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By dehloptoxic at 9:22 am, Nov 07, 2006



76 Broadway Sacramento, California 95818

November 3, 2006

Mr. Jerry Wickham Alameda County Health Agency 1131 Harbor Bay Parkway Alameda, California 94502

Re:

Report Transmittal Quarterly Report Third Quarter – 2006 76 Service Station #4186 1771 First Street Livermore, CA

Dear Mr. Wickham:

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

If you have any questions or need additional information, please contact

Shelby S. Lathrop (Contractor) ConocoPhillips Risk Management & Remediation 76 Broadway Sacramento, CA 95818 Phone: 916-558-7609 Fax: 916-558-7639

Sincerely,

Thomas Kosel

Risk Management & Remediation

Home H. Koal

Attachment

November 3, 2006

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

Re: Quarterly Summary Report – Third Quarter 2006

Delta Project Number: C104186041



Dear Mr. Wickham:

On behalf of ConocoPhillips (COP), Delta Consultants (Delta) is forwarding the quarterly summary report for the following location:

Service Station

Location

76 Service Station No. 4186

1771 First Street Livermore, California

Sincerely,

Delta Consultants

Ben Wright Staff Geologist

Daniel J. Davis, R.G.

Project Manager

Forward:

TRC - Quarterly Monitoring Report

Environ Strategy Consultants - Quarterly Ozone

DANIEL J. DAVIS

No. 6435

Injection System O&M Report

cc: Ms. Shelby Lathrop, ConocoPhillips (electronic copy)



QUARTERLY SUMMARY REPORT Third Quarter 2006 76 Station No. 4186 1771 First Street Livermore, California

PREVIOUS ASSESSMENT

This site is an operating Union 76 service station located on First Street between N Street and O Street in Livermore, California. The facility property contains the station building, four product dispenser islands, and two gasoline underground storage tanks (UST).

On June 6, 1996, six soil samples were collected from beneath the fuel dispensers and product delivery piping during dispenser and piping replacement activities. Results of soil sample analyses were reported as not detected (ND) for total petroleum hydrocarbons as gasoline (TPH-G), and benzene, toluene, ethylbenzene and total xylenes (BTEX) for each sample collected beneath the dispenser islands and product delivery piping.

On September 10, 1997, a soil gas survey was conducted as part of a baseline site evaluation associated with transfer of the property from Unocal Corporation to Tosco. Six soil gas probes were advanced and samples collected at 3 or 15 feet below ground surface (bgs) in the vicinity of the UST complex, dispenser islands, and product lines. Analytical results from the gas probes ranged from 41 to 4,500 parts per billion by volume (ppb-v) for TPHG, ND to 110 ppb-v for benzene and ND to 8,000 ppb-v for methyl tertiary butyl ether (MTBE). The area of highest soil vapor concentration was localized around the UST complex.

On April 8, 1998, the Alameda County Zone 7 Water Agency files were reviewed to identify water supply wells located within a one-half mile radius from the site. Two municipal wells were identified approximately 1,500 feet and 1,800 feet northwest of the site, and two domestic wells were located approximately 1,900 feet and 2,800 feet southwest and west of the site.

On June 16, 1998, three 2-inch diameter groundwater monitor wells (U-1 through U-3) were installed. The wells were each installed to a depth of approximately 34 feet bgs. Soil samples collected from the three well borings were reported as ND for TPH-G, benzene, and MTBE.

In May 2000, a site conceptual model (SCM) was completed for the site. In the SCM, groundwater flow velocity was calculated to determine the plume travel time to the nearest receptor. Ground water velocity was calculated at 46 feet per year. The SCM concluded that hydrocarbon impact to groundwater appears to fluctuate with the rise and fall of the groundwater surface beneath the site.

On February 21, 2001, two 2-inch diameter off-site groundwater monitor wells (U-4 and U-5) were installed. The wells were installed to depths of approximately 47 feet bgs. TPH-G, BTEX and MTBE were not detected in the soil samples analyzed. TPH-G and benzene were ND in groundwater samples analyzed from wells U-4 and U-5. MTBE was

detected in groundwater samples from wells U-4 and U-5 at concentrations of 38.2 micrograms per liter (µg/l) and 55.4 µg/l, respectively; other fuel oxygenates were non-detectable. Groundwater monitoring and sampling of the wells was initiated in July 1998 and has continued on a quarterly basis to the present time. Historically, groundwater flow directions have varied from north to southwest. Depth to groundwater has varied from approximately 23 to 46 feet below top of casing.

On December 5 – 7, 2001, two monitoring wells (U-6 and U-7) and eight ozone microsparge points (SP-1 through SP-8) were installed. The monitor wells were each installed to 46 feet bgs using 8-inch diameter hollow stem augers. Borings SP-1 through SP-8 were completed as sparge wells with the installation of 2-inch diameter KVA sparge points attached to ¾-inch diameter blank schedule 80 PVC casing through the hollow-stem augers. The sparge points are composed of 30-inch long microporous plastic. Sparge points SP-1 through SP-4 were installed to depths of 45 feet bgs. Sparge points SP-6S and SP-7S were installed to depths of 25 feet bgs. The remaining two sparge locations contain nested sparge points (SP-5, SP-5S, SP-8 and SP-8S) installed to 25 and 45 feet bgs in each boring. Upon completion of the sparge point installation, an interim remediation system was installed consisting of a K-V Associates, Inc. (KVA) "C-Sparge" ozone microsparge system.

On April 19 – 26, 2006 seven soil borings (B-1 through B-7) were drilled. Three boreholes were advanced for each soil boring location. The initial borehole was drilled to provide a cone penetrometer (CPT) log of subsurface lithologies. The second borehole was drilled to collect soil samples for identification and laboratory analysis, and to collect a depth-discrete groundwater sample at approximately 38 feet to 44 feet bgs. The third borehole was drilled to collect a depth-discrete groundwater sample at approximately 57 feet to 65 feet bgs. Three general stratigraphic zones were identified – An upper zone from 36 to 43 feet bgs, a middle clay zone from 43 to 55 feet bgs, and a lower zone from 55 feet bgs to maximum depths explored.

Soil samples from selected depths were submitted for analysis. Soil analytical results were as follows: GRO was detected in five upper zone, six clay zone, and three lower zone samples. MTBE was detected in three upper zone, three clay zone, and two lower zone samples. Benzene was detected in three clay zone samples.

Groundwater analytical results were as follows: GRO was detected in each of the 14 groundwater samples. Benzene was detected in five upper zone, and six lower zone samples. MTBE was detected in four upper zone, and six lower zone samples.

MONITORING AND SAMPLING

Groundwater is currently monitored and sampled on a quarterly basis. During the September 26, 2006 monitoring and sampling event, depth to groundwater ranged from 28.08 feet (U-3) to 34.35 feet (U-5) below top of casing (TOC). The groundwater flow direction was north, west and south at a gradient of 0.05 foot per foot (ft/ft). Historic groundwater flow directions are shown in Attachment A.

Maximum dissolved groundwater concentrations were present as follows: total petroleum hydrocarbons with gasoline distinction (TPH-G) (7,400 μ g/l in U-6), benzene (78 μ g/l in U-6), and MTBE (170 μ g/l in U-3).

REMEDIATION STATUS

The ozone sparge system, manufactured by KVA, was placed into operation on December 19, 2001 and is designed to cycle the ozone/oxygen injection between 10 sparge points. A typical injection schedule for this site was designed to operate at 18 times a day at 5 and 15 minutes per point per cycle. The system's current cycle frequency is 8 minutes. Remediation system operation and maintenance is conducted by Environ Strategy Consultants, Inc. (ES) under direct contract to ConocoPhillips.

For the Third Quarter 2006, the ozone sparge system operated for 384 hours, equivalent to 19% of the programmed runtime, and injected 3.5 pounds of ozone. System operation and maintenance (O&M) activity is conducted on a monthly to semimonthly basis.

The system was found non-operational on July 11, July 29, August 8, August 22, September 5, and September 19, 2006 due to a tripped ozone sensor. In each instance the system was reset and restarted.

CHARACTERIZATION STATUS

The furthest up-gradient monitor well, U-3, contained 170 μ g/l MTBE and 1,200 μ g/l TPH-G during the third quarter 2006 sampling event. The furthest offsite downgradient well, U-5, contained 51 μ g/l of MTBE this quarter.

RECENT CORRESPONDENCE

Delta received technical comments from Alameda County Health Care Services and a request for a revised work plan to assess the vertical extent of contamination at the site.

THIS QUARTER ACTIVITIES (Third Quarter 2006)

- 1. TRC conducted the quarterly monitoring and sampling at the site.
- 2. ES conducted system operation and maintenance activities at the site.

WASTE DISPOSAL SUMMARY

A total of 2.2 cubic yards of soil cuttings generated during the April 2006 soil investigation was disposed of from the site during this reporting period.

June 1996 - A total of 25 cubic yards of soils was excavated and disposed.

NEXT QUARTER ACTIVITIES (Fourth Quarter 2006)

- 1. TRC will conduct quarterly groundwater monitoring and sampling at the site.
- 2. ES will shut down the ozone injection system to evaluate potential effects on groundwater hydrocarbon concentrations.

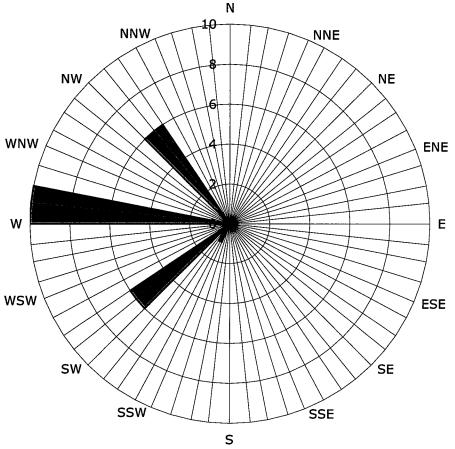
2. Delta will submit a revised work plan to address regulatory agency technical comments and propose additional assessment to complete delineation of the extent of vertical contamination at the site.

CONSULTANT: Delta Consultants

Attachment A – Historic Groundwater Flow Directions

Historic Groundwater Flow Directions ConocoPhillips Site No. 4186

1771 First Street Livermore, California



■ Groundwater Flow Direction

Legend
Concentric circles represent
quarterly montoring events
Fourth Quarter 2000 through Second
Quarter 2006
23 data points shown



October 12, 2006

ConocoPhillips Company 76 Broadway Sacramento, California 95818

ATTN:

MS. SHELBY LATHROP

SITE:

76 STATION 4186

1771 FIRST STREET

LIVERMORE, CALIFORNIA

RE:

QUARTERLY MONITORING REPORT

JULY THROUGH SEPTEMBER 2006

Dear Ms. Lathrop:

Please find enclosed our Quarterly Monitoring Report for 76 Station 4186, located 1771 First Street, Livermore, California. If you have any questions regarding this report, please call us at (949) 753-0101.

Sincerely,

TRC

Anju Farfan

QMS Operations Manager

CC: Mr. Daniel Davis, Delta Environmental Consultants, Inc. (3 copies)

Enclosures 20-0400/4186R12.QMS.doc



QUARTERLY MONITORING REPORT JULY THROUGH SEPTEMBER 2006

76 STATION 4186 1771 First Street Livermore, California

Prepared For:

Ms. Shelby Lathrop CONOCOPHILLIPS COMPANY 76 Broadway Sacramento, California 95818

By:

Senior Project Geologist, Irvine Operations October 12, 2006

	LIST OF ATTACHMENTS
Summary Sheet	Summary of Gauging and Sampling Activities
Tables	Table Key
	Contents of Tables
	Table 1: Current Fluid Levels and Selected Analytical Results
	Table 1a: Additional Current Analytical Results
	Table 2: Historic Fluid Levels and Selected Analytical Results
	Table 2a: Additional Historic Analytical Results
Figures	Figure 1: Vicinity Map
	Figure 2: Groundwater Elevation Contour Map
	Figure 3: Dissolved-Phase TPH-G (GC/MS) Concentration Map
	Figure 4: Dissolved-Phase Benzene Concentration Map
	Figure 5: Dissolved-Phase MTBE Concentration Map
Graphs	Groundwater Elevations vs. Time
	Benzene Concentrations vs. Time
Field Activities	General Field Procedures
	Field Monitoring Data Sheet – 09/26/06
	Groundwater Sampling Field Notes – 09/26/06
Laboratory	Official Laboratory Reports
Reports	Quality Control Reports
	Chain of Custody Records
Statements	Purge Water Disposal
	Limitations

Summary of Gauging and Sampling Activities July 2006 through September 2006 76 Station 4186 1771 First Street

Livermore, CA

Project Coordinator: Shelby Lathrop Telephone: 916-558-7609	Water Sampling Contractor: TRC
Date(s) of Gauging/Sampling Event: 09/26/06	Compiled by: Christina Carrillo
Sample Points	·
Groundwater wells: 5 onsite, 2 offsite Purging method: Bailer/submersible pump Purge water disposal: Onyx/Rodeo Unit 100 Other Sample Points: 0 Type: n/a	Wells gauged: 7 Wells sampled: 7
Liquid Phase Hydrocarbons (LPH)	
Wells with LPH: 0 Maximum thickness (feet): n LPH removal frequency: n/a Treatment or disposal of water/LPH: n/a	Method: n/a
Hydrogeologic Parameters	
Depth to groundwater (below TOC): Minimum: 2 Average groundwater elevation (relative to available I Average change in groundwater elevation since previous Interpreted groundwater gradient and flow direction: Current event: 0.05 ft/ft, north, west and so Previous event: 0.07 ft/ft, northwest to south	ocal datum): 446.16 feet ous event: -5.14 feet
Selected Laboratory Results	
	ells above MCL (1.0 µg/l): 3 g/l (U-6)
	ximum: 7,400 μg/l (U-6) ximum: 170 μg/l (U-3)
Notes:	

TABLES

TABLE KEY

STANDARD ABBREVIATIONS

-- = not analyzed, measured, or collected

LPH = liquid-phase hydrocarbons Trace = less than 0.01 foot of LPH in well

μg/l = micrograms per liter (approx. equivalent to parts per billion, ppb)
mg/l = milligrams per liter (approx. equivalent to parts per million, ppm)

ND < = not detected at or above laboratory detection limit
TOC = top of casing (surveyed reference elevation)

ANALYTES

BTEX = benzene, toluene, ethylbenzene, and (total) xylenes

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

MTBE = methyl tertiary butyl ether

PCB = polychlorinated biphenyls

PCE = tetrachloroethene
TBA = tertiary butyl alcohol
TCA = trichloroethane
TCE = trichloroethene

TPH-G = total petroleum hydrocarbons with gasoline distinction

TPH-G (GC/MS) = total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B

TPH-D = total petroleum hydrocarbons with diesel distinction

TRPH = total recoverable petroleum hydrocarbons

TAME = tertiary amyl methyl ether 1,1-DCA = 1,1-dichloroethane

1,2-DCA = 1,2-dichloroethane (same as EDC, ethylene dichloride)

1,1-DCE = 1,1-dichloroethene

1,2-DCE = 1,2-dichloroethene (cis- and trans-)

NOTES

- 1. Elevations are in feet above mean sea level. Depths are in feet below surveyed top-of-casing.
- 2. Groundwater elevations for wells with LPH are calculated as: <u>Surface Elevation Measured Depth to Water + (Dp x LPH Thickness)</u>, where Dp is the density of the LPH, if known. A value of 0.75 is used for gasoline and when the density is not known. A value of 0.83 is used for diesel.
- 3. Wells with LPH are generally not sampled for laboratory analysis (see General Field Procedures).
- 4. Comments shown on tables are general. Additional explanations may be included in field notes and laboratory reports, both of which are included as part of this report.
- 5. A "J" flag indicates that a reported analytical result is an estimated concentration value between the method detection limit (MDL) and the practical quantification limit (PQL) specified by the laboratory.
- 6. Other laboratory flags (qualifiers) may have been reported. See the official laboratory report (attached) for a complete list of laboratory flags.
- 7. Concentration graphs based on tables (presented following Figures) show non-detect results prior to the Second Quarter 2000 plotted at fixed values for graphical display. Non-detect results reported since that time are plotted at reporting limits stated in the official laboratory report.
- 8. Groundwater vs. Time graphs may be corrected for apparent level changes due to re-survey.

