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To:		ounty Health Care Se	- K		11/21/2005
			Environmental Prote		
		or Bay Parkway, Suite		Job No:	SJ37-90H-1.2005
		California 94502-657	7		
Attn:	Jerry Wick	nam			
We a	re sending the	following items:			
Date	A SEPTEMBER OF	Copies	Description		
21	-Nov-05	1	Well Installation	Report	
			Shell-branded Se	ervice Station	
			3790 Hopyard R	oad	
			Pleasanton, CA		
These	e are transmitte	d:			
☐ F	or your	For action	☐ For review	For your	□ As
1	nformation	specified below	and comment	use	requested
Remar					
172 THEFT					
Copies t	o: Denis Brov	vn, Shell Oil Produc	ts US		
		am, RWQCB			
		efani, Livermore-Ple	easanton Fire Dept	By:	Lena Martinez
	Matthew K	aten, Zone 7 Water	Agency	Title:	Project Manager Assistant/LFR
			esentative - 3730 Hop	pyard Rd, Pleasant	on
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ENVIRONMENTAL HEALITI SERVICE



November 21, 2005

Re:

Well Installation Report Shell-branded Service Station 3790 Hopyard Road Pleasanton, California

Dear Mr. Jerry Wickham:

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

Sincerely, Shell Oil Products US

Denis L. Brown Project Manager

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ENVIRONMENTAL HEALTH SERVICES



Solving environment-related business problems worldwide

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November 21, 2005 Project SJ3790-1.2005

Mr. Jerry Wickham Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Re: Well Installation Report Shell-branded Service Station 3790 Hopyard Road Pleasanton, California

Dear Mr. Wickham,

Delta Environmental Consultants, Inc. (Delta), on behalf of Shell Oil Products US (Shell), has prepared this report describing the drilling of a deep cone penetration testing (CPT) boring and the installation of new on- and off-site groundwater monitoring wells at the site referenced above (Figure 1). The report also presents the analytical results of groundwater samples from the new wells, a discussion of horizontal and vertical groundwater flow, extent of fuel oxygenates dissolved in groundwater, and recommendations for further site activity. The report was requested in a letter from the Alameda County Health Care Services Agency (ACHCSA) to Shell dated July 28, 2005.

#### BACKGROUND

On February 15 through 18, 2005, Delta performed groundwater sampling at nine locations (CPT-3 through CPT-11, Figure 2) using CPT equipment. The goal of the CPT investigation was to define the lateral and vertical extent of methyl tert-butyl ether (MTBE) and tert butanol (TBA) previously detected in shallow groundwater beneath the site and downgradient areas.

The CPT boreholes encountered clay to a depth of approximately 50 feet below grade (bg). Interlayered silt, sandy silt, sand, and gravelly sand predominate from approximately 50 feet bg to the total depth explored of 80 feet bg. Delta prepared a series of geologic cross sections based on CPT data and boring logs from previous soil borings and borings for groundwater monitoring wells. The cross sections were presented in Delta's CPT Soil and Groundwater Investigation (1) and March 24, 2005. Updated

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cross sections are provided as Figures 3 through 7. Logs for all CPT borings (previous and current) are provided in Attachment A.

Groundwater analytical data from the CPT investigation confirmed that petroleum hydrocarbons, MTBE, and TBA are primarily confined to the groundwater contained in clay deposits in the 15-to 20-foot depth interval (see Table 1). The clay, extending from near the ground surface to a depth of approximately 50 feet bg, appears to act to retard the downward migration of contaminants. MTBE and TBA were detected in only three of sixteen groundwater samples collected from sand deposits below a depth of 50 feet. The three samples were collected from borings CPT-4 and CPT-5 in the area of highest TBA concentrations in shallow groundwater (Figure 2). MTBE was detected in the 55- to 60-foot groundwater sample from boring CPT-4 at 0.54 micrograms per liter (ug/l). MTBE was not detected in the 70- to 74-foot depth sample from boring CPT-4. MTBE and TBA were both detected in the 59- to 62-foot and 76- to 80-foot groundwater samples from boring CPT-5. MTBE and TBA concentrations increased with depth. MTBE and TBA concentrations in the 76- to 80-foot sample were 19 ug/l and 39 ug/l, respectively.

Delta, in its March 24, 2005 report, recommended the following:

- Drilling of an additional CPT boring (CPT-5A, Figure 2) near previous boring CPT-5.
   The purpose of the boring is to define the vertical extent of MTBE and TBA detected in boring CPT-5 at a depth of 76 to 80 feet bg. The CPT boring will be extended to a depth of approximately 120 feet bg or refusal. Depth discrete groundwater samples will be collected from sand layers from 80 to 120 feet bg. The water samples will be analyzed for MTBE and TBA by EPA Method 8260B.
- Install a well cluster in the area of boring CPT-5. Existing Well S-5 will be used to
  monitor shallow groundwater. A series of wells will be installed at depths ranging from
  75 to 120 feet bg based on the results of the CPT boring described above. Wells will be
  constructed with a maximum sand pack length of 5 feet in accordance with ACHCSA
  requirements.
- Install a well cluster in the southeast corner of the 3760 Hopyard Road (7-Eleven) property. A series of wells will be installed at depths ranging from 35 to 120 feet bg based on the results of the CPT boring described above. Wells will be constructed with maximum sand pack lengths of 5 feet.
- Install three wells adjacent to Arroyo Mocha Canal. Wells are proposed to be approximately 25 feet deep and monitor first encountered groundwater.

The ACHCSA, in its letter to Shell dated April 26, 2005, concurred with Delta's recommendations. The ACHCSA requested a work plan detailing the recommended work and responses to a series of technical comments. Shell submitted a work plan prepared by Delta dated June 24, 2005. The work plan was approved by ACHCSA in a letter to Shell dated July 28, 2005.

#### **GROUNDWATER INVESTIGATION**

The following sections describe tasks performed during completion of an additional groundwater investigation at the site. Investigation results are also provided and discussed.

#### PREFIELD ACTIVITIES

Prior to drilling, Delta marked the locations of all CPT boring and well locations and contacted Underground Services Alert 48 hours prior to drilling. In addition, a private utility locator was retained to perform a geophysical survey of the proposed boring locations. Each location was then air-knifed or hand augered to a depth of approximately seven feet to minimize the possibility of encountering underground utilities during drilling activities. Delta obtained all required drilling permits and an encroachment permit for work adjacent to the Arroyo Mocho Canal from the Zone 7 Flood Control and Water Conservation District (Zone 7) and the City of Pleasanton. Drilling and encroachment permits are provided as Attachment B. Mr. Jerry Wickham of ACHCSA was notified 72 hours prior to any drilling activities.

#### **CPT SOIL PROFILING**

The CPT investigation consisted of two separate boreholes at the location of CPT-5A on Figure 2— one for stratigraphic profiling and a second for collecting discrete soil and groundwater samples. Soil classifications were based on the cone penetration resistance, sleeve friction, and friction ratio. A soil classification graph was generated during the advancement of the CPT-5A borehole. A soil profile graph is provided in Attachment A. Grout was then pumped into the initial borehole behind the cone by using a grout collar (retraction grouting).

On February 15, 2005, Boring CPT-5 was drilled to a depth of 80 feet bg in the area of highest MTBE concentrations in first groundwater (20 feet bg). Groundwater samples were collected from sand deposits at depths of approximately 62 and 80 feet bg. On September 9, 2005, an adjacent boring, CPT-5A was drilled to a depth of 100 feet bg at which boring refusal was encountered. As in all other site CPT borings, boring CPT-5A encountered clay from the ground surface to a depth of approximately 50 feet bg. (see geologic cross section A-A, Figure 3). Sand deposits were encountered at depths of 56 to 66 feet bg and 76 to 78 feet bg separated by silt (see log in Attachment A). Silt was found to underlie the deepest of the sand layers to a depth of at least 100 feet bg.

#### CPT GROUNDWATER SAMPLING AND ANALYSIS

A second CPT borehole was drilled for collection of depth discrete groundwater samples. To collect discrete groundwater samples, a sealed PVC hydropunch screen was pushed to the desired sampling depth. The push rod was then retracted exposing the hydropunch screen. Groundwater hydrostatically entered the sampler from the saturated soil. A small diameter stainless steel bailer was lowered through the hollow push rods, into the screen section for sample collection. A Delta geologist determined the appropriate depths from which to collect discrete groundwater samples by reviewing the CPT-5A soil profile graph. Water samples were collected at the depth of the two sand layers identified on the profile – 61 to 64 feet bg and 74 to 78 feet bg. An attempt was made to collect a water sample from near the bottom of the boring – 97 to 100 feet bg. No water entered the sampler during a ½-hour waiting period.

The groundwater samples were transferred to 40-milliliter glass VOA bottles. The bottles were placed on ice for transportation to the laboratory. Groundwater samples were analyzed for total

petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylene (BTEX compounds), and fuel oxygenates MTBE and TBA by EPA Method 8260B.

The water sample from the upper sand layer contained benzene (0.84 ug/l), ethylbenzene (1.4 ug/l), and xylene (2.8 ug/l). MTBE was detected at 1.4 ug/l. TBA was not detected in the sample. TPH-G, BTEX compounds, MTBE, and TBA were all below the laboratory reporting limit for the sample collected from the lower sand (Table 1). Laboratory reports and chain of custody documentation are provided in Attachment C.

#### INSTALLATION OF GROUNDWATER MONITORING WELL CLUSTERS

Delta installed groundwater monitoring well clusters at the location of existing Wells S-5 and S-9. In accordance with ACHCSA guidelines, sand pack intervals did not exceed 5 feet in length. Each well was completed in a separate borehole.

The wells were installed using hollow-stem auger drilling equipment provided by Gregg Drilling (License C57- 485165). Soil samples were collected every 5 feet from the ground surface to the near the top of the anticipated well screen depth interval. Continuous soil sampling was performed in the bottom portion of each boring (see boring logs, Attachment A). The borings at the S-5 location encountered clay from the ground surface to a depth of approximately 53.5 feet bg. Clayey sand, sand, and gravel were encountered from 53.5 feet to 77.5 feet bg, the maximum depth of the borings. The borings at the S-9 location encountered clay from the ground surface to a depth of approximately 55.5 feet bg. Clay, clayey sand, sand, and clayey gravel were encountered from 55.5 feet to 79 feet bg, the maximum depth of the borings (see geologic sections A-A and E-E, Figures 3 and 7).

A PID was used to measure soil hydrocarbon concentrations at 5-foot intervals. The PID soil samples were placed in a sealed plastic bag. After approximately 5-minutes, the PID probe was inserted into the plastic bag and soil gas allowed to pass through the PID until readings stabilized. The resulting concentration readings were recorded on the boring logs. The highest PID readings were measured in borings S-5B and S-5C at the top of the saturated zone at a depth of 19 to 20 feet bg.

The S-5 well cluster consists of three wells – S-5, S-5B, and S-5C. Well construction data is summarized below and on Table 2.

Well	Date Installed	Total Depth (feet)	Well Diameter (inches)	Screened and Sand Packed Interval (feet)	Soil Type Adjacent to Screened Interval
S-5	1/26/88	36	3	5 to 36	Clay
S-5B	10/28/05	62	4	57 to 62	Sand and gravel
S-5C	10/31/05	77	4	72 to 77	Clayey sand and sand

The S-9 well cluster consists of three wells - S-9, S-9B, and S-9C. Well construction data is summarized below and on Table 2.

Well	Date	Total	Well	Screened and	Soil Type Adjacent to	
	Installed	Depth	Diameter	Sand Packed	Screened Interval	
		(feet)	(inches)	Interval	·	
				(feet)	·	
S-9	2/24/89	34.5	3	9.5 to 34.5	Clay	
S-9B	10/26/05	61	4	56 to 61	Clayey sand and sand	
S-9C	10/31/05	79	4	74 to 79	Clayey sand and sand	

All new wells were constructed of 4-inch diameter PVC casing and well screens. The location and elevations of all new wells were established by Mid Coast Engineering (MCE), a California licensed surveyor, on November 16, 2005. The MCE report is provided as Attachment D. On November 8, 2005, Blaine Tech Services (Blaine) developed wells by cycles of surging followed by pumping until clear water was obtained. Wells in the S-5 and S-9 well clusters were sampled by Blaine on November 11, 2005. Groundwater samples were sent to Severn Trent Laboratories, Inc. (STL) of Pleasanton, California and analyzed for TPH-G, BTEX compounds, MTBE, and TBA by EPA Method 8260B. Well development and sampling field pages, laboratory analysis and chain of custody documentation are presented in Attachment C.

#### VERTICAL GROUNDWATER GRADIENT IN WELL CLUSTERS

The S-5 and S-9 well clusters provide the opportunity to determine the vertical component of groundwater gradient beneath the site area. The table below summarizes data regarding vertical gradients.

Well	Date	Depth to Water (feet)	Groundwater Elevation (MSL)	Head Difference (feet)	Length Between Mid-Point of Saturated Screened Interval (feet)	Vertical Component Gradient ( - = downward and + = upward)
S-5	11/11/05	22.17	307.19	-	-	-
S-5B	11/11/05	43.79	288.46	-18.73	31.5	-0.56
S-5C	11/11/05	43.65	288.68	0.22	15.0	0.02
S-9	11/11/05	20.41	307.44	-	-	<u>-</u>
S-9B	11/11/05	45.25	285.22	-22.22	31.5	-0.71
S-9C	11/11/05	42.87	287.90	2.68	18.0	0.15

Negative gradients show movement in the downward direction and positive gradients show movement in the upward direction. It appears that the vertical gradient between groundwater in the upper clay zone and the upper portion of the sandy zone is in the downward direction, whereas the vertical gradient between the upper portion of the sandy zone and the lowest monitored zone is upwards. This upward gradient in the lowest zone should help to retard contaminants from reaching lower zones.

#### WELL CLUSTER GROUNDWATER ANALYTICAL DATA

The S-5 and S-9 well clusters were sampled on November 11, 2005. Groundwater analytical data is summarized on Table 1. Based on initial sampling of these well clusters, it appears that MTBE is present in all zones sampled. MTBE concentrations appear to decline with depth with concentrations ranging from 8.3 ug/l to 220 ug/l in the upper wells screened in the clay zone at a range from 5 feet to 36 feet; 2.5 ug/l to 23 ug/l in the middle wells screened at a range of 57 to 62 feet bg; and 0.87 ug/l to 10 ug/l in the lowest wells screened at a range from 73 to 79 feet bg. TBA was detected at 15 ug/l and 25 ug/l in wells S-5B and S-9, respectively. TBA was not detected above the laboratory detection limit of 5.0 ug/l in any other wells in the S-5 and S-9 well clusters during the initial sampling.

#### **DOWNGRADIENT GROUNDWATER INVESTIGATION**

The ACHCSA, in its letter dated April 26, 2005, requested further delineation of the lateral extent of groundwater contamination in the shallow clay zone (15- to 20-foot depth interval). Delta proposed to install three additional monitoring wells, S-13 through S-15, at the locations adjacent to Arroyo Mocha Canal shown on Figure 2. A Delta geologist met in the field with Mr. Larry Akinsiku and Mr. Joe Seto of Zone 7 to review drilling locations adjacent to Arroyo Mocha Canal. The Zone 7 representatives observed what they referred to as unstable soil conditions in the area of proposed Well S-13 and indicate that they did not want a drill rig along that portion of the Canal. In addition, a major sanitary sewer and overhead power lines limited the ability to drill in the same area. Delta and Zone 7 agreed that proposed Well S-13 would not be installed. The locations of proposed Wells S-14 and S-15 were approved by Zone 7.

On October 28, 2005, Delta installed Wells S-14 and S-15 using hollow-stem auger drilling equipment provided by Gregg Drilling (License C57- 485165). Borings encountered clay to their total depth of 25 feet bg. Groundwater was encountered during drilling of Well S-14 at 23 feet bg. The boring for Well S-15 was dry. Boring logs are provided in Attachment A. Soil samples were collected every 5 feet from the ground surface to the total depth of the boring for the well installations. A PID was used to measure soil hydrocarbon concentrations at 5-foot intervals. Wells were constructed of 4-inch diameter PVC casing and well screens. Wells S-14 and S-15 were constructed with sand pack and well screens from 15 to 25 feet bg as approved by ACHCSA. The longer well screens were approved in order collect sufficient water for sampling from clay deposits.

Wells were developed by Blaine on November 8, 2005. Well S-15 was found to be dry. Well S-14 was developed by cycles of surging followed by pumping until clear water was obtained. Well S-14 was sampled by Blaine on November 11, 2005. The Well S-14 groundwater sample was analyzed by STL for TPH-G, BTEX compounds, MTBE and TBA by EPA Method 8260B.

Well development and sampling field pages, laboratory analysis and chain of custody documentation is presented in Attachment C.

The location and top of casing elevation of the well was established by MCE, a California licensed surveyor, on November 16, 2005. The MCE report is provided as Attachment D.

#### WELL S-14 GROUNDWATER ANALYTICAL DATA

The initial sampling of Well S-14 located across the Arroyo Mocho Canal and down gradient of the S-9 well cluster indicated no impacts in groundwater. All analytes tested for were below the laboratory reporting limits. Groundwater analytical data is summarized on Table 1.

#### CONCLUSIONS

Delta provides the following conclusions based on a comprehensive review of site soil and groundwater data;

- The site and surrounding area is underlain to a depth of approximately 50 feet by clay;
- groundwater is contained in the clay deposits below a depth of approximately 20 feet bg;
- the shallow groundwater moves to the south-southeast through thin silt and fine-grained sand seams and possibly fractures within the clay;
- soils between approximately 50 and 100 feet bg consist of saturated interlayered clay, silt, sand, and gravel;
- the groundwater flow in sand and gravel in the 50- to 100-foot depth interval is assumed to be the southeast based on regional data (Zone 7, Fall Groundwater Contour Map 2001 Water Year, February 5, 2002)
- groundwater contained in the upper clay layer has an apparent downward vertical gradient whereas the groundwater in the lowest monitored sandy layer at approximately 78 feet has an apparent upward vertical gradient;
- lateral extent of the MTBE and TBA plume in upper clay zone appears to have been defined. lateral extent of MTBE in the shallow clay zone (upper 50 feet) appears to extend east across Hopyard Road and south to the northern bank of the Arroyo Mocho Canal. TBA in the shallow clay zone extends east to the middle of Hopyard Road and to the south of the station property to the north bank of the Arroyo Mocho Canal.
- recent groundwater samples from well clusters S-5 and S-9 indicate that MTBE is
  contained in all zones monitored with declining concentrations at depth. TBA was
  detected on-site only in Well S-5B (15 ug/l). TBA was detected off-site only in
  groundwater samples collected from the upper clay layer in well S-9 (25 ug/l). Off-site
  samples collected from the lower two zones indicate no TBA impacts.

 MTBE and TBA are primarily confined to the groundwater contained in clay deposits in the upper interval

#### RECOMMENDATIONS

Delta recommends the following;

- Add Wells S-5B, S-5C, S-9B, and S-9C to the quarterly monitoring program. Well
  clusters data will be reviewed after two additional quarters of monitoring to assess
  concentrations in lower zones. Further recommendations will be considered after
  additional data is collected.
- Sample Well S-14 and S-15 (if water available) on a semi-annual basis.
- Continue groundwater extraction and treatment (GWE&T) for shallow zone in compliance with ACHESA letter dated July 28, 2005;
- Monitor natural attenuation of fuel oxygenates in deep sand and gravel zones

If you have any questions, please call me at (408) 826-1880.

Sincerely,

Delta Environmental Management, Inc.

Rebecca Wolff

Senior Staff Geologist

R. Lee Dooley Senior Hydrogeologist

CHG 183

Attachments:

Table 1 – Summary of Groundwater Analytical Data

Table 2 – Well Construction Detail

Figure 1 – Site Location and Well Survey Map

Figure 2 – Boring and Well Location Map

Figure 3 - Geologic Cross Section A-A

Figure 4 – Geologic Cross Section B-B

Figure 5 – Geologic Cross Section C-C

Figure 6 - Geologic Cross Section D-D

Figure 7 – Geologic Cross Section E-E

Attachment A – CPT and Well Boring Logs

Attachment B - Drilling and Encroachment Permits

Attachment C - Laboratory Analytical Reports and Chain of Custody

Documentation

Attachment D - Well Location and Elevation Report

cc. Denis Brown, Shell Oil Products US

Betty Graham, RWQCB - San Francisco Bay Region

Danielle Stefani, Livermore-Pleasanton Fire Department

Matthew Katen, Zone 7 Water Agency

T.C. Sun, Property owner representative – 3730 Hopyard Rd, Pleasanton

## Table 1 Summary of Groundwater Analytical Data

Shell-branded Service Station 3790 Hopyard Road Pleasanton, California

Sample	Date	Depth	TPH-G	Benzene		Ethyl-benzene	Xylene	MTBE	TBA
Designation	Sampled	(feet bg)	(ug/l)	(ug/l)	(ug/l)	(u <b>g</b> /l)	(ug/l)	(ug/l)	(u <b>g/l</b> )
CPT-3	2/15/2005	33-38	DRY			.:			
CPT-3	2/15/2005	43-48	DRY			:			
CPT-4	2/16/2005	33-38	DRY						
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	70-74	<50	<0.50	<0.50	1.1	1.3	<0.50	<5.0
ADT 6	0(40,000	50.00							
CPT-5	2/18/2005	33-38	DRY		-0.50	4 **	4.0		
CPT-5	2/18/2005	59-62	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
CDT 6	2/40/2005	22.00	DDV			<del></del>			
CPT-6 CPT-6	2/18/2005	33-38 59-63	DRY	-0.50	-0.50	40.50	-4.0	<0.50	<5.0
	2/18/2005		<50	<0.50	<0.50	<0.50	<1.0		<5.0 <5.0
CPT-6	2/18/2005	75-78	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<b>\</b> 0.0
CPT-7	2/16/2005	20.25	<50	-0.50	<0.50	<0.50	<1.0	160	<5.0
CPT-7	2/16/2005	20-35 60-63	<50 <50	<0.50 <0.50	<0.50	<0.50	<1.0	< 0.50	<5.0 <5.0
CPT-7	2/16/2005	75-80	<50 <50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0 <5.0
CF1-7	2/16/2003	/5-60	<u> </u>	\0.50	~0.50	<0.50	\1.0		<b>\</b> 3.0
	2/16/2005	33-38	DRY						
CPT-8	2/16/2005	60-63	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-8	2/16/2005	75-80	<50 <50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0 <5.0
Ci 1-0	2/10/2003	73-00		\0.50		V0.50	1.0	·V.50	٧٥.٥
CPT-9	2/18/2005	33-38	DRY						
CPT-9	2/18/2005	58-62	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-9	2/18/2005	74-77	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
<u> </u>	2 10/2000	1-1 / 1		10.00		10.00			0.0
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	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-10	2/17/2005	76-80	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
					<u></u>				
CPT-11	2/17/2005	33-38	DRY						
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
	··· i								
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
CPT-5A@100'	9/9/2005	97-100	DRY			1			
S-5	11/11/2005	36	2,300	54	0.69	15	19	8.3	<5.0
S-5B	11/11/2005	62	<50	<0.5	<0.5	<0.5	<1.0	2.5	15
S-5C	11/11/2005	77	55	<0.5	0.67	<0.5	<1.0	0.87	<5.0
S-9	11/11/2005	34.5	<100	<1.0	<1.0	<1.0	<2.0	220	25
S-9B	11/11/2005	61	<50	<0.5	2.0	<0.5	<1.0	23	<5.0
S-9C	11/11/2005	79	<50	<0.5	<1.0	<0.5	<1.0	10	<5.0
S-14	11/11/2005	25	<50	<0.5	<1.0	<0.5	<1.0	<0.5	<5.0
S-15	11/11/2005	25	DRY						
				<u>:</u>					

#### Notes:

DRY = insufficient water in borehole for sample.

ug/l = micrograms per liter

TPH-G = Total petroleum hydrocarbons as gasoline

MTBE = Methyl tert-butyl ether

TBA = tert-Butyl alchohol

# Table 2 Well Construction Details

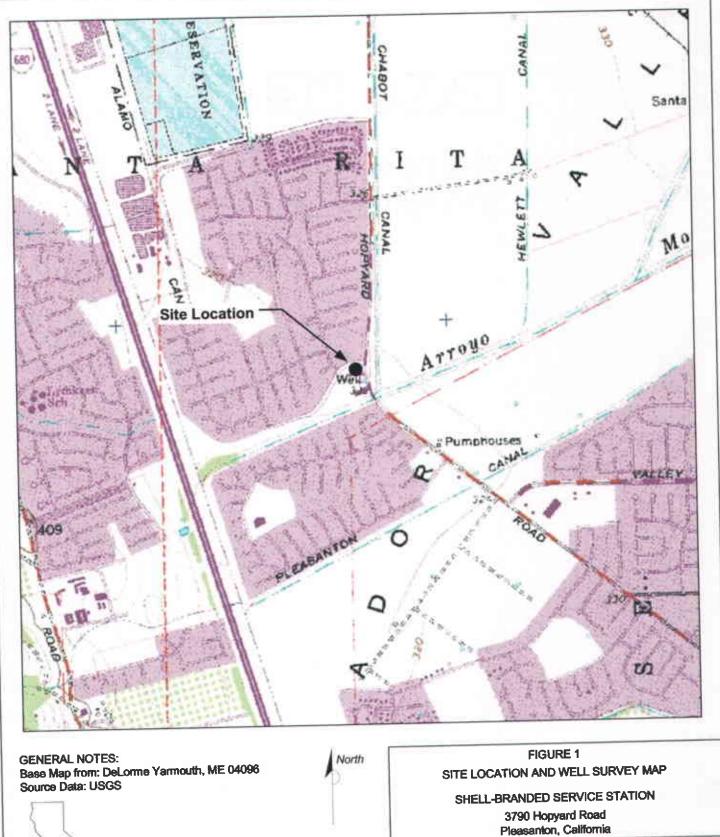
Shell-branded Service Station 3790 Hopyard Road Pleasanton, California

