NS	0.015	7.192	*#5	0.000	0.072	MS	0.004	15.618
09/01/05	2,203,738	42,336	2.94	4,234	2,203,291	<50	D 009	7.261	<0.50	0.000	0.072	4.5	0.002	15.620
09/13/05	2,253,618	49,880	2.89	4,157	2,253,171	NS	0.010	7.212	NS	0.000	0.072	NS	0.602	15.622
10/07/05	2,324,658	71,050	2.05	2,960	2,324,221	<200	0.015	7_226	<2.0	10.16161	0.072	#.2	0.002	15,624
19/24/05	2,396,125	71,457	2.92	4,203	2,395,678	NS	0.015	7,241	NS	5.901	0.073	INS	0.003	15,527
11/04/05	2,440,441	44,346	2.80	4,029	2,439,994	<50	0.009	7.251	<0.50	B.000	0.973	2.9	0.001	15.628
11/20/05	2,505,320	64,879	2.82	4,055	2,504,873	NS	0.D14	7.264	NS	8.630	A.073	<b>24</b> S	0.002	15,629
12/13/05	2,594,353	89,035	2.69	3,871	2,593,906	230	C.585	7.350	2.1	D.BEE	0.075	3.0	0.002	15,532
01/06/05	2,693,473	99,119	2.87	4,130	2,693,026	<50	0.021	7.370	1.1	O.D67	49.076	3.7	0,003	15.635
01/19/06	2,751,512	58,940	3.10	4,465	2,751,065	NS	6.012	7.362	NS	DANG:	12.076	MS	0.002	15,535
02/02/06	2,812,400	60,687	3.02	4,349	2,811,953	<50 ⋅	0.013	7,395	1.0	0.001	0.077	5.6	0,003	15,539
92/16/06	2,871,764	59,365	2.94	4,240	2,871,317	NS	0.012	7.407	NS	0.001	0.077	NS.	0.003	15.642
03/03/06	2,935,534	63,770	2.35	4.25°	2,935,067	55	0.029	7.437	0.6	12.000	0.078	2.9	0.002	15,644
03/21/05	3,012,130	76.595	2.96	4,255	3,011,683	NS	0.035	7.472	<b>MS</b>	0.000	0.078	i re	0.002	15,645
04/10/06	3,065,491	53,857	1.85	2.658	3,065,044	<50	0.011	7.483	<0.50	0.000	0.078	6.90	0.033	15:649

Groundwater Extraction - Mass Removal Date Shell-branded Service Station, Incident #98995842 3790 Hopyard Road, Pleasanton, California

A STATE OF THE PARTY OF THE PAR		3000				<b>.</b>	TPH-G	1		Benzere			MTEE	
Site Visit (mm/oč∧v)	Flow Meter Reading (gal)	Period Volume (gal)	Flow Rate (gpm)	Fiow Rate (ppd)	Cumulative Volume (gal)	TPH-G Conc. (ppb)	Peñod Removal (pounds)	Cumulative Removal (pounds)	Benzene Conc. (ppb)	Peñod Remova (202005)	Comidative Rencival (pounds)	MATER COOK COOK	Perix! Remova! (pounds)	Curvialise Removal (pounds)
04/14/06	3.989.381	14,890	2.59	3,723	3,079,934	NS	0.003	7.485	NS	0.000	0.0078	MS	0.001	15,649
04/18/06	3.102.176	21,795	1.89	5.449	3,101,729	NS	0.005	7.491	WS	0.900	10.00FB	MS	0.009	15,651
05/04/06	3,142,659	40,483	1,41	2,530	3,142,212	53	810.9	7,508	1.7	O.Det	0.079	25	0.006	15.659
ecoating Per	iod		Total Gallon	Extracted:	130,529	Total Pounds	s Removed:	0.04	Triel/Pounds	Removed:	03701	Total Pound	ls Removed:	0.044
verall:			Total Gallon	: Franced	3 142 212	Total Pounds	s Removed:	7.51	Total Pounds	Removed:	0.079	Total Pound	is Removed:	15.77
YCLONG.		CAPEAR				Total Gallons	BOOK TO THE REAL PROPERTY.	123	Total Gallons	Florengens	£015	Total Gallon	s Removed:	254

### Abbreviations & Notes:

TPH-G = Total purgeable hydrocarbons as Gasoline MTBE = Methyl ten-butyl ether

Conc. = Concentration

pob = Parts per billion, equivalent to ug/L ugiL = Micrograms per liter

L = Liter

gal = Sallon

g = Gram NS = Not Sampled

NA = Sample results are not available at this time

TPH-G, benzene and MTBE analyzed by EPA Method 8260

Mass removed based on the formula: volume extracted (gal) x Concentration (mg/L) x (g/10°mg) x (pound/453.6g) x (3.785 Ligal)

When constituents are not detected, the concentration is assumed to be equal to half the detection limit in subsequent calculations.

Volume removal data based on the formula: mass (pounds) x (density)<sup>-1</sup> (co/g) x 453.6 (g/pound) x (L/1900 oc) \* (gal/3.765 L) Density inputs: TPH-G = 0.73 g/cc, benzene = 0.88 g/cc, MTBE = 0.74 g/cc

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995842, 3790 Hopyard Road, Pleasanton, California