REFERENCE

TRC began groundwater monitoring and sampling for 76 Station 4186 in October 2003. Historical data compiled prior to that time were provided by Gettler-Ryan Inc.

Contents of Tables Site: 76 Station 4186

Current E	vent													
Table 1	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
Table 1a	Well/ Date	Ethanol (8260B)	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen	Pre-purge ORP	Post-purge ORP								
Historic D	ata													
Table 2	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
Table 2a	Well/ Date	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen	Pre-purge ORP	Post-purge ORP		

Table 1
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
September 26, 2006
76 Station 4186

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation		TPH-G (GC/MS)		Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
P	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	
U-1		(Screen I	nterval in fo	eet: 14.0-3	4.0)									
09/26/0	6 478.27	30.19	0.00	448.08	-5.20		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
U-2		(Screen I	nterval in fo	eet: 13.0-3	4.0)									
09/26/0					-5.37		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
U-3		(Screen I	nterval in fo	et: 14.0-3	4.0)									
	6 478.46				-4.19		1200	20	ND<2.5	5.2	2.8		170	
U-4		(Screen I	nterval in fe	et: 35.0-4	5.0)									
09/26/0					-5.74		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		13	
U-5		(Screen I	nterval in fe	et: 37.0-4	7.0)		_							
	6 476.51		0.00	442.16	•		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		51	
U-6		(Screen I	nterval in fe	et: DNA)										
09/26/0		-	0.00	445.07			7400	78	ND<5.0	490	160		6.4	
U-7		(Screen I	nterval in fe	et: DNA)										
09/26/00			0.00	445.27	-5.17		2300	7.8	0.84	17	2.1		61	

Table 1 a
ADDITIONAL CURRENT ANALYTICAL RESULTS
76 Station 4186

:	Date Sampled	Ethanol (8260B)	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen	Pre-purge ORP	Post-purge ORP				
_		(µg/l)	(mg/l)	(mg/l)	(mV)	(mV)				
U-		ND<250	4.24	4.66	203	200				
U-		ND<250	3.70	3.49	-31	-17				
U-	3 09/26/06	ND<1200	1.06	1.10	-72	-95				
U-	4 09/26/06	ND<250	1.38	1.23	-54	-7				
U-		ND<250	1.19	0.80	44	44				
U-	6 09/26/06	ND<2500	6.97	7.05	-67	69				
U-		ND<250	0.78	1.02	-47	-63				

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1998 Through September 2006
76 Station 4186

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(μg/l)	(μg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(μg/l)	
U-1	(5	Screen Inte	erval in fee	t: 14.0-34.0))									
07/13/9	8 478.27	23.28	0.00	454.99		ND		ND	ND	ND	ND	ND		
10/07/9	8 478.27	26.43	0.00	451.84	-3.15	ND		ND	ND	ND	ND	ND		
01/15/9	9 478.27	30.42	0.00	447.85	-3.99	ND		ND	ND	ND	1.1	7.3		
04/14/9		24.21	0.00	454.06	6.21	ND		ND	ND	ND	ND	160		
07/19/9		27.10	0.00	451.17	-2.89	ND		ND	ND	ND	ND	92	·	
10/12/9		29.40	0.00	448.87	-2.30	ND		ND	ND	ND	ND	37		
01/24/0	0 478.27	27.90	0.00	450.37	1.50	ND		ND	ND	ND	ND	28		
04/10/0	0 478.27	26.16	0.00	452.11	1.74	ND		ND	0.930	ND	ND	ND		
07/17/0		28.04	0.00	450.23	-1.88	ND		ND	ND	ND	ND	160		
10/02/0	0 478.27	28.41	0.00	449.86	-0.37	ND		ND	ND	ND	ND	120		
01/08/0	1 478.27	28.68	0.00	449.59	-0.27	ND		ND	ND	ND	ND	103		
04/03/0	1 478.27	25.74	0.00	452.53	2.94	ND		ND	ND	ND	ND	55.1		
07/02/0		30.67	0.00	447.60	-4.93	ND		ND	ND	ND	ND	ND		
10/08/0		33.13	0.00	445.14	-2.46	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0		
01/03/0	2 478.27	27.67	0.00	450.60	5.46	160		ND<0.50	0.51	ND<0.50	0.69	31		
04/05/0		29.40	0.00	448.87	-1.73	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	60		
07/02/0		31.17	0.00	447.10	-1.77		1100	ND<0.50	1.7	0.73	130		35	
10/01/0		33.00	0.00	445.27	-1.83		120	ND<0.50	ND<0.50	ND<0.50	8.8		28	
12/30/0		22.03	0.00	456.24	10.97		ND<50	ND<0.50	ND<0.50	ND<0.50	1.2		90	
05/02/0		24.13	0.00	454.14	-2.10		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		50	
07/01/0		25.35	0.00	452.92	-1.22		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
10/03/0		27.24	0.00	451.03	-1.89		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
01/08/0	4 478.27	22.67	0.00	455.60	4.57		54	ND<0.50	ND<0.50	ND<0.50	ND<1.0		5.5	

Table 2 HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS July 1998 Through September 2006 **76 Station 4186**

Date Sampled		Depth to Water	LPH Thickness	water	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	$(\mu g/l)$	$(\mu g/l)$	(μg/l)	(μg/l)	(µg/l)	(µg/l)	(µg/l)	
U-1 co	ntinued													
04/15/0	4 478.27	25.33	0.00	452.94	-2.66		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
07/15/0	4 478.27	26.47	0.00	451.80	-1.14		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
12/08/0	4 478.27	31.17	0.00	447.10	-4.70		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
03/23/0	5 478.27	22.47	0.00	455.80	8.70		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
06/28/0	5 478.27	25.37	0.00	452.90	-2.90		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
09/23/0	5 478.27	29.15	0.00	449.12	-3.78		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	, 	ND<0.50	
12/30/0	5 478.27	23.69	0.00	454.58	5.46		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
03/24/0	6 478.27	22.54	0.00	455.73	1.15		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		1.6	
06/26/0	6 478.27	24.99	0.00	453.28	-2.45		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
09/26/0	6 478.27	30.19	0.00	448.08	-5.20		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
U-2	(S	creen Inte	rval in feet	: 13.0-34.0)									
07/13/98	8 477.44	23.52	0.00	453.92		1200		130	12	62	180	1100		
10/07/98	8 477.44	25.31	0.00	452.13	-1.79	ND		ND	ND	ND	ND	160		
01/15/99	9 477.44	30.22	0.00	447.22	-4.91	ND		ND	ND	ND	ND	280		
04/14/99	9 477.44	24.50	0.00	452.94	5.72	ND		ND	ND	ND	ND	460		
07/19/99	9 477.44	28.54	0.00	448.90	-4.04	ND		ND	ND	ND	ND	220		
10/12/99	9 477.44	30.48	0.00	446.96	-1.94	ND		ND	ND	ND	ND	160		
01/24/00	477.44	24.52	0.00	452.92	5.96	ND		ND	ND	ND	ND	150		
04/10/00	477.44	23.68	0.00	453.76	0.84	ND		ND	ND	ND	ND	177		
07/17/00	477.44	28.35	0.00	449.09	-4.67	ND		ND	ND	ND	ND	62.7		
10/02/00	477.44	28.72	0.00	448.72	-0.37	ND		ND	ND	ND	ND	52		
01/08/01		29.11	0.00	448.33	-0.39	ND		ND	ND	ND	ND	57.3		
04/03/01		25.95	0.00	451.49	3.16	ND		ND	ND	ND	ND	30.2		
07/02/01	477.44	29.01	0.00	448.43	-3.06	ND		ND	ND	ND	ND	16		
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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1998 Through September 2006
76 Station 4186

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(µg/l)	(µg/l)	
U-2 co												487	(1-8)	
10/08/0			0.00	446.50	-1.93	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	82		
01/03/0		27.33	0.00	450.11	3.61	260		7.7	11	1.7	15	42		
04/05/0		30.02	0.00	447.42	-2.69	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	25		
07/02/0		31.23	0.00	446.21	-1.21		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
10/01/0		32.00	0.00	445.44	-0.77		ND<50	ND<0.50	0.62	ND<0.50	ND<1.0		ND<2.0	
12/30/0		22.32	0.00	455.12	9.68		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
05/02/0		25.92	0.00	451.52	-3.60		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
07/01/0		24.99	0.00	452.45	0.93		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
10/03/03		25.31	0.00	452.13	-0.32		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
01/08/04		21.94	0.00	455.50	3.37		ND<50	ND<0.50	ND<0.50	0.51	ND<1.0		ND<2.0	
04/15/04		25.20	0.00	452.24	-3.26		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
07/15/04		24.45	0.00	452.99	0.75		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
12/08/04		29.89	0.00	447.55	-5.44		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
03/23/05		22.00	0.00	455.44	7.89		ND<50	ND<0.50	ND<0.50	ND<0.50	1.1		ND<0.50	
06/28/05		25.30	0.00	452.14	-3.30		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
09/23/05		28.25	0.00	449.19	-2.95		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
12/30/05		24.33	0.00	453.11	3.92		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
03/24/06		22.34	0.00	455.10	1.99		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
06/26/06		23.15	0.00	454.29	-0.81		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
09/26/06	6 477.44	28.52	0.00	448.92	-5.37	~~	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
U-3			rval in feet:	14.0-34.0)	i									
07/13/98		23.82	0.00	454.64		70000		3100	5500	2700	16000	7500		
10/07/98		25.64	0.00	452.82	-1.82	54000		5000	1100	3100	14000	6100		
01/15/99	478.46	30.92	0.00	447.54	-5.28	41000		3100	ND	1800	3800	15000		
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Table 2 HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS July 1998 Through September 2006 **76 Station 4186**

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground-water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
-	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(µg/l)	(μg/l)	$(\mu g/l)$	$(\mu g/l)$	
	ontinued													
04/14/9		24.48	0.00	453.98	6.44	33000		86	290	2200	7800	39000		
07/19/9		28.46	0.00	450.00	-3.98	48000		3900	2500	3600	14000	12000	16000	
10/12/9	9 478.46	30.39	0.00	448.07	-1.93	35000		4200	ND	2300	1800	22000	8300	
01/24/0	0 478.46	23.43	0.00	455.03	6.96	13000		260	ND	770	3200	53000	42000	
04/10/0	0 478.46	23.31	0.00	455.15	0.12	35200		1070	241	2820	8850	35600	40900	
07/17/0	0 478.46	27.53	0.00	450.93	-4.22	29000		3570	525	3180	5660	22500	21000	
10/02/0	0 478.46	28.19	0.00	450.27	-0.66	11000	~~	2100	31	2000	780	25000	28000	
01/08/0	1 478.46	29.85	0.00	448.61	-1.66	33600		3060	427	3040	4190	24700	30900	
04/03/0	1 478.46	24.98	0.00	453.48	4.87	5390		660	10.8	304	356	15200	19300	
07/02/0	1 478.46	31.35	0.00	447.11	-6.37	13000		1200	58	1300	930	25000	26000	
10/08/0	1 478.46	32.69	0.00	445.77	-1.34	6100		500	ND<10	570	130	23000	22000	
01/03/0	2 478.46	23.73	0.00	454.73	8.96	9900		700	130	24	1000	14000	12000	
04/05/0	2 477.44	28.27	0.00	449.17	-5.56	9800		1100	180	220	1400	16000	30000	
07/02/0	2 478.46	29.71	0.00	448.75	-0.42		ND<25000	ND<250	ND<250	ND<250	ND<500	12000	12000	
10/01/0	2 478.46	31.18	0.00	447.28	-1.47		ND<25000	ND<250	ND<250	ND<250	ND<500	12000	12000	
12/30/0	2 478.46	21.62	0.00	456.84	9.56		23000	330	170	870	4900	18000	18000	
05/02/0	3 478.46	23.11	0.00	455.35	-1.49		19000	280	ND<50	880	1500	15000	15000	
07/01/0	3 478.46	24.89	0.00	453.57	-1.78		19000	120	ND<100	180	880	22000	22000	
10/03/0	3 478.46	26.59	0.00	451.87	-1.70		20000	170	ND<50	250	730		16000	
01/08/0	4 478.46	21.92	0.00	456.54	4.67		17000	250	ND<100	770	1500		9700	
04/15/0		23.59	0.00	454.87	-1.67		4600	ND<25	ND<25	36	100		3700	
07/15/0		24.80	0.00	453.66	-1.21		2700	ND<25	ND<25	ND<25	ND<50		3400	
12/08/0	4 478.46	29.13	0.00	449.33	-4.33		12000	ND<50	ND<50	250	140		13000	
03/23/0	5 478.46	21.64	0.00	456.82	7.49		21000	94	ND<50	630	1200		6200	
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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1998 Through September 2006
76 Station 4186

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
·	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	(μg/l)	(μg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-3 cc	ntinued												\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
06/28/0	5 478.46	24.57	0.00	453.89	-2.93		6600	24	0.64	150	70		4700	
09/23/0		27.64	0.00	450.82	-3.07		6000	31	ND<25	150	ND<50		8900	
12/30/0		23.96	0.00	454.50	3.68		390	ND<0.50	ND<0.50	ND<0.50	ND<1.0		840	
03/24/0		22.52	0.00	455.94	1.44		2700	28	ND<5.0	57	120		690	
06/26/0		23.89	0.00	454.57	-1.37		2000	51	0.77	84	45		560	
09/26/0	6 478.46	28.08	0.00	450.38	-4.19		1200	20	ND<2.5	5.2	2.8		170	
U-4		creen Inte	rval in feet	: 35.0-45.0)									
04/03/0		31.63	0.00	445.30		ND		ND	ND	ND	ND	37.8	38.2	
07/02/0		37.96	0.00	438.97	-6.33	ND		ND	ND	ND	ND	ND	5.3	
10/08/0		44.24	0.00	432.69	-6.28									Not enough water to sample
01/03/02		36.15	0.00	440.78	8.09	100		ND<0.50	ND<0.50	ND<0.50	ND<0.50	10	8.5	•
04/05/02		37.64	0.00	439.29	-1.49	ND<50		0.50	ND<0.50	ND<0.50	ND<0.50	4.1		
07/02/02		36.85	0.00	440.08	0.79		67	ND<0.50	ND<0.50	ND<0.50	ND<1.0		12	
10/01/02	4	38.54	0.00	438.39	-1.69		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		9.8	
12/30/02		32.64	0.00	444.29	5.90		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		25	
05/02/03		31.40	0.00	445.53	1.24		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		4.1	
07/01/03		33.60	0.00	443.33	-2.20		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2.1	
10/03/03		37.63	0.00	439.30	-4.03		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		9.1	
01/08/04		29.23	0.00	447.70	8.40		ND<50	0.55	ND<0.50	1.6	3.7		2.5	•
04/15/04		29.80	0.00	447.13	-0.57		ND<50		ND<0.50		ND<1.0		5.2	
07/15/04		35.05	0.00	441.88	-5.25		ND<50	ND<0.50			ND<1.0		5.1	
12/08/04		35.10	0.00	441.83	-0.05		ND<50		ND<0.50	ND<0.50	ND<1.0		3.0	
03/23/05		25.38	0.00	451.55	9.72		ND<50	ND<0.50		1.3	1.2		0.65	
06/28/05	476.93	28.67	0.00	448.26	-3.29		34J	ND<0.50	0.15J	ND<0.50	ND<1.0		0.23J	
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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1998 Through September 2006
76 Station 4186