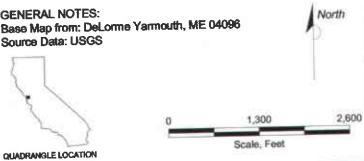
Well Designation	Date Installed	Total Depth	Screened Interval	TOC Elevation
-		(feet)	(feet)	(feet - MSL)
S-1 (destroyed)	10/28/87			and the second second second
S-2	10/28/87	35	5 to 35	328.77
S-3	01/26/88	36	5 to 36	327.40
S-4	01/26/88	36	5 to 36	328.11
S-5	01/26/88	36	5 to 36	329.36
S-5B	10/28/05	62	58 to 62	332.25
S-5C	10/31/05	77	73 to 77	332.33
S-6	10/04/88	- 35	10 to 35	327.26
S-7	10/04/88	35	10 to 35	328.41
S-8	02/24/89	34.5	9.5 to 34.5	326.14
S-9	02/24/89	34.5	9.5 to 34.5	327.85
S-9B	10/26/05	61	57 to 61	330.47
S-9C	10/25/05	79	75 to 79	330.77
S-10	8/9/1989	35.5	unknown	325.87
S-11	08/26/02	25	10 to 25	327.48
S-12	09/19/02	25	10 to 25	322.76
S-14	10/28/05	25	15 to 25	324.90
S-15	10/28/05	25	15 to 25	332.05
SR-1	08/09/89	35	10 to 35	328.33
SR-2	09/20/89	35	10 to 35	327.31
SR-3	09/19/89	35	10 to 35	327.50

Notes

TOC = top of casing MSL = mean sea level

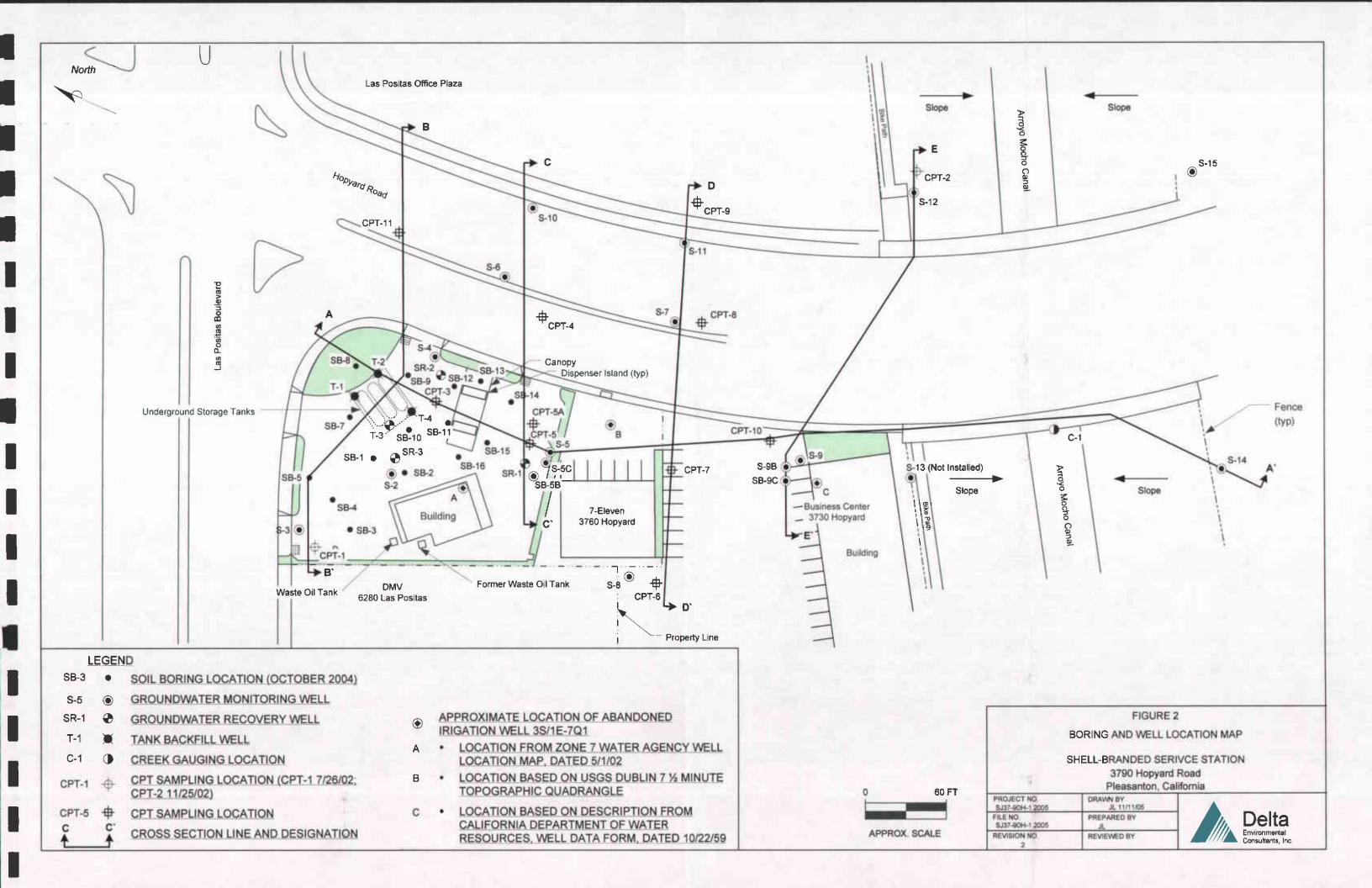
	Α	В	С	D	Е	F	G	Н	l	J	K
1	SHELL-BR	SHELL-BRANDED SERVICE STATION									
2	3790 Hopy	ard Road									
3	Pleasantor	ı, Califori	nia								
4											
5	DELTA Pro	ject No.	SJ37-908-1	•							
6											
7	Project: 05	224									
8	User na					' AN	111/	17/2005			
9			m US State		983	Z	one	California	Zone 3 0403		
10	Project	Datum	NAD 1983 (C	onus)					·		
11			NAVD88								
12		ate Units									
13			US survey fee								
14		n Units	US survey fe	et			<u>.</u> .				
15					-						
16		S-5B	11/16/2005						Mid Coast Engineers		top of casing
17	1	S-5C	11/16/2005						Mid Coast Engineers		top of casing
18		S-9B	11/16/2005						Mid Coast Engineers		top of casing
19		S-9C	11/16/2005						Mid Coast Engineers		top of casing
20		S-14	11/16/2005		CGPS				Mid Coast Engineers		top of casing
21		S-15	11/16/2005	332.05	CGPS	88	0.5		Mid Coast Engineers		top of casing

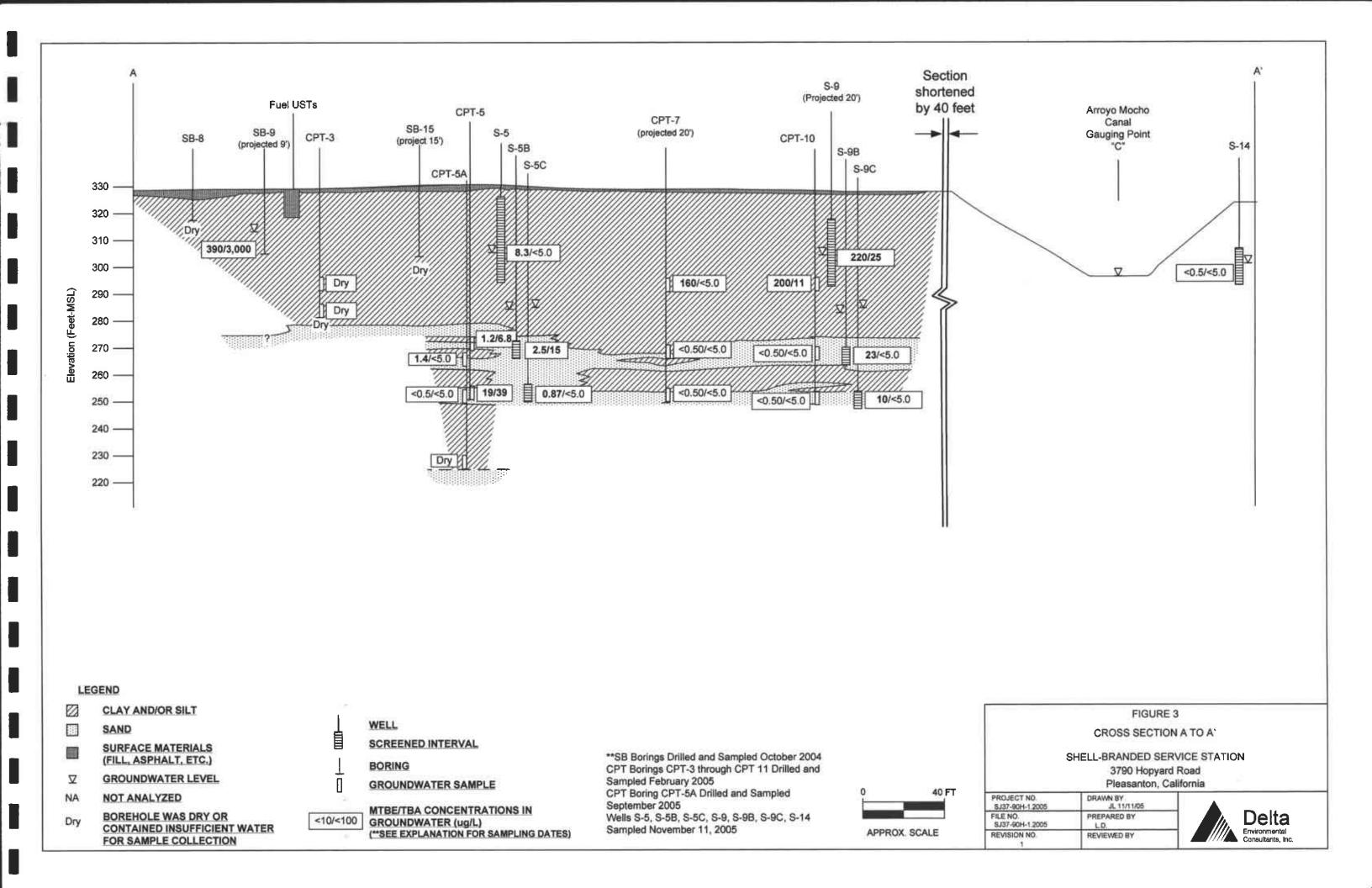


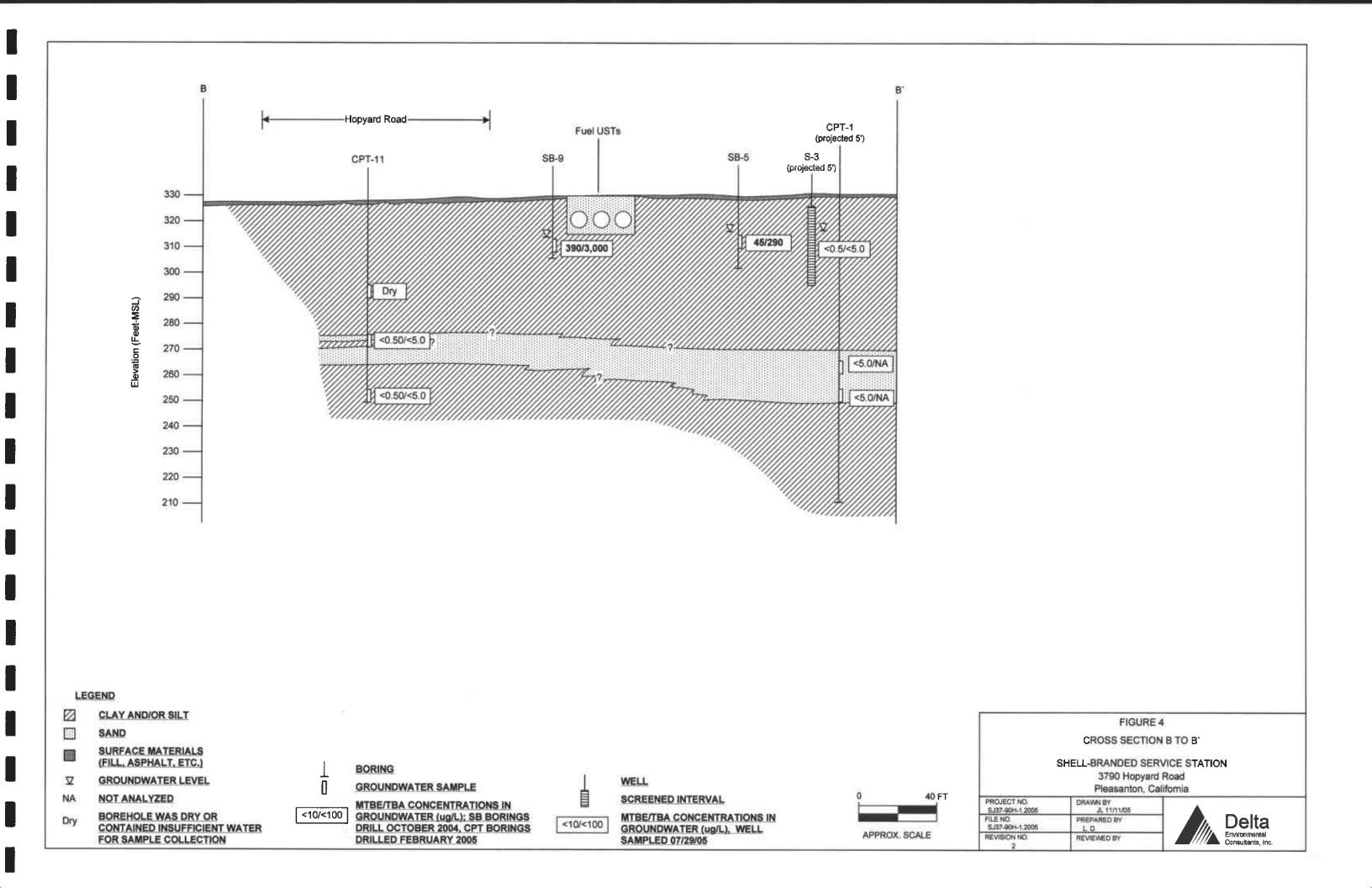


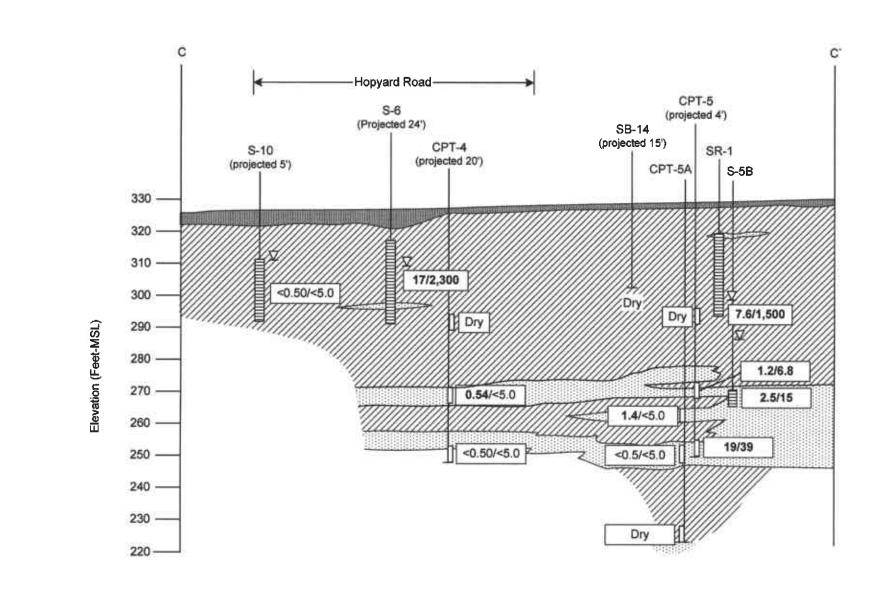
PROJECT NO. 8J07-90H-1-2005	DRAWN BY VF 12/04/03
FILE NO. SJ37-90H-1 2005	PREPARED BY
REVISION NO.	REVIEWED BY













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

(WITH THE EXCEPTION OF CPT-5A (9/05))

<10/<100

WELL SCREENED INTERVAL

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



APPROX. SCALE

### FIGURE 5

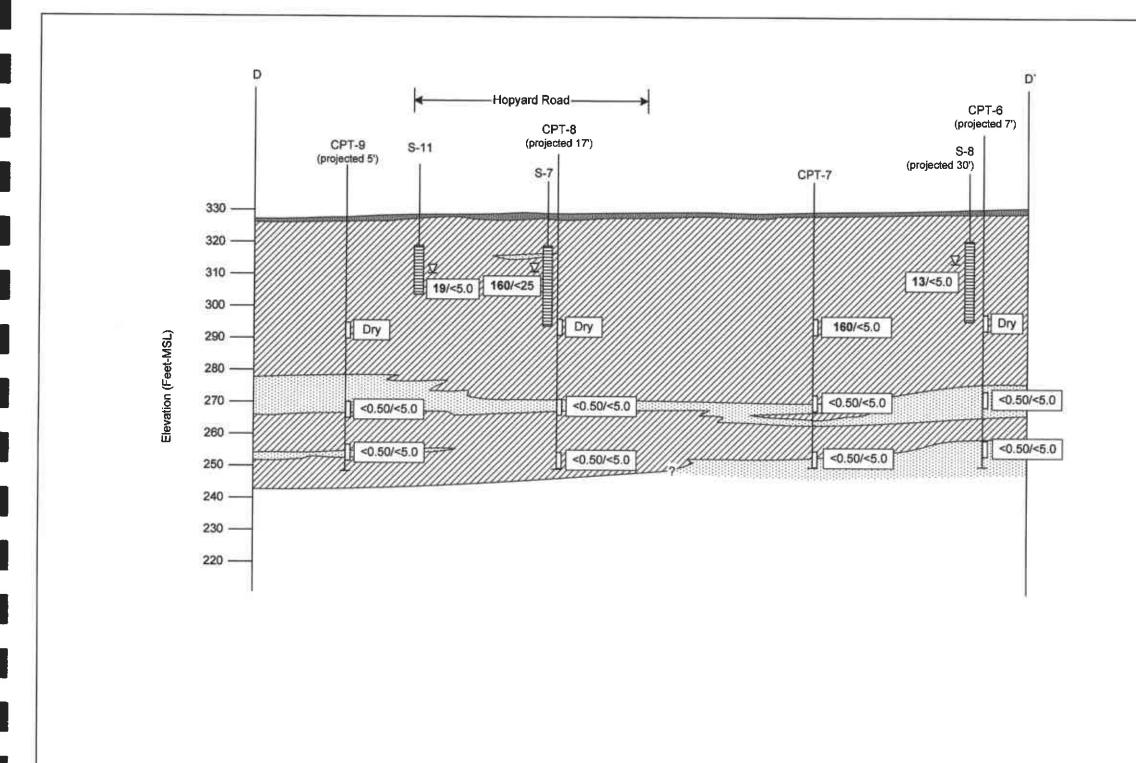
CROSS SECTION C TO C'

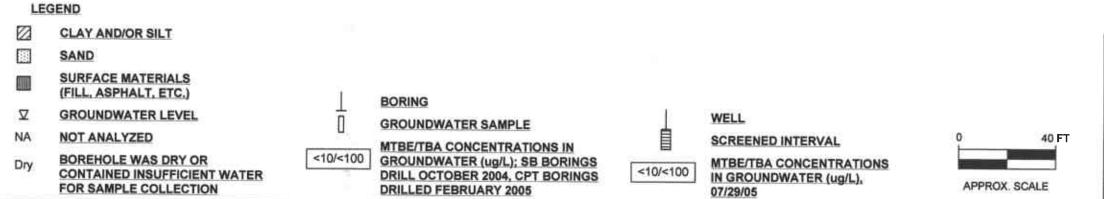
SHELL-BRANDED SERVICE STATION 3790 Hopyard Road

3790 Hopyard Road Pleasanton, California

PROJECT NO. 8J37-90H-1.2005	DRAWN BY JL 11/11/05
FILE NO. SJ37-90H-1-2005	PREPARED BY
REVISION NO	REVIEWED BY







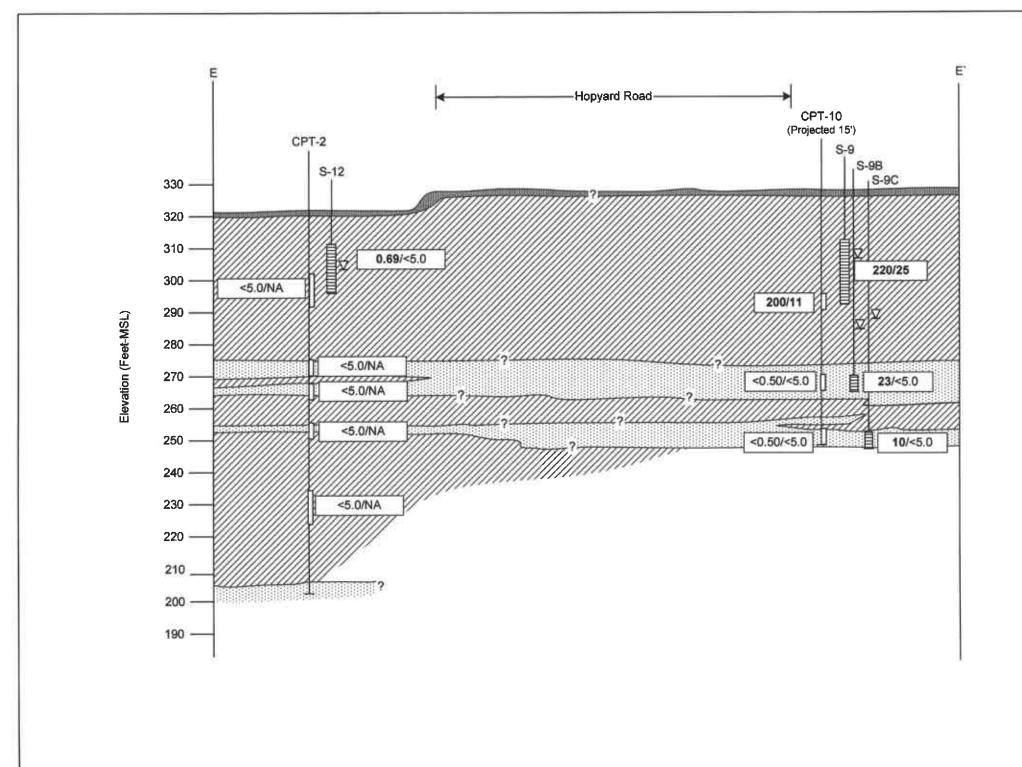
## FIGURE 6

CROSS SECTION D TO D'

SHELL-BRANDED SERVICE STATION 3790 Hopyard Road Pleasanton, California

PROJECT NO. SJ37-90H-1,2005	DRAWN BY JL 11/11/05
FILE NO. 8,137-90H-1:2006	PREPARED BY
REVISION NO.	REVIEWED BY





#### LEGEND

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** 



<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



APPROX. SCALE

### FIGURE 7 CROSS SECTION E TO E'

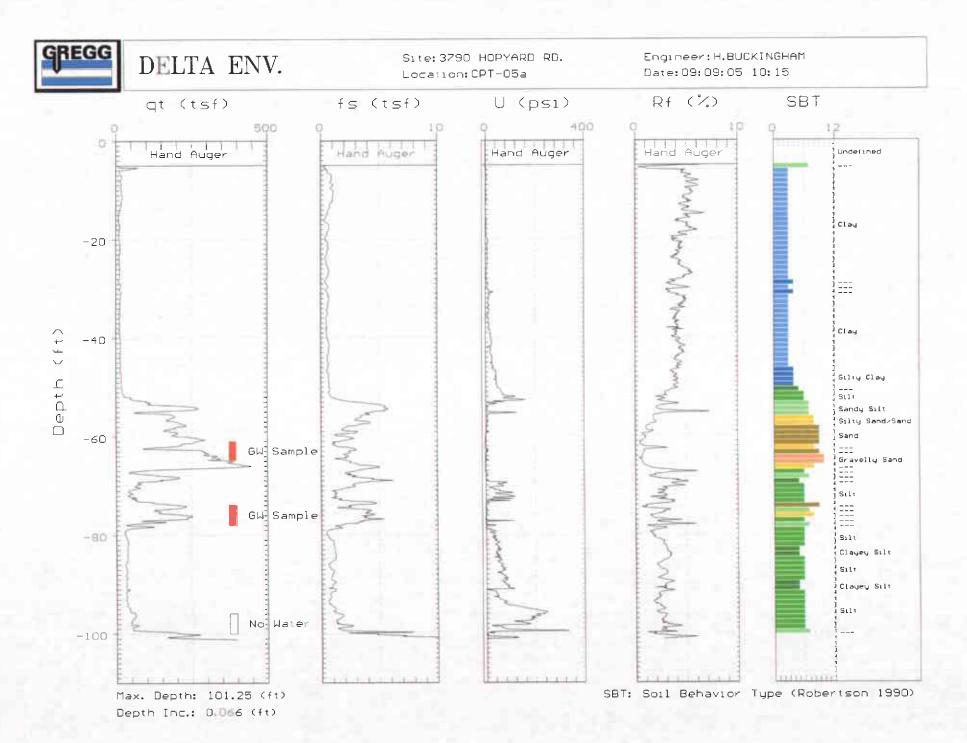
SHELL-BRANDED SERVICE STATION 3790 Hopyard Road Pleasanton, California