				•		<u> </u>			1			1		
							<u> ГРРН</u>	, *		Benzese			MTBE	
				Cumulative				ТРРН			Benzene			MTBE
			Volume	Volume		TPPH	TPPH	Removed	Benzene	Benzene	Removed	MTBE	MTBE	Removed
	Date	Well	Pumped	Pumped	Date	Concentration	Removed	To Date	Concentration	Removed	To Date	Concentration	Removed	To Date
	Purged	ID	(gal)	(gal)	Sampled	(ppb)	(pounds)	(pounds)	(ppb)	(pounds)	(pounds)	(ppb)	(pounds)	(pounds)
													7	
j	05/17/01	S-2	20	20	03/07/01	<500	0.00004	0.00004	14.7	0.00000	0.00000	8,610	0.00144	0.00144
	05/22/01	S-2	100	120	03/07/01	<500	0.00021	0.00025	14.7	0.00001	0.00001	8,610	0.00718	0.00862
	05/29/01	S-2	75	195	03/07/01	<500	0.00016	0.00041	14.7	0.00001	0.00002	8,610	0.00539	0.01401
7	08/08/01	S-2	50	245	06/18/01	<2,000	0.00042	0.00082	<20	0.00000	0.00003	7,100	0.00296	0.01697
1	08/17/01	S-2	20	265	06/18/01	<2,000	0.00017	0.00099	<20	0.00000	0.00003	7,100	0.00118	0.01816
ſ	08/31/01	S-2	250	515	06/18/01	<2,000	0.00209	0.00308	<20	0.00002	0.00005	7,100	0.01481	0.03297
						_								
4	05/17/01	S-4	100	100	03/07/01	<500	0.00021	0.00021	5.44	0.00000	0.00000	14,500	0.01210	0.01210
?	05/22/01	<b>S-4</b>	150	250	03/07/01	<500	0.00031	0.00052	5.44	19990.0	0.00001	14,500	0.01815	0.03025
i	05/29/01	S-4	125	375	03/07/01	<500	0.00026	0.00078	5.44	0.00001	0.00002	14,500	0.01512	0.04537
1	08/08/01	S-4	50	425	06/18/01	<1,000	0.00021	0.00099	<10	0.00000	0.00002	3,500	0.00146	0.04683
d	08/17/01	S-4	40	465	06/18/01	<1,000	0.00017	0.00116	<10	0.00000	0.00002	3,500	0.00117	0.04800
3	08/31/01	S-4	500	965	06/18/01	<1,000	0.00209	0.00324	<10	0.00002	0.00004	3,500	0.01460	0.06260
. (	06/26/02	S-4	1,669	2,634	06/18/02	<100	0.00070	0.00394	1.1	0.00001	0.00005	530	0.00738	0.06998
1	07/10/02	S-4	100	2,734	06/18/02	<100	0.00004	0.00398	1.3	0.00000	0.00005	530	0.00044	0.07043
ſ	07/24/02	S-4	0	2,734	06/18/02	<100	0.00000	0.00398	1.1	0.00000	0.00005	530	0.00000	0.07043
	08/12/02	S-4	. 0	2,734	06/18/02	<100	0.00000	0.00398	1.1	0.00000	0.00005	530	0.00000	0.07043
4	09/09/02	S-4	100	2,834	06/18/02	<100	0.00004	0.00402	1.3	0.00000	0.00005	530	0.00044	0.07087
						. *								
1	05/17/01	T-2	2,300	2,300	NA	NA	0.00000	0.00000	NA	0.00000	0.00000	NA	0.00000	0.00000
4	05/22/01	T-2	0	2,300	NA	. NA	0.00000	0.00000	NA	0.00000	0.00000	NA	0.00000	0.00000
1	05/29/01	T-2	0	2,300	NA	NA	0.00000	0.00000	NA	0.00000	0.00000	NA	0.00000	0.00000
ŧ	08/08/01	T-2	1,300	3,600	09/17/01	<5,000	0.02712	0.02712	<25	0.00024	0.00014	29,000	0.31458	0.31458
1	08/17/01	- T-2	10	3,610	09/17/01	<5,000	0.00021	0.02733	<25	0.00000	0.00014	29,000	0.00242	0.31700
. 1	08/31/01	T-2	2,000	5,610	09/17/01	<5,000	0.04172	0.06905	<b>2</b> 5	0.00021	0.00035	29,000	0.48397	0.80097
1	04/11/02	· T-2	2,465	8,075	03/13/02	<5,000	0.65142	0.12047	<50	0.00051	0.00086	48,000	0.98730	1.78828
#	04/24/02	T-2	2,074	10,149	03/13/02	<5,000	0.04327	0.16374	<50	0.00043	0.00129	48,000	0.83070	2.61898
. 4	05/15/02	T-2	2,410	12,559	03/13/02	<5,000	0.05027	0.21401	<50	0.00050	0.00179	48,000	0.96528	3.58425
. 1	05/29/02	T-2	2,408	14,967	03/13/02	<5,000	0.05023	0.26424	<58	0.00050	0.00230	48,000	0.96447	4.54873

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995842, 3790 Hopyard Road, Pleasanton, California