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(µg/l)	(μg/l)	(μg/l)	(µg/l)	
U-4 co	ntinued													
09/23/0	5 476.93	32.25	0.00	444.68	-3.58		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		11	
12/30/0	5 476.93	31.02	0.00	445.91	1.23	·	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		17	
03/24/0	6 476.93	26.51	0.00	450.42	4.51		ND<50	ND<0.50	ND<0.50	ND<0.50	4.4		21	
06/26/0	6 476.93	27.98	0.00	448.95	-1.47		63	ND<0.50	ND<0.50	0.56	ND<1.0		11	
09/26/0	6 476.93	33.72	0.00	443.21	-5.74		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		13	
U-5	(S	creen Inte	rval in feet	t: 37.0-47.0)									
04/03/0		31.75	0.00	444.76		ND		ND	0.728	ND	0.993	54.8	55.4	•
07/02/0	1 476.51	38.68	0.00	437.83	-6.93	ND		ND	ND	ND	ND	88	94	
10/08/0	1 476.51	46.31	0.00	430.20	-7.63	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	37	54	
01/03/02	2 476.51	36.55	0.00	439.96	9.76	ND<50		ND<0.50	0.59	ND<0.50	0.91	51	53	
04/05/02	2 476.51	37.83	0.00	438.68	-1.28	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	37		
07/02/02	2 476.51	36.92	0.00	439.59	0.91		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		43	
10/01/02	2 476.51									·				Inaccessible - truck parked over well
12/30/02	2 476.51													Inaccessible - car parked over well
05/02/03	476.51	31.55	0.00	444.96			ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		18	
07/01/03	476.51	33.83	0.00	442.68	-2.28		73	ND<0.50	ND<0.50	ND<0.50	ND<1.0		46	
10/03/03	476.51	37.72	0.00	438.79	-3.89		58	ND<0.50	ND<0.50	ND<0.50	ND<1.0		44	
01/08/04	476.51	29.21	0.00	447.30	8.51		ND<50	ND<0.50	ND<0.50	1.1	2.7	 '	17	
04/15/04	476.51	30.05	0.00	446.46	-0.84		57	ND<0.50	ND<0.50	ND<0.50	ND<1.0		37	,
07/15/04	476.51	35.15	0.00	441.36	-5.10		60	ND<0.50	ND<0.50	ND<0.50	ND<1.0		27	
12/08/04	476.51	35.33	0.00	441.18	-0.18		62	ND<0.50	ND<0.50	ND<0.50	ND<1.0		- 39	
03/23/05	476.51	25.45	0.00	451.06	9.88		ND<50	ND<0.50	ND<0.50	0.51	ND<1.0		4.5	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1998 Through September 2006
76 Station 4186

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
<u> </u>	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	(μg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(μg/l)	
U-5 co	ntinued													
06/28/05	476.51	28.90	0.00	447.61	-3.45		73	ND<0.50	ND<0.50	ND<0.50	ND<1.0		40	
09/23/05	476.51	33.01	0.00	443.50	-4.11		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		53	
12/30/05	476.51	30.96	0.00	445.55	2.05		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		72	
03/24/06	476.51	22.42	0.00	454.09	8.54		2400	13	ND<5.0	48	58		54	
06/26/06		29.31	0.00	447.20	-6.89		72	ND<0.50	ND<0.50	ND<0.50	ND<1.0		. 82	
09/26/06	476.51	34.35	0.00	442.16	-5.04		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		51	
U-6	(S	creen Inte	erval in feet	: DNA)										
01/03/02	478.38	33.99	0.00	444.39		5000		36	ND<25	260	450	ND<250	ND<10	
04/05/02	478.38	36.18	0.00	442.20	-2.19	1300		16	ND<5.0	54	ND<5.0	ND<25	\ .	
07/02/02	478.38	36.33	0.00	442.05	-0.15		1100	1.4	ND<0.50	16	ND<1.0		0.94	
10/01/02	478.38	37.70	0.00	440.68	-1.37		2000	5.4	ND<0.50	62	ND<1.0		2.6	
12/30/02	478.38	31.63	0.00	446.75	6.07	·	130	ND<0.50	ND<0.50	2.3	ND<1.0		ND<2.0	
05/02/03		31.49	0.00	446.89	0.14		150	ND<0.50	ND<0.50	1.8	1.7		82	
07/01/03		32.88	0.00	445.50	-1.39		190	1.8	ND<0.50	9.4	8.7		36	
10/03/03		36.54	0.00	441.84	-3.66		ND<10000	140	ND<100	940	560		ND<400	
01/08/04	478.38	30.45	0.00	447.93	6.09		3500	29	32	90	89		27	•
04/15/04		29.48	0.00	448.90	0.97		2400	19	ND<2.5	91	53		16	
07/15/04		34.30	0.00	444.08	-4.82		8500	150	5.7	970	560		24	
12/08/04		34.80	0.00	443.58	-0.50		2700	16	ND<2.5	28	ND<5.0		10	
03/23/05		25.08	0.00	453.30	9.72		960	2.7	ND<0.50	9.6	4.8		2.5	
06/28/05		28.75	0.00	449.63	-3.67		12000	120	4.9	930	780		21	
09/23/05		32.38	0.00	446.00	-3.63		5200	78	ND<25	540	230		34	
12/30/05		30.43	0.00	447.95	1.95		2400	15	0.67	99	12		3.5	
03/24/06	478.38	25.94	0.00	452.44	4.49		4300	52	ND<5.0	440	160		11	
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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1998 Through September 2006
76 Station 4186

Date Sampled		Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	(μg/l)	(µg/l)	(µg/l)	(μg/l)	(µg/l)	
U-6 cc	ntinued									•				·
06/26/0	6 478.38	28.07	0.00	450.31	-2.13		5300	59	ND<5.0	520	300		ND<5.0	
09/26/0	6 478.38	33.31	0.00	445.07	-5.24		7400	78	ND<5.0	490	160		6.4	
U-7	(8	Screen Inte	erval in fee	t: DNA)										
01/03/0	2 478.74	32.43	0.00	446.31		3100		93	ND<10	35	73	140	130	
04/05/0	2 478.74	34.06	0.00	444.68	-1.63	630		22	0.53	2.6	ND<0.50	45		
07/02/0	2 478.74	35.28	0.00	443.46	-1.22		1100	21	ND<0.50	6.9	ND<1.0		60	
10/01/0	2 478.74	37.70	0.00	441.04	-2.42		1700	11	ND<0.50	3.1	ND<1.0		25	
12/30/0	2 478.74	31.93	0.00	446.81	5.77		4600	41	5.3	32	13		34	
05/02/0	3 478.74	31.81	0.00	446.93	0.12		3000	17	2.7	14	5.1		42	
07/01/0	3 478.74	33.47	0.00	445.27	-1.66		2300	11	0.53	8.0	1.5		35	
10/03/0	3 478.74	35.84	0.00	442.90	-2.37		6500	30	ND<5.0	41	ND<10		53	
01/08/0	4 478.74	30.35	0.00	448.39	5.49		1600	4.0	ND<1.0	4.2	8.7		56	
04/15/0	4 478.74	29.03	0.00	449.71	1.32		3600	22	1.3	64	40		57	
07/15/0	4 478.74	33.52	0.00	445.22	-4.49		4700	15	1.2	59	57		50	
12/08/0	4 478.74	34.68	0.00	444.06	-1.16		5800	26	1.9	63	27		52	
03/23/0	5 478.74	24.49	0.00	454.25	10.19		5600	18	1.3	42	14		39	
06/28/0	5 478.74	28.83	0.00	449.91	-4.34		5400	16	1.1	35	10		45	
09/23/0	5 478.74	32.35	0.00	446.39	-3.52		2400	13	1.3	31	6.9		46	
12/30/0	5 478.74	30.18	0.00	448.56	2.17		2500	11	1.1	28	4.3		35	
03/24/0	6 478.74	25.06	0.00	453.68	5.12		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		32	
06/26/0	6 478.74	28.30	0.00	450.44	-3.24		2500	11	1.1	45	15		55	
09/26/0	6 478.74	33.47	0.00	445.27	-5.17		2300	7.8	0.84	17	2.1		61	

Page 8 of 8

Table 2 a ADDITIONAL HISTORIC ANALYTICAL RESULTS 76 Station 4186

Date Sampled	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen	Pre-purge ORP	Post-purge ORP
	(μg/l)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	(µg/l)	(µg/l)	(mg/l)	(mg/l)	(mV)	(mV)
U-1											
10/02/00	ND										
12/30/02								0.60			91
05/02/03								0.50			90
07/01/03		ND<500000						0.60			110
10/03/03		ND<500						3.79			329
01/08/04		ND<500						12.36			184
04/15/04		ND<50						10.56			213
07/15/04		ND<50						6.62			251
12/08/04		ND<50						2.66			68
03/23/05		ND<50						3.12			091
06/28/05		ND<1000						8.84			153
09/23/05		ND<1000						2.26			187
12/30/05		ND<250						7.74			159
03/24/06		ND<250							3.88	036	
06/26/06		ND<250							5.50	008	
09/26/06		ND<250	~~					4.24	4.66	203	200
U-2											
10/02/00	ND										
10/01/02								1.40			
12/30/02								2.80			120
05/02/03								150.00			120
07/01/03		ND<500000						1.20			110
10/03/03		ND<500			 -			5.61			321
01/08/04		ND<500						12.11			- 6
04/15/04		ND<50						11.39			259
07/15/04		ND<50						7.46			238
4186							Page 1				256

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 4186

Date Sampled	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)			ETBE	TAME	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen	Pre-purge ORP	Post-purge ORP			
	(μg/l)	(µg/l)	(µg/l)	(μg/l)	(µg/l)	(μg/l)	(μg/l)	(mg/l)	(mg/l)	(mV)	(mV)			
U-2 con	ntinued											 	 	
12/08/04		ND<50						3.57		'	132			
03/23/05		730						4.57			024			
06/28/05	~-	ND<1000						8.08			230			
09/23/05		ND<1000						5.47			188			
12/30/05		ND<250						8.33	·		177			
03/24/06		ND<250							6.20	-004				
06/26/06		ND<250							4.51	040				
09/26/06		ND<250						3.70	3.49	-31	-17			
U-3														
10/02/00	63000							-						
01/08/01	49300	ND	ND	ND	ND	ND	ND							
04/03/01	22200	ND	ND	ND	ND	ND	ND							
07/02/01	27000	ND	ND	ND	ND	ND	ND							
10/08/01	33000	VD<140000000	ND<290	ND<290	ND<290	ND<290	ND<290							
01/03/02	17000	ND<50000000	ND<100	ND<100	ND<100	ND<100	ND<100							
04/05/02	66000	ND<25000000	ND<100	ND<100	ND<100	ND<100	ND<100							
07/02/02	47000	ND<13000000	ND<250	ND<250	ND<500	ND<250	ND<250							
10/01/02	ND<50000	ND<250000000	ND<1000	ND<1000	ND<1000	ND<1000	ND<1000	0.50			- 47			
12/30/02	23000	VD<10000000 (ND<400	ND<400	ND<400	ND<400	ND<400	0.20			106			
05/02/03	25000	ND<50000000	ND<200	ND<200	ND<200	ND<200	ND<200	0.50			85			
07/01/03	32000	۷D<100000000	ND<400	ND<400	ND<400	ND<400	ND<400	0.50			90			
10/03/03	39000	ND<50000	ND<200	ND<200	ND<2.0	ND<200	ND<200	3.80			- 27			
	ND<20000	ND<100000	ND<400	ND<400	ND<400	ND<400	ND<400	12.82			133			
04/15/04	18000	ND<2500	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	3.11			24			
07/15/04	15000	ND<2500	ND<25	ND<25	ND<50	ND<25	ND<25	1.90			53			
12/08/04	34000	ND<5000	ND<50	ND<50	ND<100	ND<50	ND<50	1.30			-81			
											.01			

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 4186

Date Sampled	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	Post-purge Dissolved Oxygen		Pre-purge ORP	Post-purge ORP			
	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(mg/l)	(mg/l)	(mV)	(mV)			-
U-3 cont	tinued	•										 	 	
03/23/05		ND<5000						0.52			-087			
06/28/05		ND<1000						1.47			-151			
09/23/05		ND<50000						1.40			-80			
12/30/05	2000	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.58	1.45		***	-068			
03/24/06		ND<2500							.79	003				
06/26/06	18000	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		3.56	015				
09/26/06		ND<1200						1.06	1.10	-72	-95			
U-4														
04/03/01	ND	ND	ND	ND	ND	ND	ND							
07/02/01	ND	ND	ND	ND	ND	ND	ND							
01/03/02	ND<20	ND<500000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0							
10/01/02								1.00			83			
12/30/02								0.40	:		126			
05/02/03								0.70			120			
07/01/03		ND<500000						0.60			130			
10/03/03		ND<500						2.06			3.05			
01/08/04		ND<500						11.90			76			
04/15/04		ND<50						3.30			116			
07/15/04		ND<50						2.50			32			
12/08/04		ND<50						2.09			47			
03/23/05		ND<50						0.04			021			
06/28/05		ND<1000						2.24			120			
09/23/05		ND<1000						3.01			176			
12/30/05		ND<250						1.96			175			
03/24/06		ND<250							1.48	015				
06/26/06		ND<250							1.31	031				

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 4186

Date Sampled	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen	Pre-purge ORP	Post-purge ORP			
	(μg/l)	(μg/l)	(µg/l)	(μg/l)	(μg/l)	(µg/l)	(μg/l)	(mg/l)	(mg/l)	(mV)	(mV)			
U-4 con	tinued													
09/26/06		ND<250						1.38	1.23	-54	-7			
U-5														
04/03/01	ND	ND	ND	ND	ND	ND	ND							
07/02/01	ND	ND	ND -	ND	ND	ND	ND				Ban yan			
10/08/01	ND<100	ND<1000000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0							
01/03/02	ND<20	ND<500000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0							
05/02/03								0.60			120			
07/01/03	~~	ND<500						0.90			145			
10/03/03		ND<500						2.21			3.13			
01/08/04		ND<500						11.27			104			
04/15/04		ND<50						3.35			65			
07/15/04		ND<50						2.87			66		•	
12/08/04		ND<50						1.67			102			
03/23/05		ND<50						0.75			131			
06/28/05		ND<1000						2.29			103			
09/23/05		ND<1000						2.05			172			
12/30/05		ND<250						1.39			171			
03/24/06		ND<2500							.97	011				
06/26/06		ND<250			·	 .			7.23	091				
09/26/06		ND<250						1.19	0.80	44	44			
U-6														
	ND<200	ND<5000000	ND<10	ND<10	ND<10	ND<10	ND<10							
10/01/02								0.90						
12/30/02		·						0.20			88			
05/02/03								0.90			145			
07/01/03		ND<500000			No. 100			0.70			120			
/186							Dage A	l of 6						

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Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 4186

Date Sampled	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)		DIPE	ETBE	TAME	Post-purge Dissolved Oxygen		Pre-purge ORP	Post-purge ORP			
	(μg/l)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(mg/l)	(mg/l)	(mV)	(mV)			
U-6 cont	inued											 	 -	
10/03/03		ND<100000						2.26			12			
01/08/04		ND<5000						11.95			- 37			
04/15/04		ND<250						3.47			- 20			
07/15/04		ND<250						3.25			- 43			
12/08/04		ND<250						0.94			-91			
03/23/05		ND<50						0.55			-077			
06/28/05		ND<1000						0.86			-129			
09/23/05		ND<50000					,	1.97			-82		•	
12/30/05		ND<250						1.01			-66			
03/24/06		ND<2500							1.25	011				
06/26/06		ND<2500							5.48	015				
09/26/06		ND<2500						6.97	7.05	-67	-69			
U-7														
01/03/02	30	ND<500000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0							
10/01/02								1.80			- 60			
12/30/02								0.10			121	*		
05/02/03								0.40			105			
07/01/03		ND<500000						0.50			95			
10/03/03		ND<5000						2.91			- 21			
01/08/04		ND<1000						11.85			- 51			
04/15/04		ND<100						4.68			- 16			
07/15/04	-	ND<100						2.55			- 52			
12/08/04		ND<100						1.20			-88			
03/23/05		ND<100						0.21			-088			
06/28/05		ND<1000						1.32			-160			
09/23/05		ND<1000						2.25			108			

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Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 4186

Date Sampled	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE .	TAME	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen	Pre-purge ORP	Post-purge ORP		
	(μg/l)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(µg/l)	(mg/l)	(mg/l)	(mV)	(mV)		
U-7 con	tinued												
12/30/05		ND<250						1.12			105		
03/24/06		ND<250							.99	008			
06/26/06		ND<250							1.27	025			
09/26/06		ND<250						0.78	1.02	-47	-63		

FIGURES



2006 - 4:16pm lwinters

= 1:1 L:\ VICINITY MAPS\4186vm.DWG Jul 12,

SOURCE:

United States Geological Survey 7.5 Minute Topographic Map: Livermore Quadrangle



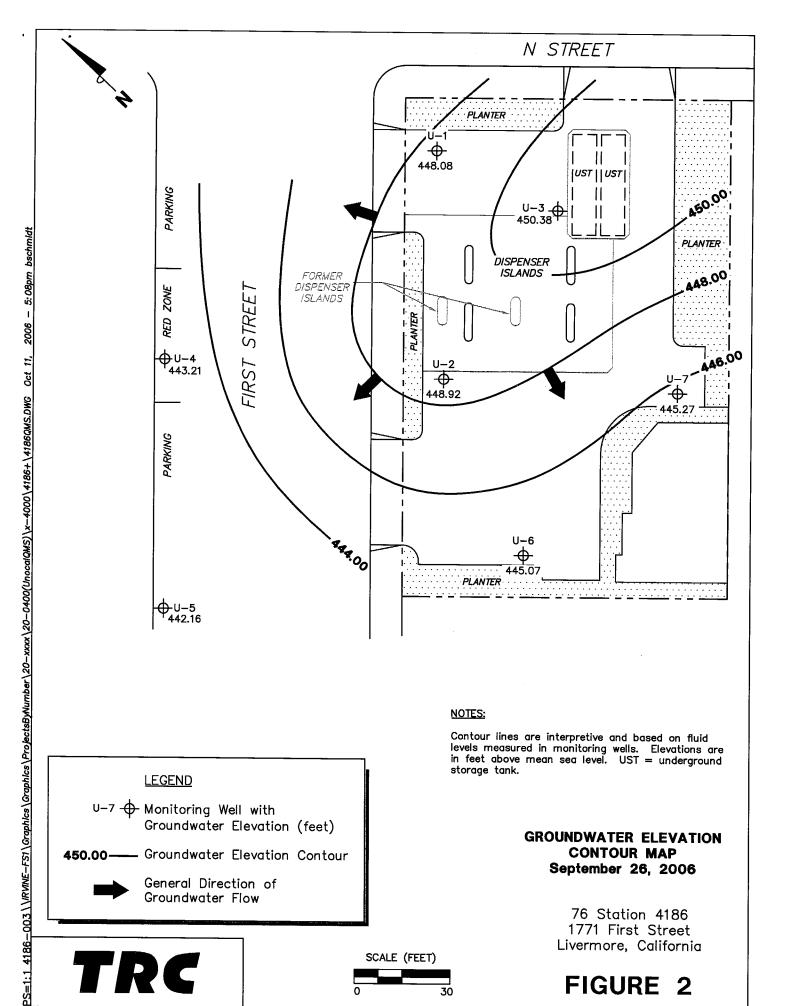
SCALE 1:24,000



VICINITY MAP

76 Station 4186 1771 First Street Livermore, California

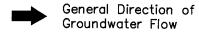
FIGURE 1



LEGEND

U-7 → Monitoring Well with Groundwater Elevation (feet)

450.00-- Groundwater Elevation Contour



NOTES:

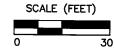
Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. UST = underground storage tank.

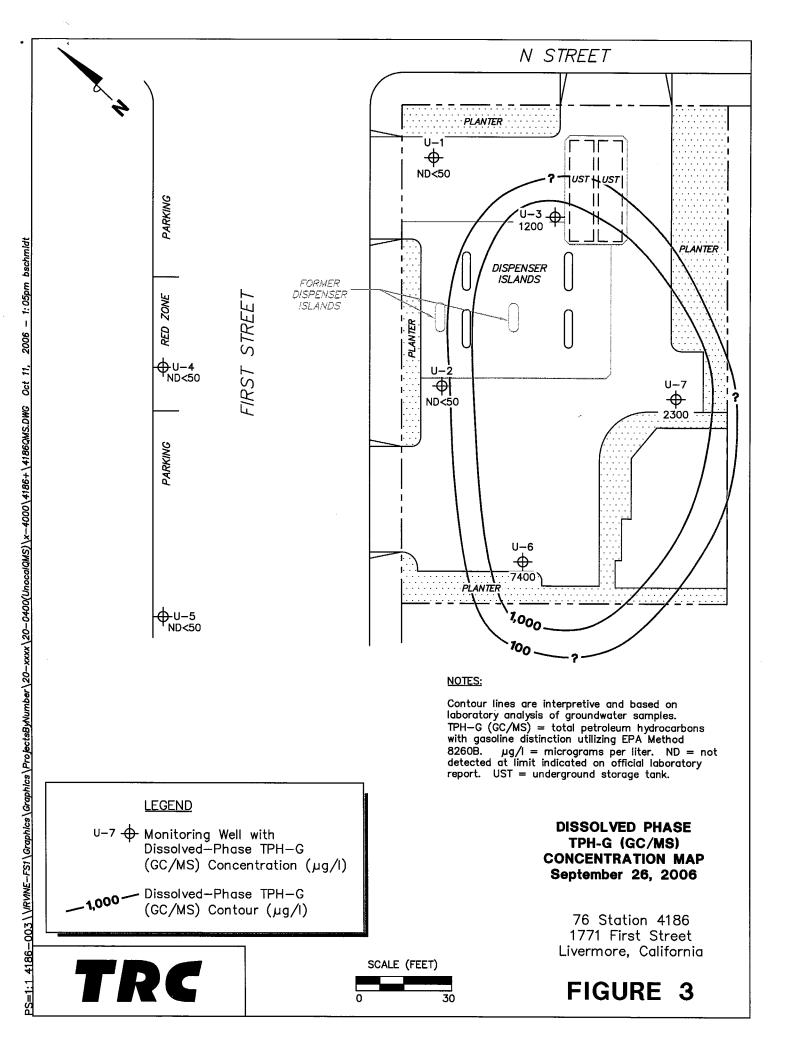
GROUNDWATER ELEVATION CONTOUR MAP September 26, 2006

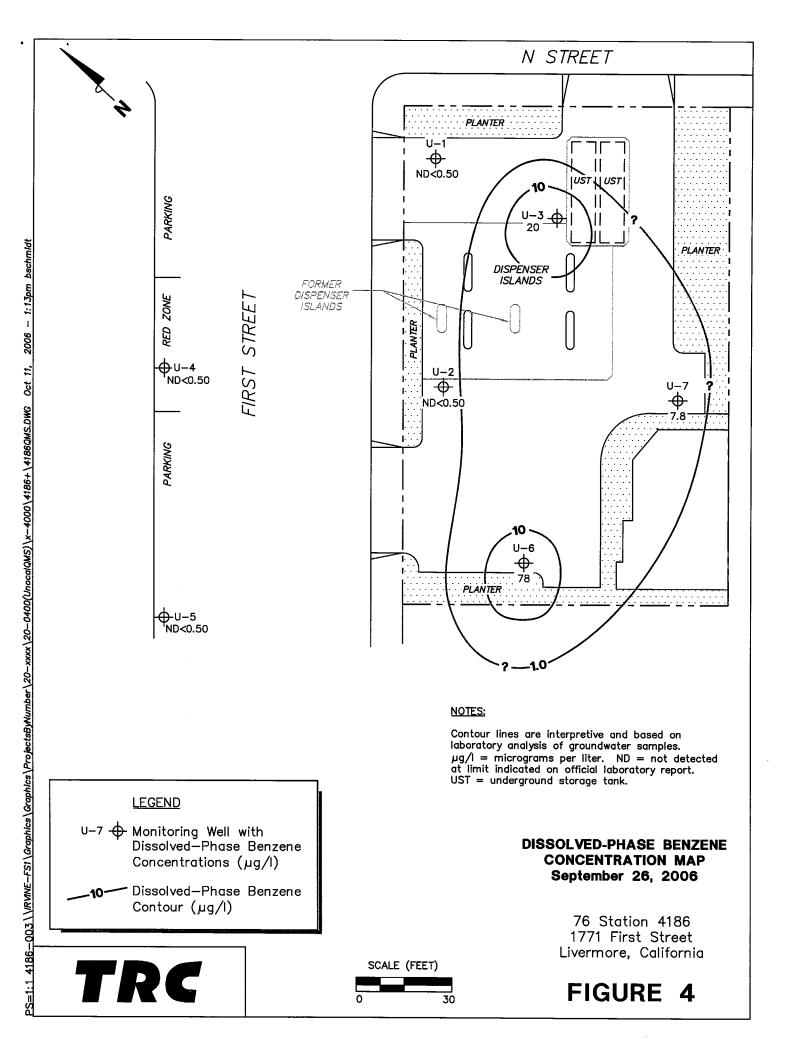
76 Station 4186 1771 First Street Livermore, California

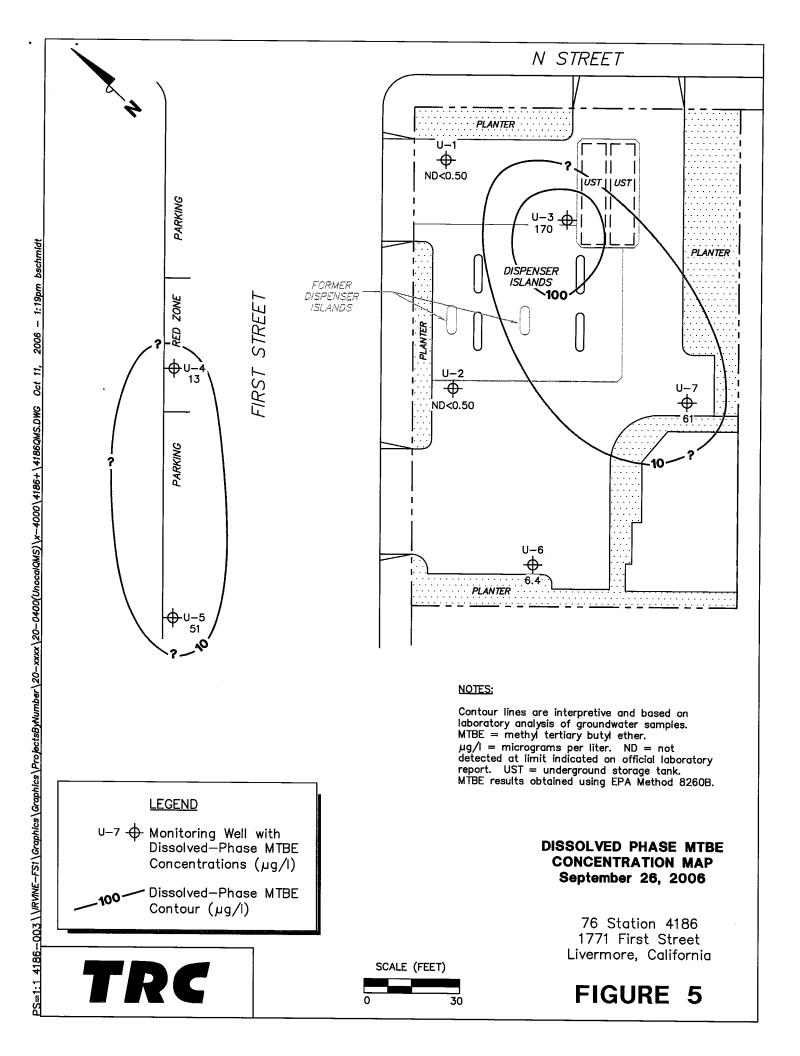
FIGURE 2



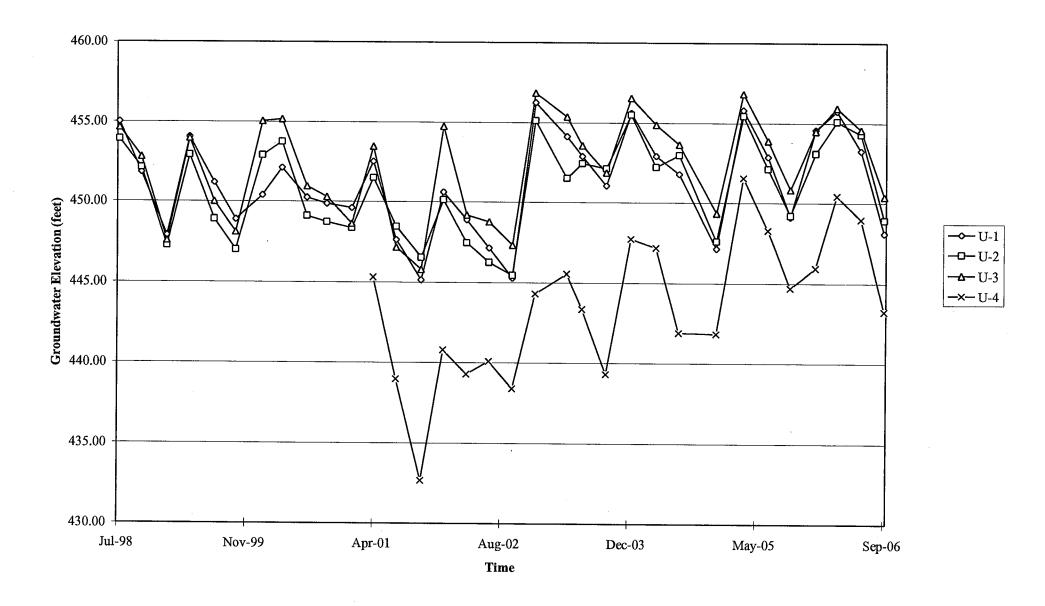


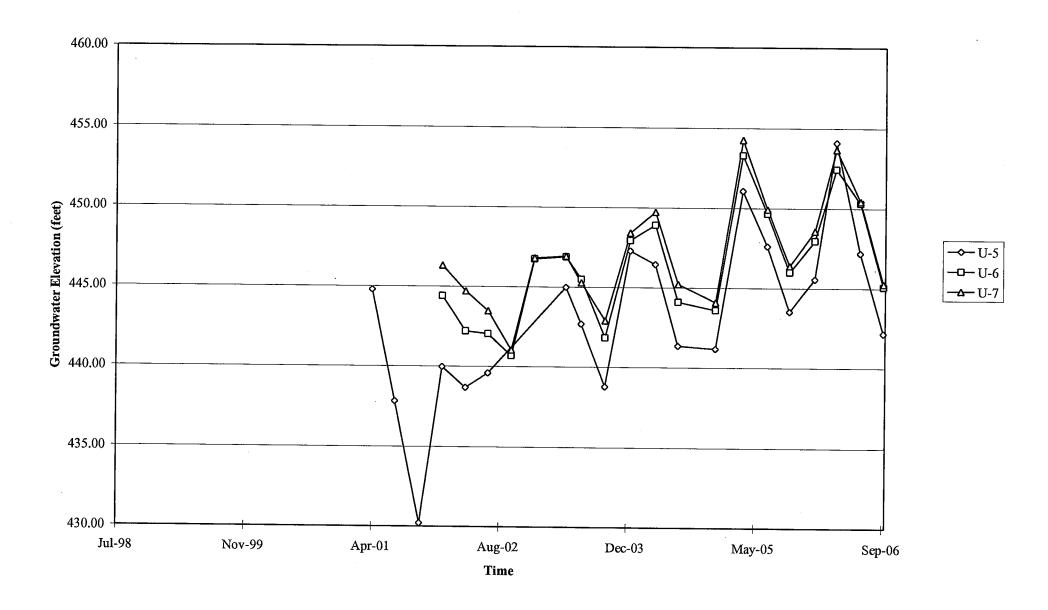




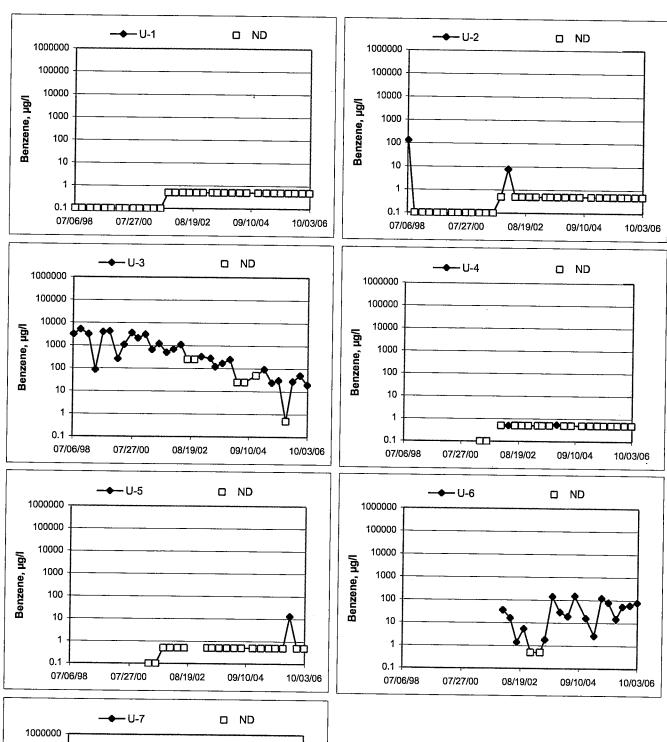


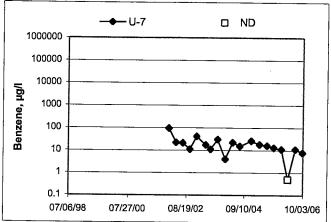
GRAPHS





Benzene Concentrations vs Time 76 Station 4186





GENERAL FIELD PROCEDURES

Groundwater Monitoring and Sampling Assignments

For each site, TRC technicians are provided with a Technical Service Request (TSR) that specifies activities required to complete the groundwater monitoring and sampling assignment for the site. TSRs are based on client directives, instructions from the primary environmental consultant for the site, regulatory requirements, and TRC's previous experience with the site.