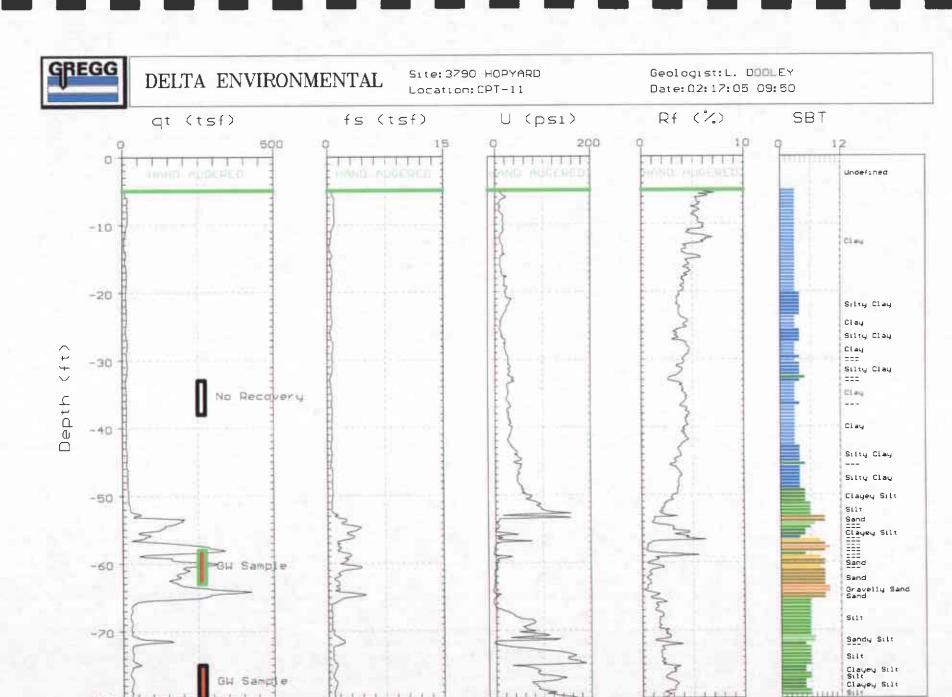
PROJECT NO. 8J37-90H-1.2005	DRAWN BY JL 11/11/05
FILE NO. \$337-90H-1.2005	PREPARED BY
REVISIÓN NO.	REVIEWED BY



## Attachment A

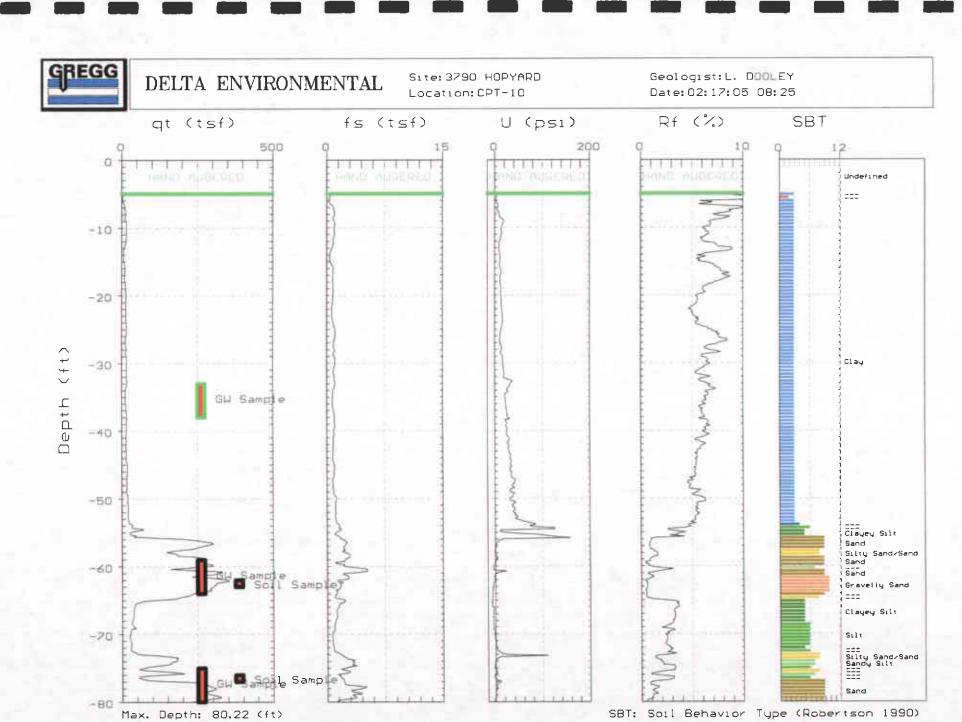
CPT AND WELL BORING LOGS



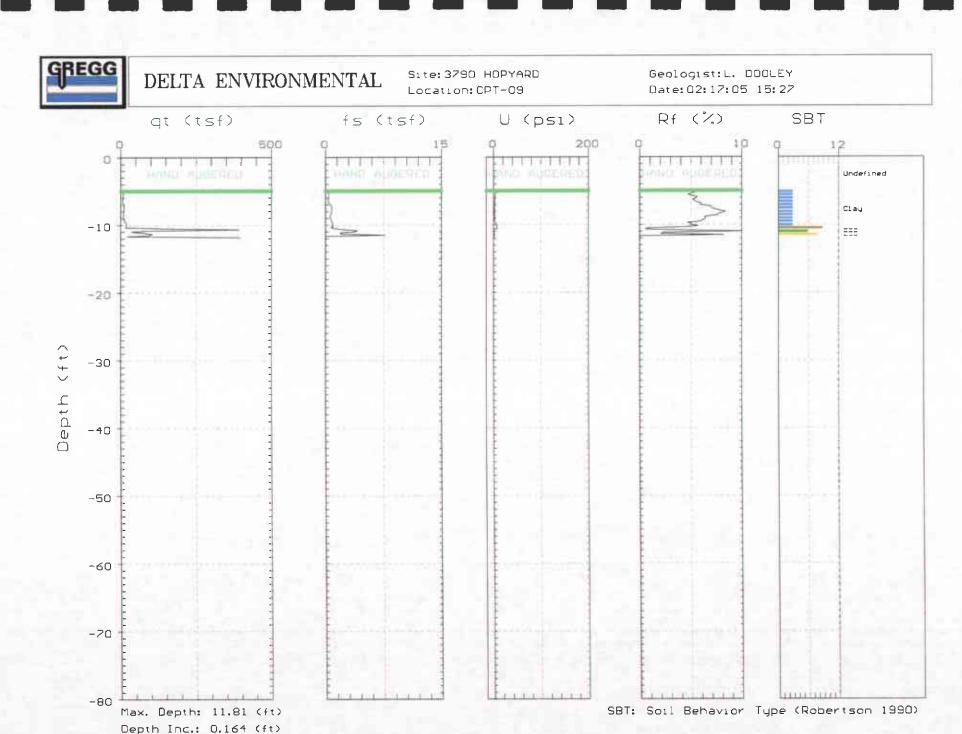


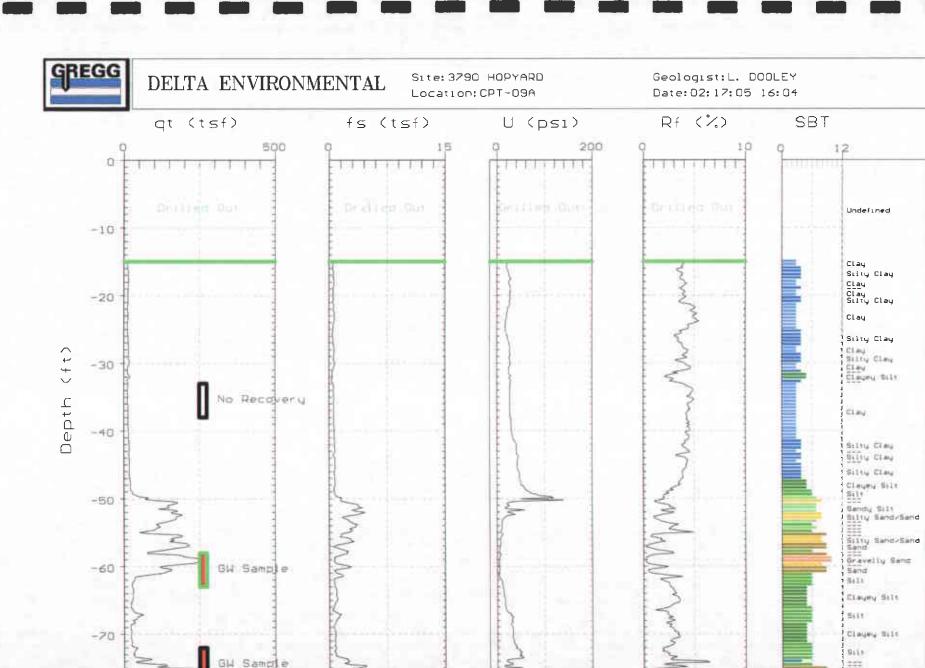
Max. Depth: 80.05 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)



Depth Inc.: 0.164 (ft)



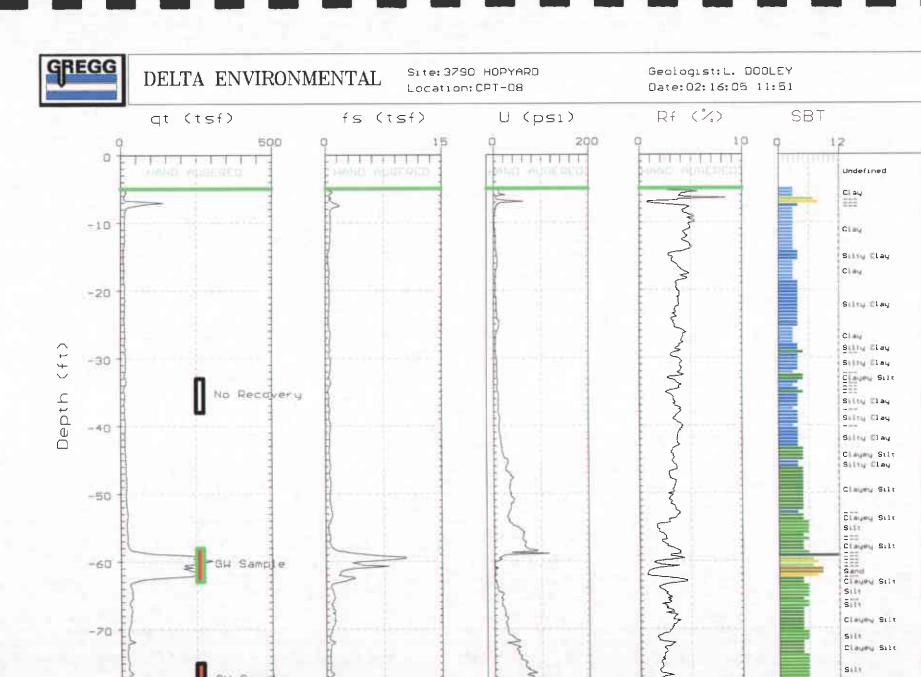


Max. Depth: 80.05 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Depth Inc.: 0.164 (ft)

Sandy Bill



SBT: Soil Behavior Type (Robertson 1990)

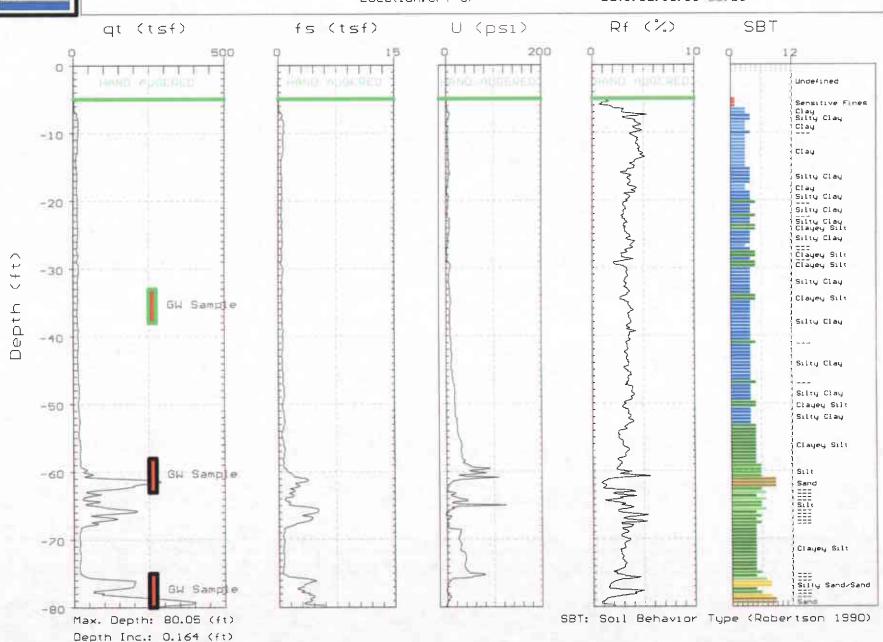
Max. Depth: 80.22 (ft)

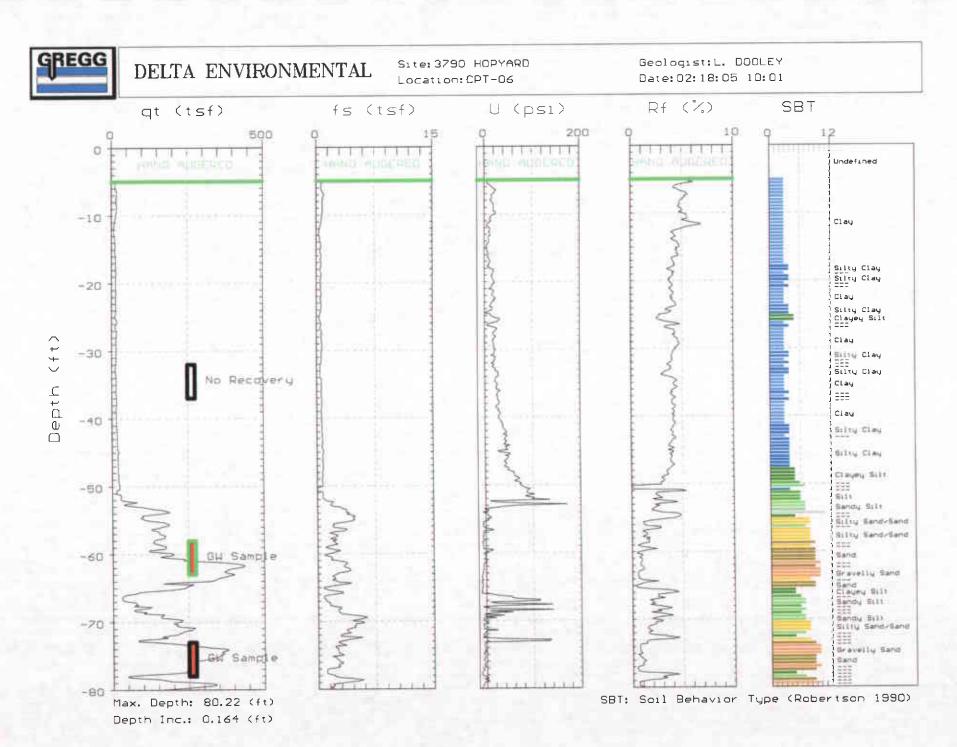
Depth Inc.: 0.164 (ft)

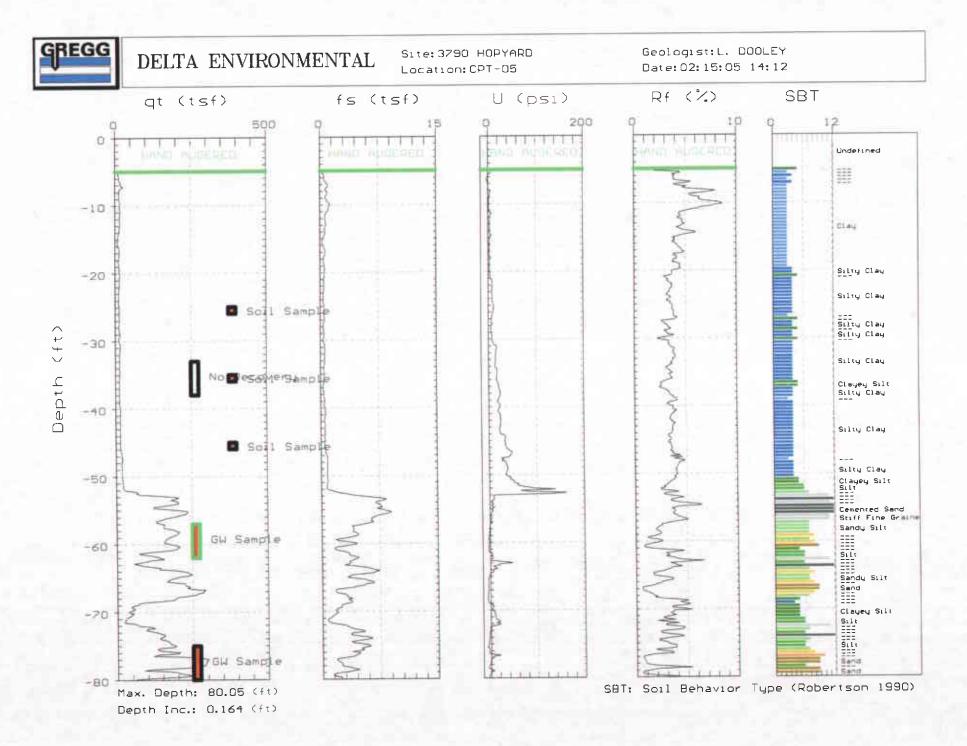


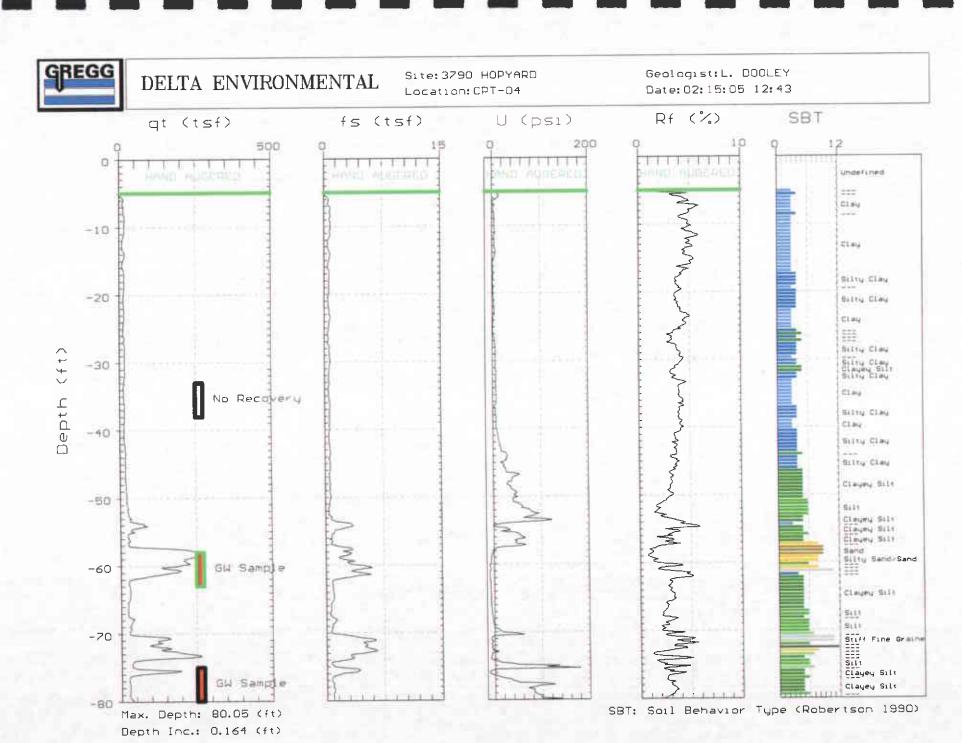
### DELTA ENVIRONMENTAL

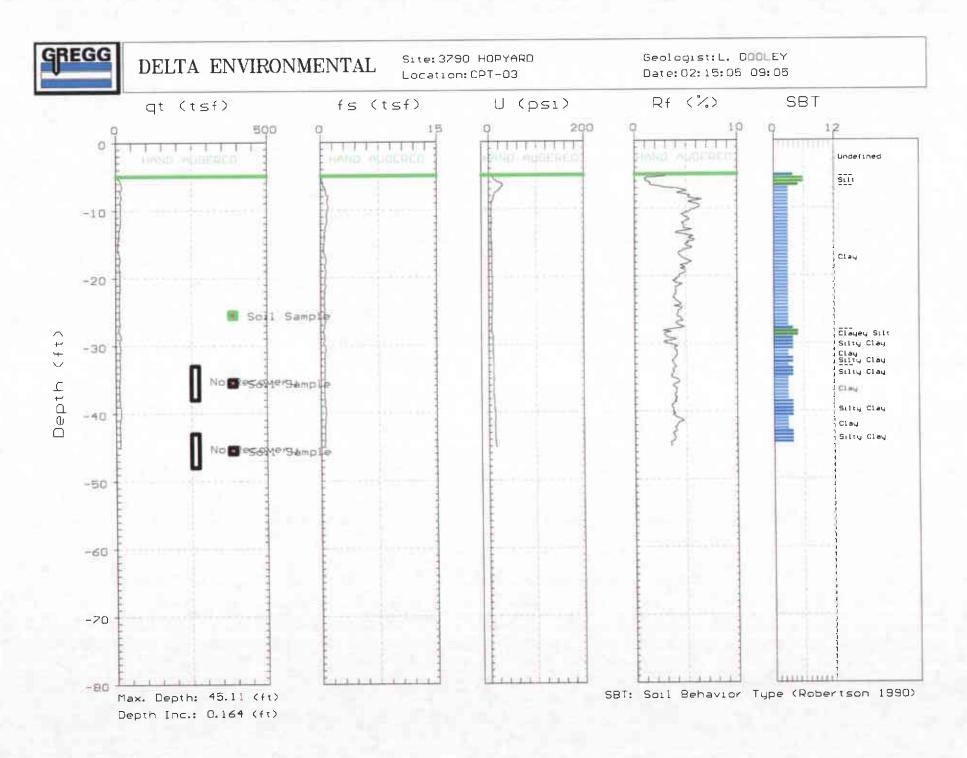
Site: 3790 HOPYARD Location: CPT-07 Geologist:L. DDOLEY
Date: 02:16:05 08:20