06/12/02	T-2	2,338	17,305	03/13/02	<5,900	0.04877	0.31302	<50	0.00049	0.00278	48,000	0.93644	5.48516
06/26/02	T-2	1,000	18,305	06/18/02	<20,000	0.08344	0.39646	<200	0.00083	0.00362	100,000	0.83444	6.31960
07/10/02	T-2	1,025	19,330	06/18/02	<20,000	0.08553	0.48199	<260	0.00086	0.00447	100,006	0.85530	7.17489
07/24/02	T-2	0	19,330	06/18/02	<20,000	0.00000	0.48199	<200	0.00000	0.00447	100,000	0.00000	7.17489
08/12/02	T-2	0	19,330	06/18/02	<20,000	0.00000	0.48199	<200	0.00000	0.00447	109,000	0.00000	7.17489
09/09/02	T-2	2,336	21,666	06/18/02	<20,000	0.19492	0.67692	<200	0.00195	0.00642	166,666	1.94924	9.12414
09/30/02	T-2	2,295	23,961	09/27/02	240	0.00460	0.68151	0.55	0.00001	0.00643	39	0.00075	9.12488
10/07/02	T-2	2,312	26,273	09/27/02	240	0.00463	0.68614	0.55	0.00001	0.00645	39	0.00075	9.12564
10/21/02	T-2	2,355	28,628	09/27/02	240	0.00472	0.69086	0.55	0.00001	0.00646	39	0.00077	9.12640
11/05/02	T-2	2,532	31,160	09/27/02	240	0.00507	0.69593	0.55	0.00001	0.00647	39	0.00082	9.12723
11/19/02	T-2	2,439	33,599	09/27/02	240	0.00488	0.70081	0.55	0.00001	0.00648	39	0.00079	9.12802
12/06/02	T-2	2,362	35,961	09/27/02	240	0.00473	0.70554	0.55	0.00001	0.00649	39	0.00077	9.12879
12/28/02	T-2	2,005	37,966	12/27/02	2,100	0.03513	0.74068	7.8	0.00013	0.00662	798	0.01322	9.14201
01/17/03	T-2	1,770	39,736	12/27/02	2,100	0.03102	0.77169	7.8	0.00012	0.00674	790	0.01167	9.15367
01/29/03	T-2	2,096	41,832	12/27/02	2,100	0.03673	0.80842	7.8	0.00014	0.00687	790	0.01382	9.16749
02/12/03	T-2	2,353	44,185	12/27/02	2,100	0.04123	0.84965	7.8	0.00015	0.00702	790	0.01551	9.18300
02/26/03	T-2	2,012	46,197	12/27/02	2,100	0.03526	0.88491	7.8	0.00013	0.00716	790	0.01326	9.19626
03/12/03	1-2	200	46,397	12/27/02	2,100	0.00350	0.88841	7.8	0.00001	0.00717	790	0.00132	9.19758
7 - 1		,		-									
09/09/02	T-4*	0	0	09/27/02	240	0.00000	0.00000	0.55	0.00000	0.00000	39	0.00000	0.00000
09/09/02	T-4*	2,264	2,264	09/27/02	240	0.00453	0.00453	0.55	1000001	0.00001	39	0:00074	0.00074
10/21/02	T-4*	2,329	4,593	09/27/02	240	0.00466	0.00920	0.55	0.00001	0.00002	39	0.00076	0.00149
11/05/02	T-4*	2,657	7,250	09/27/02	240	0.00532	0.01452	0.55	0.00001	0.00003	39	0.00086	0.00236
11/05/02	T-4*	2,657	9,907	69/27/02	240	0.00532	0.01984	0.55	0.00001	0.00005	39	0.00086	0.00322
12/06/02	T-4*	1,657	11,564	09/27/02	240	0.00332	0.02316	0.55	0.00001	0.00005	39	0.00054	0.00376
12/28/02	T-4	2,175	13,739	12/27/02	550	0.00998	0.03314	5.3	0.00010	0.00015	140	0.00254	0.00630
01/17/03	T-4	1,664	15,403	12/27/02	550	0.00764	0.04078	5.3	0.00097	0.00022	140	0.00194	0.00825
01/29/03	T-4	1,679	17,082	12/27/02	550	0.00771	0.04848	5.3	0.09007	0.00030	140	0.00196	0.01021
02/12/03	T-4	2,276	19,358	12/27/02	550	0.01045	0.05893	5.3	0.00013	0.00040	140	0.00266	0.01287
02/26/03	T-4	1,969	21,327	12/27/02	550	0.00904	0.06796	5.3	0.00009	0.00048	140	0.00230	0.01517
03/12/03	T-4	308	21,635	12/27/02	550	0.00141	0.06938	5.3	0.00001	0.00050	140	0.00036	0.01553
·				_			_				<u> </u>		
v. H. atlans	Established		71.881		Lated Paumds	Removed:	30.0648.0			# <b>(14)</b> 777			9.3469
Total Callen-	Existenced.		7(.52)		Entre Laurids	Remired.				aranzez			

### Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995842, 3790 Hopyard Road, Pleasanton, California

### Abbreviations & Notes:

TPPH = Total purgeable hydrocarbons as gasoline

MtBE = Methyl tert-butyl ether

ppb = Parts per billion

gal = Gallon

\* = Concentrations for tank backfill well T-4 taken from nearest sampled tank backfill well, T-2.

Mass removed based on the formula: volume extracted (gal) x Concentration (gg/L) x (g/106 µg) x (pound/453.6g) x (3.785 L/gal)

Volume removal data based on the formula: density (in gms/cc) x 9.339 (ccxlbs/gmsxgals)

TPPH, benzene analyzed by EPA Method 8015/8020

MTBE analyzed by EPA Method 8260 in bold font, all other MTBE analyzed by EPA Method 8020

Concentrations based on most recent groundwater monitoring results

Groundwater extracted by vacuum trucks provided by ACTL Water disposed of at a Martinez Refinery.