Fluid Level Measurements

Initial site activities include determination of well locations based on a site map provided with the TSR. Well boxes are opened and caps are removed. Indications of well or well box damage or of pressure buildup in the well are noted.

Fluid levels in each well are measured using a coated cloth tape equipped with an electronic interface probe, which distinguishes between liquid phase hydrocarbon (LPH) and water. The depth to LPH (if it is present), to water, and to the bottom of the well are measured from the top of the well casing (surveyo rs mark or notch if present) to the nearest 0.01 foot. Unless otherwise instructed, a well with less than 0.67 foot between the measured top of water and the measured bottom of the well casing is considered dry, and is not sampled. If the well contains 0.67 foot or more of water, an attempt is made to bail and/or sample as specified on the TSR.

Wells that are found to contain LPH are not purged or sampled. Instead, one casing volume of fluid is bailed from the well and the well is re-sealed. Bailed fluids are placed in a container separate from normal purge water, and properly disposed.

Purging and Groundwater Parameter Measurement

TSR instructions may specify that a well not be purged (no-purge sampling), be purged using low-flow methods, or be purged using conventional pump and/or bail methods. Conventional purging generally consists of pumping or bailing until a minimum of three casing volumes of water have been removed or until the well has been pumped dry. Pumping is generally accomplished using submersible electric or pneumatic diaphragm pumps.

During conventional purging, three groundwater parameters (temperature, pH, and conductivity) are measured after removal of each casing volume. Stabilization of these parameters, to within 10 percent, confirm that sufficient purging has been completed. In some cases, the TSR indicates that other parameters are also to be measured during purging. TRC commonly measures dissolved oxygen (DO), oxidation-reduction potential (ORP), and/or turbidity. Instruments used for groundwater parameter measurements are calibrated daily according to manufacturer's instructions.

Low-flow purging utilizes a bladder or peristaltic pump to remove water from the well at a low rate. Groundwater parameters specified by the TSR are measured continuously until they become stable in general accordance with EPA guidelines.

Purge water is generally collected in labeled drums for disposal. Drums may be left on site for disposal by others, or transported to a collection location for eventual transfer to a licensed treatment or recycling facility. In some cases, purge water may be collected directly from the site by a licensed vacuum truck company, or may be treated on site by an active remediation system, if so directed.

Groundwater Sample Collection

After wells are purged, or not purged, according to TSR instructions, samples are collected for laboratory analysis. For wells that have been purged using conventional pump or bail methods, sampling is conducted after the well has recovered to 80 percent of its original volume or after two hours if the well does not recover to at least 80 percent. If there is insufficient recharge of water in the well after two hours, the well is not sampled.

Samples are collected by lowering a new, disposable, ½-inch to 4-inch polyethylene bottom-fill bailer to just below the water level in the well. The bailer is retrieved and the water sample is carefully transferred to containers specified for the laboratory analytical methods indicated by the TSR. Particular care is given to containers for volatile organic analysis (VOAs) which require filling to zero headspace and fitting with Teflon-sealed caps.

After filling, all containers are labeled with project number (or site number), well designation, sample date, sample time, and the sampler's initials, and placed in an insulated chest with ice. Samples remain chilled prior to and during transport to a state-certified laboratory for analysis. Sample container descriptions and requested analyses are entered onto a chain-of-custody form in order to provide instructions to the laboratory. The chain-of-custody form accompanies the samples during transportation to provide a continuous record of possession from the field to the laboratory. If a freight or overnight carrier transports the samples, the carrier is noted on the form.

For wells that have been purged using low-flow methods, sample containers are filled from the effluent stream of the bladder or peristaltic pump. In some cases, if so specified by the TSR, samples are taken from the sample ports of actively pumping remediation wells.

Sequence of Gauging, Purging and Sampling

The sequence in which monitoring activities are conducted are specified on the TSR. In general, wells are gauged beginning with the least affected well and ending with the well that has the highest concentration based on previous analytic results. After all gauging for the site is completed, wells are purged and/or sampled from the least-affected to the most-affected well.

Decontamination

In order to reduce the possibility of cross contamination between wells, strict isolation and decontamination procedures are observed. Portable pumps are not used in wells with LPH. Technicians wear nitrile gloves during all gauging, purging and sampling activities. Gloves are changed between wells and more often if warranted. Any equipment that could come in contact with fluids are either dedicated to a particular wells, decontaminated prior to each use, or discarded after a single use. Decontamination consists of washing in a solution of Liqui-nox and water and rinsing twice. The final rinse is in deionized water.

Exceptions

Additional tasks or non-standard procedures, if any, that may be requested or required for a particular site, and noted on the site TSR, are documented in field notes on the following pages.

1/5/04 version

FIELD MONITORING DATA SHEET

Technician: Pok P.	Job #/Task #: <u>L/1060001/£A20</u>	Date: 9/26/06
Site # 4186	Project Manager A - Collins	Page _ _ of \

Well #	Time Gauged	тос	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
	0547			30.19			0918	۵"
U-1 U-2	0551	./		28.52			0948	2"
W-4	0607	V		33.7,2		-	1025	<i>a</i> ``
J-5	0606		4	34.35			1050	<i>a</i> "
11 - 7	0628	1		33.47			1009	2"
<u>u-6</u>	0613	1		33.31	<u> </u>		0938	2``
U-3	0618	V	33.43	28.08			0931	2"
<i>:</i>								
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FIELD DA	ATA COMP	LETE	QA/Q	C	CO	2 1	WELL BOX	CONDITION SHEETS
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WTT CEI	RTIFICATE		MANIF	EST	DRUM I	NVENTORY	TR.	AFFIC CONTROL
						<i>`</i>		<i></i>

Technician:

Static at Time Sampled

Comments: New

Rick R.

Site: 4186 Date: 9/26/06 Project No.: 41060001 Well No. (人...) Purge Method: Depth to Water (feet): 30,19 Depth to Product (feet): Total Depth (feet) 33,73 LPH & Water Recovered (gallons): Water Column (feet): 3.54 Casing Diameter (Inches): " 80% Recharge Depth(feet): 30.90 1 Well Volume (gallons): 0.5 Depth to Volume Conduc-Time Time Temperature Water Purged tivity pН D.O. ORP Turbidity Start Stop (F,**Ø**) (feet) (gallons) (uS/cm) 0713 0.5 572 18.4 6.93 4.66 203 1474 1.0 7.20 4.04 198 0718 1473 7.294.24 20.1

Total Gallons Purged

READING to ACHIOLE 10% ON D.O. WELL DID NOT RECOVER IN I HES

Well No. <u> </u>	Purge Method: HB
Depth to Water (feet): 28,08 Total Depth (feet) 33,43 Water Column (feet): 535 80% Recharge Depth(feet): 29,15	Depth to Product (feet): LPH & Water Recovered (gallons): Casing Diameter (Inches): 1 Well Volume (gallons):

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F,(C)	рН	D.O.	ORP	Turbidity
0724				1119	18.8	6.91	1.10	- F2	
	- 7 -		7	1101	19.5	6.91	1.05	- 81	
	0731		3	1119	20.0	6.87	1,06	-95	
Ctati	1.7: 0		<u> </u>						
	c at Time Sa	mpled	Tota	l Gallons Pur	ged		Sample	Time	
	30,27	·	3				093	1	
Comments	: Wei	LDID	NOT P	ECOUER	IN 2	HRS.			

Sample Time

0918

GAIS - WAS GOING TO ATTEMPT FOURTH

Technician: Pick L.

Site: 4186

Project No.: 4106000 (

Date: 9/0606

Well No. 4-2

Depth to Water (feet): 38.50

Depth to Product (feet): 6

LPH & Water Recovered (gallons): 6

Water Column (feet): 4.60

Recharge Depth(feet): 29.44

1 Well Volume (gallons): 1

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F,C)	pН	D.O.	ORP	Turbidity
0741			1	1001	19.4	7.35	3,49	-31	
			2	1000	19.4	7.34	3.83	-20	
	0748		3	1001	18.5	7.34	3,70	-17	
Stati	ic at Time Sa	ampled	Tota	al Gallons Pu	raed		Sample	Timo	
	30,44	.(3		900		9948		
Comments	: WEI	DID		2ECOUDA	2 iN 21	tes.	7740		

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F, 🔘)	pН	D.O.	ORP	Turbidity
0804			2	1150	16.6	7.18	1.02	-47	
ļ			4	1252	18.2	7.17	0.91	-59	
	0809		6	1249	18.7	7.20	0.78	-63	
		<u> </u>		· · · · · · · · · · · · · · · · · · ·					
	c at Time Sa	mpled	Tota	l Gallons Pur	ged		Sample	Time	
	6.44		6				100	?	
Comments	: WELL	DIO NO	OT RECO	NEB IN	2 Hes.				

		Ted	hnician: _	Rick F	2			٠	
Site: 418	86_	Proj	ect No.:	106000	(Date:	9/5	6/06
Well No	U-6			Purge Metho	od: Su	ط			
		33.31		Depth to Pro	duct (feet):	D			
Total Depth	(feet) 44	4.55		LPH & Wate	r Recovered (g	allons): €	∍		
		11.24			و:(Inches)	· —		_	
80% Recha	rge Depth(fe	et): <u>36,5</u>	6		ne (gallons):				
									•
Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F (C)	рН	D.O.	ORP	Turbidity
0818			12	1333		7.05	1.07	-67	
	20,00		4	1321	19.1	7.00	1.17	-64	
	0823		6	1365	19.5	46.97	0.83	-69	
							·		
Stati	c at Time Sa	mpled	Tota	al Gallons Pur	ged		Sample	Time	J
	,23		6				093		
Comments	•								
									
Well No	11-4			Purge Metho	d: 5 (طد			
Depth to Wa	ater (feet):	33.72			ط طuct (feet): ڪ				
		1.93			Recovered (ga			_	
		11.21			eter (Inches):				
		et): 35,9		1 Well Volum	e (gallons):				
	- ,			2 2.3.00	(3=(10)				

Stati	c at Time Sa) Implea	1 ota	l Gallons Pur	ged		Sample	Time	
Stati	o at Time Ca				<u> </u>				
	0839		8	998.9	20.8	7.39	1,38	-7	
			6	1003	20.6	729	1,49	-15	
			H	997.5	20.1	7.31	1,70	-24	
0832			2	1001	19.1	7.30	1,23	-54	
Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F,C)	рН	D.O.	ORP	Turbidity

Technician: Rick R. Site: 4186 Project No.: 41060001 Date: 9/26/06 Well No. U-S Purge Method: Sub Depth to Water (feet): 34.35 Depth to Product (feet): Total Depth (feet) \dot{u} 7.07 LPH & Water Recovered (gallons): Water Column (feet): 12.72 Casing Diameter (Inches): 2" 80% Recharge Depth(feet): 36.89 1 Well Volume (gallons): 2 Depth to Volume Conduc-Time Time Temperature Water Purged tivity Нα D.O. ORP Start Turbidity Stop (F (C)) (feet) (gallons) (uS/cm) 11848 948.6 20.4 0,80 844,5 4 0865 973.7 Static at Time Sampled Total Gallons Purged Sample Time 1050 124 @ Comments: 6 GAIS. Attemption Fourth READING. Well No.____ Purge Method: Depth to Water (feet):_____ Depth to Product (feet):_____ Total Depth (feet)_____ LPH & Water Recovered (gallons):_____ Water Column (feet): Casing Diameter (Inches):_____ 80% Recharge Depth(feet):_____ 1 Well Volume (gallons):_____ Depth to Volume Conduc-Time Time Temperature Water Purged tivity pН D.O. ORP **Turbidity** Start Stop 7 (F,C) (feet) (gallons) (uS/cm) Static at Time Sampled Total Gallons Purged Sample Time Comments:



Date of Report: 10/06/2006

Anju Farfan

TRC Alton Geoscience

21 Technology Drive Irvine, CA 92618-2302

RE: 4186

BC Lab Number: 0609989

Enclosed are the results of analyses for samples received by the laboratory on 09/26/06 21:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person:

Vanèssa Hooker

Client Service Rep

Authorized Signature

Project: 4186

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/06/06 11:00

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Informa	tion	•	
0609989-01	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 4186 U-1 U-1 Rick R. of TRCI	Receive Date: 09/26/06 21:50 Sampling Date: 09/26/06 09:18 Sample Depth: Sample Matrix: Water	Delivery Work Order: Global ID: T0600101777 Matrix: W Samle QC Type (SACode): CS Cooler ID:
0609989-02	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 4186 U-2 U-2 Rick R. of TRCI	Receive Date: 09/26/06 21:50 Sampling Date: 09/26/06 09:48 Sample Depth: Sample Matrix: Water	Delivery Work Order: Global ID: T0600101777 Matrix: W Samle QC Type (SACode): CS Cooler ID:
0609989-03	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 4186 U-3 U-3 Rick R. of TRCI	Receive Date: 09/26/06 21:50 Sampling Date: 09/26/06 09:31 Sample Depth: Sample Matrix: Water	Delivery Work Order: Global ID: T0600101777 Matrix: W Samle QC Type (SACode): CS Cooler ID:
0609989-04	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 4186 U-4 U-4 Rick R. of TRCI	Receive Date: 09/26/06 21:50 Sampling Date: 09/26/06 10:25 Sample Depth: Sample Matrix: Water	Delivery Work Order: Global ID: T0600101777 Matrix: W Samle QC Type (SACode): CS Cooler ID:
0609989-05	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 4186 U-5 U-5 Rick R. of TRCI	Receive Date: 09/26/06 21:50 Sampling Date: 09/26/06 10:50 Sample Depth: Sample Matrix: Water	Delivery Work Order: Global ID: T0600101777 Matrix: W Samle QC Type (SACode): CS Cooler ID:



Project: 4186

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/06/06 11:00

Laboratory / Client Sample Cross Reference

Laboratory **Client Sample Information** 0609989-06 COC Number: Receive Date: 09/26/06 21:50 Delivery Work Order: Global ID: T0600101777 **Project Number:** 4186 Sampling Date: 09/26/06 09:38 Matrix: W Sampling Location: U-6 Sample Depth: ---Samle QC Type (SACode): CS Sampling Point: **U-6** Sample Matrix: Water Cooler ID: Sampled By: Rick R. of TRCI ---0609989-07 COC Number: Receive Date: 09/26/06 21:50 Delivery Work Order: Global ID: T0600101777 **Project Number:** 4186 Sampling Date: 09/26/06 10:09 Matrix: W Sampling Location: U-7 Sample Depth: ---Samle QC Type (SACode): CS Sampling Point: U-7 Sample Matrix: Water Cooler ID: Sampled By: Rick R. of TRCI