			Project N	o:	SJ37-90	H-1	(	Client:	-	Shell Oil Products U	JS	Well No: S-5b	
			Logged B	By:	Heather	Buckingha	m l	Locati	on:	3790 Hopyard Road	1	Page 1 of 3	
	Delta		Dritter:		Gregg HSA		Date Drilled:		Orilled:	10/28/2005	Location Map		
			Drilling M	lethod:			ı	Hole D	Diameter	: 10 inch			
7 <b>-</b>			Sampling	Method:	CA Mod	. Split-Sho	e 1	Hole [	Depth:	62.5 feet	Please se	ee site map	
En√	/ironm	ental	Casing T	уре:	Sched. 4	IO PVC	١	Well E	Diameter	: 4 inch		•	
Cons	sultant	s, Inc.	Slot Size:	:	0.02		1	Well D	Depth:	62 feet			
7		-	Gravel Pa	ack:	#3			Casin	g Sticku	p: n/a	· ·		
1				Elevation			Northi	ing		Easting	-		
			ļ		1						-		
	Well Completion Static Water Level			PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sam Secovery S	Recovery Sall Type		LITHOLOGY / DESCRIPTION			
					<b>A</b>	_	<del>-</del> -T		AF	3 to 4 inch asphalt wit	h approx.	2 inches of base rock	
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						2							
					-				CL			, 5-15% gravels up to	
					∞ ହ	3					<u> </u>	medium grained sand, low	
					air knifed and auge	]				to moderate plasticity	, some sm	all roots	
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	l _				air knifed & hand augered							- And And the -	
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				Project N	٥.	SJ37-90	<b>⊔</b> .1		Client			Shell Oil Products U	IS	Well No: S-5b	
			1	Logged B					Locati			3790 Hopyard Road		Page 2 of 3	
Delta				Driller:	·y-	Heather Buckingham Gregg			Date Drilled:			10/28/2005	Location Map		
			2	Drilling M	ethod:	HSA			Hole Diameter: Hole Depth:		r:	10 inch	,		
			a	Sampling Method:		CA Mod. Split-Shoe						62.5 feet	Please see site map		
Environmental Consultants, Inc.				Casing T		Sched. 40 PVC			Well Diameter:		г:	4 inch	l louis sou sur map		
				Slot Size:		0.02			Well Depth:			62 feet			
Consultants, IIIC.				Gravel Pa		#3			Casing Stickup:		n/a				
					Elevation							Easting			
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Well (	Complet	tion (	Static	e t	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	San	-	/be					
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			Project N	lo:	\$J37-90	H-1	Clien	t:		Shell Oil Product	ts US	Well No: S-5b
			Logged By:		Heather Buckingham		am Loca	Location:		3790 Hopyard R	opyard Road Page 3 of 3	
	<b>.</b> H	1	Driller:		Gregg			Drilled:		10/28/2005	Location Map	
Delta			Casing Type:		HSA CA Mod. Split-Shoe Sched. 40 PVC			Hole Diameter: Hole Depth: Well Diameter: Well Depth:		10 inch		
							e Hole			62.5 feet	Please s	ee site map
										4 inch		
Consul	Consultants, Inc.			Slot Size: Gravel Pack:		0.02				62 feet		
"				ack: Elevation	#3 Nort			Casing Stickup: rthing		n/a	4	
•				Elevation			Northing			Easting		
Well	. 1			Ð.	5.5	t)	Sample	_			<u> </u>	
Completi	ion	Static Water	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)		Soil Type			ITUOLOGY	/ / DESCRIPTION
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			moist	0.1	11	49 —		CL	Lean	CLAY with Sa	and: light br	own mottled with light grey,
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					50 for 5"	54		SC	Fine (	Grained SANI	with Clay	: medium brown, 15-25%
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Bentonite					16	56 —		SP	Poorl	y Graded Med	dium Grain	ed SAND: dark tan,
Ø					16	E7				ım dense		
			wet		40	57 —						
					11	58 —		sw			tan and m	edium brown, ~10% fines,
					50 for 5"	-			mediu	ım dense		
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Sand	_					_			<u> </u>	No recovery	(siuff)	
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			wet				<del>                                     </del>	GW	Well (	Graded GRAV	/EL with sa	ind: grey, 1/4 to 1.5" gravel,
						62				% well graded		
	_						4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Boring	g terminated a	1 62.5 feet b	elow grade
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1												
			Project N		SJ37-90	H-1	(	Client:	:	Shell Oil Products	US	Well No: S-5c
			Logged E	Ву:	Heather	Buckingha	m L	_ocati	on:	3790 Hopyard Roa	ıd	Page 1 of 4
		1 -	Driller:		Gregg		Ī	Date D	Drilled:	10/31/2005	Location Map	
D	Ωl.	ta.	Drilling M	lethod:	HSA		1	Hote D	Diameter	10 inch		
	<b>U</b> I	la	_	Method:		. Split-Shoe	<b>.</b>	-lole C	Depth:	77.5 feet	Please se	e site map
Envi	ronme	ental	Casing T		Sched. 4	-			Diameter	•		
		s, Inc.	Slot Size:		0.02	101 10			Depth:	77 feet		
Colls	untami	s, mc.	Gravel Pa		#3				g Sticku		-	
			Glaver	Elevation	#J	· ·	Northi		y Silcku	μ. τηνα Easting	┥ .	
				Elevation			NOLLIII	ııy		Lasting		
Backfill Backfill Casing		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery S	Interval ald	Soil Type	LIT	THOLOGY A	DESCRIPTION
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					air knifed & hand augered	3						medium grained sand, low
	_]		1		lã tệl					to moderate plasticity	y, some sma	all roots
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					6							
			damp	68.6	13	9			CL	Lean CLAY: medium	n grey, ~109	% fine grained sand, low
					15	l   —				plasticity, very stiff	<u> </u>	
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Grout						_						
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			Project N	lo:	SJ37-90	H-1	Clier	nt:		Shell Oil Produc	ts US	Well No: S-5c
			Logged E	By:	Heather	Buckingham	Loca	tion:		3790 Hopyard F	Road	Page 2 of 4
	_ I.	1_	Driller:		Gregg		Date	Drilled:		10/31/2005	Location Map	2
D	ÐΙ.	TA.	Drilling M	lethod:	HSA		Hole	Diamete	er:	10 inch		•
י עם	O I	·	Sampling	Method:	CA Mod	. Split-Shoe	Hole	Depth:		77.5 feet	Please	see site map
Envi	ronme	ental	Casing T	уре:	Sched. 4	40 PVC	Well	Diamete	er:	4 inch		
Consu	ultant	s, Inc.	Slot Size	:	0.02		Well	Depth:		77 feet		
7			Gravel Pa	ack:	#3		Casi	ng Stickt	up:	n/a		
				Elevation		N	orthing			Easting		
Backfill moo llew		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")		Recovery Sample Interval	Soil Type			ITHOLOG	Y / DESCRIPTION
	Ι				<u> </u>		<u>~ -</u>	/	<del> </del>			
						23						
			:					<b>]</b> -′			4.1.000	
					8	24		_				
			damp	10.3	8	- ' _		CL				ome black mottling, ~10%
			]		9	25—			fine o	rained sands	moderate	plasticity, stiff
								-	<u> </u>			
	—					26—		-	<u> </u>			
	-				'	+		-		,	<del></del>	
					}	27		1				
	-					l <del>+</del>	_	4.	-			
						28—		┨				
					8							
			wet	0.3	13	29 —				(same as ah	ove no da	rk grey mottling, very stiff)
	-		Wet	0.3	13					(Saine as ac	, 110 GG	ik grey mousing, very unity
				0.5	'	30		1				
					]	1 🛨		1		<del>-</del>		
			1			31—		1				
	_					<del>   </del>	_	1				
						32		1.				
	-					l 🕇		1 /	$\vdash$		-	- Alle State Con-
Grout						33		1/				
Groul	_				6			<b>1</b>		A MOTO		
			damp	0.1	8	34		CL	Sand	lv Lean CLA	r: greyish b	prown, 30-35% fine to medium
			moist		9							nh plasticity, stiff
						35						
								1				
						36—		1				
	1					37		]				
						3,						
						38		]/′				
			]		7	39						
	_		moist	0.1	8	_		CL	Lean	CLAY: medi	um brown,	medium to high plasticity, stiff
			1		10	40-			<u> </u>			
	. —							4.	<u> </u>			
	l				1.	41 —	+	-	<u> </u>			
	·							4				
	<u> </u>					42	1	4	1			
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	<b></b>				1	43—	-	-				
	_	1			-	-			ļ			
			ma:-4		5	44	2 - 27 - Fig. 1 (Fig.					
		<u> </u>	moist		1 9.			<u> </u>				

	Project I	No:	SJ37-90	H-1	Clien	ıt:	Shell Oil Product	s US	Well No: S-5c
	Logged	Ву:	Heather	Buckingham	Loca	tion:	3790 Hopyard Ro	oad	Page 3 of 4
	Driller:		Gregg		Date	Drilled:	10/31/2005	Location Map	
Delta	Drilling N	Method:	HSA		Hole	Diamete	er: 10 inch	-	
Joila	Samplin	g Method:	CA Mod	. Split-Shoe	Hole	Depth:	77.5 feet	Please s	ee site map
<b>Environmental</b>	Casing 1	Туре:	Sched. 4	40 PVC	Well	Diamete	er: 4 inch		
Consultants, Inc.	Slot Size	e:	0.02		Well	Depth:	77 feet	1	
	Gravel F	Pack:	#3	-	Casii	ng Stick	up: n/a	_]	
		Elevation		No	orthing		Easting		·
Well		1	ı			··-···			
Completion Static	e t	PID Reading (ppm)	Penetration (blows/6")		Sample	8			
■ 🗐 📴 Water	Moisture Content	Peg	etra	\$	γei,	Soil Type	LI	ITHOLOGY	/ DESCRIPTION
Water Casing Level	ĕŏ	<u> </u>	를 <u>효</u>	Dep	recovery	တိ			
	moist	0.1	5	C	aritis mirromatici	CL	Lean CLAY: same a	as above	
	1110101	0	6	- 133		Ŭ-			· · · · · · · · · · · · · · · · · · ·
			-	45					
			1	46					
				'`					
				47					
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				48	_				
			7	_					
	moist	0.1	11	49		CL	Lean CLAY with Sa	ı <b>nd</b> : liaht br	own mottled with light grey,
	1110100	0.1	13			\ \frac{1}{2}	15-25% fine grained		
				50 —					
			1						
				51—					
				52					
				J 2					
				53					
			40	_					
<del> </del>			40	54 —		20	Fine Grained SAND	) with Clay	: medium brown, 15-25%
Ground	damp		50 for 5"	-		SC	clay, very dense	with Clay	. Medium brown, 15-25%
	Juanip	0.3	27	55 —			clay, very delise		
		0.5	54						
			16	56		SP	Poorly Graded Med	lium Grain	ed SAND: dark tan.
			16			J .	medium dense		
	wet		40	57					
			11	60		sw	Well Graded SAND	: tan and m	edium brown, ~10% fines,
			50 for 5"	58			medium dense		
		1		59		]			
							No recovery (	sluff)	
				60		] ,			
			1				No recovery (	sluff)	
		1		61 —		<b> </b>			
	wet								
	Mer		8	62		GW	Well Graded GRAV	EL with sa	nd: grey, 1/4 to 1.5" gravel,
			13		au galai	~	10-20% well graded		
			36	63-					
				64					
				64					
		0.3		65					
				00		]			
				66——					
	1								

		Project N	No:	SJ37-90	)H-1	Clien	t:	Shell Oil Products	US	Well No: S-5c
		Logged I	Ву:	Heather	Buckingham	Locat	tion:	3790 Hopyard Roa	a <u>d</u> _	Page 4 of 4
	<b>I</b> 1_	Driller:		Gregg		Date	Drilled:	10/31/2005	Location Map	
De	IT2	Drilling N	Method:	HSA		Hole	Diamete	r: 10 inch		
	ILC	,	g Method:		. Split-Shoe		Depth:	77.5 feet	Please se	ee site map
Environn	nontal	Casing T	-	Sched. 4			Diamete		1 10000 00	o otto map
		Slot Size			40 FVC				1	
Consultan	its, inc.	1		0.02			Depth:	77 feet		
		Gravel P		#3			ng Sticku		4	
			Elevation		Nor	thing		Easting		
Well			5	T <u>-</u>	<u> </u>				<u>l</u>	· · · · · · · · · · · · · · · · · · ·
Completion	Static Water	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	1 (3) 1	ample	Soil Type		THOLOGY	/ DESCRIPTION
Backfill Casing	Level	Con	K. 9	low lo	at s	Interval	ō	la I	INOLOGI	DESCRIPTION
မ်ားများ			붑	ਕੂ ਨੂੰ ਕ	Depth (fi	ξ	တ			
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t		1			+	1				
Grout					68	<del>  </del>				
					69					
		wet		16	11000	7 07 000 000 000 000 000 000 000 000 00		Poorly Graded Coar		
			0.1	50 for 4"	70			gravel, 10-20% clay,	medium de	nse
				16	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$			— ———		
Bentonite				50 for 4"	71 —	S REED III				
-   <u>B</u>				50 for 6"				· · · · · · · · · · · · · · · · · · ·		
				30 101 6	72					· ·
		wet					SC	Clavey SAND: mediu	ım brown, 4	10-45% clay, 55-60% fine
				15	73			grained sand, low pla		<u> </u>
				16	74		İ			
Sand				28						
ος 📕 —			0.1		75 —		sw	Coarse Grained SAI	ND: came a	e ahoyo
-		wet	0.1				200	Coarse Grained SAI	ND. Same a	s above
		""			76—		SC	Clayey SAND: same	as above,	grey
					77					
_				50 for 5"						
					78	+		Boring terminated at	77.5 feet be	elow ground surface
=					<del>                                     </del>	+				·
					79 —	+-				
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		]			81					
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	_				85——	<del>                                     </del>				
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					87——	<del>  </del>				
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					l 88 — <del> </del> —	<u> </u>				

			Project N	lo:	SJ37-90	H-1	Cli	ent:	Shell Oil Products	US	Well No: S-9b
			Logged E	Зу:	Heather	Buckinghar	m Loc	ation:	3730 Hopyard Roa	ıd	Page 1 of 3
	_ 1_	4_	Driller:		Gregg		Da	te Drilled:	10/26/2005	Location Map	
D	Ð١.	IA	Drilling M	lethod:	HSA		Ho	le Diamete	r: 10 inch		
י שן	O I	··	Sampling	Method:	CA Mod	. Split Shoe	Ho	le Depth:	61 feet	Please se	ee site map
Envi	ronme	ental	Casing T	ype:	Sch. 40	PVC	We	ell Diamete	r: 4 inch		
Consu	ultants	s, Inc.	Slot Size:	:	0.02		We	ell Depth:	61 feet		
7			Gravel Pa		#3			sing Sticku		_	
1				Elevation			Northing		Easting		
Well Com	nletion				T					<u> </u>	
Backfill g		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery Sumplements	€	LIT	THOLOGY	/ DESCRIPTION
					<b>†</b>			AF	3 to 4 inch asphalt wi	th approx.	2 inches of base rock
						1					
	1 4						$oxed{oxed}$				
						2—					, trace coarse grained
					× ×			CL	sand, gravels up to ~	ixa-a mmc	s diameter, medium
					air knifed & hand augered	3		```` ⊢	plasticity	brown fina	to medium grained sand,
	$\mid \; \dashv$				ife ing		$\vdash \vdash$	sc`	<del> </del>	DIOWN, TIME	to medium grained sand,
	-				돌호	4		⊢ cì`	20-30% clay	NAM 5_150/	gravels up to ~5mm
	-			0.1	a   E	-	$\vdash\vdash$	$\dashv$ $\checkmark$ ${\smile}$ ${\smile}$	b-axis diameter, med		
				U. I		5		, · · · · · · · · · · · · · · · · · · ·	pravio diameter, met	num piasuo	"··J
						-		sc	Clavey SAND: brown	n to vellowis	sh brown, fine to medium
	-					6		$\dashv$	grained sand, 15-25%		on order and to modium
	_								granieu sariu, 15-207	o city ·	
					▼	7		-			
	$\mid \; \dashv$					_	<del></del>	┧``、			
	-				]	8	-	<b>-</b>			
	-				5	_					<u></u>
	I - I		slight	0.1	8	9		CL	Lean CLAY with Sa	nd: dark or	ey, sand pockets ~0.5cm
			damp	<b>U.</b> .	12	l · —			with fine to medium		
=			"""	-	'-	10			moderate plasticity, 2	2-3" clayey	sand layer within fine
Grout	$\Box$					–			grained sand, stiff		
O						11			3	<del></del>	
					1	10 -		٦٠,			- N-
					1	12		一 ``、			
					1				***		
					1	13					
					6		0.00				
			damp	0.1	8	14		CL	Lean CLAY: dark gro	een with bro	own mottling, trace fine
			'		9	15—	HARLE III		grained sand, mediu	m to high p	lasticity, stiff
					1	10					
					1	16—					
					1	10					last. V
						17—		_]			<u> </u>
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					6	19					400 600 600 600 600 600 600 600 600 600
			i .	0.1	7						mottling, ~10% fine grained
					7	20			sand, medium	to high pla	isticity)
		1						4			
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	_						$\vdash \vdash$	_			
						22	$\vdash \vdash$	<u> </u>	-0		
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9				Project N		SJ37-90			Client		Shell Oil Products		Well No: S-9b
╛				Logged E	Зу:		Buckingha		Locat		3730 Hopyard Roa	···	Page 2 of 3
ВГ	7.	٦ŀ	ta	Driller:		Gregg				Drilled:	10/26/2005	Location Map	
۹ L	ノじ	31	เส	Drilling M		HSA				Diamete		Diagon	a sita man
					Method:		Split Shoe			Depth:	61 feet	Please se	e site map
		onme		Casing T		Sch. 401	PVC			Diamete:	r: 4 inch 61 feet		
Co	nsu	Itants	s, Inc.	Slot Size Gravel P		0.02 #3				Depth: ng Sticku			
-				Glavein	Elevation	#-3		North		ig Stickt	Easting		
					Lievation				y				
Well	Comp	pletion	Static	e ±	guil	ion ("S	et	Sar	nple	e			
Backfill	Casing		Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery	Interval	Soil Type	Lin	HOLOGY	DESCRIPTION
							_				Lean CLAY (continu	ed)	
							23			```			
							~		SHE THE	``			
					<u>.</u> -	6	24 —			۸.			www.vaidle.macl.le.macres
	<b>I</b>			damp	0.9	8				CL	Lean CLAY with Sa		
	▓					9	25—				mottling (end at 15')		nd, moderate plasticity,
	<b>I</b>	-									very stiff	graineu sa	nd, moderate plasticity,
	▓ ╽						26				very sun		
		-											
							27—			****			
			i				28						
		-				9					<u> </u>		
				damp	0.5	11 12	29		10	CL			ey, 30-35% fine grained
						12	30		ugu (C)		sand, moderate plas	licity, very s	
							31 —						
		_					32			ĺ			
Grout							32			]			
							33					.,	
						7	34—						
				damp	0.3	9							
							35—						
							36 —			1			-
							37—						
		-	_				38—			}			
							_						
				damp	0.2	8 15	39						
						16	40—						
							-	-		1			
							41 —			1			
							42 —		╂	-		<u>.</u>	
							43—			1			
		_		1		1 44	-		11877 2.1.				
				damp		11	44 —		Obside				······································
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			Project N	io:	SJ37-90	H-1	(	Client	:	Shell Oil Produ	ucts US	Well No: S-9b
			Logged E	Зу:	Heather	Buckingha	am L	ocat	ion:	3730 Hopyard	Road	Page 3 of 3
	1	1 .	Driller:		Gregg .			Date I	Drilled:	10/26/2005	Location	Мар
D		TA.	Drilling M	lethod:	HSA		H	lole I	Diamete	r: 10 inch		
	VI	LU	Sampling	Method:	CA Mod	. Split Sho	e F	lole I	Depth:	61 feet	Plea	se see site map
Envi	ronm	ental	Casing T	-	Sch. 40			Vell [	Diamete	r: 4 inch		·
		s, Inc.	Slot Size		0.02		٧	Vell [	Depth:	61 feet		
		<b>-</b> ,	Gravel P		#3		c	Casin	g Sticku	ip: NA		
				Elevation			Northir			Easting		
187	-n	r	ļ,									
We Compl		Static	o -=	PID Reading (ppm)	Penetration (blows/6")	(je	Sam	ple	g	•		
		Water	Moisture Content	reac pm)	trat ws/6	Depth (feet)	Recovery	ल	Soil Type		LITHOLO	OGY / DESCRIPTION
Backfill		Level	စို့ ပိ	<u>Б</u> 6	ene	ebt[	8	Interval	Soil			
ത് ധ	·						8	=				
	l _		damp	0.1	9	_			CL	Sandy Lean CLA	Y (continu	ued)
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					'	49 —						
	-						<del>  -</del>					
			wet	0.2	7	50 —						
				<b>-</b>	10				CL	Lean CLAY with	Sand: gre	ey, 15-20% fine grained sand,
					11	51				moderate plasticit		
<b>5</b>		İ	damp		7						<u> </u>	
Grout		<b>i</b> ,	'		9	52 —						
		1			8	-						
		1			9	53		h die		(same as a	bove, gre	y mottling)
	_	]			12	54				t.		<u></u>
Bentonite			damp		18	34						
5					7	55						
Bentonite			1	0.1	11	33 — _						·
			damp		18	56 —						ed SAND with Clay: grey,
					5				i	80-85% fine grain	ed sand,	15-20% fines, medium dense
	<u> </u>		wet		17	57						
	<b>=</b>				11	_						
	<b>=</b>				15	58						Coarse Grained SAND with
Sand	_	-	.		25	_			SP	Gravel: grey, 10-1	15% grave	el, trace fine grained sand, dense
Sa 📗	<b>-</b>		wet		33	59				Dearly Order de de		inad Sand with Class same
	_	}			7	-					med Grai	ined Sand with Clay: same
	▋	1		0.8	17	60 —			SC	as above, dense	adiores 4-	Coarea Grained SAND with
	-	-	1,,,,,,		18 27	-			SP	Gravel: same as		Coarse Grained SAND with
	∄	1	wet		21	61 ——			SF.	Oravel, Sallie do	above, ve	y delide
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			Project N	lo:	SJ37-90	H-1	Cli	ent:	Shell Oil Products	US	Well No: S-9c
			Logged B			Buckingha		ation:	3730 Hopyard Roa		Page 1 of 4
		•	Driller:	-	Gregg	J		te Drilled:	10/25/2005	Location Map	<u>-</u>
D	۱۱۵	12	Drilling M	lethod:	HSA			le Diamete			
ישף		la	Sampling			. Split Shoe		le Depth:	79 feet	Please se	e site map
Envi	ronme	ntal	Casing T	•	Sch. 40	•		ell Diamete			•
Consu			Slot Size		0.02	•		ell Depth:	79 feet		•
7		,	Gravel Pa		#3			sing Stick	ıp: NA		
┙				Elevation			Northing		Easting	]	
		····		<del></del>	1			1		<u> </u>	
Backfill Backfill Casing		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery S	1 5	LIT	HOLOGY I	DESCRIPTION
					<b>†</b>			AF	3 to 4 inch asphalt wi	th approx. 2	2 inches of base rock
						1				,	
						' _			<u> </u>		
						2					, trace coarse grained
	▎ᆜ				ح ا			CL	sand, gravels up to ~	5mm b-axis	s diameter, medium
	<u> </u>				air knifed & hand augered	з—		→ ```	plasticity		
					ng iệc			(sc`		prown, fine	to medium grained sand,
					air knifed & and augere	4			20-30% clay	F 4501	
					air an	· –		CL	Lean CLAY: dark bro		
				0.1	ן וַבּ	5			b-axis diameter, med	lium plastici	
							1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0. 0.115		la la companya di companya di companya di companya di companya di companya di companya di companya di companya
			·			l 6		sc			sh brown, fine to medium
	_					_			grained sand, 15-25%	6 clay	
					♦	7	ļ				
	_					_	<b></b>	<b>-</b> ∤``•			
					]	8	<u> </u>	-			
					_	_	Marketti (anc.	C743.0			
					5	9	diameni				o Som
			slight	0.1	8	] _		CL			ey, sand pockets ~0.5cm
			damp		12	10			with fine to medium of		
Grout	1 4					_		_		2-3" clayey	sand layer within fine
ວັ 🏻						11			grained sand, stiff		
						_					
						12		<b></b>  ```			
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						13		_			
					_	_	Mental Date of the A	17.7	A 2/700		·
			1.		6	14	333	<b>4</b>			
			damp	0.1	8	_		CL			own mottling, trace fine
			]		9	15			grained sand, mediu	ti to nigh pl	asucity, sum
	_					_		4			
						16		_	:		
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						17	$\vdash$	4			
						-	$\vdash$	_			
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			Project N		SJ37-90	H-1	Clien	t:	Shell Oil Products U	JS	Well No: S-9c
			Logged 8	Ву:	Heather	Buckingham	n Local	tion:	3730 Hopyard Road	<u> </u>	Page 2 of 4
	_ []	4_	Driller:		Gregg		Date	Drilled:	10/25/2005	Location Map	
D		<b>1</b> 2	Drilling M	lethod:	HSA		Hole	Diamete	r: 10 inch		
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<b>O</b> .	•	Sampling	Method:	CA Mod.	. Split Shoe	Hole	Depth:	79 feet	Please se	e site map
	ronme	•	Casing T		Sch. 40	PVC	Well	Diamete	er: 4 inch		i
Consu	ıltants	s, Inc.	Slot Size	ī.	0.02			Depth:	79 feet		
7			Gravel P		#3			ng Sticki	· · · · · · · · · · · · · · · · · · ·		
				Elevation		^	Northing		Easting		
Weil Com	nletion			D)	Ι			<del></del>			
Backfill g	.	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery S Interval eldume	Soil Type	LIT	HOLOGY	DESCRIPTION
									Lean CLAY (continue	ed)	
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			],		6	24—		٠	0.01		
			damp	0.9	8			CL	Lean CLAY with Sar		
					9	25			mottling (end at 15') o		nd, moderate plasticity,
	-					+	<u> </u>		very stiff	yrameu sa	nd, moderate prasticity,
						26—			very sum		· · · · · · · · · · · · · · · · · · ·
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			damp	0.5	11	29-		CL	Sandy Lean CLAY: r	nedium are	ey, 30-35% fine grained
			Jaanne	0.0	12			Ŭ-	sand, moderate plast		
					'-	30					
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Grout						32 —		1			
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			damp	0.3	9 13					•	
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			damp		9	44					
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			Project N	lo:	SJ37-90	H-1	Clien	t:	Shell Oil Products		Well No: S-9c
			Logged E	Ву:	Heather	Buckinghan	n Local	tion:	3730 Hopyard Ro	ad	Page 3 of 4
	_ I.	4_	Driller:		Gregg		Date	Drilled:	10/25/2005	Location Map	
I De	-11	12	Drilling M	lethod:	HSA		Hole	Diamete	r: 10 inch		
\	<b>–</b> .		Sampling	Method:	CA Mod.	Split Shoe	Hole	Depth:	79 feet	Please s	see site map
<b>Envi</b> r	ronme	ental	Casing T	уре:	Sch. 40	PVC		Diamete	r: 4 inch		
Consu	ıltants	s, Inc.	Slot Size	2	0.02			Depth:	79 feet		
٦٠			Gravel P		#3			ng Sticku		_	
				Elevation		N	lorthing		Easting		
We			<del>                                     </del>		T _						
Comple	etion	Static	활동	ig c	/6")	do I	Sample	/pe			
<b>-</b>	- 1	Water	Moisture Content	Read (ppm)	etra	ith (	very val	Soil Type	Li	THOLOGY	/ / DESCRIPTION
Backfill Casing		Level	25 0	PID Reading (ppm)	Penetration (blows/6")	De De	Recovery	တိ			
			damp	0.1	9			CL	Sandy Lean CLAY (	continued)	
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	·		wet	0.2	7	<del>   </del>		<u>.</u>	Lasa CLAV with Ca	1	E 200/ fine around cond
					10 11	51 —		CL	moderate plasticity,		15-20% fine grained sand,
±#	-		damp		7	-			moderate plasticity, t	very sum	
Grout			damp		9	52 —					
					8	-					
					9	53—			(same as abo	ve, grey m	ottling)
	l				12	54					
			damp		18		100				
					7	55 —	0.00		<del></del>		
	_			0.1	11	_		SC	Baarly Craded Fine	Grained	SAND with Clay: grey,
			damp	٠	18 5	56		ಾರ			20% fines, medium dense
	_		wet		17				00-0070 line granieu	Janu, 10-2	20 /0 timod, illidulatif dollad
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					15	<u>-</u>			·		<u></u>
					25	58		SP			parse Grained SAND with
			wet		33	59			Gravel: grey, 10-159	% gravel, tr	race fine grained sand, dense
	_				7				D	A C!	I Cand with Clay came
				0.8	17	60 —		SC	L	ea Grainec	I Sand with Clay: same
	-		wet		18 27	<del>-  </del>		SP	as above, dense Poorly Graded Med	lium to Co	parse Grained SAND with
	<b> </b>		wer		50 for 5"	61		٦	Gravel: same as ab		
	-				17	ac -	10				
			wet		33	62	1.00	1			
	-				40	63		sc		Grained	SAND with Clay: same as
					17	03	9,000	<del></del>	above, very dense		
					19	64 —		sw			SAND with Gravel: grey,
	_		wet		30	_	10.0		·	trace large	gravels up to 1", 60-65%
		<u> </u>		0.4	12	65 —			sand, dense	V and CD	AVEL with Fine Grained
	-		wet	0.1	19 20	<u> </u>	2.	GC			ned sands, ~25-30% fines,
	:		wet		12	66		CL	50-55% gravel up to		104 04 140, 20 00 /0 III 160,
	L		1		1 12		KIND OF STREET	LVL	100-0070 graver up to	. , 401100	· · · · · · · · · · · · · · · · · · ·