# TABLE 3 MgSO4 FEASIBILITY PILOT STUDY MONITORING DATA

Shell-branded Service Station 3790 Hopyard Road Pleasanton, California

Date  01:35 AM 0 2:00 PM 10:25 AM 0 11:30 PM 0 11:20 AM 0 10:25 AM 10:30 AM 0 10:40 AM 0 11:00 AM 0 11:00 AM	Depth to Water (feet below TOC)  11.70 NR 13.98 NR 15.00 NR 14.95 14.95 11.73 NR 13.50	pH (pH units)  6.83* NA 7.12 6.7 7.52 NA 6.65 6.73	Suffate (mg/L)  13 14 12 11 7.6 7.2 4.6 2.1 130 110	Iron   (Fe+2)   (mg/L)   0.8   NA   0.4   0.0   2.6   NA   2.4   2.6   0.4   0.0		210 710 NA 490 750	B (ug/L) ND(<0.50) NA ND(<0.50) ND(<0.50) 1.2 NA 1.9 2.3	T (ug/L) ND(<1.0) ND(<1.0) ND(<1.0) NA ND(<1.0) NA ND(<1.0)	NA ND(<1.0) ND(<1.0) 1.3 NA 1.9	X (ug/L) NA ND(<1.0) ND(<1.0) ND(<1.0) NA ND(<1.0)	NA NA	MTBE (ug/L)  18  NA  15  14  19  NA  24  21	18A (vg/L) 530 NA 420 590 820 NA 720 940	NA ND(<2.0) ND(<2.0) ND(<2.0) NA ND(<2.0)	ND(<2.0) NA ND(<2.0) ND(<2.0) ND(<2.0) ND(<2.0) NA ND(<2.0) ND(<2.0) NA	NA ND(<2.0) ND(<2.0) NO(<2.0) NA ND(<2.0)
0.2:00 PM 0.2:00 PM 10:25 AM 0.12:30 PM 0.11:20 AM 0.10:25 AM 10:30 AM 0.10:40 AM	11.70 NR 13.98 NR 15.00 NR 14.95 14.95	6.83* NA 7.12 6.7 7.52 NA 6.65 6.73	13 14 12 11 7.6 7.2 4.6 2.1	0.8 NA 0.4 0.0 2.0 NA 2.4 2.6	(mg/L)   ND(<0.10)   NA   ND(<0.10)   0.48   ND(<0.10)   NA   ND(<0.10)   ND(<0.10)	180 NA 180 210 710 NA 490 750	ND(<0.50) NA ND(<0.50) ND(<0.50) 1.2 NA 1.9 2.3	ND(<1.0) NA ND(<1.0) ND(<1.0) ND(<1.0) NA ND(<1.0) ND(<1.0)	(ug/L)  ND(<1.0)  NA  ND(<1.0)  ND(<1.0)  1.3  NA  1.9	(Ug/L)  ND(<1.0)  NA  ND(<1.0)  ND(<1.0)  ND(<1.0)  NA  ND(<1.0)	(UGAL)  ND(<100)  NA  NA  NA  NA  ND(<100)  NA  ND(<100)	(ug/L)  18  NA  15  14  19  NA  24	(vg/L)  530 NA 420 590 820 NA 720	ND(<2.0)  NA  ND(<2.0)  ND(<2.0)  ND(<2.0)  ND(<2.0)  NA  ND(<2.0)	ND(<2.0) NA ND(<2.0) ND(<2.0) ND(<2.0) ND(<2.0) ND(<2.0) ND(<2.0)	ND(<2.0) NA ND(<2.0) ND(<2.0) ND(<2.0) ND(<2.0) NA ND(<2.0)
11:35 AM 0 2:00 PM 10:25 AM 0 12:30 PM 0 11:20 AM 0 10:25 AM 10:30 AM 0 10:40 AM 0 10:40 AM	11.70 NR 13.98 NR 15.00 NR 14.95 14.95	6.83* NA 7.12 6.7 7.52 NA 6.65 6.73 6.66*	13 14 12 11 7.6 7.2 4.6 2.1	0.8 NA 0.4 .0.0 2.0 NA 2.4 2.6	ND(<0.10) NA ND(<0.10) 0.48 ND(<0.10) NA ND(<0.10) NA ND(<0.10)	180 NA 180 210 710 NA 490 750	ND(<0.50) NA ND(<0.50) ND(<0.50) 1.2 NA 1.9 2.3	ND(<1.0) NA ND(<1.0) ND(<1.0) ND(<1.0) NA ND(<1.0) ND(<1.0)	ND(<1.0) NA ND(<1.0) ND(<1.0) 1.3 NA 1.9	ND(<1.0) NA ND(<1.0) ND(<1.0) ND(<1.0) NA ND(<1.0)	ND(<100) NA NA NA ND(<100) NA ND(<100)	18 NA 15 14 19 NA 24	530 NA 420 590 820 NA 720	ND(<2.0) NA ND(<2.0) ND(<2.0) ND(<2.0) NA ND(<2.0)	ND(<2.0) NA ND(<2.0) ND(<2.0) ND(<2.0) NA ND(<2.0)	ND(<2.0 NA ND(<2.0 ND(<2.0 ND(<2.0 NA ND(<2.0
11:35 AM 0 2:00 PM 10:25 AM 0 12:30 PM 0 11:20 AM 0 10:25 AM 10:30 AM 0 10:40 AM 0 10:40 AM	NR 13.98 NR 15.00 NR 14.95 14.95 14.95	NA 7.12 6.7 7.52 NA 6.65 6.73 6.66*	14 12 11 7.6 7.2 4.6 2.1	NA 0.4 .0.0 2.0 NA 2.4 2.6	NA ND(<0.10) 0.48 ND(<0.10) NA ND(<0.10) ND(<6.10)	NA 180 210 710 NA 490 750	NA ND(<0.50) ND(<0.50) 1.2 NA 1.9 2.3	NA ND(<1.0) ND(<1.0) ND(<1.0) NA ND(<1.0) ND(<1.0)	NA ND(<1.0) ND(<1.0) 1.3 NA 1.9	NA ND(<1.0) ND(<1.0) ND(<1.0) NA ND(<1.0)	NA NA NA ND(<100) NA ND(<100)	NA 15 14 19 NA 24	NA 420 590 820 NA 720	NA ND(<2.0) ND(<2.0) ND(<2.0) NA ND(<2.0)	NA ND(<2.0) ND(<2.0) ND(<2.0) NA ND(<2.0)	NA ND(<2.0 ND(<2.0 NO(<2.0 NA ND(<2.0
11:35 AM 0 2:00 PM 10:25 AM 0 12:30 PM 0 11:20 AM 0 10:25 AM 10:30 AM 0 10:40 AM 0 10:40 AM	NR 13.98 NR 15.00 NR 14.95 14.95 14.95	NA 7.12 6.7 7.52 NA 6.65 6.73 6.66*	14 12 11 7.6 7.2 4.6 2.1	NA 0.4 .0.0 2.0 NA 2.4 2.6	NA ND(<0.10) 0.48 ND(<0.10) NA ND(<0.10) ND(<6.10)	NA 180 210 710 NA 490 750	NA ND(<0.50) ND(<0.50) 1.2 NA 1.9 2.3	NA ND(<1.0) ND(<1.0) ND(<1.0) NA ND(<1.0) ND(<1.0)	NA ND(<1.0) ND(<1.0) 1.3 NA 1.9	NA ND(<1.0) ND(<1.0) ND(<1.0) NA ND(<1.0)	NA NA NA ND(<100) NA ND(<100)	NA 15 14 19 NA 24	NA 420 590 820 NA 720	NA ND(<2.0) ND(<2.0) ND(<2.0) NA ND(<2.0)	NA ND(<2.0) ND(<2.0) ND(<2.0) NA ND(<2.0)	NA ND(<2.0 ND(<2.0 NO(<2.0 NA ND(<2.0