Project: 4186

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/06/06 11:00

BCL Sample ID: 0609989	-01	Client Sam	ple Name	e: 4186, U-1, U	-1, 9/26/2006	9:18:0	0AM, Rick R.						
						Prep	Run		Instru-	-,	QC	MB	Lab
Constituent		Result	Units	PQL MD	L Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene		ND	ug/L	0.50	EPA-8260	10/02/06	10/03/06 01:02	SDU	MS-V10	1	BPJ0136	ND	
Ethylbenzene		ND	ug/L	0.50	EPA-8260	10/02/06	10/03/06 01:02	SDU	MS-V10	1	BPJ0136	ND	
Methyl t-butyl ether		ND	ug/L	0.50	EPA-8260	10/02/06	10/03/06 01:02	SDU	MS-V10	1	BPJ0136	ND	
Toluene		ND	ug/L	0.50	EPA-8260	10/02/06	10/03/06 01:02	SDU	MS-V10	1	BPJ0136	ND.	
Total Xylenes		ND	ug/L	0.50	EPA-8260	10/02/06	10/03/06 01:02	SDU	MS-V10	1	BPJ0136	ND	<u> </u>
Ethanol		ND	ug/L	250	EPA-8260	10/02/06	10/03/06 01:02	SDU	MS-V10	1	BPJ0136	ND	
Total Purgeable Petroleum Hydrocarbons		ND	ug/L	50	EPA-8260	10/02/06	10/03/06 01:02	SDU	MS-V10	1	BPJ0136	ND	
1,2-Dichloroethane-d4 (Surrogate)		101	%	76 - 114 (LCL - UC	L) EPA-8260	10/02/06	10/03/06 01:02	SDU	MS-V10	1	BPJ0136		
Toluene-d8 (Surrogate)		98.1	%	88 - 110 (LCL - UC	L) EPA-8260	10/02/06	10/03/06 01:02	SDU	MS-V10	1	BPJ0136		
4-Bromofluorobenzene (Surrogate))	99.5	%	86 - 115 (LCL - UC	L) EPA-8260	10/02/06	10/03/06 01:02	SDU	MS-V10	1	BPJ0136		



Project: 4186

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/06/06 11:00

BCL Sample ID: 06099	89-02	Client Sam	ple Name	e: 4186, U-2	, U-2,	9/26/2006	9:48:00	DAM, Rick R.				<u></u>		
							Prep	Run		Instru-		QC	MB	Lab
Constituent		Result	Units	PQL N	/IDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene		ND	ug/L	0.50	•	EPA-8260	10/02/06	10/03/06 01:27	SDU	MS-V10	1	BPJ0136	ND	
Ethylbenzene	•	ND	ug/L	0.50		EPA-8260	10/02/06	10/03/06 01:27	SDU	MS-V10	1	BPJ0136	ND	
Methyl t-butyl ether		ND	ug/L	0.50		EPA-8260	10/02/06	10/03/06 01:27	SDU	MS-V10	1	BPJ0136	ND	
Toluene		ND	ug/L	0.50		EPA-8260	10/02/06	10/03/06 01:27	SDU	MS-V10	1	BPJ0136	ND	
Total Xylenes		ND	ug/L	0.50		EPA-8260	10/02/06	10/03/06 01:27	SDU	MS-V10	1	BPJ0136	ND	
Ethanol		ND	ug/L	250		EPA-8260	10/02/06	10/03/06 01:27	SDU	MS-V10	1	BPJ0136	ND	
Total Purgeable Petroleum Hydrocarbons		ND	ug/L	50		EPA-8260	10/02/06	10/03/06 01:27	SDU	MS-V10	1	BPJ0136	ND	**************************************
1,2-Dichloroethane-d4 (Surroga	ate)	104	%	76 - 114 (LCL -	UCL)	EPA-8260	10/02/06	10/03/06 01:27	SDU	MS-V10	1	BPJ0136		
Toluene-d8 (Surrogate)		99.0	%	88 - 110 (LCL -	UCL)	EPA-8260	10/02/06	10/03/06 01:27	SDU	MŞ-V10	1	BPJ0136		
4-Bromofluorobenzene (Surroga	ate)	101	%	86 - 115 (LCL -	UCL)	EPA-8260	10/02/06	10/03/06 01:27	SDU	MS-V10	1	BPJ0136		

Project: 4186

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/06/06 11:00

BCL Sample ID:	0609989-03	Client Sample Name:		: 4186, U-3, U-3	4186, U-3, U-3, 9/26/2006		9:31:00AM, Rick R.						
					•	Prep	Run		Instru-		QC	MB	Lab
Constituent		Result	Units	PQL MDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene		20	ug/L	2.5	EPA-8260	10/02/06	10/03/06 14:35	SDU	MS-V10	5	BPJ0136	ND	A01
Ethylbenzene		5.2	ug/L	2.5	EPA-8260	10/02/06	10/03/06 14:35	SDU	MS-V10	5	BPJ0136	ND	A01
Methyl t-butyl ether		170	ug/L	2.5	EPA-8260	10/02/06	10/03/06 14:35	SDU	MS-V10	5	BPJ0136	ND	A01
Toluene		ND	ug/L	2.5	EPA-8260	10/02/06	10/03/06 14:35	SDU	MS-V10	5	BPJ0136	ND	A01
Total Xylenes		2.8	ug/L	2.5	EPA-8260	10/02/06	10/03/06 14:35	SDU	MS-V10	· 5	BPJ0136	ND	A01
Ethanol		ND	ug/L	1200	EPA-8260	10/02/06	10/03/06 14:35	SDU	MS-V10	5	BPJ0136	ND	A01
Total Purgeable Petrole Hydrocarbons	eum	1200	ug/L	250	EPA-8260	10/02/06	10/03/06 14:35	SDU	MS-V10	5	BPJ0136	ND	A01
1,2-Dichloroethane-d4 ((Surrogate)	95.5	%	76 - 114 (LCL - UCL)	EPA-8260	10/02/06	10/03/06 14:35	SDU	MS-V10	5	BPJ0136		
Toluene-d8 (Surrogate)		96.1	%	88 - 110 (LCL - UCL)	EPA-8260	10/02/06	10/03/06 14:35	SDU	MS-V10	5	BPJ0136		
4-Bromofluorobenzene	(Surrogate)	102	%	86 - 115 (LCL - UCL)	EPA-8260	10/02/06	10/03/06 14:35	SDU	MS-V10	5	BPJ0136		



Project: 4186

- Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/06/06 11:00

BCL Sample ID:	0609989-04	Client Sam	ole Name	: 4186, U-4, U-4	, 9/26/2006	10:25:0	00AM, Rick R.						
_	- verm alem					Prep	Run		Instru-		QC	MB	Lab
Constituent		Result	Units	PQL MDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene		ND	ug/L	0.50	EPA-8260	10/02/06	10/03/06 01:52	SDU	MS-V10	1	BPJ0136	ND	
Ethylbenzene	**************************************	ND	ug/L	0.50	EPA-8260	10/02/06	10/03/06 01:52	SDU	MS-V10	1	BPJ0136	ND	
Methyl t-butyl ether		13	ug/L	0.50	EPA-8260	10/02/06	10/03/06 01:52	SDU	MS-V10	1	BPJ0136	ND	
Toluene		ND	ug/L	0.50	EPA-8260	10/02/06	10/03/06 01:52	SDU	MS-V10	1	BPJ0136	ND	
Total Xylenes		ND	ug/L	0.50	EPA-8260	10/02/06	10/03/06 01:52	SDU	MS-V10	1	BPJ0136	ND	
Ethanol		ND	ug/L	250	EPA-8260	10/02/06	10/03/06 01:52	SDU	MS-V10	1	BPJ0136	ND	
Total Purgeable Petrole Hydrocarbons	eum	ND	ug/L	50	EPA-8260	10/02/06	10/03/06 01:52	SDU	MS-V10	1	BPJ0136	ND	A53
1,2-Dichloroethane-d4	(Surrogate)	102	%	76 - 114 (LCL - UCL)	EPA-8260	10/02/06	10/03/06 01:52	SDU	MS-V10	1	BPJ0136		
Toluene-d8 (Surrogate))	96.2	%	88 - 110 (LCL - UCL)	EPA-8260	10/02/06	10/03/06 01:52	SDU	MS-V10	1	BPJ0136		
4-Bromofluorobenzene	(Surrogate)	100	%	86 - 115 (LCL - UCL)	EPA-8260	10/02/06	10/03/06 01:52	SDU	MS-V10	1	BPJ0136		

Project: 4186

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/06/06 11:00

BCL Sample ID: 0609989	9-05	Client Samp	ole Name	: 4186, U-5, U	-5, 9/26/2006	10:50:0	00AM, Rick R.						
						Prep	Run		Instru-		QC.	MB	Lab
Constituent		Result	Units	PQL MD	L Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene		ND	ug/L	0.50	EPA-8260	10/02/06	10/03/06 02:17	SDU	MS-V10	1	BPJ0136	ND	
Ethylbenzene		ND	ug/L	0.50	EPA-8260	10/02/06	10/03/06 02:17	SDU	MS-V10	1	BPJ0136	ND	
Methyl t-butyl ether		51	ug/L	0.50	EPA-8260	10/02/06	10/03/06 02:17	SDU	MS-V10	1	BPJ0136	ND	· · · · · · · · · · · · · · · · · · ·
Toluene		· ND	ug/L	0.50	EPA-8260	10/02/06	10/03/06 02:17	SDU	MS-V10	1	BPJ0136	ND	
Total Xylenes		ND	ug/L	0.50	EPA-8260	10/02/06	10/03/06 02:17	SDU	MS-V10	1	BPJ0136	ND	
Ethanol		ND	ug/L	250	EPA-8260	10/02/06	10/03/06 02:17	SDU	MS-V10	1	BPJ0136	ND	
Total Purgeable Petroleum Hydrocarbons		ND	ug/L	50	EPA-8260	10/02/06	10/03/06 02:17	SDU	MS-V10	1	BPJ0136	ND	A53
1,2-Dichloroethane-d4 (Surrogate))	99.1	%	76 - 114 (LCL - UC	L) EPA-8260	10/02/06	10/03/06 02:17	SDU	MS-V10	1	BPJ0136		
Toluene-d8 (Surrogate)		98.1	%	88 - 110 (LCL - UC	L) EPA-8260	10/02/06	10/03/06 02:17	SDU	MS-V10	1	BPJ0136		
4-Bromofluorobenzene (Surrogate)	99.5	%	86 - 115 (LCL - UC	L) EPA-8260	10/02/06	10/03/06 02:17	SDU	MS-V10	1	BPJ0136		



Project: 4186

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/06/06 11:00

BCL Sample ID: 0609989-0	6 Client Sam	ple Name	e: 4186, U-6, U-6	, 9/26/2006	9:38:0	0AM, Rick R.		,				
					Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL MDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene	78	ug/L	5.0	EPA-8260	10/02/06	10/03/06 07:16	SDU	MS-V10	10	BPJ0136	ND	A01
Ethylbenzene	490	ug/L	5.0	EPA-8260	10/02/06	10/03/06 07:16	SDU	MS-V10	10	BPJ0136	ND	A01
Methyl t-butyl ether	6.4	ug/L	5.0	EPA-8260	10/02/06	10/03/06 07:16	SDU	MS-V10	10	BPJ0136	ND	A01
Toluene	ND	ug/L	5.0	EPA-8260	10/02/06	10/03/06 07:16	SDU	MS-V10	10	BPJ0136	ND	A01
Total Xylenes	160	ug/L	5.0	EPA-8260	10/02/06	10/03/06 07:16	SDU	MS-V10	10	BPJ0136	ND	A01
Ethanol	ND	ug/L	2500	EPA-8260	10/02/06	10/03/06 07:16	SDU	MS-V10	10	BPJ0136	ND	A01
Total Purgeable Petroleum Hydrocarbons	7400	ug/L	500	EPA-8260	10/02/06	10/03/06 07:16	SDU	MS-V10	10	BPJ0136	ND	A01
1,2-Dichloroethane-d4 (Surrogate)	96.8	%	76 - 114 (LCL - UCL)	EPA-8260	10/02/06	10/03/06 07:16	SDU	MS-V10	10	BPJ0136		
Toluene-d8 (Surrogate)	97.2	%	88 - 110 (LCL - UCL)	EPA-8260	10/02/06	10/03/06 07:16	SDU	MS-V10	10	BPJ0136		
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)	EPA-8260	10/02/06	10/03/06 07:16	SDU	MS-V10	10	BPJ0136		



Project: 4186

Project Number: [none]

Project Manager: Anju Farfan Reported: 10/06/06 11:00

9-07	Client Sam	ole Name	e: 4186, U-7, U-	7, 9/26/2006	10:09:0	00AM, Rick R.						
	•				Prep	Run		Instru-		QC	MB	Lab
	Result	Units	PQL MDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
	7.8	ug/L	0.50	EPA-8260	10/02/06	10/03/06 02:42	SDU	MS-V10	1	BPJ0136	ND	
	17	ug/L	0.50	EPA-8260	10/02/06	10/03/06 02:42	SDU	MS-V10	1	BPJ0136	ND	
	61	ug/L	0.50	EPA-8260	10/02/06	10/03/06 02:42	SDU	MS-V10	1	BPJ0136	ND	
	0.84	ug/L	0.50	EPA-8260	10/02/06	10/03/06 02:42	SDU	MS-V10	1	BPJ0136	ND	
	2.1	ug/L	0.50	EPA-8260	10/02/06	10/03/06 02:42	SDU	MS-V10	1	BPJ0136	ND	
	ND	ug/L	250	EPA-8260	10/02/06	10/03/06 02:42	SDU	MS-V10	1	BPJ0136	ND	
	2300	ug/L	50	EPA-8260	10/02/06	10/03/06 02:42	SDU	MS-V10	1	BPJ0136	ND	
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	101	%	88 - 110 (LCL - UCL	.) EPA-8260	10/02/06	10/03/06 02:42	SDU	MS-V10	1	BPJ0136		
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Project: 4186

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/06/06 11:00

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

										Contr	<u>ol Limits</u>
			Source	Source		Spike			Percent		Percent
Constituent	Batch ID	QC Sample Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery Lab Quals
Benzene	BPJ0136	Matrix Spike	0609975-03	ND	22.720	25.000	ug/L		90.9		70 - 130
		Matrix Spike Duplicate	0609975-03	ND	24.590	25.000	ug/L	7,92	98.4	20	70 - 130
Toluene	BPJ0136	Matrix Spike	0609975-03	ND	21.460	25.000	ug/L		85.8		70 - 130
		Matrix Spike Duplicate	0609975-03	ND	24.010	25.000	ug/L	11.2	96.0	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BPJ0136	Matrix Spike	0609975-03	ND	9.8700	10.000	ug/L		98.7		76 - 114
		Matrix Spike Duplicate	0609975-03	ND	9.9800	10.000	ug/L		99.8		76 - 114
Toluene-d8 (Surrogate)	BPJ0136	Matrix Spike	0609975-03	ND	9.8600	10.000	ug/L		98.6		88 - 110
		Matrix Spike Duplicate	0609975-03	ND	9.8300	10.000	ug/L		98.3		88 - 110
4-Bromofluorobenzene (Surrogate)	BPJ0136	Matrix Spike	0609975-03	ND	10.090	10.000	ug/L		101		86 - 115
		Matrix Spike Duplicate	0609975-03	ND	9.9200	10.000	ug/L		99.2		86 - 115



Project: 4186

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/06/06 11:00

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

		·						,	Co	ntrol	Limits	
Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	Pero RPD Reco		RPD	Lab Quals
Benzene	BPJ0136	BPJ0136-BS1	LCS	22.590	25.000	0.50	ug/L	90.4	70 -	130		··
Toluene	BPJ0136	BPJ0136-BS1	LCS	22.460	25.000	0.50	ug/L	89.8	70 -	130		
1,2-Dichloroethane-d4 (Surrogate)	BPJ0136	BPJ0136-BS1	LCS	10.010	10.000		ug/L	100	76 -	114		***
Toluene-d8 (Surrogate)	BPJ0136	BPJ0136-BS1	LCS	9.8400	10.000		ug/L	98.4	88 -	110		
4-Bromofluorobenzene (Surrogate)	BPJ0136	BPJ0136-BS1	LCS	10.360	10.000		ug/L	104	86 -	115		



Project: 4186

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/06/06 11:00

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BPJ0136	BPJ0136-BLK1	ND	ug/L	0.50	0.14	· · · · · · · · · · · · · · · · · · ·
Ethylbenzene	BPJ0136	BPJ0136-BLK1	ND	ug/L	0.50	0.094	
Methyl t-butyl ether	BPJ0136	BPJ0136-BLK1	ND	ug/L	0.50	0.13	
Toluene	BPJ0136	BPJ0136-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	BPJ0136	BPJ0136-BLK1	ND	ug/L	0.50	0.31	
Ethanol	BPJ0136	BPJ0136-BLK1	ND	ug/L	250	85	
Total Purgeable Petroleum Hydrocarbons	BPJ0136	BPJ0136-BLK1	ND	ug/L	50	16	
1,2-Dichloroethane-d4 (Surrogate)	BPJ0136	BPJ0136-BLK1	98.0	%	76 - 114 (L	.CL - UCL)	
Toluene-d8 (Surrogate)	BPJ0136	BPJ0136-BLK1	97.8	%	88 - 110 (L	.CL - UCL)	
4-Bromofluorobenzene (Surrogate)	BPJ0136	BPJ0136-BLK1	102	%	86 - 115 (L	.CL - UCL)	



Project: 4186

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/06/06 11:00

Notes and Definitions

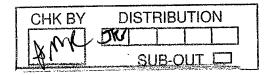
J	Estimated value
A53	Chromatogram not typical of gasoline.
A01	PQL's and MDL's are raised due to sample dilution.
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

BC LABORATORIES INC.		SAI	MPLE REC	CEIPT FO	RM	Rev. No.	10 01/	21/04	 Page	Of
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Custody Seals: Ice Chest □	Contain	ers 🗆	None [2	Comm	ents:					
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☑ YES ☐ NO			eter ID:		Com		ACK ISS	Analys	st Init 💇	<u>TO</u>
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100ml TOTAL ORGANIC CARBON		 						·		
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BC LABORATORIES, INC.