	Project No:	SJ37-90H-	-1 Clie	ent:	Shell Oil Product	US We	II No: S-9c
	Logged By:	Heather Bu	luckingham Loc	ation:	3730 Hopyard Ro	ad Pag	ge 4 of 4
D ~ 14 ~	Driller:	Gregg	Dat	e Drilled:	10/25/2005	Location Map	
Delta	Drilling Method:	HSA	Hol	e Diamete	er: 10 inch		
	Gamping Memou.	CA Mod. S	Split Shoe Hol	e Depth:	79 feet	Please see sit	e map
Environmental	Casing Type:	Sch. 40 P\		ll Diamete	r: 4 inch		
Consultants, Inc	1	0.02		Il Depth:	79 feet		
<b>'</b>	Gravel Pack: Elevation	#3		sing Stickt			
, [	Elevation		Northing		Easting		
Well Completion Static Back Size Back Completion Completion Wate Leve	13416	Penetration (blows/6")	Depth (feet) Recovery & Interval	1 5	LI	THOLOGY / DE	SCRIPTION
Sand Bentonite Grout Ca	dry slight damp  dry slight damp  damp  moist 0.1	12 12 14 19 11 7 7 6 8 11 13 8 11 4 12 18 14 14 28 28 28 28 50 for 5" 18 33 25	8	CL SC	(same as abo  Poorly Graded Fine 10-15% fines, dense	re, brown with to Grained SAND D with Clay: me ained sand, slightannish brown,	edium brown, 15-20% ht plasticity, dense trace gravel (~5%)
		8	85 ————————————————————————————————————				

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Delta Environmental Consultants, Inc.		Gregg d: HSA hod: Geoprob PVC 0.01 #2/12 vation	Buckingham e North	Client: Location: Date Drilled: Hole Diameter Hole Depth: Well Diameter Well Depth: Casing Sticku	25 feet r: 4 inch 25 feet	US Well No: S-14 Page 1 of 2  Location Map  Please see site map
Well Completion Static Water Level	Moisfure Content PID Reading	(ppm) Penetration (blows/6")	Depth (feet) Recovery &	Interval के	LIT	THOLOGY / DESCRIPTION
		air knifed & hand augered	1	CL	Lean CLAY: brown with grained sand, modulum plasticity  Lean CLAY: brown with grained sand, modulum grained sa	avel: dark brown, 15-25% gravel (up be medium grained sands, medium grained sand, nown, 10-20% medium grained sand, with orangish brown mottling, ~10% edium to high plasticity  ve, 10-20% organics)  ve, root holes)  and: dark grey mottled with tan, 15-25% led sand, moderate to high plasticity

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			Project N	lo:	SJ37-90	H-1	Client	:	Shell Oil Products	US	Well No: S-14
1			Logged E			Buckinghan			Trailgate # 7 & 8		Page 2 of 2
┛▃		4	Driller:	•	Gregg	·		Orilled:	10/28/2005	Location Map	
	)el	ta	Drilling M	lethod:	HSA			Diameter			
7 L		la	Sampling		Geoprob	e e	Hole [		25 feet	Please se	ee site map
J <sub>Fn</sub>	vironme	ental	Casing T		PVC	-		Diameter			•
	sultant		Slot Size		0.01		Well (		25 feet		
		J,	Gravel Pa		#2/12			g Sticku	: ip:		
				Elevation			Northing		Easting	1	
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Well C	ompletion		0	PID Reading (ppm)	8 🕝	[ ag	Sample	e e			
		Static Water	Moisture Content	ead m)	Penetration (blows/6")	Depth (feet)		Soil Type		THO! OGY	/ DESCRIPTION
Backfill	Casing	Level	Co 🧸	7 Q	ene	e bt	Recovery	Soil			, 52001
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			moist			23—		CL	Sandy Lean CLAY:		25-35% fine grained
멑				0.4	]	¯			sand, medium to high	n plasticity	
Sand						24			94	· · · · · · · · · · · · · · · · · · ·	
			]			→			Poring torminated at	25 foot hal	ow ground curface
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	· · ·		Project N	lo:	SJ37-90	H-1	Client	:	Shell Oil Products \	Js	Well No: S-15	
	:		Logged B	By:	Heather	Buckingham	Locati	ion:	trailgate #7 and #8		Page 1 of 2	
	1	1 _	Driller:		Gregg		Date I	Drilled:	10/28/2005	Location Map		
D	Ð١.	TA.	Drilling M	lethod:	HSA		Hole !	Diameter	: 10 inch			
ישן		LCI	Sampling		Geoprob	e	Hole I	Depth:	25 feet	Please se	e site map	
┛ Envi	ronme	ental	Casing T		PVC	•		Diameter	: 4 inch	+ 5		
Consu			Slot Size:		0.01		·Well I	Depth:	25 feet			
- 01130		J, <b>-</b> .	Gravel Pa		#2/12			g Sticku	p: NA			
				Elevation		N	lorthing		Easting	1		
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Backfill Backfill Casing		Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery S	Soil Type	LIT	HOLOGY /	DESCRIPTION	
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	<u> </u>				air knifed & hand augered	3					10% gravels up to 15m	m
					fed lge	"			b-axis, 10-25% fines,	no plasticit	y	
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					air knifed and augel	-					·	
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] g [		1				18-		CL	Lean CLAY: same a	s above, da	rk brown mottled with	· · ·
Sand	1 -	1			1			1 -	medium grey			1.
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		1				21—			Lean CLAY with Sa	nd: dark bro	own mottled with light	
	-	1				+	ul iii	CL	brown 10-25% fine of	rained sand	d, moderate plasticity	
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		<u> </u>		1	1			}	<u> </u>		<del> </del>	

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			Project N	lo:	SJ37-90	H-1	Clien	t:		Shell Oil Products U	JS .	Well No: S-15	
			Logged E	Ву:	Heather	Buckingha	am Locat	tion:		trailgate #7 and #8		Page 2 of 2	
d -	<b>\</b> _ 1.	1_	Driller:		Gregg		Date	Drilled:		10/28/2005	Location Map		
	Del	12	Drilling M		HSA			Diamete		10 inch			
				Method:	Geoprob	e		Depth:		25 feet	Please so	ee site map	
	nvironm		Casing T		PVC	1		Diamete	er:	4 inch			
Co	nsultant	s, Inc.	Slot Size		0.01			Depth:		25 feet			
1			Gravel Pa		#2/12	1		ng Sticki	ib:	NA		-	
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Well	Completion			<u> </u>	E ~	8	Sample	d)		· · · · · · · · · · · · · · · · · · ·			
╛	<b>D</b> D	Static Water	sture	eadi vm)	tratic vs/6'	<u>.</u>		Typ(		r i T	HOLOGY	/ DESCRIPTION	
Backfill	Casing	Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery	Soil Type		_1,			
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## Attachment B

DRILLING AND ENCROACHEMENT PERMITS

# AND AND THE PARTY OF THE PARTY

## **ZONE 7 WATER AGENCY**

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 454-5728

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

Revised: April 27, 2005

	<u> </u>
LOCATION OF PROJECT Appays Mocho Canal near Hopyard Rd., Pleasanton, (A	PERMIT NUMBER 25160 WELL NUMBER 3S/1E-18B2, 18B3 & 18B4 APN
California Coordinates Source ft. Accuracy± ft. CCN ft. CCE ft.	
	(Circled Permit Requirements Apply)
CLIENT Name Shell Oil Products ().S. Address 209455. Willminstm. Phone 707-865-0251 City Canson, CA Zip 90810  APPLICANT Name Deta Envenmental Casultants, Ioc. Fax Address 175 Bernal Rd, St. 200 Phone 408-224-4724 City San Jose CA Zip 95119	<ul> <li>A. GENERAL</li> <li>1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.</li> <li>2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects or drilling logs and location sketch for geotechnical projects.</li> <li>3. Permit is void if project not begun within 90 days of approval</li> </ul>
TYPE OF PROJECT Well Construction Geotechnical Investigation Cathodic Protection General Water Supply Contamination Monitoring Well Destruction	date.  B. WATER SUPPLY WELLS  1. Minimum surface seal thickness is two inches of cement grout placed by tremie.  2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and imigation wells unless a lesser depth is specially approved.
PROPOSED WELL USE  New Domestic	An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.     A sample port is required on the discharge pipe near the wellhead.     GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
DRILLING METHOD:  Mud Rotary	<ol> <li>Minimum surface seal thickness is two inches of cement grout placed by tremie.</li> <li>Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.</li> <li>GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be</li> </ol>
WELL PROJECTS  Drill Hole Diameter	used in place of compacted cuttings.  E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.  F. WELL DESTRUCTION. See attached.  G. SPECIAL CONDITIONS. Submit to Zono Z within 60 days offerthan
Number of Borings Maximum Hole Diameter in. Depth ft.  ESTIMATED STARTING DATE 10/21/05 ESTIMATED COMPLETION DATE 10/21/05	Approved Wyman Hand Date 10/3/05
I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.  APPLICANTS SIGNATURE  Lattur Burlain Murrate 9 / 13 / 05	Wyman Hong

# ZONE 7 WATER AGENCY



ATTACH SITE PLAN OR SKETCH

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 454-5728

## **DRILLING PERMIT APPLICATION**

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 3730 HOOMARD PLEASANTON : CA

^	FOR OFFICE USE
	RMITNUMBER 25169 LLNUMBER 3S/1E-7Q28 (S-9B), 3S/1E-7Q29 (S-90 N 941-1309-069-00
	PERMIT CONDITIONS
	(Circled Permit Requirements Apply)
A.) B.	<ol> <li>GENERAL</li> <li>A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.</li> <li>Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects or drilling logs and location sketch for geotechnical projects.</li> <li>Permit is void if project not begun within 90 days of approval date.</li> <li>WATER SUPPLY WELLS</li> <li>Minimum surface seal thickness is two inches of cement grout placed by tremie.</li> <li>Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and imigation wells unless a lesser depth is specially approved.</li> <li>An access port at least 0.5 inches in diameter is required</li> </ol>
<u>.</u>	on the wellhead for water level measurements.  4. A sample port is required on the discharge pipe near the wellhead.  GROUNDWATER MONITORING WELLS INCLUDING
	PIEZOMETERS  Minimum surface seal thickness is two inches of cement grout placed by tremie.  Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
D,	GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.
E.	CATHODIC. Fill hole above anode zone with concrete placed by tremie.
F. G.	WELL DESTRUCTION. See attached. SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after the

Industrial	APN_
CLIENT Name Shall O   Reduck U.S. Address 20915 S. Wilmington Ave Phone (707) 865-0251  APPLICANT Name Delta Environmental Consultants Inc. Fax 463 225-8506  Address (75 Grenal Fd., St. 200 Phone (708) 826-1866  City An 3051  TYPE OF PROJECT Well Construction Cathodic Protection Water Supply Monitoring Well Destruction  PROPOSED WELL USE New Domestic   Irrigation Municipal   Remediation   Remediation Industrial   Groundwater Monitoring   C.  DRILLING METHOD: Mud Rotary   Air Rotary   Hollow Stem Auger   Cable Tool   Direct Push   Other   D.  DRILLING COMPANY BC Environmental DR	Coordinates Sourceft Accuracy±ft
CLIENT Name Shall 0; Radwek U.S.  Address 20975 S. Will mington Avc. Phone (707) 865-0251  City Caeson, CA Zip 90810  APPLICANT Name Dilta Environmental (ensultants, Inc. Fax 468) 225-8500  Address (75 (Stend) Ed., St. 200 Phone (403) 826-1300  City San Jose Zip 9531,9  TYPE OF PROJECT  Well Construction General Gene	
Name Shell Oil Reduck U.S. Address 20945 S. Wil mington Ave. Phone (703) 865-0251  APPLICANT Name Ditta Environmental Consultants Inc. Fax 408) 225-8500  Address (75 Seenal Ed., 15 200 Phone (708) 826-13946  City San Joss  TYPE OF PROJECT Well Construction Geotechnical Investigation Cathodic Protection General Water Supply General Municipal Remediation Industrial Groundwater Monitoring Well Destruction  PROPOSED WELL USE New Dornestic Remediation Industrial Groundwater Monitoring Cother Other  Deveatering General Direct Push Hollow Stem Auger Cable Tool Direct Push Other Direct Push Cother Direc	191-1309-09
Name Shell Oil Reduck U.S. Address 20945 S. Wil mington Ave. Phone (703) 865-0251  APPLICANT Name Ditta Environmental Consultants Inc. Fax 408) 225-8500  Address (75 Seenal Ed., 15 200 Phone (708) 826-13946  City San Joss  TYPE OF PROJECT Well Construction Geotechnical Investigation Cathodic Protection General Water Supply General Municipal Remediation Industrial Groundwater Monitoring Well Destruction  PROPOSED WELL USE New Dornestic Remediation Industrial Groundwater Monitoring Cother Other  Deveatering General Direct Push Hollow Stem Auger Cable Tool Direct Push Other Direct Push Cother Direc	_
City Calson, (A Zip 90310  APPLICANT Name Dilta Environmental Consultants, Inc. Fax 403 225-8500  Address (IS Granal Ed., 5:200 Phone 103 326-1306  City San Jose Zip 95319  TYPE OF PROJECT  Well Construction Geotechnical Investigation Cathodic Protection General General Muster Supply Contamination Monitoring Well Destruction  PROPOSED WELL USE New Domestic General Groundwater Monitoring Municipal Groundwater Monitoring Contamination Groundwater Monitoring Complex Find Cable Tool Groundwater Monitoring Cable Too	
APPLICANT Name Ditta Environmental Consultants Inc. Fax 463 225-850U  Address (15 Grand Pd., 5t. 200 Phone (108) 825-850U  City San 1052  TYPE OF PROJECT  Well Construction Geotechnical Investigation Cathodic Protection General Ge	
APPLICANT Name	150n, (A J Zip 908/0
Name Delta Environmental (ensultants, Inc. Fax 468) 225.8506  Address 175 Grand Fd. 5.200 Phone 108 326-1366  City An Jose Zip Stage  TYPE OF PROJECT  Well Construction Geotechnical Investigation Cathodic Protection General Genera	
Address (15 Grend Fd., 1200 Phone (108) 326-1306 City	Ulta Environmental Consultainte Too
TYPE OF PROJECT  Well Construction	Fax( 408) 225-850(a
TYPE OF PROJECT  Well Construction	15 Grand Ed., St. 200 Phone (408) 826-1846
Well Construction  Cathodic Protection  Water Supply  Monitoring  PROPOSED WELL USE  New Domestic  Industrial  Ind	71.3032 Zip 95.12.9
Well Construction	PROJECT B. V
Cathodic Protection	· · · = - ·
PROPOSED WELL USE  New Domestic	lic Protection   General
PROPOSED WELL USE  New Domestic	
New Domestic   Irrigation	ing
New Domestic   Irrigation	D WELL LISE
Municipal   Remediation   Maximum   Mole Diameter   Maximum   Maxi	stic 🗆 Irrigation 🙃
DRILLING METHOD:  Mud Rotary	□ Remediation □ _ 4
DRILLING METHOD:  Mud Rotary	
Mud Rotary	D Other D
Mud Rotary	
DRILLING COMPANY  DRILLING COMPANY  DRILLER'S LICENSE NO.  WELL PROJECTS  98 5-90  Drill Hole Diameter  Casing Diameter  Surface Seal Depth 18.57 ft.  Surface Seal Depth 18.57 ft.  Number 5-98 5-90  S-90-75 ft  Number of Borings  Hole Diameter  in.  Depth  Maximum  Hole Diameter  in.  Depth  ft.  ESTIMATED STARTING DATE  10 121 0 5  ESTIMATED COMPLETION DATE  10 121 0 5	☐ Air Rotary ☐ Hollow Stem Auger
WELL PROJECTS \$96 \ 5-96  Drill Hole Diameter 10 in. Maximum 5-96 \ 12 ft.  Casing Diameter 4 in. Depth \$10 \ 5-96	
WELL PROJECTS \$96 \ 5-96  Drill Hole Diameter 10 in. Maximum 5-96 \ 12 ft.  Casing Diameter 4 in. Depth \$10 \ 5-96	COMPANY RS a FOLDER MARCH D. G.
WELL PROJECTS \$98 \cdot 5-96  Drill Hole Diameter 10 in. Maximum 5-98 \cdot 57ft.  Casing Diameter 4 in. Depth 5-16: 77ft.  Surface Seal Depth 5-18: 57ft.  Number 5-98 \cdot 5-96  F.  SOIL BORINGS  Number of Borings Maximum Hole Diameter in. Depth ft.  ESTIMATED STARTING DATE 10 121 0 5  ESTIMATED COMPLETION DATE 10 121 0 5	
Drill Hole Diarneter 10 in. Maximum Depth 31C 37ft.  Surface Seal Depth 18.57 ft. Number 5-96 5-96  SOIL BORINGS  Number of Borings Maximum Hole Diameter in. Depth ft.  ESTIMATED STARTING DATE 10 121 0 5	
Drill Hole Diameter 10 in. Maximum Depth 15 G. 17 ft. Surface Seal Depth 15 ft. Number 5-96 5-96 G. SOIL BORINGS Maximum Hole Diameter in. Depth ft.  ESTIMATED STARTING DATE 10 121 0 5  ESTIMATED COMPLETION DATE 10 121 0 5	JECTS 346 = 3-96 No Diagnoster 10 in Maximum 5-96=U2ft E. C
Surface Seal Depth 5-48.57 ft. Number 5-98 5-90 G.  SOIL BORINGS Number of Borings Hole Diameter in. Depth ft.  ESTIMATED STARTING DATE ESTIMATED COMPLETION DATE  10 121 0 5	No Diameter / U III. Waxiiiuiii
SOIL BORINGS  Number of Borings Hole Diameter in. Depth ft.  ESTIMATED STARTING DATE ESTIMATED COMPLETION DATE 10 21 0 5	Diameter - In. Depti - IV.
Number of Borings Maximum  Hole Diameter in. Depth ft.  ESTIMATED STARTING DATE 10 121 0 5  ESTIMATED COMPLETION DATE 10 121 0 5	Carrier (a wall)
Hole Diameterin. Depthft.  ESTIMATED STARTING DATE	IGS
ESTIMATED STARTING DATE 10/12/105 ESTIMATED COMPLETION DATE 10/12/105	· · · · · · · · · · · · · · · · · · ·
ESTIMATED COMPLETION DATE 10121105	ameterin. Depthft.
ESTIMATED COMPLETION DATE 10121105	STARTING DATE WOLTHAS
Approv	
Approv	A
•	
hereby agree to comply with all requirements of this permit and Alameda	e to comply with all requirements of this permit and Alameda
County Ordinance No. 73-68.	nance No. 73-68.
APPLICANT'S / A O A 1	S/ 4 0 4 1
SIGNATURE Wathy Suchender Date 10/6/05	TVAILU BULLING Date 10/4/05

Date 10/17/05

Revised: April 27, 2005

## **ZONE 7 WATER AGENCY**



100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 454-5728

#### DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE 25170 LOCATION OF PROJECT PERMIT NUMBER California Coordinates Source ft .Accuracy± CCN ft. CCE fit APN GENERAL. Name Putta Environmental (assulta) Phone / 458) \$20-1866 date. B. WATER SUPPLY WELLS TYPE OF PROJECT Well Construction Geotechnical Investigation grout placed by tremie. Cathodic Protection General Water Supply Contamination Monitoring Well Destruction is specially approved. PROPOSED WELL USE New Domestic П Irrigation Municipal п Remediation weilhead. Industrial п Groundwater Monitoring **GROUNDWATER** Dewatering **PIEZOMETERS** DRILLING METHOD: placed by tremie. Mud Rotary Air Rotary Hollow Stem Auger Cable Tool Direct Push @ Other practicable or 20 feet. D. Envienmental DRILLING COMPANY DRILLER'S LICENSE NO. -58 45.56 used in place of compacted cuttings. WELL PROJECTS Drill Hole Diameter tremie. Casing Diameter\_ Depth 🗲 🗲 WELL DESTRUCTION. See attached. Surface Seal Depth 5-18=57 ft. Number **SOIL BORINGS** Number of Borings Maximum Hole Diameter Depth **ESTIMATED STARTING DATE ESTIMATED COMPLETION DATE** Wyman Hono I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68. \_Date\_\_10/4/05 SIGNATUREC

FOR OFFICE USE

WELL NUMBER 3S/1E-7Q32 (S-5B), 3S/1E-7033 941-1309-035-00

#### PERMIT CONDITIONS

(Circled Permit Requirements Apply)

- A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
- Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects or drilling logs and location sketch for geotechnical projects.
- Permit is void if project not begun within 90 days of approval
- Minimum surface seal thickness is two inches of cement
- Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth
- An access port at least 0.5 inches in diarneter is required on the wellhead for water level measurements.
- A sample port is required on the discharge pipe near the
- MONITORING INCLUDING WELLS
  - Minimum surface seal thickness is two inches of cement grout
  - Minimum seal depth for monitoring wells is the maximum depth
- GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be
- CATHODIC. Fill hole above anode zone with concrete placed by
- SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after the completion of permitted work the well installation report including all soil and water laboratory analysis results.

Date 10/17/05



Zone 7 Water Agency 100 North Canyons Parkway Livermore, CA 94551

Phone: 925-454-5000 Fax: 925-454-5726 www.zone?water.com

ENCROA	CHMENT PERMIT
	Permit Information
77 51 - 10 - 4	rol 🔲 Water Supply PERMIT NO.: 70044
☑ Flood Contr	ATTN: HEATHER BUCKINHAM DELTA ENVIRONMENTAL CONSULTANTS, IN
Address:	175 BERNAL ROAD, SUITE 200
City/State/Zip:	SAN JOSE, CA. 95119
Telephone No.:	
Cell Phone No.:	
	HEATHER BUCKINHAM
WORK PERF	ORMED UNDER THIS PERMIT SHALL NOT COMMENCE BEFORE 10/17/05  AND SHALL BE COMPLETED BY 10/28/05
PLEASE R	READ ALL SECTIONS OF THIS PERMIT CAREFULLY AND KEEP IT AT THE WORKSITE.
ln c	compliance with your request, and subject to all the terms, conditions and restrictions written below or given as general or special provisions on any part of this form,  PERMISSION IS HEREBY GRANTED AS FOLLOWS:
Location:	ARROYO MOCHO (LINE G) AT HOPYARD ROAD
Permitted Use:	ACCESS TO THE FACILITY TO INSTALL 3 WELLS ON ACCESS ROAD FOR GROUND WATER MONITORING
	WATER MONITORING ASSOCIATED WITH ENVIRONMENTAL ASSESMENT FOR THE SHELL STATION
	AT 3790 HOPYARD ROAD AS DIRECTED BY THE ALAMEDA COUNTY ENVIRONMENTAL HEALTH
	Failure to complete work by said date shall void this permit unless a written extension is granted by Zone 7 Water Agency.
I. Gene	or referred to herein and made part hereof: ral Provisions, attached. ial Provisions, below.
·	Special Provisions
PERMITTEE SHA	LL KEEP ACCESS ROAD CLEAR AT ALL TIME FOR EMERGENCY AND INSPECTION VEHICLES
	SHALL KEEP ACCESS GATES LOCKED AT THE END OF THE DAY
Spot XIVIES I Emilia A	ON MEDICAL MODEOU OF STEU LOOKED FIT THE END OF THE BUILD
<u>*</u>	

PERMIT NO.: 70043

	Special Prov	isions (Continued)
	SEE A	TTACHMENT
-		
	· · · · · · · · · · · · · · · · · · ·	
		e pages if needed)
Provisions of does not hold sign: Hatte Print: Hatte Prin	I fee title, I have also obtained perm  I BUCKING OFFICIAL  I BUCK OFFICIAL  Issien is Granted  NSIKU	nission from the underlying property owners.  Date: 10/17/0 S  Title: Sturior Staff Glologi Staff  Deffet  Date: 10/3/05
	For Zone	7 Use Only
		DIOLIADO DAAREI
Work Completed	• •	RICHARD DANIEL
Expired	Inspection Date:	A ADDA A AMERICAN
	Zone 7 Engineer:	LARRY AKINSIKU
	Approved Completion Date:	10/15//05
Permit Fee:	ş WAIVED	Receipt Number:
Review Deposit:	\$	Receipt Number:
respection Deposit:	\$	Receipt Number:
Bond Required?	☐ Yes ☐ No	Bond Type: Cash Surety
Bond Amount:	\$	Receipt Number:
	☐ Yes ☐ No	If required, attach proof of insurance to permit.