0 2:00 PM 10:25 AM 3 12:30 PM 0 11:20 AM 0 10:25 AM 10:30 AM 0 10:40 AM 11:00 AM	NR 13.98 NR 15.00 NR 14.95 14.95 14.95	NA 7.12 6.7 7.52 NA 6.65 6.73 6.66*	14 12 11 7.6 7.2 4.6 2.1	NA 0.4 .0.0 2.0 NA 2.4 2.6	NA ND(<0.10) 0.48 ND(<0.10) NA ND(<0.10) ND(<6.10)	NA 180 210 710 NA 490 750	NA ND(<0.50) ND(<0.50) 1.2 NA 1.9 2.3	NA ND(<1.0) ND(<1.0) ND(<1.0) NA ND(<1.0) ND(<1.0)	NA ND(<1.0) ND(<1.0) 1.3 NA 1.9	NA ND(<1.0) ND(<1.0) ND(<1.0) NA ND(<1.0)	NA NA NA ND(<100) NA ND(<100)	NA 15 14 19 NA 24	NA 420 590 820 NA 720	NA ND(<2.0) ND(<2.0) ND(<2.0) NA ND(<2.0)	NA ND(<2.0) ND(<2.0) ND(<2.0) NA ND(<2.0)	NA ND(<2.0 ND(<2.0 NO(<2.0 NA ND(<2.0
10:25 AM 12:30 PM 11:20 AM 10:25 AM 10:30 AM 10:40 AM 11:00 AM	13.98 NR 15.00 NR 14.95 14.95	7.12 6.7 7.52 NA 6.65 6.73 6.66*	12 11 7.6 7.2 4.6 2.1	0.4 0.0 2.0 NA 2.4 2.6	ND(<0.10) 0.48 ND(<0.10) NA ND(<0.10) ND(<6.10)	180 210 710 NA 490 750	ND(<0.50) ND(<0.50) 1.2 NA 1.9 2.3	ND(<1.0) ND(<1.0) ND(<1.0) NA ND(<1.0) ND(<1.0)	ND(<1.0) ND(<1.0) 1.3 NA 1.9	ND(<1.0) ND(<1.0) ND(<1.0) NA ND(<1.0)	NA NA ND(<100) NA ND(<100)	15 14 19 NA 24	420 590 820 NA 720	ND(<2.0) ND(<2.0) ND(<2.0) NA ND(<2.0)	ND(<2.0) ND(<2.0) ND(<2.0) NA ND(<2.0)	ND(<2.0 ND(<2.0 ND(<2.0 NA ND(<2.0
0 12:30 PM 0 11:20 AM 0 10:25 AM 10:30 AM 0 10:40 AM 11:00 AM	NR 15.00 NR 14.95 14.95	6.7 7.52 NA 6.65 6.73 6.66*	11 7.6 7.2 4.6 2.1	.0.0 2.0 NA 2.4 2.6	0.48 ND(<0.10) NA ND(<0.10) ND(<0.10)	210 710 NA 490 750	ND(<0.50) 1.2 NA 1.9 2.3	ND(<1.0) ND(<1.0) NA ND(<1.0) ND(<1.0)	ND(<1.0) 1.3 NA 1.9	ND(<1.0) ND(<1.0) NA ND(<1.0)	NA ND(<100) NA ND(<100)	14 19 NA 24	590 820 NA 720	ND(<2.0) ND(<2.0) NA ND(<2.0)	ND(<2.0) ND(<2.0) NA ND(<2.0)	ND(<2.0) ND(<2.0) NA ND(<2.0)
11:20 AM 10:25 AM 10:30 AM 10:40 AM 11:00 AM	15.00 NR 14.95 14.95 14.73 NR	7.52 NA 6.65 6.73 6.66*	7.6 7.2 4.6 2.1	2.0 NA 2.4 2.5	ND(<0.10) NA ND(<0.10) ND(<0.10)	710 NA 490 750	1.2 NA 1.9 2.3	ND(<1.0) NA ND(<1.0) ND(<1.0)	1.3 NA 1.9	ND(<1.0) NA ND(<1.0)	ND(<100) NA ND(<100)	19 NA 24	820 NA 720	MD(<2.0) NA ND(<2.0)	ND(<2.0) NA ND(<2.0)	ND(<2.0) NA ND(<2.0)
10:25 AM 16:30 AM 10:40 AM 11:00 AM	NR 14.95 14.95 11.73 NR	NA 6.65 6.73 6.66*	7.2 4.6 2.1	NA 2.4 2.6	NA ND(<0.10) ND(<0.10) ND(<0.10)	NA 490 750	NA 1.9 2.3	NA ND(<1.0) ND(<1.0)	NA 1.9	NA ND(<1.0)	NA ND(<100)	NA 24	NA 720	NA ND(<2.0)	NA ND(<2.0)	NA ND(<2.0)
10:30 AM 0 10:40 AM 11:00 AM 0 11:00 AM	14.95 14.95 11.73 NR	6.65 6.73 6.66*	4.6 2.1 130	2.4 2.6	ND(<0.10) ND(<0.10) ND(<0.10)	490 750	1.9 2.3	ND(<1.0) ND(<1.0)	1.9	ND(<1.0)	ND(<100)	24	720	ND(<2.0)	ND(<2.0)	ND(<2.0)
11:00 AM 11:00 AM	14.95 11.73 NR	6.66* 6.66	2.1	2.6 0.4	ND(<0.10)	750	2.3	ND(<1.0)	<del></del>			· · · · · · · · · · · · · · · · · · ·				
11:00 AM 3 11:00 AM	11.73 NR	6.66* 6.6	130	0.4	ND(<0.10)	L			2.0	ND(<1.0)	ND(<100)	21	940	ND(<2.0)	ND(<2.0)	ND(<2.0)
11:00 AM	NR	6.6				MINITERN	NEDION SON									
11:00 AM	NR	6.6				AMILEON	אנחובח בחו									
		~~~~~~	110	nn		THUI - 20)	(מפימרותונו	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<100)	MD(<1.0)	ND(<10)	ND(<2.0)	ND(<2.0)	ND(<2.0)
10:20 AM	13.50	7 40		ful. U	0.10	ND(<50)	NO(<0.50)	ND(<1.0)	ND(<1.0)	ND(<1.0)	NA.	ND(<1.0)	NO(<10)	ND(<2.0)	ND(<2.0)	ND(<2.0)
		7.42	190	4.6	NO(<0.10)	MD(<50)	ND(<0.50)	ND(<1.0)	MD(<1.0)	ND(<1.0)	210	ND(<1.0)	MD(<10)	ND(<2.0)	ND(<2.0)	ND(<2.0)
12:45 PM	13.65	6.39	150	0.8	ND(<0.10)	ND(<50)	ND(<0.50)	ND(<1.0)	(0.1°)/QM	NO(<1.0)	NO(<100)	ND(<1.0)	MD(<10)	NID(<2.0)	ND(<2.0)	ND(<2.0)
10:10 AM	11.95	6.79*	1.1	3.6	0.19	3,800	24	1.7	2.6	3.9	ND(<100)	24	1,300	ND(<2.0)	ND(<2.0)	ND(<2.0)