4100 Atlas Court □ Bakersfield, CA 93308 (661) 327-4911 □ FAX (661) 327-1918

CHAIN OF CUSTODY

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ager: Shelby Lathrop	Sampler Name:	Box R	Sludge	MTB		IESE		MTB	호	by G			Juno
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	Tip: ager: Shelby Lathrop Sample Description -1 -2 -3 -4 -5 -7 Run 8 OXYs by 8260B on any 8 U-3 only.	e: Phillips 66 / Unocal 1771 First St. 21 Technology Driv. Irvine, CA 92618-23 Attn: Anju Farfan Trmore 4-digit site#: 4186 Work Order# 1237TI Zip: Project #: 41060001/ Sample Description Field Point Name 1 U-1 1 U-2 1 U-2 1 U-3 1 U-4 1 U-5 1 U-6 1 U-7 Run 8 OXYs by 8260B on any 8260 U-3 only. Relinquished by Signature and Signatu	1771 First St. 21 Technology Drive	### Phillips 66 / Unocal Consultant Firm: TRC (GW)	e: Phillips 66 / Unocal Consultant Firm: TRC MATRIX (GW) Ground-water Attn: Anju Farfan Soil (WW) Soil (WW) Waste-water (SI) Soil (WW) Waste-water (SI) Soil (WW) Waste-water (SI) Sampler Name:	e: Phillips 66 / Unocal Consultant Firm: TRC 21 Technology Drive Irvine, CA 92618-2302 Attn: Anju Farfan Trmore 4-digit site#: 4186 Work Order# 1237TRC502 Wastewater Water Wa	### Phillips 66 / Unocal Consultant Firm: TRC MATRIX (GW) Soli Urvine, CA 92618-2302 Attn: Anju Farfan Soli (WW) Wastewater (SL) Sample Description Field Point Name Date & Time Sampled GW Sample Description Field Point Name Date & Time Sample Description Field Point Name Date & Time Sample GW Date GW Da	e: Phillips 66 / Unocal Consultant Firm: TRC (GW) Trine, CA 92618-2302 Attn: Anju Farfan (S) Soil (WW) Work Order# 1237TRC502 Zip: Project #: 41060001/FA20 Sample Description Field Point Name Date & Time Sampled GW -1 U-1 9606 -2 U-2 9748 GW -3 U-3 0731 GW -4 U-4 1025 GW -5 U-5 1050 GW -7 U-7 1009 Relinquished by Signature) Relinquished by Signature) Relinquished by Signature Relinquished by Signature Relinquished by Signature Relinquished by Signature Received by: MATRIX (GW) GW GW GW GW GW GW GW Ag BW Ag BW Ag BW Ag BW Ag BW CC) CC) CC) CC) CONTAINER (C) PRESERVATIVE MATRIX (GW) GW GW GW GW GW Ag BW Ag BW Ag BW Ag BW CC) Received by: Received by: Received by: Macat	e: Phillips 66 / Unocal Consultant Firm: TRC 1771 First St. 21 Technology Drive Irvine, CA 92618-2302 Attn: Anju Farfan Trmore 4-digit site#: 4186 Work Order# 1237TRC502 Zip: Project #: 41060001/FA20 Sample Description Field Point Name Date & Time Sampled Sampled Gw 10-1 10-1 10-1 10-2 10-3 10	### Phillips 66 / Unocal Consultant Firm: TRC MATRIX (GW) GW	2 Phillips 66 / Unocal Consultant Firm: TRC MATRIX (GW) 1771 First St. 21 Technology Drive 21 Tec	Phillips 66 / Unocal Consultant Firm: TRC MATRIX (GW) 1771 First St. 21 Technology Drive 21 Technology Drive	### Phillips 66 / Unocal Consultant Firm: TRC MATRIX (GW) First St. 21 Technology Drive Irvine, CA 92618-2302 Attn: Anju Farfan (S) Soil (WW) Wastewater (S) Soil (WW) Wastewater (S) Soil (WW) Wastewater (SL) Sindge Wastewater (SL) Sindge Wastewater (SL) Sindge Wastewater (SL) Sindge Wastewater (SL) Wastewater (SL) Wastewater (SL) Sindge Wastewater (SL) Wastewater

STATEMENTS

Purge Water Disposal

Non-hazardous groundwater produced during purging and sampling of monitoring was accumulated at TRC's groundwater monitoring facility at Concord, California, for transportation by Onyx Transportation, Inc., to the ConocoPhillips Refinery at Rodeo, California. Disposal at the Rodeo facility was authorized by ConocoPhillips in accordance with "ESD Standard Operating Procedures – Water Quality and Compliance", as revised on February 7, 2003. Documentation of compliance with ConocoPhillips requirements is provided by an ESD Form R -149, which is on file at TRC's Concord Office. Purge water containing a significant amount of liquid -phase hydrocarbons was accumulated separately in drums for transportation and disposal by Filter Recycling, Inc.

Limitations

The fluid level monitoring and groundwater sampling activities summarized in this report have been performed under the responsible charge of a California Registered Geologist or Registered Civil Engineer and have been conducted in accordance with current practice and the standard of care exercised by geologists and engineers performing similar tasks in this area. No warranty, express or implied, is made regarding the conclusions and professional opinions presented in this report. The conclusions are based solely upon an analysis of the observed conditions. If actual conditions differ from those described in this report, our office should be notified.

October 20, 2006

30 Hughes, Suite 209 Irvine, California 92618 tel 949.581.3222 fax 949.581.3207

Mr. Daniel Davis, R.G.
Senior Project Manager
Delta Environmental Consultants, Inc.
3164 Gold Camp Road - Suite 200
Rancho Cordova, CA 95670

Project No. 328-A

Third Quarter 2006 Ozone Injection System O&M Report 76 Service Station No. 4186 1771 First Street Livermore, California

Dear Mr. Davis:

Environ Strategy Consultants, Inc. is pleased to submit this ozone injection system operation and maintenance (O&M) report for 76 Service Station No. 4186, located at 1771 First Street, Livermore, California. An ozone injection system was started on June 19, 2003 to remediate hydrocarbon-impacted groundwater.

Type of Remediation System:	Ozone Injection System	
Operation Data During: Reporting Period: Jul. 1, 2006 – Sep. 30, 2006	Operated 84 days during the period Hours of Operation: 384	
System Operation Data Since Startup: June 19, 2003	Total Hours of Operation: 6,480	

Note:

System down time occurred during the third quarter of 2006 due to tripped ozone sensor.

Environ Strategy appreciates the opportunity to be of service. If you have any questions or require additional information regarding this report, please do not hesitate to call us at (949) 581-3222.

Respectfully submitted,

Sonny Nguyen Project Assistant Jinghui Niu, P.E. Principal Engineer

Exp. 9/30/07

CIVIL E OF CALIF

Third Quarter 2006 O&M Report 76 Service Station No. 4186 October 20, 2006

Page 2

Attachments: Figure - Site Plan

Table 1 - Ozone Injection - System Operation Data

Table 2 - Ozone Injection - Groundwater Monitoring Data

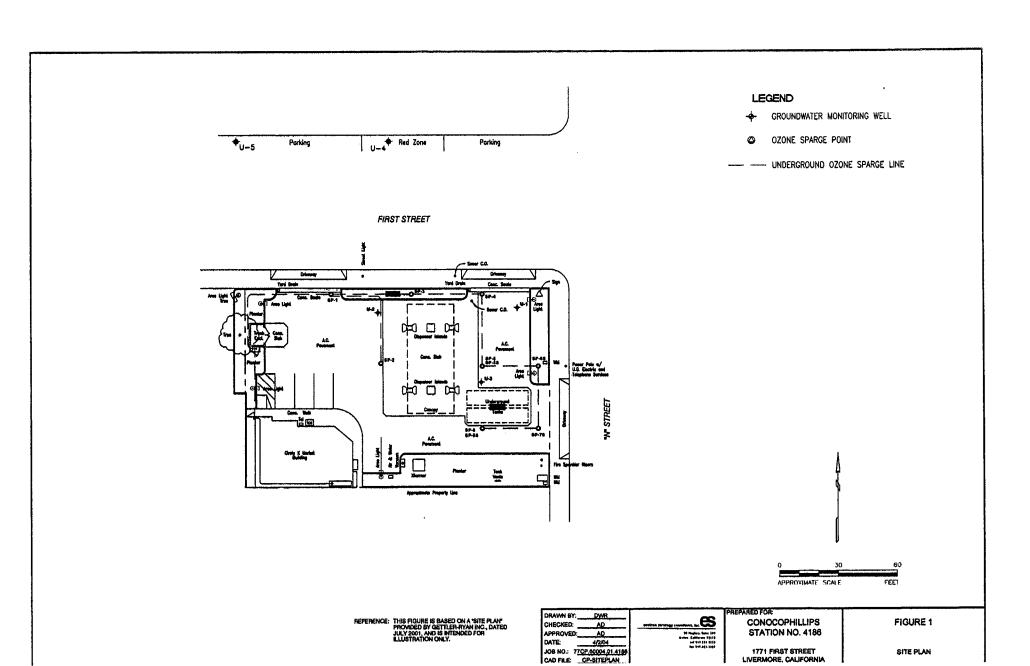
Graph 1 - U-3 TPHg, Benzene, and MtBE Groundwater Concentrations Graph 2 - U-6 TPHg, Benzene, and MtBE Groundwater Concentrations

Appendix A - Field Notes

Appendix B - Laboratory Analytical Reports

cc: Shelby Lathrop, ConocoPhillips Company (electronic copy)

Figure



Tables

Table 1
Ozone Injection - System Operation Data
76 Service Station No. 4186
1771 First Street, Livermore, California

			O	OZONE SPARGE SYSTEM	E SYSTEM			02-1	02:2	0Z-3	02.4	9-Z0	9-20	<i>1</i> -20	0Z-8	8-ZO	02-10
٥	- estoN	1	System Status	Hourmeter		Periodic		Pressure	Pressure	Pressure	Pressure P	Pressure P	Pressure	Pressure	Pressure F	Pressure	Preseure
-		on Arrival	On Departure	Reading	Operating	Online Factor	Online Factor	(pad)	(led)	(bad)	(lsd)	(jsd)	(psi)	(lsd)	(bsd)	(jsd)	(led)
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04/07/04		Jo	δ	8008,40	1010.48	0.24	0.18	-,	,	٠,		-	-	1	†	1	,
04/09/04		δ	ర్	8047.53	1049.61	0.93	0.17	٠	,	'	,	,			,	, (
04/14/04		Б	δ	8053.53	1055.61	90.0	0.17	40.8	38.3	27.2	4 4 7	3,8	0:/2		\$		\$
04/18/04		ర్	Б	6088.38	1090,44	0.83	0.17				,	,	-	1	-	,	Ţ
04/20/04	°	ð	JJG O	8167.64	1169.72	0.94	0.18	. ;	,	<u>'</u>	1	-	1	-	'	, ,	
0477701		ð	ę	8167.78	1169.66	0.01	0.16	38.6	35.9	27.2	41.2	37.6	8	2.5	46.7	9	70.5
04/23/04		δ	ő	8204.68	1206.78	0.88	0.19	37.9	34.0	8	8.8	36.2	35.2	36.3	25.8	90.0	2
05/1/04	٥	ð	Б	8253.45	1255.53	0.13	0.18	40.8	46.3	27.0	\$2	24.8	38.2	720	23.0	2	800
05/13/04		ō	ပ ်	8291.64	1293.72	0.91	0.10 0.10		,	•	-	, ,	, ,	, ;	- 50		36.0
05/21/04		ъ	o	6441.19	1443.27	0,69	0.20	37.7	36.2	27.5	320	729.5		9.47	200	0.08	37.0
06/16/04	٩	Off	ర్	8505.37	1507.45	0.12	0.20	41.2	41.5		2	2,0	*	2.02			2 2
07/06/04	p'q	οu	ő	8554.82	1556.90	0.13	0.19	Ş	\$		*	*	8 8	5,000	5	5 6	3 8
08/08/04	a'p'q	ō	δ	9002.21	2004.29	0.78	0.24	9	5	2 2		3	8 4	3,5	ş	5 5	3
09/23/04	9 q	ğ	δ	9012.63	2014.71	0.01	0.22	***	5	*		5 =	3 2	200	-	ō	28
10/22/04	6,0,d	ğ	δ	9184.90	2166.98	0.31	0.23	5 6	5 8	100	1	=	3 2	-	_	5	92
11/05/04	_	5	5	00.0019	2487 48	8.6	1500	3	5	1	,	1	,	,	,	,	,
120204	4	5 3	5 8	9100.00	5187.33	88	0.40	[,	-		,	,	,	,	,	-
01/10/05	4	5 8	58	0185.78	2167.34	000	0.18	-	4	27	45	23	38	24	22	JJ O	
007000	2	5	56	017171	2473 70	100	0.17	42	48	27	8	22	39	24	22	튱	35
ONAZANO	9	50	56	010100	2194.07	900	0.16	F	4	8	4	22	39	23	21	٥Щ	ਲ
04/13/05	-	50	ő	9228.71	2228.79	0.10	0.16	42	9#	28	43	23	ş	52	2	2	35.6
Generos	-	#o	δ	9402.13	2404.21	0.30	0.17	41	9	28	42	2	8	72	2	5	8
07/11/06	L	Б	Off	9929.79	2931.87	0.63	0.19		'	•	1	,	,		1	1	-
08/08/05	l,m) JO	Off	9929.79	2931.87	0.00	0.18			,		-		, ,	: 6	: 5	, 5
08/26/05	o'u	υĘ	δ	9930.17	2932.25	0.00	0.18	g ;	3	2	3	5 8	5 6	200	77	3 5	3 8
09/13/05	۵	J.O	5	9932.50	2934.58	0.01	0.18	5	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	878	5 2	Š	5	Š	ķ	Ē	2
09/30/05		5	5	10340.21	3342.20	800	95.0	۶	\$ ×	22	ð	ō	ő	ŏ	23	ō	15
1004/05		5 8	58	1404K 70	4087 78	3 5	0.22		250	28	ē	ö	ō	off	Б	Off	31
1003100	1	Š	50	11089.15	4091 23	000	0.21	8	35	\$	38	36	36	37	æ	38	Ş
120000		á	ē	11141.12	4143.20	0.15	0.21	35	35	37	37	33	38	37	ဗ္ဂ	8	8
01/03/08		ర్	ర్	11324.00	4328.08	0.42	0.22	88	36	37	88	38	35	8	8	8	
01/1/108		-O	б	11592.00	4594.08	0.80	0.22	38	38	ş	8	8	6	37	9	75	\$ 6
01/31/06		ď	On	11923.00	4925.08	0.89	0.24	37	32	8	37	86	8	37	2,5	,	900
02/17/08	. 8	Ю	ဝ	12232.00	5234.08	0.78	0.25	37	32	3	8	3, 1	8	3	3		ş
02/28/08	8	JIO.	δ	12326.00	5328.08	0.38	0.25	8	3	2	8 8	3	3 5) ge	2 9	7 9	g
03/14/06		ð	δ	12476.00	5478.08	0.45	0.25	3	3		Ş	5 2	3 2	3	3 8	37	-
03/30/08	•	ð	δ	12543.00	5545.08	0.17	0.25	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	S S	Ī	3 6	38	5 65	37	38	8	8
04/13/06	-	50	56	12504.00	5718 08	9 0	0.25	88	88	8	8	88	S	8	37	36	Ş
04/25/06	╣.	55	58	12833.00	5835.08	0.22	0.26	36	38	8	37	35	31	37	38	38	39
05/11/00		5 6	100	12934.00	5936.08	0.30	0.28	38	88	37	38	88	33	38	37	37	ş
2000	٩																