100 NORTH CANYONS PARKWAY, LIVERMORE, CA 94551

PHONE (925) 454-5000

## SPECIAL PROVISIONS PERMIT NO. 70044

- 1. Permittee or any person/agency undertaking a construction activity that disturbs greater or equal than 1 (one) acre shall provide a copy of the Notice of Intent (NOI) that was sent to the State Water Resources Control Board for coverage under the Construction Activity Stormwater NPDES General Permit.
- 2. Permittee shall provide for erosion control measures which prevent site runoff from running over bank directly into a live stream or channel.
- 3. Permittee shall be responsible to repair all damages resulting from the permittee's use of flood control facilities. All damage shall be repaired to the satisfaction of Zone 7.
- 4. Permittee shall make such repairs within a reasonable time, as determined by Zone 7, after receipt of a written notice. In the event of permittee's failure to make such repairs within 14 calendar days, or otherwise specified, after receipt of written notice from Zone 7, it will be interpreted as the permittee authorizes Zone 7 to proceed to have said repairs made at permittee's expense and permittee shall pay the costs and charges, therefore, upon demand.
- 5. Permittee shall observe a maximum vehicular speed limit of 15 mph on all access roads within Zone 7 facilities. Dust control shall be provided. Working hours shall conform to City of Pleasanton ordinances. Zone 7 access entrance area must remain clear at all times for emergency vehicles' use. Permittee shall keep the access area in a neat, orderly and sanitary condition at all times. No disposal of any material in Zone 7 property is permitted.
- 6. In consideration of the granting of this permit, the permittee agrees that it shall hold harmless, defend and indemnify the County of Alameda, the Alameda County Flood Control and Water Conservation District, including Zone 7, its Board of Supervisors, the Directors of Zone 7, their officers, employees and agents (collectively "Indemnitees") from and against any and all claims, losses, damages, liabilities or expenses, including reasonable attorney fees, incurred in the defense thereof, for the death or injury to any person or persons (including employees of Permittee or COUNTY and/or District) or damage of any property (including property of Permittee or County and/or District) which arises out of or is any way connected with the work permitted herein (collectively "Liabilities") except where such Liabilities are proximately caused solely by the negligence or willful misconduct of any Indemnitee.

- 7. In consideration of the granting of this permit, the permittee agrees to name, at permittee's expense, the Alameda County Flood Control and Water Conservation District, including Zone 7, the members of its Board of Supervisors and the directors of Zone 7, and all their officials, officers, employees and agents ("Flood Control"), as additional insureds on one or more policies of insurance providing general liability and automobile liability coverage, issued by an insurer licensed to do business in the State of California, with minimum levels of coverage of \$500,000 individual/\$1,000,000 total, for liability for injury to persons, and \$100,000 for damage to property. Written proof of coverage must be provided before commencement of the permitted work. The proof must provide for 30 days written notice of cancellation to "Flood Control" before coverage is terminated.
- 8. Please notify Richard Daniel, Zone 7 inspector, at least 48 hours prior to all scheduled work at (925) 454-5084.
- 9. Return key to Zone 7.

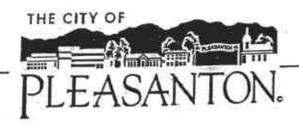
E:\larry\specialprovisions70044



## **PUBLIC WORKS PERMIT**

-Inspections must be requested 24 Hours prior to Starting Work-

Project Address		APN#	Applica	nt Environmental com
Project: ARROYO MOCHO	CANEL - ENCR TO DRI	LL WELL ON ZONE	7 PROP.	- 2
Owner		Contractor DELTA ENVIRO	ONMENTAL CONSULTA	ANT
		WELL DRILLIN	NG 48	5165
Scope of Work ENCR- This encroachment pe Hopyard and Arroyo M restoring any damage sidewalk, street, uno plan for city staff a pedestrian traffic.	rmit is for installa ocho Canel trail gat to public improveme derground utility, e	e 7 and 8. Contra nts including bu tc. Contractor sl	ng well on zone actor is response t not limited to hall submit traff	ible for curb, gutter, fic control
Comments			197	
	ption ENCROACHMENT PERMIT INSPECTION			Amount 50.00 110.00
Entered: KB	INSPECT PRIOR TO	BLIC WORKS TON 24 HRS O START OF 25) 931-5680		
visuals de la maria mand de Cita est l		d Considerations. This wa		
work to be performed to City of I y of Pleasanton Municipal Code,	Pleasanton Standard Details an Chapter 13.04, Encroachment	d Specifications. This pe	rmit is issued pursuant to	all provisions of the
Total Fees:	\$160.00		Payment:	\$160.00
Issued By:	Caushor Polo	H- Delle	Date of Issue: 1	7-0CT-2005
Engineering Divis	ion: (025) 024 5550	Rublic Works In	enections: (925) 931	ECON



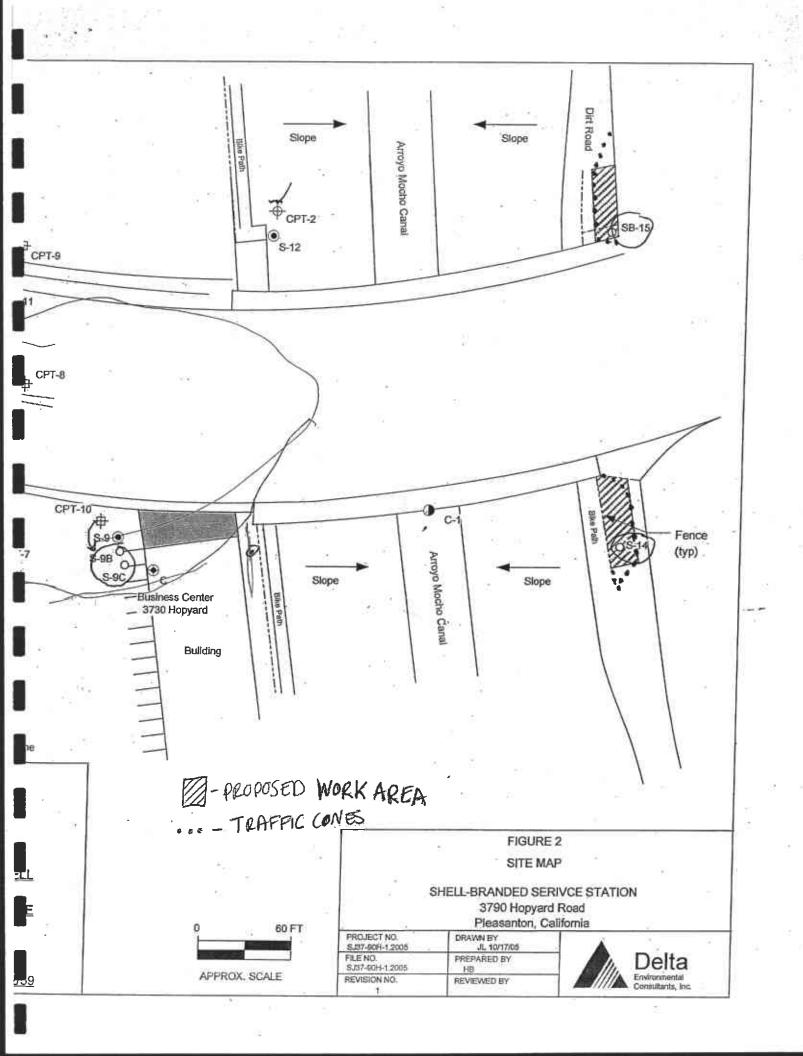
## CONDITIONS FOR ENCROACHMENT PERMIT

		CONDITIONS FOR ENCROACHMENT 1214
1.	<u> </u>	Work area shall be clean at the end of each working day. No construction materials may be stored in street or sidewalk overnight. City of Pleasanton streets shall not be used for staging areas. If excessive debris accumulates to the dissatisfaction of the homeowners, business owners or the City due to construction activities, then the contractor shall be required to clean roadway and sidewalk areas during working hours. All cleaning methods used for construction shall conform to the Urban Runoff Program.
2.		Work area shall be safe for vehicular, bicycle and pedestrian traffic. All driveways and other entrances to homes or businesses are to remain accessible at all times or other provisions for access must be made.
3.	_	Landscaping damaged during the project shall be repaired to the owner's satisfaction. In the case of City owned and maintain landscaping, contact Parks Department at (925) 931-5565.
4.	V	Traffic control shall conform to Cal-Trans standards.
5.		Contractor to submit site specific traffic control plan for pothole work and bore work. (Traffic control plan must be received 48 hours prior to lane closure).
6.	<u>~</u>	Concrete to be removed shall be removed to closest score mark outside work area. All replacement concrete must be doweled to existing concrete.
7.		Removal of 6" of pavement required where gutter is to be removed. 6" slot shall be re-paved with AC deep lift after new gutter is in place.
8.	81	Pipe or conduit that is installed in a trench over 5' in depth must be shored in accordance with applicable Cal-OSHA regulations.
9.		When permission is granted for directional boring, existing utilities must be "potholed" to establish bore profile.
10.		When permission is granted for directional boring in a landscaped area, the minimum bore depth shall be 42 inches, measured from the top of curb and not from the top of the landscape mound.
11.		Structural trench backfill shall consist of:  A) Standard trenches: 3" min. AC on 10" of CTB (2 Sack mix) for minor streets.  B) Standard trenches: 3" min. AC on 15" of CTB (2-sack mix) for major streets.  C) Rock wheel trenching: 2" of AC on flowable concrete trench backfill. (City approved mix)  Backfill in sidewalk and landscape areas shall conform to City Specifications.
12.	/	Permits may be required from other agencies having jurisdiction in area.
13.		Haul route per attached sheet.
14.		Permittee to call utility locating service (USA) at 1-800-642-2444 48 hours prior to beginning of work.
15.	<u> </u>	Work hours are from 8:00 a.m. to 5:00 p.m. Monday through Friday. Weekends, holidays and after-hours only upon written permission 48 hours in advance. (All overtime is subject to reimbursement).
16.	<u> </u>	The City Engineer or his authorized representative will be the sole judge of the quality of work, the interpretation of these conditions, and the interpretations of City specifications and/or City Details applicable to the project.
17.	<u>/</u>	Contractor is responsible for removal of all USA marking.
	7	8 T

## PUBLIC WORKS

## P. O. Box 520, Pleasanton, CA 94566-0802

PUBLIC WORKS		# FF	Inspection	Operation Service Center	77
Administration 200 Old Bernal Rd (925) 931-5650 (925) 931-5479	Engineering 200 Old Bernal Rd (925) 931-5650 (925) 931-5479	(025) 031-5650	205-F Main St. (925) 931-5680	3333 Busch Road	



## Attachment C

BLAINE FIELD DATA SHEETS
AND
LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY
DOCUMENTATION



#### Blaine Tech Services, Inc.

November 17, 2005

1680 Rogers Avenue San Jose, CA 95112-1105

Attn.: Michael Ninokata

Project#: BTS#051111-WC-1

Project: 98995842

Site: 3790 Hopyard Rd., Pleasanton, CA

Attached is our report for your samples received on 11/11/2005 18:10

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/26/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: mbrewer@stl-inc.com Sincerely,

milisar Brewer

Melissa Brewer Project Manager



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc. Attn.: Michael Ninokata

1680 Rogers Avenue San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

#### Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
S-5	11/11/2005 10:50	Water	1
S-5B	11/11/2005 09:47	Water	2
S-5C	11/11/2005 10:25	Water	3
S-9	11/11/2005 07:45	Water	4
S-9B	11/11/2005 11:35	Water	5
S-9C	11/11/2005 11:20	Water	6
S-14	11/11/2005 09:10	Water	7



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc. Attn.: Michael Ninokata

1680 Rogers Avenue San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s): 5030B Test(s): 8260B

 Sample ID: S-5
 Lab ID: 2005-11-0174 - 1

 Sampled: 11/11/2005 10:50
 Extracted: 11/14/2005 13:02

Matrix: Water QC Batch#: 2005/11/14-1B.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	2300	50	ug/L	1.00	11/14/2005 13:02	
Benzene	54	0.50	ug/L	1.00	11/14/2005 13:02	
Toluene	0.69	0.50	ug/L	1.00	11/14/2005 13:02	
Ethylbenzene	15	0.50	ug/L	1.00	11/14/2005 13:02	
Total xylenes	19	1.0	ug/L	1.00	11/14/2005 13:02	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/14/2005 13:02	
Methyl tert-butyl ether (MTBE)	8.3	0.50	ug/L	1.00	11/14/2005 13:02	
Surrogate(s)		1				
1,2-Dichloroethane-d4	95.9	73-130	%	1.00	11/14/2005 13:02	
Toluene-d8	92.0	81-114	%	1.00	11/14/2005 13:02	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc. Attn.: Michael Ninokata

1680 Rogers Avenue San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s):

5030B

Test(s):

8260B

Sample ID: S-5B

Lab ID:

2005-11-0174 - 2

Sampled: 11/11/2005 09:47 Extracted:

11/12/2005 11:35

Matrix:

Water

QC Batch#: 2005/11/12-1A.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/12/2005 11:35	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 11:35	
Toluene	ND	0.50	ug/L	1.00	11/12/2005 11:35	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 11:35	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 11:35	
tert-Butyl alcohol (TBA)	15	5.0	ug/L	1.00	11/12/2005 11:35	
Methyl tert-butyl ether (MTBE)	2.5	0.50	ug/L	1.00	11/12/2005 11:35	
Surrogate(s)						
1,2-Dichloroethane-d4	85.7	73-130	%	1.00	11/12/2005 11:35	
Toluene-d8	91.2	81-114	%	1.00	11/12/2005 11:35	



#### Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc. Attn.: Michael Ninokata

1680 Rogers Avenue San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s):

5030B

Test(s):

8260B

Sample ID: S-5C

Lab ID:

2005-11-0174 - 3

Sampled: 11/11/2005 10:25

Extracted:

11/12/2005 16:44

Matrix:

Water

QC Batch#: 2005/11/12-1A.71

pH: <2		:	13. 			
Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	55	50	ug/L	1.00	11/12/2005 16:44	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 16:44	
Toluene	0.67	0.50	ug/L	1.00	11/12/2005 16:44	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 16:44	]
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 16:44	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/12/2005 16:44	
Methyl tert-butyl ether (MTBE)	0.87	0.50	ug/L	1.00	11/12/2005 16:44	
Surrogate(s)						ļ
1,2-Dichloroethane-d4	99.5	73-130	%	1.00	11/12/2005 16:44	1
Toluene-d8	98.6	81-114	%	1.00	11/12/2005 16:44	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc. Attn.: Michael Ninokata

1680 Rogers Avenue San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s): 5030B Sample ID: S-9

8260B

Test(s): Lab ID:

2005-11-0174 - 4

Sampled: 11/11/2005 07:45 Extracted:

11/15/2005 23:20

Matrix: Water

QC Batch#: 2005/11/15-2A.64

Analysis Flag: L2, pH: <2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	100	ug/L	2.00	11/15/2005 23:20	
Benzene	ND	1.0	ug/L	2.00	11/15/2005 23:20	
Toluene	ND	1.0	ug/L	2.00	11/15/2005 23:20	
Ethylbenzene	ND	1.0	ug/L	2.00	11/15/2005 23:20	
Total xylenes	ND	2.0	ug/L	2.00	11/15/2005 23:20	
tert-Butyl alcohol (TBA)	25	10	ug/L	2.00	11/15/2005 23:20	
Methyl tert-butyl ether (MTBE)	220	1.0	ug/L	2.00	11/15/2005 23:20	
Surrogate(s)						
1,2-Dichloroethane-d4	103.4	73-130	%	2.00	11/15/2005 23:20	
Toluene-d8	105.2	81-114	%	2.00	11/15/2005 23:20	



#### Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc. Attn.: Michael Ninokata

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s):

5030B

Water

Test(s):

8260B

Sample ID: S-9B

Lab ID:

2005-11-0174 - 5

Sampled: Matrix:

11/11/2005 11:35

Extracted:

11/12/2005 12:52 QC Batch#: 2005/11/12-1A.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/12/2005 12:52	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 12:52	
Toluene	2.0	0.50	ug/L	1.00	11/12/2005 12:52	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 12:52	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 12:52	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/12/2005 12:52	
Methyl tert-butyl ether (MTBE)	23	0.50	ug/L	1.00	11/12/2005 12:52	
Surrogate(s)						
1,2-Dichloroethane-d4	95.6	73-130	%	1.00	11/12/2005 12:52	
Toluene-d8	93.4	81-114	%	1.00	11/12/2005 12:52	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc. Attn.: Michael Ninokata

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s):

5030B

Test(s):

8260B

Sample ID: S-9C

Lab ID:

2005-11-0174 - 6

Sampled: 11/11/2005 11:20

Extracted:

11/12/2005 13:17

Matrix: Water

LXII acieu.

QC Batch#: 2005/11/12-1A.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/12/2005 13:17	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 13:17	
Toluene	ND	0.50	ug/L	1.00	11/12/2005 13:17	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 13:17	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 13:17	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/12/2005 13:17	
Methyl tert-butyl ether (MTBE)	10	0.50	ug/L	1.00	11/12/2005 13:17	
Surrogate(s)						
1,2-Dichloroethane-d4	91.5	73-130	%	1.00	11/12/2005 13:17	
Toluene-d8	93.1	81-114	%	1.00	11/12/2005 13:17	



#### Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s):

5030B

Test(s):

8260B

Sample ID: S-14

Lab ID:

2005-11-0174 - 7

Sampled: 11/11/2005 09:10

Extracted:

11/14/2005 13:45

Matrix:

Water

QC Batch#: 2005/11/14-1B.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/14/2005 13:45	Q6
Benzene	ND	0.50	ug/L	1.00	11/14/2005 13:45	
Toluene	ND	0.50	ug/L	1.00	11/14/2005 13:45	
Ethylbenzene	ND	0.50	ug/L	1.00	11/14/2005 13:45	
Total xylenes	ND	1.0	ug/L	1.00	11/14/2005 13:45	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/14/2005 13:45	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	11/14/2005 13:45	
Surrogate(s)		İ				
1,2-Dichloroethane-d4	101.4	73-130	%	1.00	11/14/2005 13:45	
Toluene-d8	95.3	81-114	%	1.00	11/14/2005 13:45	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc. Attn.: Michael Ninokata

1680 Rogers Avenue San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

#### **Batch QC Report**

Prep(s): 5030B Method Blank

MB: 2005/11/12-1A.65-052

Water

Test(s): 8260B QC Batch # 2005/11/12-1A.65

Date Extracted: 11/12/2005 07:52

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/12/2005 07:52	
Gasoline [Shell]	ND	50	ug/L	11/12/2005 07:52	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/12/2005 07:52	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/12/2005 07:52	
Benzene	ND	0.5	ug/L	11/12/2005 07:52	
Toluene	ND	0.5	ug/L	11/12/2005 07:52	
Ethylbenzene	ND	0.5	ug/L	11/12/2005 07:52	
Total xylenes	ND	1.0	ug/L	11/12/2005 07:52	
Surrogates(s)					
1,2-Dichloroethane-d4	86.0	73-130	%	11/12/2005 07:52	
Toluene-d8	92.8	81-114	%	11/12/2005 07:52	

11/17/2005 12:45



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc. Attn.: Michael Ninokata

1680 Rogers Avenue San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

#### **Batch QC Report**

Prep(s): 5030B Method Blank

Water

Test(s): 8260B QC Batch # 2005/11/12-1A.71

Date Extracted: 11/12/2005 08:45

MB: 2005/11/12-1A.71-045

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/12/2005 08:45	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/12/2005 08:45	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/12/2005 08:45	
Benzene	ND	0.5	ug/L	11/12/2005 08:45	
Toluene	ND	0.5	ug/L	11/12/2005 08:45	
Ethylbenzene	ND	0.5	ug/L	11/12/2005 08:45	
Total xylenes	ND	1.0	ug/L	11/12/2005 08:45	
Surrogates(s)					
1,2-Dichloroethane-d4	104.6	73-130	%	11/12/2005 08:45	
Toluene-d8	107.0	81-114	%	11/12/2005 08:45	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

#### Batch QC Report

Prep(s): 5030B Method Blank

Water

Test(s): 8260B QC Batch # 2005/11/14-1B.69

Date Extracted: 11/14/2005 07:44

MB: 2005/11/14-1B.69-044

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/14/2005 07:44	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/14/2005 07:44	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/14/2005 07:44	•
Benzene	ND	0.5	ug/L	11/14/2005 07:44	
Toluene	ND	0.5	ug/L	11/14/2005 07:44	
Ethylbenzene	ND	0.5	ug/∟	11/14/2005 07:44	
Total xylenes	ND	1.0	ug/L	11/14/2005 07:44	
Surrogates(s)	ŀ	Ì			
1,2-Dichloroethane-d4	100.8	73-130	%	11/14/2005 07:44	
Toluene-d8	97.0	81-114	%	11/14/2005 07:44	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

#### **Batch QC Report**

Prep(s): 5030B Method Blank

MB: 2005/11/15-2A.64-036

Water

Test(s): 8260B QC Batch # 2005/11/15-2A.64

Date Extracted: 11/15/2005 19:36

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/15/2005 19:36	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/15/2005 19:36	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/15/2005 19:36	
Benzene	ND	0.5	ug/L	11/15/2005 19:36	
Toluene	ND	0.5	ug/L	11/15/2005 19:36	
Ethylbenzene	ND	0.5	ug/L	11/15/2005 19:36	
Total xylenes	ND	1.0	ug/L	11/15/2005 19:36	
Surrogates(s)					
1,2-Dichloroethane-d4	93.8	73-130	%	11/15/2005 19:36	
Toluene-d8	102.0	81-114	%	11/15/2005 19:36	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc. Attn.: Michael Ninokata

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

#### **Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike** 

Water

QC Batch # 2005/11/12-1A.65

LCS

2005/11/12-1A.65-099

Extracted: 11/12/2005

Analyzed: 11/12/2005 07:26

LCSD

Compound	Conc.	ug/L	Exp.Conc.	Recov	ery %	RPD	Ctrl.Lin	nits %	Fla	igs
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	20.7		25	82.8			65-165	20		
Benzene	21.8		25	87.2		ŀ	69-129	20		
Toluene	23.8		25	95.2			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	393		500	78.6			73-130			
Toluene-d8	465		500	93.0			81-114			



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc. Attn.: Michael Ninokata

1680 Rogers Avenue San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

#### **Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike** 

Water

QC Batch # 2005/11/12-1A.71

LCS

2005/11/12-1A.71-018

Extracted: 11/12/2005

Analyzed: 11/12/2005 08:18

LCSD

Compound	Conc.	ug/L	Exp.Conc.	Recov	rery %	RPD	Ctrl.Lin	nits %	Fla	igs
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE) Benzene Toluene	30.3 24.3 22.8		25 25 25	121.2 97.2 91.2			65-165 69-129 70-130	20 20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	468 502		500 500	93.6 100.4		:	73-130 81-114			



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

#### **Batch QC Report**

Prep(s): 5030B

LCS

LCSD

Test(s): 8260B

#### **Laboratory Control Spike**

2005/11/14-1B.69-002 2005/11/14-1B.69-023 Water

QC Batch # 2005/11/14-1B.69

Extracted: 11/14/2005 Extracted: 11/14/2005 Analyzed: 11/14/2005 07:02 Analyzed: 11/14/2005 07:23

Compound	Conc.	ug/L	Exp.Conc.	Recov	/ery %	RPD	Ctrl.Lim	nits %	Fla	ngs
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE) Benzene Toluene	26.1 23.5 24.8	26.5 23.9 24.5	25 25 25	104.4 94.0 99.2	106.0 95.6 98.0	1.5 1.7 1.2	65-165 69-129 70-130	20 20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	447 485	473 497	500 500	89.4 97.0	94.6 99.4		73-130 81-114			



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc. Attn.: Michael Ninokata

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

#### **Batch QC Report**

Prep(s): 5030B

LCS

Test(s): 8260B

#### **Laboratory Control Spike**

2005/11/15-2A.64-054

Water

QC Batch # 2005/11/15-2A.64

LCSD 2005/11/15-2A.64-015

Extracted: 11/15/2005 Extracted: 11/15/2005 Analyzed: 11/15/2005 18:54 Analyzed: 11/15/2005 19:15

Compound	Conc.	ug/L	Exp.Conc.	Recov	very %	RPD	Ctrl.Lirr	nits %	Fla	igs
03	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE) Benzene Toluene	22.0 21.3 22.6	20.9 21.0 21.9	25 25 25	88.0 85.2 90.4	83.6 84.0 87.6	5.1 1.4 3.1	65-165 69-129 70-130	20 20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	508 535	507 540	500 500	101.6 107.0	101.4 108.0		73-130 81-114			



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

## **Batch QC Report**

5030B Prep(s):

Test(s): 8260B

Matrix Spike (MS/MSD)

Water

QC Batch # 2005/11/12-1A.65

S-5B >> MS

Lab ID: 2005-11-0174 - 002

11/12/2005 09:00

MS:

MSD:

2005/11/12-1A.65-020

2005/11/12-1A.65-026

Extracted: 11/12/2005

Analyzed: Dilution:

Extracted: 11/12/2005

Analyzed:

1.00 11/12/2005 09:26

Dilution:

1.00

Spk.Level Recovery % Limits % Flags Сопс. Compound RPD MSD RPD MS MSD MSD Sample ug/L MS Rec. MS Methyl tert-butyl ether 23.1 22.3 2.49 25 82.4 79.2 4.0 65-165 20 69-129 20 Benzene 22.3 22.0 ND 25 89.2 0.88 1.4 20 0.0 70-130 Toluene 23.8 23.8 ND 25 95.2 95.2 Surrogate(s) 1,2-Dichloroethane-d4 391 386 500 78.2 77.2 73-130 453 460 500 90.6 92.0 81-114 Toluene-d8



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

#### **Batch QC Report**

Prep(s): 5030B Test(s): 8260B

Matrix Spike (MS/MSD)

Water

QC Batch # 2005/11/12-1A.71

MS/MSD

Lab ID: 2005-11-0145 - 011

Analyzed:

11/12/2005 10:02

MS:

2005/11/12-1A.71-002

Extracted: 11/12/2005

Dilution:

50.00

MSD:

2005/11/12-1A.71-029

Extracted: 11/12/2005

Analyzed:

11/12/2005 10:29

Dilution:

50.00

Compound	Conc.	uç	ı/L	Spk.Level	R	ecovery	%	Limits	s %	FI:	ags
Compound	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether Benzene Toluene	5040 1220 1160	5020 1140 1080	4100 ND ND	1250 1250 1250	75.2 97.6 92.8	73.6 91.2 86.4	2.2 6.8 7.1	65-165 69-129 70-130	20 20 20		
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	460 517	459 508		500 500	92.0 103.4	91.8 101.6		73-130 81-114			



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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1680 Rogers Avenue San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

#### Batch QC Report

Test(s): 8260B Prep(s): 5030B QC Batch # 2005/11/15-2A.64 Matrix Spike (MS/MSD) Water Lab ID: 2005-11-0174 - 004 S-9 >> MS 11/15/2005 22:38 Analyzed: MS: 2005/11/15-2A.64-038 Extracted: 11/15/2005 2.00 Dilution: MSD: 2005/11/15-2A.64-059 Extracted: 11/15/2005 Analyzed: 11/15/2005 22:59 Dilution: 2.00

Compound	Conc.	ug	/L	Spk.Level	R	ecovery	%	Limits	%	FI	ags
Composito	мѕ	MSD	Sample	ug/L	мѕ	MSD	RPD	Rec.	RPD	мѕ	MSD
Methyl tert-butyl ether Benzene Toluene	229 40.6 43.3	211 36.3 37.6	216 ND 0.54	50 50 50	26.0 81.2 85.5	-10.0 72.6 74.1	450. 11.2 14.3	65-165 69-129 70-130	20 20 20	М5	M5,R1
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	484 514	478 513		500 500	96.8 102.8	95.6 102.6		73-130 81-114		ļ. _	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc. Attn.: Michael Ninokata

1680 Rogers Avenue San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1

98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

#### Legend and Notes

#### **Sample Comment**

Lab ID: 2005-11-0174-7

Siloxane peaks were found in the sample which are not believed to be gasoline related. If they were to be quantified as gasoline, the concentration would be 92ug/L.