0 1:40 PM	NR	NA	ND(<1.0)	NA	NA	NA	NA	NA	MA	NA	MA	NA.	MA	NA	NA	NEA
9:45 AM	13.48	6.98	NO(<1.0)	3.2	ND(<0.10)	2,100	21	1.5	1.4	3.6	NA	24	1,300	ND(<2.0)	ND(<2.0)	ND(<2.0)
12:00 PM	NR	6.7	ND(<1.0)	2.6	2.00	2,100	19	1.3	1.6	2.6	NA	78	1,700	MD(<2.0)	ND(<2.0)	ND(<2.0)
12:10 PM	15.71	7.48	2.0	4.6	2.30	2,700	21	1.6	2.6	2.9	NO(<100)	20	1,800	ND(<2.0)	ND(<2.0)	ND(<2.0)
10:50 AM	NR	NA	ND(<5.0)**	NA	NA	NA	NA	NA	NA .	NA	N/A	na i	NA	NA	MA	MA
11:00 AM	14.66	6.57	MD(<1.0)	6.2	0.81	2,000	24	ND(<2.0)	4.5	3.7	ND(<200)	19	1,100	ND(<4.0)	ND(<4.0)	ND(<4.0)
11:45 AM	15.39	6.58	MD(<1.0)	2.8	3.29	1,800.	21	ND(<2.0)	3.2	3.6	ND(<200)	19	1,600	MD(<4.0)	ND(<4.0)	ND(<4.0)
**************************************			1	•												
8:50 AM	13.61	6.68*	20	0.2	2.84	ND(<50)	ND(<0.50)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<100)	4.9	110	ND(<2.0)	ND(<2.0)	ND(<2.0)
8:30 AM	13.70	6.54	55	0.0	19	53	ND(<0.50)	NO(<1.0)	ND(<1.0)	ND(<1.0)	NA	5.6	210	ND(<2.0)	ND(<2.0)	ND(<2.0)
9:30 AM	NR	6.7	10	4.0	0.29	170	ND(<0.50)	ND(<1.0)	NO(<1.0)	ND(<1.0)	N/A	8.2	1,600	ND(<2.0)	ND(<2.0)	ND(-2.0)
9:30 AM		<del></del>	24		4.81	430					ND (<500)	12	3,700	ND(<10)	ND(<10)	ND(<10)
	15.49		8.5	3.4	3.41	1,100						15	4,100	ND(<10)	ND(<10)	ND(<10)
9:15 AM I					(	870						75	4,400			
3	12:10 PM 10:50 AM 1:00 AM 11:45 AM 3:50 AM 3:30 AM	12:10 PM 15:71 10:50 AM NR 1:00 AM 14:66 11:45 AM 15:39 3:50 AM 13:61 3:30 AM 13:70 9:30 AM NR 9:30 AM 15:55 9:15 AM 15:49	12:10 PM 15:71 7.48 10:50 AM NR NA 1:00 AM 14.66 6:57 11:45 AM 15:39 6:58 3:50 AM 13:61 6:68* 3:30 AM 13:70 6:54 9:30 AM NR 6:7 9:30 AM 15:55 7.47 2:15 AM 15:49 6:55	12:10 PM 15:71 7.48 2.0 10:50 AM NR NA ND(<5.0)** 1:00 AM 14.66 6.57 ND(<1.0) 11:45 AM 15:39 6.58 ND(<1.0) 3:50 AM 13:61 6.68* 20 3:30 AM 13:70 6.54 55 9:30 AM NR 6.7 10 9:30 AM 15:55 7.47 2.4 2:15 AM 15:49 6.55 8.5	12:10 PM 15:71 7.48 2.0 4.6 10:50 AM NR NA ND(<5.0)™ NA 1:00 AM 14.66 6.57 ND(<1.0) 6.2 11:45 AM 15:39 6.58 ND(<1.0) 2.8 3:50 AM 13:61 6.68° 20 0.2 3:30 AM 13:70 6.54 55 0.0 9:30 AM NR 6.7 10 4.0 9:30 AM 15:55 7.47 2.4 4.6 2:15 AM 15:49 6.55 8.5 3.4	12:10 PM	12:10 PM	12:10 PM	12:10 PM	12:10 PM	12:10 PM	12:10 PM	12:10 PM	12:10 PM	12:10 PM	12:10 PM

# TABLE 3 MgSO4 FEASIBILITY PILOT STUDY MONITORING DATA

Shell-branded Service Station 3790 Hopyard Road Pleasanton, California

		Depth to			Ferrous	Ferric		T .				7		7	1		<b>(                                    </b>
		Water (feet		-	Iron	tron		.:	BTEX Cor	ziwwwiz							
Well ID	Date	below	ρН	Sulfate	(Fe+2)	(Fe+3)	TPH-g	В	T	E	X	Ethanol	MTBE	TBA	DIPE	ETBE	TAME
		TOC	(athunits)	(mg/L)	(mg/L)	(mg/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
<del>Language d</del>		3					<u> </u>	<u> </u>	1 3 2 7 3			<u> </u>			<u> </u>		8.3.3.7
Applicat	ion Points								*								
S-2	5/7/10 9:50 AM a	13.23	6.61*	ND(<1.0)	5.0	1.15	13.000	62	3.4	67	1 17	MDI<100)	56	920	ND/<2 ()	ND(<2.0)	ND(<2.0)
S-2	5/7/10 6:20 PM	NR	NA	59.000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA NA
S-2	5/28/10 1:35 PM	NR	NA	1,900	NA	NA.	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S-2	6/4/10 9:10 AM	13.95	6.65	1,700	7.2	10	8,300	84	4.0	110	20	NA	81	910	ND(<2.0)	ND(<2.0)	ND(<2.0)
S-2	6/29/10 11:30 AM	NR I	. 6.7	350	5.6	5.70	12,000	74	ND(<5.0)	88	12	NA	51	1,300	ND(<10)	ND(<10)	ND(<10)
S-2	8/10/10 11:50 AM	15.35	7.62	280	4.6	4.61	9,800	60	28	85	12	ND(<200)	48	996	ND(<4.0)	ND(<4.0)	ND(<4.0)
S-2	8/11/10 4:15 PM b	15.30	NA	62,000	NA	NA.	NA	NA.	NA	NA	NA	NA	NIA	NA	NA.	NA	NA
S-2	8/26/10 10:40 AM	NR	NA	5,100	NA	NA	NA	NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA
S-2	9/8/10 11:30 AM	14.74	6.38	2,600	5.8	24.3	10,000	80	ND(<5.0)	120	18	ND(<500)	56	1,200	ND(<10)	ND(<10)	ND(<10)
S-2	10/6/10 11:25 AM	15.46	6.55	1,200	4	11.1	8,700	66	ND(<5.0)	100	15	ND(<500)	39	1,100	ND(<10)	ND(<16)	ND(<10)
S-4	5/7/10 12:00 PM a	12.86	6.71*	ND(<1.0)	2.4	3.29	5,200	4.6	MD(<2.0)	35	3.2	ND(<200)	17	960	MD(<4.6)	ND(<4.0)	ND(<4.0)
S-4	5/7/10 8:35 PM	NR I	NA.	49,000	NA	NA	NA	NA	NA	na	AM	NA NA	MA	ava	NA	MA	NA NA
S-4	5/28/10 2:05 PM	MR	NA	16,000	NA	NA	NA	NA	NA	NA	NA.	NA.	NA	NA ·	NA	NA	₩A
S-4	6/4/10 8:50 AM	13.96	6.71	14,000	6.1	10.7	2,100	2.5	ND(<1.0)	35	1.5	NA I	8.4	410	ND(<2.0)	MD(<2.0)	ND(<2.0)
S-4	6/29/10 1:00 PM	NR	6.7	8,200	4.0	11:9	1,400	2.4	ND(<1.0)	13	ND(<1.0)	NA	7.8	390	ND(<2.0)	ND(<2.0)	ND(<2.0)
S-4	8/10/10 11:00 AM	14.95	7.51	4,400	4.8	7.4	1,700	2.9	ND(<1.0)	55	WD(<1.0)	ND(<100)	10	550	ND(<2.0)	MD(<2.0)	ND(<2.0)
S-4	8/11/10 4:30 PM b	15.02	NA NA	13,000	NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA.
S-4	8/26/10 10:20 AM	NR	NA	7,700	NA	NA [	NA	NA	NA	NA	NA	MA	NA	NA	NA :	NA	NA
S-4	9/8/10 10:00 AM	14.80	6.3	3,600	5.2	6.6	2,100	5.4	1.2	57	4.5	MD(<100)	25	430	ND(<2.0)	ND(<2.0)	ND(<2.0)
\$-4	10/6/10 10:20 AM	14.65	6.54	3,100 ]	3.2	29.1	1,700	5.8	ND(<1.0)	74	1.8	ND(<100)	27	1,400	ND(<2.0)	ND(<2.0)	ND(<2.0)

### Abbreviations:

TPH-g = Total petroleum hydrocarbons as gasoline by EPA Method 8260B

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

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

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

ETBE = Ethyl tert-butyl ether, analyzed by EPA Method 8260

TAME = Tertiary-arryl methyl ether, analyzed by EPA Method 8260

## MgSO4 FEASIBILITY PILOT STUDY MONITORING DATA

Shell-branded Service Station 3790 Hopyard Road Pleasanton, California

		Depth to			Ferrous	Ferric											
Well ID	Date	Water (feet			Iron	iron		1	STEX Cor	npounds			Į.				
AACH OD	Date .	below	pН	Sulfate	(Fe+2)	(Fe+3)	TPH-g	B	T	E	Ж	Ethanol	MIEE	TBA	DIFE	ETBE	TAME
		TOC)	(pH units)	(mg/L)	(mg/L)	(mg/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(wg/L)	(wall)	(wgil)	(ogil)	(wgal)	(wg/L)	(ug/L)

### Abbreviations (cost.):

TBA = Tertiary-butyl alcohol

TOC = Top of Casing

mg/L = Milligrams per liter

ug/L = Micrograms per liter

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

NA = Not Analyzed

NR= Not Reported

### Notes:

\*Laboratory pH derived by SM 4500 H+ B.

"The reporting limit is elevated resulting from matrix interference.

pH measured in the field unless otherwise specified

Ferrous iron measured using a field kit.

Sulfate analyzed by EPA Method 300.0

Ferric iron calculated from ferrous iron and total iron concentrations analyzed by EPA Method 6010B.

Ethanol analyzed by EPA Method 8260B.

- a. Initial MgSO4 application May 7, 2010 of approximately 60 to 85 gallens of EOS WgSO4 material to each application well.
- b. Second MgSO4 application August 11, 2010 of approximately 55 gallons of EOS MgSO4 material to each application well.

APPENDIX D

WELL SURVEY TABLE

Table 1. Well Survey Results - Shell-branded Service Station, 3790 Hopyard Road, Pleasanton, California. Incident # 98995842

					Depth	Screened	Sealed
Number	Well ID	Installation Date	Location	Use	(ft bgs)	Interval (ft bgs)	Interval (ft bgs)
	·						
			On NW corner of Hopyard				
	9		Rd. and Pleasanton Canal	* *		96-104, 108-122, 140-	
1	3S/1E-7R2	Sept. 1943	intersection	UNK	205.0	148, 167-184	UNK
			On SW corner of Hopyard	:			
			Rd. and Pleasanton Canal	·		95-103, 106-120, 139-	
2	3S/1E-71	Aug. 10, 1949	intersection	UNK	205.0	147, 166-183	UNK
							-
		:				Formerly	
			0.4 mi from Hopyard Rd.	DEST		143-158, 192-208, 240	
3	3S/1E-7R1	March 10, 1962	along Arroyo Mocho	IRR	324.0	309	DEST
4	3S/1E-7Q1	unknown	, and the	ABD	172.0		. ~
						215-235, 275-305, 355	
5	3S/1E-18A6	February 1943	Parkside and Hopyard Rd.	MUN		375, 400-490	
					·	Formerly	