#### **Analysis Flag**

L2

Reporting limits were raised due to high level of analyte present in the sample.

#### **Result Flag**

М5

MS/MSD spike recoveries were below acceptance limits. See blank spike (LCS).

Q6

The concentration reported reflect(s) individual or discrete unidentified peaks not matching a typical fuel pattern.

R1

Analyte RPD was out of QC limits.

	10000000000000000000000000000000000000				
LAB: STL		SHELL	Chain Of Cu	stody Record	114504
Lab Hactification (if moreumary)	Shell Project Manager to			INCIDENT NUMBER (ES ONLY)	
<b>美可能的</b> 多数	D ENVIRONMENTAL STRVILES	Denis Brown		and the second s	1/4504 2 DATE: 11/11/05
Cay, Water Zw	Park was a second secon		. <b>A</b>	SAP OF CRIMT NUMBER (TS/CRIMT	Z DATE:
	O DAM' HOUSTON	2005-110	orgal		PAGE 1 or 1
SAME SELECTION S	200 0000	SITE ASORESS (Sweet, City and Mark	<i>""                                   </i>	######################################	
Blaina Toch Services	BTSS	3790 Hopyard Rd., P	leasanton, CA	T0600101257	
1680 Rogers Avenue, Sen Jose, CA 95112		ACP CALICONNIA TO ANAPORTOR PER W. D.	edward Pedag Ist.	EMAL)	CONSQUENT PROJECTION OSITIFUNC - )
PADEST CONTACT (Indepty of CF Augusts)	<u> </u>	Justin Link	[(40B)2Z4-	Harrison Commission of the Com	BIS*
Michael Ninokata RELITIESE   NA.	\$4443.	₹₹₩.			LAB USE CALY
408-573-0555 408-573-7771 TURNARIAND TIME (CALENDAR DAYS):	menokala jirkanalech com	THONK CALL	サレノノ		
☐ 10 DAYS ☐ 5 DAYS A 72 HOURS ☐ 48 HOURS	E ☐ 24 HOURS ☐ LESS TRIAN 14 HOURS		R	QUESTED ANALYSIS	
☐ 1.A - PRANÇOS RESCRET FORMAT ☐ INST AGENCY:					
COMS MISE CONSIGNATION HIGHEST H	HG1:EST per 90941KG: ALL		Military		FIELD NOTES:
	ECK BOX IN ECONS MOT WEEGED.	Furgoatte (92608) 18-5ppb RL, 26-5ppb RL, 7 (6) by (92608) 6269)			ContaineriPreservative
		- Sppb RL, - O.Sppb RL, O.Sppb RL, S) by (82608)	i ago		er PID Roadings
		- Sppb RL) - O.Sppb RL) 5) by (8280 8)	(\$28)		or Laboratory Rotes
			5 5	***************************************	
ige.	COIPT VERIFICATION REQUESTED E	8 E S S S S	2 2 2 2	4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
USE Field Sample Identification	DATE TIME BATRIX HO. OF	TPH - Gax, Purgandia (826 BTEX (82468) ATBE (80218 - 5ppb RL) ATBE (82508 - 0.5ppb RL) Oxygenatos (6) by (92608)	Methanol EDB & 1,2-DCA (67698) TBA (62508)		TEMPERATURE ON RECEIPT C
45	11/1/05 1050 H20 34K1	XXX			
- GBB	(947)				
S-5C			$+\sqrt{1+\sqrt{1+1}}$		
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<u> </u>					W. Company
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S-14	V OBV V				
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Canada and Canada and					
Gibingues von / Suphatogr	Hacquest by (signature)			Dally	- Gets
MAN CORE			(Sample Cold)	3 <u>11/11/05</u>	<u> </u>
16-11/11/91	Accident Commen		and the same of th	11/1/67	18/0
disposalty (Sample   1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1	Resolvator (Consider)	TO Bu	A-	11/1/1/1	2015



#### Delta Env. Consultants San Jose

September 27, 2005

175 Bernal Rd., Suite 200 San Jose, CA 95119

Attn.:

Lee Dooley

Project:

98995842

Site:

3790 Hopyard Road, Pleasanton

Attached is our report for your samples received on 09/13/2005 12:06

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 10/28/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: mbrewer@stl-inc.com Sincerely,

nelissa Brewer

Melissa Brewer

Project Manager



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Lee Dooley

175 Bernal Rd., Suite 200 San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: 98995842

Received: 09/13/2005 12:06

Site: 3790 Hopyard Road, Pleasanton

#### Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
CPT-5A@65`	09/09/2005 16:20	Water	1
CPT-5A@78`	09/09/2005 17:30	Water	2



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Lee Dooley

175 Bernal Rd., Suite 200 San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: 98995842

Received: 09/13/2005 12:06

Site: 3790 Hopyard Road, Pleasanton

Prep(s):

5030B

Test(s):

Sample ID: CPT-5A@65

Lab ID:

2005-09-0325 - 1

8260B

Sampled:

09/09/2005 16:20

Extracted:

9/20/2005 15:02

Matrix:

Water

QC Batch#: 2005/09/20-1A.66

pH: <2

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	09/20/2005 15:02	
Benzene	0.84	0.50	ug/L	1.00	09/20/2005 15:02	
Toluene	ND	0.50	ug/L	1.00	09/20/2005 15:02	
Ethylbenzene	1.4	0.50	ug/L	1.00	09/20/2005 15:02	
Total xylenes	2.8	1.0	ug/L	1.00	09/20/2005 15:02	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	09/20/2005 15:02	
Methyl tert-butyl ether (MTBE)	1.4	0.50	ug/L	1.00	09/20/2005 15:02	
Surrogate(s)		ļ				
1,2-Dichloroethane-d4	94.9	73-130	%	1.00	09/20/2005 15:02	
Toluene-d8	98.5	81-114	%	1.00	09/20/2005 15:02	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Lee Dooley

175 Bernal Rd., Suite 200 San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: 98995842

Received: 09/13/2005 12:06

Site: 3790 Hopyard Road, Pleasanton

Prep(s): 5030B

Sample ID: CPT-5A@78

SA@/8

Sampled: 09/09/2005 17:30

Matrix: Water

pH: <2

Test(s): 8260B

Lab ID: 2005

2005-09-0325 - 2

Extracted:

9/20/2005 14:34

QC Batch#: 2005/09/20-1A.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	09/20/2005 14:34	
Benzene	ND	0.50	ug/L	1.00	09/20/2005 14:34	
Toluene	ND	0.50	ug/L	1.00	09/20/2005 14:34	
Ethylbenzene	ND	0.50	ug/L	1.00	09/20/2005 14:34	
Total xylenes	ND	1.0	ug/L	1.00	09/20/2005 14:34	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	09/20/2005 14:34	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	09/20/2005 14:34	
Surrogate(s)						
1,2-Dichloroethane-d4	95.6	73-130	%	1.00	09/20/2005 14:34	
Toluene-d8	97.7	81-114	%	1.00	09/20/2005 14:34	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Lee Dooley

175 Bernal Rd., Suite 200 San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: 98995842

Prep(s): 5030B

Method Blank

MB: 2005/09/20-1A.66-045

Received: 09/13/2005 12:06

Site: 3790 Hopyard Road, Pleasanton

# ### Test(s): 8260B Water | QC Batch # 2005/09/20-1A.66

Date Extracted: 09/20/2005 10:45

	at a final contract of			144 144 144 144 144 144 144 144 144 144	
Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	09/20/2005 10:45	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	09/20/2005 10:45	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	09/20/2005 10:45	
Benzene	ND	0.5	ug/L	09/20/2005 10:45	
Toluene	ND	0.5	ug/L	09/20/2005 10:45	
Ethylbenzene	ND	0.5	ug/L	09/20/2005 10:45	
Total xylenes	ND	1.0	ug/L	09/20/2005 10:45	
Surrogates(s)			ļ		
1,2-Dichloroethane-d4	100.0	73-130	%	09/20/2005 10:45	
Toluene-d8	98.2	81-114	%	09/20/2005 10:45	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Lee Dooley

175 Bernal Rd., Suite 200 San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: 98995842

Received: 09/13/2005 12:06

Site: 3790 Hopyard Road, Pleasanton

#### **Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike** 

Water

QC Batch # 2005/09/20-1A.66

LCS 2005/09/20-1A.66-018

Extracted: 09/20/2005

Analyzed: 09/20/2005 10:18

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recov	ery %	RPD	Ctrl.Lin	nits %	Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE) Benzene Toluene	25.0 26.0 28.6		25 25 25	100.0 104.0 114.4			65-165 69-129 70-130	20 20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	454 515		500 500	90.8 103.0			73-130 81-114			



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Lee Dooley

175 Bernal Rd., Suite 200 San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: 98995842

Received: 09/13/2005 12:06

Site: 3790 Hopyard Road, Pleasanton

		Batch QC Repor	t		
Prep(s): 5030B					Test(s): 8260B
Matrix Spike ( N	IS/MSD)	Water	# <sub>1</sub> .**	QC Bato	:h # 2005/09/20-1A.66
MS/MSD	erina di Santa di Santa di Santa di Santa di Santa di Santa di Santa di Santa di Santa di Santa di Santa di Sa Santa di Santa		Lab ID:	2005-09-0211 - 012	
MS: 2005/09/2	20-1A.66-039 E	Extracted: 09/20/2005		Analyzed:	09/20/2005 13:39
				Dilution:	4.00
MSD: 2005/09/2	20-1A.66-007 E	Extracted: 09/20/2005		Analyzed:	09/20/2005 14:07
	e di Merce di Lagoriani. La companya di Lagoriani			Dilution:	4.00

Compound	Conc.	Conc. ug/L		Spk.Level	R	ecovery	%	Limit	s %	Flags		
	MS	MSD	Sample	ug/L	мѕ	MSD	RPD	Rec.	RPD	MS	MSD	
Methyl tert-butyl ether	377	390	274	100	103.0	116.0	11.9	65-165	20			
Benzene	93.7	102	ND	100	93.7	102.0	8.5	69-129	20			
Toluene	111	116	ND	100	111.0	116.0	4.4	70-130	20			
Surrogate(s)												
1,2-Dichloroethane-d4	445	461	j	500	89.0	92.2		73-130				
Toluene-d8	537	526	1	500	107.4	105.2		81-114				

#### STL-San Francisco

## **EQUIVA Services LLC Chain Of Custody Record**

97426

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	)484-1919 (925)484-1095 fax	Памана	sta <sub>rii</sub>		20	V.	) -	•	/ (		O	) >	Sec.	<b>John State</b>						gic 6 cei int 30 m	İ	1	1	T		PAGE
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41,00	Dooley	1.46%				- SA	MPLE	r na	WG(S	Pin	()c													1	VO US	IE OMLY
	) 224-4724  468) 223-8666	doceyyaldi.	atriv.com	1		He	aine	r Bu	ckin	ghar	/i			v.v.v.v.		**********	***********	······································	*****					<u> </u>	**********	
	TURNARQUED INE (BUSINESS DAVIS)  10 DAYS Ø 5 DAYS   77 HOURS   40 HÜRZE HUSIKS   U.SS THAN 24 HOURS   REQUE												JEST	ED,	inai	YS)	S.									
Пŧ	A - RANÇON KERCINI FRANÇAT 🔲 UST AGEN	er:					Ī	******		-		T	Ī	<u> </u>	i	T	<b>3</b>			ж.:	î			Ī	T	
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SPEC	CIAL INSTRUCTIONS OR NOTES:	ORCKO	X IF EOD	IS NEEDED	· (z)	1		5		939			_	3	###		aTEX / MTBE (70-15)	2	Ê	(AS:N:	ļ	per Shaff's Diap. 18	2	# 10 m	8	Container/Presorvative
						***		do R	· O.Sppb #1.	y (825			32808	iosi Re	¥.		×	3	200	5	<u></u>	1	actab		100	or PIO Readings or Laboratory Notes
						Purgestille		8	10	(4) b)	8		Š	dract	enzie			2	200	Gust	100	CTUB	an ex	OCON.	9	1
						Gas, I		(8021	(828)	faler	2		\$ 1,2-5CA (8260B)	5D15 Extraction for	His log	4:8.1	NOC?	ğ	TFH.	Fixed	in a	2020	· Diasei, Extractable		9225	2
LAN USE ONLY	Field Sample Identification	SAMPLII DATE	VG TIME	MATER	SME CONT.	I I	# EX	MTDE (80219 - Sppb RL)	MTBE (8260E	Oxygenates (5) by (82603)	Eihand (82606)	18.A	803	4	Voca Haiogenziedià romatti (80218)	TRPH 14:8.11	Vapor VOCs	Vapor VOCs Pull List 170-45)	Vapor TPH (ASTR Malen)	Vapor Pixed Gases	Test for Disposal   48	Fotal Lead BOTOB	E .		WTHE ISOCOLI CONTINUEDON.	TEMPERATORE OF RECEIPT CO
	CPT-SAGGS	9/9/2005	4:20	g.w	5	X	X		х		770C 3170	х							ĺ						*****	
Tirl	CIT-SA078"	9/9/2005	6:30	D.W.	5	х	Х		X			X						A								
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4	a Hay Kay	1/-		fictorised to	(Chistoniae)	And the second	L		المارس مورسود مورسود	A CONTRACTOR OF THE PARTY OF TH		-	t	1				$\neg$	Sale:	(A	<del>/</del>	77	14	君	lan:	12 21
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	Willes White with the horizon Comes & The Victims						***********	**********			<del>~~~~~</del>		*******	<del></del>	*********	*********	**********	-	*****							WARRED SAME FORM

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Project # 05/111-	ال ال ال ال ال ال ال ال ال ال ال ال ال ا	111/05	_Client Shell	
Site <u>3790</u>	Hopyard	RD Ple	easanton	

				Thickness	Volume of				
	Well		Depth to	of	Immiscibles			Survey	i
	Size	Sheen /	Immiscible	Immiscible	Removed	Depth to water	Depth to well		İ
Well ID	(in.)	Odor	Liquid (ft.)	Liquid (ft.)	(ml)	(ft.)	bottom (ft.)	or <b>(O</b> C	•
5-5	3					22.17	35.65		
S.50	4					43.79	61.53		
S-5C	4					43.65	1 <del>3</del> 4.45	76.76	
5-9	$\mathcal{S}$					20.41	34.45		
59B	4	:				45,25	59.37		manager of the strong
59B 59C 5-14	4					I	78.05		
5-14	4					17.63	24.63	J	
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BTS #: <b>&amp;</b> <	-11 11 -	سجور		Site: 3	790	Hoova	no hak	D. Pleasantar				
Sampler: •••	e			Date: 1	/11	105						
Well I.D.:	S-5			Well Di	ameter:	2 3	4	6 8				
Total Well	Depth (TD	): る	5.65	Depth to	Water	(DTW):	22	-17				
Depth to Fr	ee Product	•		Thickness of Free Product (feet):								
Referenced	to:	P(Q)	Grade	D.O. M	eter (if	req'd):		YSI HACH				
DTW with	80% Rech	arge [(H	eight of Water	Column	x 0.20)	+ DTW]	: 24	1.87				
Purge Method:	Bailer Disposable B Positive Air I Electric	ailer Displaceme		Waterra Peristaltic	Vell Diamete	Sampling I	Method: Other:	Baller Disposable Bailer Extraction Port Dedicated Tubing				
1 Okse Volume	Gals.) XSpeci	S ified Volum	$\frac{1500}{\text{Calculated Vo}} = \frac{1500}{\text{Calculated Vo}}$	Gals.	1" 2" 3"	0.04 0.16 0.37	4" 6" Other	0.65 1.47 radius <sup>2</sup> * 0.163				
Time	Temp (°F)	рН	Cond. (mS or 🐼)	Turb (NT	-	Gals. Rer	noved	Observations				
1043	659	7.0	1755	146	_	5		odor				
1644	6GA	6.9	163]	105		(3)		1				
1045	66.7	6.9	1631	9		15		υ				
Did well de	water?	Yes	N <sub>0</sub>	Gallons	actuall	y evacuat	ed:	15				
Sampling D	Pate: # / to	105	Sampling Tim	e: 10E	ŠO.	Depth to	Wate	1:28.63 e depatr				
Sample I.D	: 5-5			Laborat	ory:	SKAL O	her					
Analyzed for	or: TP#	ATEX	SBE TPH-D	Other:	7 <b>.</b>	A						
EB I.D. (if	applicable	 ):	@ Time	Duplica	te I.D.	(if application	able):					
Analyzed for	or: TPH-G	BTEX	MTBE TPH-D	Other:								
D.O. (if req	'd): P	re-purge:		$^{ m mg}/_{ m L}$	P	ost-purge:		mg/I				
O.R.P. (if r	eq'd): P	re-purge:		mV	P	ost-purge:		mV				

Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (800) 545-7558

 $\lambda$ .

BTS#: oc	Site: 3710 Hayrand Rel, I keasan ton											
Sampler: 6	٠			Date: 1	1/0	165						
Well I.D.: .	5.51	B		Well Dia	meter:	2 3,	<b>B</b>	6 8				
Total Well I	Depth (TD	): 61	.53	Depth to	Water	(DTW):	43	. 79				
Depth to Fre	e Product	:		Thickness of Free Product (feet):								
Referenced	to:	<b>16</b> 9c	Grade	D.O. Me	ter (if 1	req'd):	7	SI HACH				
DTW with 8	30% Recha	rge [(H	eight of Water	Column	x 0.20)	+ DTW]:	:47	:34				
Purge Method:	Bailer Disposable Ba Positive Air D Electric <b>Electric</b>	ailer Displacemen	nt Extrac Other	Waterra Peristaltic etion Pump	ell Diameter 1"	Sampling N	Method: Other: Well Dis	Disposable Bailer Extraction Port Dedicated Tubing  ameter Multiplier 0.65				
1 Case Volume	Sals.) X Speci:	fied Volum	es Calculated Vo	Gals. olume	2" 3"	0.16	6" Other	1.47 radius <sup>2</sup> * 0.163				
Time	Temp (°F)	рН	Cond. (mS or (ms)	Turbio (NTU	_	Gals. Ren	noved	Observations				
0939	65.5	7.8	3299	105	-	12						
0941	65A	7.7	3810	98		23		· · · · · · · · · · · · · · · · · · ·				
0943	660	7.7	3849	46		35						
				<u> </u>	**							
Did		15	<u> </u>	Gallona	actuall	y evacuat	ed.	35				
Did well de			<u> </u>					44.28				
Sampling D			Sampling Tim					1 1. ~ 6				
Sample I.D.	: 5, 2	<u>50                                    </u>		Laborato			her					
Analyzed for	or: 1941-05	PIEX-	MTB2 TPH-D	Other:	TBM	<u> </u>		<u>.                                    </u>				
EB I.D. (if a	applicable)	):	@ Time	Duplicat	te I.D.	(if applica	able):					
Analyzed fo	or: TPH-G	BTEX	MTBE TPH-D	Other:								
D.O. (if req	'd): P	re-purge:		mg/ <sub>L</sub>	P	ost-purge:		mg/I				
O.R.P. (if re	eq'd): P	re-purge:		mV	P	ost-purge:		mV				

BTS#: 🗅	51111-	ue-1		Site: 3	A0	Hopyard !	11, Pleasanton		
Sampler: 6				Date: 11/11/05					
Well I.D.:	5-50			Well Diameter: 2 3 6 6 8					
Total Well	Depth (TD)	): 76.	76	Depth to Water (DTW): 43.65					
Depth to Fr	ee Product	•		Thicknes	s of Fr	ee Product (fee	t <b>)</b> :		
Referenced		€€C	Grade	D.O. Met	er (if ı	req'd):	YSI HACH		
DTW with	80% Recha	rge [(H	eight of Water	Column x	0.20)	+DTW]: 50	5. <del>27</del>		
Purge Method:	Bailer Disposable Ba Positive Air E Electric Suga	Displaceme	nt Extrac Other			Sampling Method: Other:	Disposable Bailer Extraction Port Dedicated Tubing		
215 1 Case Volume	Gals.) X	3 fied Volum	= 64.5 nes Calculated Vo	Gals.	ll Diameter 1" 2" 3"	Multiplier Well D 0.04 4" 0.16 6" 0.37 Other	iameter Multiplier 0.65 1.47 radius <sup>2</sup> * 0.163		
Time	Temp (°F)	рН	Cond. (mS or 🕬)	Turbid (NTU	-	Gals. Removed	Observations		
1010	64.5	28	4564	23	l	22			
10185	649	7.7	4605	85	·	44			
1020	65.2	7-7	4585	74		65			
	65.2								
Did well de	ewater?	Yes (	No	Gallons a	actuall	y evacuated:	65		
Sampling I	Date: 11/1	1/65	Sampling Tim	ie: (02°	5	Depth to Water	r: 43.86		
Sample I.D	0: 5-	50		Laborato		SPL Other_			
Analyzed f	or: TPP	<b>E</b> EX	MUBE TRH-D	Other:	TB	A			
EB I.D. (if	applicable	):	@ Time	Duplicat	e I.D.	(if applicable):			
Analyzed f	for: TPH-G	BTEX	мтве трн-D	Other:					
D.O. (if red	q'd): P	re-purge:		mg/L	P	ost-purge:	mg/		
O.R.P. (if	rea'd): P	re-purge:		. mV	P	ost-purge:	mV		

					<del></del>	_		
111-600	:-1		Site: 37	90 1	logrand	l Rc	Hassandor	2_
Z			l		, , ,			
4319	- S	9	Well Diameter: 2 (3) 4 6 8					
Depth (TD	): 34	1.45	Depth to Water (DTW): 26.41					
ee Product	:		Thickne	ss of Fr	ee Produc	t (fee	t):	
to:	<b>100</b> 0	Grade	D.O. Me	eter (if 1	req'd):		YSI HACH	
30% Recha	arge [(H	eight of Water	Column	x 0.20)	+ DTW]:	2	3.22	
Positive Air E	Displacemen yersible			/ell Diameter 1"		Other:	Disposable Bailer Extraction Port Dedicated Tubing    Multiplier.	
Jals.) X	fied Volum	es = 15-6 Calculated Vo	Gals.	2" 3"	0.16 0.37	6" Other	1.47 radius <sup>2</sup> * 0.163	
Temp (°F)	1	Cond. (mS or (AS)	(NTI	Us)			Observations	
					11			
1			111	-	16		ما	
				• •				
				•		1		
water?	Yes	<u></u>	Gallons	actuall	y evacuate	d:	6	
ate:    /(	11/05	Sampling Tim	e: 674	5	Depth to	Water	:: 23.00	
: puto	9-	3-9	Laborate	ory:	Oth	er		
or; TPA	RTEX	MATBE TPH-D	Other:	TB/	4			
applicable)	):	@ Time	Duplica	te I.D.	(if applica	ble):		
or: TPH-G	BTEX	MTBE TPH-D	Other:					
'd): P	re-purge:		mg/L	P	ost-purge:			<sup>mg</sup> /L
eq'd): P	re-purge:		mV	P	ost-purge:		A-V	mV
	Depth (TD ee Product to:  30% Recha Bailer Disposable B Positive Air I Electric Substitute  Gals.) X Speci  Temp (°F)  66.0  66.5  water?  ate: 1/  applicable or: TPH-G  'd): P	Depth (TD): 24 Depth	Depth (TD): 34.45  Depth (TD): 34.45  Depth (TD): 34.45  Depth (TD): 34.45  Depth (TD): 34.45  Depth (TD): 34.45  Depth (TD): 34.45  Depth (TD): 34.45  Depth (TD): 34.45  Depth (TD): 34.45  Depth (TD): 34.45  Depth (TD): 34.45  Depth (TD): 34.45  Depth (To Grade of Cond. o	Date: 1.  Well Dia Depth (TD): 24.45  Depth (TD): 24.45  Depth to	Well Diameter: Depth (TD): 34.45 Depth to Water Depth (TD): 34.45 Depth to Water Depth (TD): 34.45 Depth to Water Thickness of Fi to: FC Grade D.O. Meter (if in its construction of the interval of the inter	Date: 11/11/65  Well Diameter: 2 3  Depth (TD): 24.45  Depth to Water (DTW):  Thickness of Free Product  to: Grade D.O. Meter (if req'd):  Bailer Peristaltic  Extraction Pump  Other  Temp (°F) pH (mS or (A)) (NTUs) Gals. Rem  66.0 6.8 2613 [68 6  66.2 6.8 2698 63 1]  66.5 69 2736 111 [6]  Water? Yes Gallons actually evacuate ate: 11/11/05 Sampling Time: 6745 Depth to other.  Date: 11/11/65  Depth to Water (DTW):  Thickness of Free Product  Thickness of Free Product  Thickness of Free Product  Thickness of Free Product  Thickness of Free Product  Thickness of Free Product  Thickness of Free Product  Thickness of Free Product  Thickness of Free Product  Thickness of Free Product  Thickness of Free Product  Thickness of Free Product  Thickness of Free Product  Thickness of Free Product  To applicable to the Water (DTW):  Thickness of Free Product  T	Date: 11/11/05  Well Diameter: 2 3 4  Depth (TD): 34.45  Depth to Water (DTW): 26  Depth to Water (DTW): 26  Depth to Water (if req'd): 36  Depth to Water	Date: 11/11/05  Well Diameter: 2 (3) 4 6 8  Depth (TD): 34.45  Depth to Water (DTW): 29.47  Disposable Bailer  Dispos