		•		DEST		101-114, 154-166, 186	
6	3S/1E-18A1	October 1943	Parkside and Hopyard Rd.	MUN		199	DEST

# Notes and Abbreviations:

Number = Column number refers to map location on Figure 2.

Well ID = California State well identification number as recorded by the Department of Water Resources in Sacramento, California.

UNK = Unknown.

IRR = Irrigation

DEST= Destroyed

ABD = Abandoned

MUN = Municipal

# APPENDIX E

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LOW-THREAT CLOSURE CHECKLIST

### APPENDIX E: COMPLIANCE WITH STATE WATER BOARD POLICIES AND STATE LAW

The site comply with the State Water Resources Control Board policies and state law. Section 25296.10 of the Health and Safety Code requires that sites be cleaned up to protect human health, safety, and the environment. Based on available information, any residual petroleum constituents at the site do not pose significant risk to human health, safety, or the environment.

The site complies with the requirements of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.

	✓ Yes	☐ No		
Is corrective action consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations?				
The corrective action provisions contained in Chapter 6.7 of the Health and Safety Code and the				
implementing regulations govern the entire corrective action process at leaking UST site. If it is determined, at any stage in the corrective action process, that UST case closure is appropriate,				
further compliance with corrective action requirements is not necessary. Corrective action at this site				
has been consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations				
and, since this case meets applicable case-closure requirements, further corrective action is not necessary, unless the activity is necessary for case closure.				
Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this site?	Yes	☑ No		
	Yes	☐ No		
If so, was the corrective action performed consistent with any order?  There				
was an order issued for this site. The corrective action performed in the past is consistent with				
that order. Since this case meets applicable case-closure requirements, further corrective action under the order that is not necessary, unless the activity is necessary for case closure.				
General Criteria				
General criteria that must be satisfied by all candidate sites:	! :			
Is the unauthorized release located within the service area of a public water system?	✓ Yes	□ No		
Does the unauthorized release consist only of petroleum?	✓ Yes	☐ No		
Has the unauthorized ("primary") release from the UST system been stopped?	✓ Yes	. 🗌 No		
Has free product been removed to the maximum extent practicable?	✓ Yes	□ No		
Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?	✓ Yes	□ No		
Has secondary source been removed to the extent practicable?	✓ Yes	□ No		
Has the soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code section 25296.15?	✓ Yes	☐ No		
Nuisance as defined by Water Code section 13050 does not exist at the site?	✓ Yes	□ No		
Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?	Yes	✓ No		
Media-Specific Criteria				
Candidate sites must satisfy all three of these media-specific criteria:				
1. Groundwater				
To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites:				
Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?	✓ Yes	□ No	□ NA	e .

✓ Yes	□ No	□ NA	
Yes	□ No	✓ NA	
✓ Yes	□ No		
Yes	□ No	☑ <sub>.</sub> NA	
☐ Yes	No	✓ NA	
Yes	□ No	✓ NA	
		,	
✓ Yes	□ No	□ NA	
Yes	□ No	✓ NA	
☐ Yes	□ No	☑ NA	
	Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes   Yes	Yes No  Yes No  Yes No  Yes No  Yes No  Yes No  Yes No	Yes No ANA  Yes No ANA  Yes No ANA  Yes No ANA  Yes No ANA  Yes No ANA  Yes No ANA