		74444	o Well Me	HI CALLITO	TEXTE DILLIE				
BTS#: 6	s//// -	we. I		Site: 3790	Hoppard Rd	Pleasanton			
Sampler: W	re			Date: 11/11	105				
Well I.D.:	PAW TX	9c	5-9B	Well Diamete	er: 2 3 <b>3</b>	6 8			
Total Well I	Depth (TD	): 59.	<b>3</b> 7	Depth to Water (DTW): 45.25					
Depth to Fro	ee Product	:		Thickness of	Free Product (fee	et):			
Referenced	to:	Øс	Grade	D.O. Meter (i	f req'd):	YSI HACH			
DTW with 8	80% Recha	ırge [(H	eight of Water	Column x 0.2	0) + DTW]: 4	8.07			
Purge Method:	Bailer Disposable Bailer Positive Air E Electric Subm	Displac <del>e</del> me	nt Extrac Other	Waterra Peristaltic ction Pump	Sampling Method:	Disposable Bailer Extraction Port Dedicated Tubing			
9.2 (0 1 Case Volume	Gals.) XSpeci	Sied Volum	= 27.6 ces Calculated Vo	Galsolume	eter Multiplier Well 0.04 4" 0.16 6" 0.37 Othe	Diameter   Multiplicr   0.65   1.47   radius <sup>2</sup> * 0.163			
Time	Temp (°F)	рН	Cond. (mS or 48)	Turbidity (NTUs)	Gals. Removed	Observations			
G759	655	8,0	1893	54	10	Clear			
0800	well	den	patered	Q No.	2 gallor				
<del>080&gt;</del>									
1133	65.3	8.3	2099	84					
					,				
Did well de	water?	<b>E</b>	No	Gallons actua	ally evacuated:	13			
Sampling D	Date: [1/11	105	Sampling Tim	ne: //35	Depth to Wate	er:54.300 deput			
Sample I.D.		96	5.9B	Laboratory:	<b>₫</b> L Other_				
Analyzed for	or: Temg	<b>ETEX</b>	MOBE TPH-D	Other: 76	<b>*</b>				
EB I.D. (if	applicable)	):	@ Time	Duplicate I.I	). (if applicable):				
Analyzed for			MTBE TPH-D	Other:					
D.O. (if req	'd): P:	re-purge:		mg/L	Post-purge:	ing			
O.R.P. (if re	eq'd): Pi	re-purge:		mV	Post-purge:	mV			

BTS#: C	551111-	WC-1		Site: 3	7901	Hoppord Rd.	Pleasanter	
Sampler: L	~~~			Date: 1		•		
Well I.D.	MW-0	13		Well Diameter: 2 3 (4) 6 8				
Total Well	Depth (TD	): <b>7</b> 6	(DS)	Depth to Water (DTW): 42.87				
Depth to Fr	ree Product			Thickne	ss of Fi	ree Product (fe	eet):	
Referenced	to:	P <b>Ø</b> C	Grade	D.O. Me	eter (if 1	req'd):	YSI HACH	
DTW with	80% Rech	arge [(H	leight of Water			,	19.91	
Purge Method:	Bailer Disposable Ba Positive A <u>ir</u> I Electric Subm	Displacemen		Waterra Peristaltic tion Pump	1-11 Fliampie	Sampling Method Othe	Disposable Bailer Extraction Port Dedicated Tubing	
22.4 (c) 1 Case Volume	·	3 ified Volum		_ Gals.	Vell Diameter 1" 2" 3"	0.04 4 0.16 6 0.37 Ott	0.65 1.47	
Time	Temp (°F)	рН	Cond. (mS or 😂)	Turbi (NT)	- 1	Gals. Removed	d Observations	
0814	650	7.7	4221	5.		23	Clear	
0815	well	dew	atored c	@~	25	gallors	>	
1118	64,6	7.6	4214	95	<i>y</i>	7		
	!	'	1					
Did well de	water?		No	Gallons	actuall	y evacuated:	25	
Sampling D	· · · · · · · · · · · · · · · · · · ·		Sampling Time	e: 1120	3	Depth to Wa	ter: 51.45 edgeha	
Sample I.D.	.÷posi-	9B	5-96	Laborate		&TL Other_	<u>-</u>	
Analyzed fo	or: prh-G	BTEX		Other:	TBA	-		
EB I.D. (if	applicable)	): 	@ Time	Duplica	te I.D.	(if applicable)	):	
Analyzed for	or: TPH-G	BTEX	MTBE TPH-D	Other:			s 1	
D.O. (if req	ı'd): P	re-purge:		<sup>mg</sup> /L	P	ost-purge:	mg/L	
O.R.P. (if re	ea'd): P	re-purge:		mV	P	Post-purge:	mV	

BTS #: 05	51116 u	se-1	4 4 100 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0	Site: 3790 Hapyard Rel, Pleasanton					
Sampler: L				Date: 11/11/65					
Well I.D.:	3-14	1		Well Diameter: 2 3 4 6 8					
Total Well	Depth (TD	): 2 <sup>L</sup>	1-63	Depth to Water (DTW): 17.63					
Depth to Fr	ee Product			Thickne	ess of Fi	ree Produc	t (feet	t):	
Referenced	to:	Ŵ	Grade	D.O. M	eter (if	req'd):	-	YSI HACH	
DTW with	80% Recha	urge [(H	eight of Water	Column	x 0.20)	+ DTW]:		1.03	
Purge Method:	Bailer Disposable Bailer Positive Air I Electric Sport	Displaceme	nt Extrac / Other	Waterra Peristaltic tion Pump	<u>Weil Diamete</u> 1" 2"	n Multiplier 0.04 0.16	Other: Well D 4" 6"	Batter Disposable Bailer Extraction Port Dedicated Tubing	
1 Case Volume		fied Volum	•	olume	3"	0.37	Other	radius* * 0.163	
Time	Temp (°F)	рН	Cond, (mS or 🕰)	Turb (NT	•	Gals. Rem	oved	Observations	
0358	634	7.6	4270	18	9	5		dean	
0859	634	7.3	4516	2	6	10		1	
0900	633	7.2	4467	34	1	14		J.	
Did well de	water?	Yes (	No	Gallons	actuall	y evacuate	ed:	14	
Sampling I	Date: 11/11	105	Sampling Tim	ie: 041	0	Depth to	Water	r: 19.00	
Sample I.D	.: 8-14	-1		Labora	tory:	ETB ON	ier		
Analyzed f	or: (TPH-G	BTEX	мтве <i>Т</i> РН-D	Other:	7BA	<u></u>		<u> </u>	
EB I.D. (if	applicable	):	@ Time	Duplica	ate I.D.	(if applica	ble):		
Analyzed f	or: TPH-G	BTEX	мтве трн-D	Other:			<del></del>		
D.O. (if rec	(d): P	re-purge:		mg/L	F	Post-purge:		mg/ <sub>1</sub>	
O.R.P. (if r	ea'd): P	re-purge:		mV	F	Post-purge:		mV	

## WELL GAUGING DATA

Proje	ect#_ <i>051</i> .	108-PC1	Date _	11/8/05	Client	Shell		
Site	3790	Hopyard	Rd.	Pleasan ton			<u>:</u>	

Well ID	Well Size (in.)	Sheen / Odor	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or FOC	
S-5B	4				43.71	61.26	1	
55C 5-9B 5-9C S-14	۴				43.69	76.38		
5-9B	Y				43.12	58.71		
5-96	ų				40.80	74.60		
5-14	4				17.45	24.59	0	
		·						
					·			-
		-						
				,,,				
, <u> </u>			 					

Project #:	95110B-P	12		Client: 5h	e1[				
Developer				Date Developed: 11(8)5					
بے.Well <u>I.D.</u>	5-5B			Well Diameter: (circle one) 2 3 4 6					
Total Well	Depth:			Depth to W	ater:	· · · · · · · · · · · · · · · · · · ·			
Before 61	-26	After 61.5	5	Before 43	-7( Afte	r 4402			
Reason no	t develop	ed:		If Free Product, thickness:					
Additional	Notation	S: Surced	nell for	for 10 min. Hard Bottom					
Volume Conve	ersion Factor (VCF) <sup>1</sup> /4) x π) /231		Well dia. VC $2^{\mu} = 0.1$	F					
where 12 = in / 1			3" = 0.3 4" = 0.6						
	neter (in.)		6" - 1.4						
n = 3.14 231 = in 3/			$10^{\circ} = 4.0$ $12^{\circ} = 6.8$	_					
(1.4		X	10	· · · · · · · · · · · · · · · · · · ·	<u>,,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	114			
1 Case \		Λ		d Volumes	=	gallons			
			Bailer			Electric Submersible			
Purging Dev	vice:		Suction Pum	n	•	Positive Air Displacement			
		_	•	P	<b></b> ,	1 ostivo III Displacoment			
		Type of Insta Other equipn		r . Ri	<u></u>				
		Omer equipm		ir surge 15/6	<del>r</del>	, , , , , , , , , , , , , , , , , , ,			
TIME	TEMP (F)	рН	Cond. (mS or 🚯)	TURBIDITY (NTUs)	VOLUME REMOVED:	(ft), NOTATIONS:			
1100		gewl PAN							
1123	103.9	7-6	3412	Cools	11.5	44.05 thick crea			
॥ ५५	64.2	7.6	3744	21000	23	44.15 10 00			
		•							
1158	64.6	7-5	3822	912 nersible	34.2	44-20 Clearing			

TIME	TEMP (F)	рН	(mS or 🚯)	(NTUs)	REMOVED:	NOTATIONS:
1100	Beain Pr	gew(PAD				
1123	103.9	7.6	3412	Cools	11-5	44.05 thick grea
ા ધપ	64.2	7.6	3744	८००।४	23	44.15 10 00
1158	64.6	7-5	3822	912	34.2	44-20 Clearing
Decon	Swit	en to Klec	lvic Subu	nersible 1	Pump	
1230			lectricsu		٠.	
1230	649	7,5	7880	202	347 NS.6	44.08 claudy
1238	66.2	7.5	3914	]]]	57	45.00 Clearing
1244	66-0	7.4	3902	82	68.4	45.04
1250	65.7	7.5	3893	106	79.8	45-21 1 agitated bottom
1756	66-4	7.4	3896	71000	91.2	+\a\b\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
1302	106-2	7.5	3926	126	1026	
(308	66-3	7-5	3928	131	114	45.45 4
	vater? No	If yes, note abo		Gallons Actual	ly Evacuated: \	ų

Project #: 051108 101		Client: Shall	Client: Stall					
Developer: 🗨			Date Developed: 11/8/05					
Well I.D. 5-50		Well Diameter	r: (circle one) 2 3 🗗 6					
Total Well Depth:		Depth to Water	r:					
Before 76.38 After :	1695	Before 43.69	After 44.19					
Reason not developed:		If Free Produc	t, thickness:					
Additional Notations: 6446	at well for	- 10 mHz						
Volume Conversion Factor (VCF): {12 x (d²/4) x π} /231	Well dia.	VCF 0.16	· .					
where 12 ≃ in / foot	3" = 4" =	0.37 0.65						
d = diameter (in.)	6" =	1.47	•					
$\pi = 3.1416$ 231 = in 3/gal	10" =	4.08 6.87						
21.Z X	t.	٥	212					
1 Case Volume	Spec	ified Volumes	= gallons					
Purging Device:	☐ Bailer		☑ Electric Submersible					
	☐ Suction I	ump	Positive Air Displacement					
Type of	Installed Pum	9						
	uipment used	4" surge Block	<del></del>					

			Cond.	TURBIDITY	VOLUME	6.0	
TIME	TEMP (F)	pН	(mS or µ8)	(NTUs)	REMOVED:	(Ft)	NOTATIONS:
1300	Bogin	rurge w/ PA			25-Zyg	÷	
1324	64.00	7.6	4612	>1000	21.2	44.05	brown Mully
1325	Pull Pu	imoto ui	clo				' '
1448			DATO DWW	<u> </u>			
1506	63.8	7.6	4752	325	424	44.05	brown
1524	63.5	7-5	4678	71 <i>98</i> 0	63.6	44.09	Muddy book
1528	<b>Swite</b>	ved to El	ectesic Sub	mersible		<u> </u>	
153B	65.0		4669	272	64.8	44.74	brown silty
1550	65.4	7.5	4663	राज्य	86106	4548	u ' ve
1557	653	7.5	4684	626	124.2	45-49	clearing"
1605	653	7.5	4686	96	148.4	45.50	, "
1610.	651	7.5	4678	leo	169.6	45.50	) <sup>11</sup>
1615	653	7.5	4679	००७।५	मिक्कि. ह	4551	brown Muddy
Did Well Dew	vater? NO	If yes, note abo	ve,		ly Evacuated: 3	12	
1620	65.3	7-5	५७८(	Coals	ala	45.4	8 T

Endpurge

		WELL	DEVEL	) PIMICIN I	DATA SIT	EEI			
Project #:	osiloe r	Ž		Client: Shell					
Develope		•		Date Developed: 11 18 05					
Well I.D.	3-9C S	-9B		Well Diameter: (circle one) 2 3 4 6					
Total We	-			Depth to Water:					
Before 5	8.71	After 5%	25	Before 43.	IZ Afte	r 5849	.*		
	ot develop			If Free Prod		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Additiona	al Notation	18: Suabbe	d well f	or 10 min.					
{12 x : where 12 = in	ameter (în.) L416	);	Well dia.         VC           2"         =         0.1           3"         =         0.3           4"         =         0.6           6"         =         1.4           10"         =         4.0           12"         =         6.8	F 6 7 5 7	,				
1 Case	Volume	Х	Specified	i Volumes	=	( <u>&amp;</u>	allons		
Purging De	evice:			p	<b>Q</b>		Submersible Air Displacement		
TIME	TEMP (F)	pН	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	(ft)	NOTATIONS:		
622	Begin P	we id P	AD.						
639	63.4	7.8	530	7(০৩එ	10-1	56.21	Exercit		
- 1	weell de		llgal 5	valabed re					
,		onto 5.9B			711 -01 112.	21.51.			
930	1	•		L. DTW.5	2401	·			
936		ewatered (	13gal	ν. ν(ω.ς	T·( <b>p</b>		gressilfy, thick		
	sursed	well for 10	1 /	DTW: 58.	D9 <sup>'</sup>				
1445	1 . •	of Gause'		DTW: 65.7	1 '		 		
		grd Gor	~ 10min		Auging c	4/Bailte			
160(.	65.0	8,5	1429	>(00)		total)	DTW=5830		
`	nell	denatere	d				, '		
	5 md. 5	evelopmen	ht air	احدا					

Gallons Actually Evacuated:

Did Well Dewater? Yes If yes, note above.

S. C. C. C. C. C. C. C. C. C. C. C. C. C.									
Project #: osu ovor	Client: shell								
Developer: اعج	Date Developed: 11 8 5								
Well I.D. ティー・S-9C	Well Diameter: (circle one) 2 3 4 6								
Total Well Depth:	Depth to Water:								
Before 74.60 After 78.59	Before 40.80 After								
Reason not developed: If Free Product, thickness:									
Additional Notations: surged well for to lomin.									
Volume Collyersion Factor (VCF): Well dia,	Volume Conversion Factor (VCF): Well dis, VCF								
$\{12 \times (d^{2}/4) \times \pi\}$ /231 2" where 3" -	• 0.16 • 0.37								
12 = in / foot 4" =	= 0.65								
d = diameter (in.) 6" = π = 3.1416 10" =	= 1.47 = 4.08								
231 = in 3/gal	= 6.87								
22 x	10 220								
1 Case Volume Sp	pecified Volumes = gallons								
Purging Device:   Bailer	☐ Electric Submersible								
	n Pump Positive Air Displacement								
Type of Installed Pu	ımn								
Other equipment use	· · · · · · · · · · · · · · · ·								
TIME TEMP (F) pH (mS o	TBREBERT TO COLOR TO CATALON								
Yes									
655 Bein Pureonige	thick grey sitty								
926 63.7 7-3 210									
	<i>,</i> , , , , , , , , , , , , , , , , , ,								
958 Restant Purse	65.92								
1020 well downtered Sava	sedwell for lamin								
la 28 sal Ma	oved outo 5-58								
1452 return to Gange	DTW: 48.31 DPW@D /511=47.20								
1	I min betwee restarting purge								
Botton of well 15 50 to hot									
1605. 65,6 7,6 39	168 7000 44 Cloudy 500								
well Aru	intered to promise 70,71								
End Development @1	45591								
Did Well Dewater? 165 If yes, note above.	Gallons Actually Evacuated;								

Project #:	651108×PC	ч		Client: 51	nell			
Developer: PC			Date Developed: 11 8 6					
Well I.D. ८ । प				Well Diameter: (circle one) 2 3 4 6				
Total Well Depth:				Depth to Water:				
Before 2	1.59	Afterzy.	<b>∘</b> ≶	Before [7]	45 Afte	r		
Reason no	t develop	ed:		If Free Prod	luct, thickn	ess:		
Additional	Notation	18: Surged u	ell for	lown. H	ar) Botton	۸		
Volume Conve	ersion Factor (VCF) <sup>2</sup> /4) κ π} /231	. ن	$\frac{\text{Well dia.}}{2^{\text{"}}} = 0.1$			•		
where 12 ≃ in / 1	foot		$3^{u} = 0.3^{\circ}$ $4^{u} = 0.6^{\circ}$					
d = dian	neter (in.)		6" = 1.4	7				
$\pi = 3.14$ $231 = \text{in } 36$			10" = 4.0 12" = 6.8					
4.0	<u> </u>	X	10	)		46		
1 Case \	/olume		Specified	l Volumes	=	gallons		
Purging Dev	vice:		Bailer			Electric Submersible		
			Suction Pump	p '	<b>(24)</b>	Positive Air Displacement		
		Type of Insta	lled Pump					
		Other equipm	ent used 4	l"surje Bl	ak			
			Cond.	TURBIDITY	VOLUME	(FE)		
TIME	TEMP (F)	pН	(mS or 🚳)	(NTUs)	REMOVED:	OTU: NOTATIONS:		
1355	Begin Pi	rige w/ PA!	Denme					
1402	<i>6</i> 3.(	7-8	5350	CO015	4.6	19:30 hours.		
1409	63-0	7.9	5151	192	9.2	20.95 clearing		
1415	62.8	8-1	5028	449	13.8	22:35		
	well do	watered a	214001	DTW 24	ුලඉ			
1430 4	nabbed 1	sell for 1	min D	Tw: 23.10	D'. Retur	to later		
1628		to well of	C saus	2130				
1630	623	6.9	4753	Cools	(8-4	brown		
	well	dewatered						
	Kud 8	B .			1.			
		<u> </u>						
		,						
				<del> </del>		-		
Did W-U D	untano Vas	Tenna cata at a	<u> </u>	Callons Astrol	lu Buggustad. [1]	R <		
Did Well Dewater? Yes If yes, note		jii yes, note abo	ve.	Gallons Actually Evacuated: (6.5				

## Attachment D

## WELL LOCATION AND ELEVATION REPORT



# **Mid Coast Engineers**

**Civil Engineers and Land Surveyors** 

70 Penny Lane, Suite A - Watsonville, CA 95076 phone: (831) 724-2580 fax: (831) 724-8025 e-mail: lee@midcoastengineers.com

Richard A. Wadsworth Civil Engineer

Stanley O. Nielsen Land Surveyor

> Lee D. Vaage Land Surveyor

Jeff S. Nielsen Land Surveyor

November 17, 2005

Heather Buckingham Delta Environmental Consultants, Inc. 175 Bernal Road, Suite 200 San Jose, CA 95119

Re: Shell-branded Service Station, 3790 Hopyard Road, Pleasanton, California; DELTA Project No. SJ37-908-1, MCE Job No. 05224

Dear Ms. Buckingham,

As you requested, on November 16 we surveyed six monitoring wells located at the referenced site. Our findings are listed on the attached sheets, expressed in State Plane Coordinates and Latitude/Longitude.

A notch was cut in the north rim of the PVC casing (TOC) and a cross chiseled in the north rim of the box (TOB).

Measurements were obtained from conventional survey techniques in combination with GPS techniques (Code CGPS), using control points HS5408 (HPGN CA 04 07)and DE8479 (C226), as published by NGS/NOAA and listed on their web site. Latitude and Longitude as shown were determined from the California Coordinate System, Zone 3, NAD 83 Datum. The accuracy range of the reported information is +/- 1cm. GPS equipment is the Trimble 5700/5800 system (Code T57).

The benchmark used for this survey is HS3991 (C 972 RESET 1967), a bench mark disk in a steel and concrete bridge over Mocho Canal, on the east side of Hopyard Road approximately 650 feet south of the intersection with Las Positas Boulevard. Elevation = 333.23 feet, NAVD 88 datum.

Please let me know if you have questions or need additional information.

Yours truly,

Lee D. Vaage



## SHELL-BRANDED SERVICE STATION 3790 Hopyard Road Pleasanton, California

## **DELTA Project No. SJ37-908-1**

Project: 05224

User name MCE Date & Time 9:48:27 AM 11/17/2005

Coordinate System US State Plane 1983 Zone California Zone 3 0403

Project Datum NAD 1983 (Conus)

Vertical Datum NAVD88

Coordinate Units US survey feet
Distance Units US survey feet
Elevation Units US survey feet

Point Number	Northing	Easting	Elevation	Description
3	2073529.27	6155274.66	332.25	S-5Btoc
4	2073529.64	6155274.61	332.61	S-5Btob
5	2073523.40	6155280.84	332.33	S-5Ctoc
6	2073523.75	6155280.84	332.51	S-5Ctob
8	2073396.07	6155333.87	330.47	S-9Btoc
9	2073396.50	6155333.68	330.92	S-9Btob
10	2073398.42	6155341.81	330.77	S-9Ctoc
11	2073398.89	6155341.70	331.37	S-9Ctob
13	2073101.03	6155405.79	324.90	S-14toc
14	2073101.29	6155405.74	325.36	S-14tob
15	2073163.03	6155631.84	332.05	S-15toc
16	2073163.30	6155631.74	332.43	S-15tob
17	2073155.67	6155535.85	333.23	BM3991

## SHELL-BRANDED SERVICE STATION 3790 Hopyard Road Pleasanton, California

## **DELTA Project No. SJ37-908-1**

Project: 05224

User name MCE Date & Time 9:48:27 AM 11/17/2005

Coordinate System US State Plane 1983 Zone California Zone 3 0403

Project Datum NAD 1983 (Conus)

Vertical Datum NAVD88

Coordinate Units US survey feet
Distance Units US survey feet
Elevation Units US survey feet

Point Number	Latitude	Longitude	Elevation	Description
3	37.681137763°N	121.904374743°W	332.25	S-5Btoc
4	37.681138793°N	121.904374947°W	332.61	S-5Btob
5	37.681121903°N	121.904353091°W	332.33	S-5Ctoc
6	37.681122854°N	121.904353132°W	332.51	S-5Ctob
8	37.680774425°N	121.904163269°W	330.47	S-9Btoc
9	37.680775593°N	121.904163942°W	330.92	S-9Btob
10	37.680781210°N	121.904135944°W	330.77	S-9Ctoc
11	37.680782482°N	121,904136353°W	331.37	S-9Ctob
13	37.679967198°N	121.903899471°W	324.90	S-14toc
14	37.679967899°N	121.903899661°W	325.36	S-14tob
15	37.680146764°N	121.903121649°W	332.05	S-15toc
16	37.680147482°N	121.903122022°W	332.43	S-15tob
17	37 680122601°N	121.903452926°W	333.23	BM3991

	A	В	С	D	E	F	G	Н	1	J	K	L
1	1 SHELL-BRANDED SERVICE STATION											
2	3790 Hopy	ard Road										
3	Pleasantor	, Califor	nia									<u></u>
4												
5	5 DELTA Project No. SJ37-908-1											
6												
7	Project: 05	224										
8	User na	me MC	E	Date & Tim	e 9:48:27 AM	11/17/2005						
9	Coordin	ate Syste		S State Plane		ne California Zor	ne 3 040	3				
10	Project	Datum	NAD 1	983 (Conus)		<u></u>						
11	Vertical		NAVE									
12	Coordin	ate Units		survey feet								
13	Distanc	e Units		rvey feet								
14	Elevation	n Units	US st	ırvey feet					<u></u>			
15			ļ									
16		S-5B	MW	11/16/2005	37.6811378			L		Mid Coast Engineers	T57	top of casing
17		S-5C	MW	11/16/2005	37.6811219					Mid Coast Engineers	T57	top of casing
18		S-9B	MW	11/16/2005	37.6807744	-121.9041633	4			Mid Coast Engineers	T57	top of casing
19		S-9C	MW	11/16/2005	37.6807812			.1		Mid Coast Engineers	T57	top of casing
20		S-14	MW	11/16/2005	37.6799672	-121.9038995				Mid Coast Engineers	T57	top of casing
21		S-15	MW	11/16/2005	37.6801468	-121.9031216	CGPS	NAD83	1	Mid Coast Engineers	T57	top of casing

T.