Table 1 Ozone Injection - System Operation Data 76 Service Station No. 4186 1771 First Street, Livermore, California

<u> </u>		OZONE SPARGE SYSTEM							OZ-2	OZ-3	OZ-4	OZ-6	OZ-6	OZ-7	OZ-8	OZ-9	OZ-10
Date	Notes	System Status on Arrival (On/Off)	System Status on Departure (On/Off)	Hourmeter Reading	Cumulative Operating Hours	Periodic	Cumulative Online Factor		Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psl)	Pressure (psl)	Pressure (psi)
06/13/06	8	Off	On	13013.00	6015.08	0.25	0.25	35	35	36	37	35	32	37	36	36	39
06/27/06	8	Off	On	13094.00	8096.08	0.24	0.25	36	38	37	37	36	33	38	37	37	40
07/11/08		Off	Q în	13124.00	6126.08	0.09	0.25	34	35	36	36	34	31	37	35	35	39
07/29/08		Off	On	13206.00	6208.08	0.19	0.25	35	36	37	37	35	33	37	36	36	39
08/08/06	8	Off	Ori	13254.00	6256,08	0.20	0.25	35	36	38	38	34	31	38	38	35	39
08/22/06		Off	On	13317.00	6319.08	0.19	0.24	36	35	38	37	35	32	38	35	37	40
09/05/06	1	l on	On .	13416.00	6418.08	0.29	0.25	35	34	36	37	33	31	36	34	35	39
09/19/08	8	Off	. On	13478.00	8480.08	0,18	0.24	38	36	37	35	35	33	38	37	37	41
			!		'	Sparge time	per cycle (min)	- 8	- 8	8	8	8	8	- 8	- 8	8	8

18-Jan-01

Reporting Period: Third Quarter 2006 (7-1-06 to 9-30-06) Total Hours Operational: 6,480 Total Pounds Ozone Injected: 58 Period Hours Operational: 384 Period Percent Operational: 19% Period Pounds Ozone injected: 3.5

Definitions:

Pounds per square inch pși Data not available NA Not applicable

Notes:

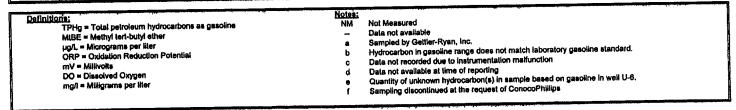
System cycles program 18 times per day, for 100% utilization

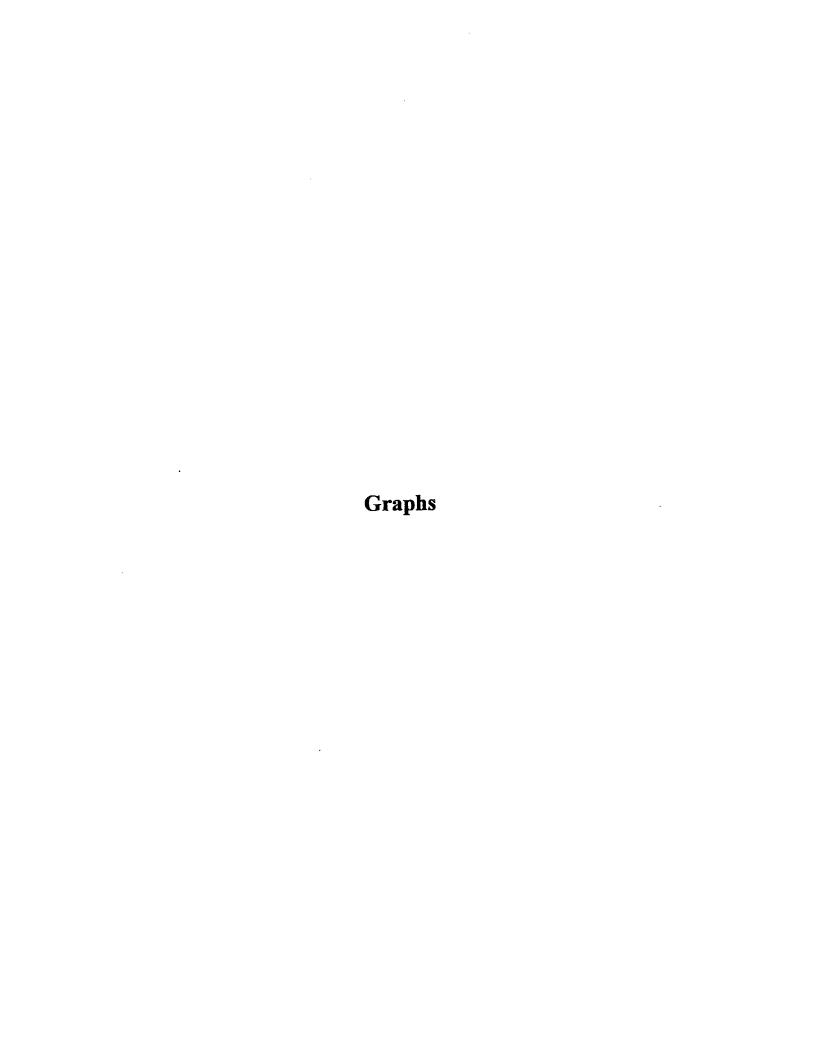
- a = GFI switch would not reset.
- b = System's 16amp breaker was tripped
- c = Installing Generator
- d = OZ-9 offline due to high pressure
- e = QZ-2 offline due to leaking check valve
- f = System shutdown due to ozone sensor switch.
- g = System off due to leaking compressor, no readings.
- h = Compressor not in panel, being repaired / replaced.
- 1 = Reinstalled compressor after installing new piston rebuild kit & new check valve on line # 2.
- j = System runtime increased to 100%
- k = Lead to sparge blower was burnt, repaired and restarted.
- = Compressor broken, system left off,
- m = Removed old compressor, unable to install new one due to incompatible feet.
- n = New compressor and new feet installed.
- o = OZ-5 and OZ-6 turned off due to leaks. Programmed modified to remain at 100% runtime.
- p = System down for Ozone elarm. Found ozone coming form secondary containment for OZ-4, turned off. Found broken line for OZ-7, turned off.
- q = OZ-8 turned off due to leak
- r = Reprogrammed all lines to run for 8 minutes a cycle and 100% runtime.
- s = Ozone sensor tripped; system restarted.

Table 2 Ozone Injection - Groundwater Monitoring Data

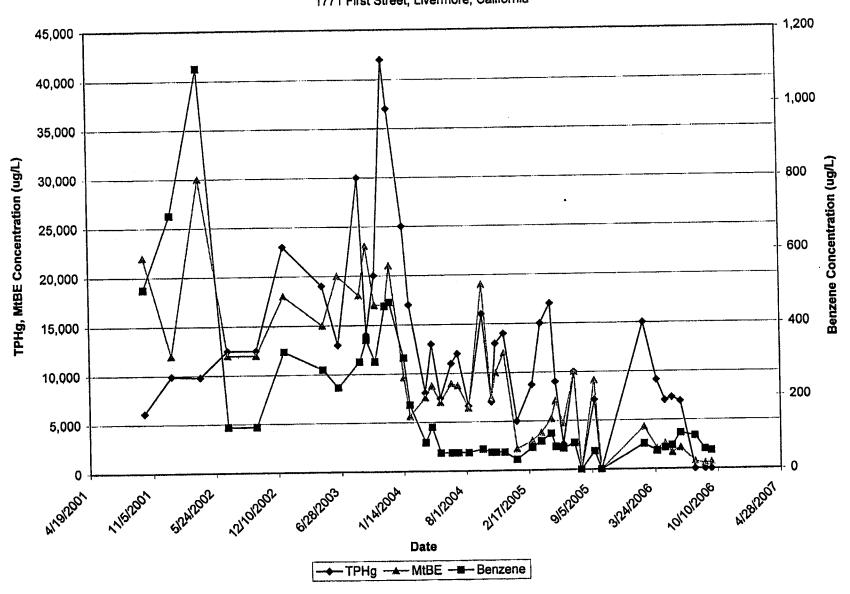
76 Service Station No. 4186 1771 First Street, Livermore, California

						147-11-11-2			Monitoring Well; U-6								
		T			Monitoring Well: U-3		Ethyl-	Xylenes (total)	MIBE	ORP	DO	TPHg	Benzene	Toluene	Ethyl- benzene	Xylenes (total)	MIBE
	1 1	ORP	DO	TPHg	Benzene	Toluene	benzene (µg/L)	(total)	(µg/L)	(mV)	(mg/l)	(Hov)	(µg/L)	(Hg/L)	(µg/L)	(µg/L)	(Hp/L)
Date	Notes	(mV)	(mg/l)	(µg/L)	(µg/L)	(hō/r)			22,000	NM	NM I	-					
10/8/2001	8	NM_	NM.	8100	500				12,000	NM	NM	5.000	36				5.0
1/3/2002		NM	NM_	9900	700					NM	NM	1,300	16		-		12.5
4/5/2002	a	NM	NM	9800	1,100				30,000	- NM	NM	1,100	1,4				0.94
7/2/2002		NM	NM_	12500	125				12,000	NM		2.000	5,4		-		2.6
10/1/2002	8	NM _	NM	12500	125				12,000	NM	NM	130	0.25				1.0
12/30/2002		NM	NM	23000	330				18,000	NM	NM I	150	0.25				82
5/2/2003	8	NM _	NM	19000	280				15,000	- NM		68	<0.50	<0.50	<0.50	<1.0	50
6/19/2003	-	NM	NM	13,000	230	<100	220	1,600	20,000_		- NM	1,000	15	<1.0	76	11	20
8/28/2003	-	NM	NM	30,000	300	<100	1,000	1,600_	18,000		INM	1,100	9	<2.5	25	<5.0	22
9/19/2003		NM.	NM	14,000	360	120	340	2,400	23,000	NM_		3,700	16	₹2.5	90	29	14
10/16/2003	-	NM	NM	20,000	300	93	250	1,800	17,000	NM			34	2.8	190	150	26
11/18/2003		NM	NM	42,000	450	140	1,500	5,100	17,000	NM	NM	5,100 3,500	<5.0	₹5.0	8.6	<10	35
12/3/2003		NM	NM	37,000	460	100	1,500	5,800	21,000	NM			44	5.8	100	52	36
1/16/2004		NM	NM	25,000	310	<100	110	2,900	9,600	NM.	NM	5,000	18	<5.0	49	12	23
2/3/2004	-	NM	NM	17,000	180	<20	670	1,900	5,600	NM	NM	2,800	0.92	<0.50	0.83	<1.0	22
3/24/2004	 Б	-58	NM	8,000	78	<25	340	1,200	7,500	78	NM	710		₹0.50	<0.50	<1.0	21
4/14/2004			NM	13,000	120	<50	470	1,400	8,700	37	_NM	750	0.64	<0.50	0.95		18
5/11/2004	•	-79	NM	7.400	<50	<50	170	450	7,000	-40	NM	650	0.58		<0.60	<1.0	14
6/16/2004	-	81	1.42	11,000	<50	<50	190	450	8,900	-51	1.35	470_	<0.50	<0.50 <0.50	<0.50	<1.0	9.7
7/6/2004	-Б-	-54	5.81	12,000	<50	<50	290	550	8,700	-77	3.01	770	<0.50		72	64	12
8/9/2004	-	-64	5.80	6,600	<50	<50	65	370	6,400	-73	5.81	2,300	23	3.0	250	├ ─~	15
9/23/2004	-	-64	- c	16,000	59	<50	290	970	19,000	-74	. c	5,800	80	<2.5		<10	14
10/22/2004			3.20	7.000	50	<25	210	270	7,400	-76	1.46	9,500	49	<5.0	. 92	1.5	7.2
11/5/2004		-60	2.38	13,000	<50	<50	190	370	10,000	-56	2,68	2,400	23_	0.78	42		11
12/2/2004	-	-57	5.73	14,000	<50	<50	290	160	12,000	-60	4,58	2,600	18	0.70	45	1.3	3.6
1/10/2005	-	1 -3' -	3.61	<5,000	30	<0.50	3.8	180	2,200	-18	1.95	1,100	4.3	<0.50	12 <0.50	2.5 <1.0	
2/28/2005	-	-55	5.09	8,700	62	<13	260	580	3,000	165	5.41	200	<0.50	<0.50		98	6.4
	_ <u>e</u>	48	6.91	15,000	78	<50	400	1,100	3,800	135	7.34	2,200	20	1.20	85	1	
3/29/2005	-	- 	4.85	17,000	99	<50	560	770	5,200	197	5.31	270	<0.50	<0.50	<0.50	<1.0	- - :
4/29/2005		-62	0.76	9,000	63	<5.0	380	760	7,000	161	1.50	140	<0.50	0.81	-_<0.50 -	<1.0	. 1.1
5/13/2005	-	-77	0.91	2.600	- 59	<5.0	450	760	4,700	-72	1.71	160	<0.50	<0.50	<0.50	-\ <u>-\</u>	
8/6/2005	-		1.06	10,000	- 73	<50	670	280	10,000	112	2.53	450	<0.50	<0.50	<0.50	1,2	1.8
7/11/2005	<u></u>	-20		10,000		-		-		-		-					
8/1/2005	_[!_	-17	1.33	7,100	- 	<50	320	<100	9,100	194	1.51	150	<0.50	<0,50	<0.50	<1.0	1.3
9/13/2005			1.87	7,100	-	\ <u></u>				122	1.04						
10/4/2005		42_		15.000	69	<25	400	310	4,300	38	1,44	310	<0.50	<0.50	<0.50	<1.0	
2/17/2006	~~	-18	1.43		50	- \25	210	700	2,100	47	1.24	60	<0.50	<0.60	2.7	1,4	<0.0
3/30/2006		11	1,17	7,000	58	-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\	310	410	2,600	68	1.36	430	<0.50	2.9	<0.50	<1.0	_ 0.7
4/25/2006	_	1 4	1,26		64	-	290	- 330	1,700	-	1.44	290	<0.50	<0.50	<0.50	<1.0	0.6
5/17/2006		22	1.78	7,300	98		470	300	2,200	97	1.64	72	<0.50	<0.50	<0.50	<1.0	0.5
6/13/2006		-12	1.58		90	-\-\ <u>-\\\<50</u>	400	<100	750	186	1,77	340	<0.50	<0,50		<1.0_	<0.
7/29/2006		37_	2.61	<5000	54	-\-\-\\-\\-\\-\\-\\-\\-\\-\\-\\-\\-\\-\	110	<100	560	104	1.97	280	<0.50	<0.50		<1.0_	<0,
8/30/2006		17	1.78	<5000	1	-\ <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>		<100	680	137	1.56	290	<0.50	<0.50	0.59	<1.0	0.5
9/19/2000	3 I	8	1.53	<5000	<50	_		_								1	- F



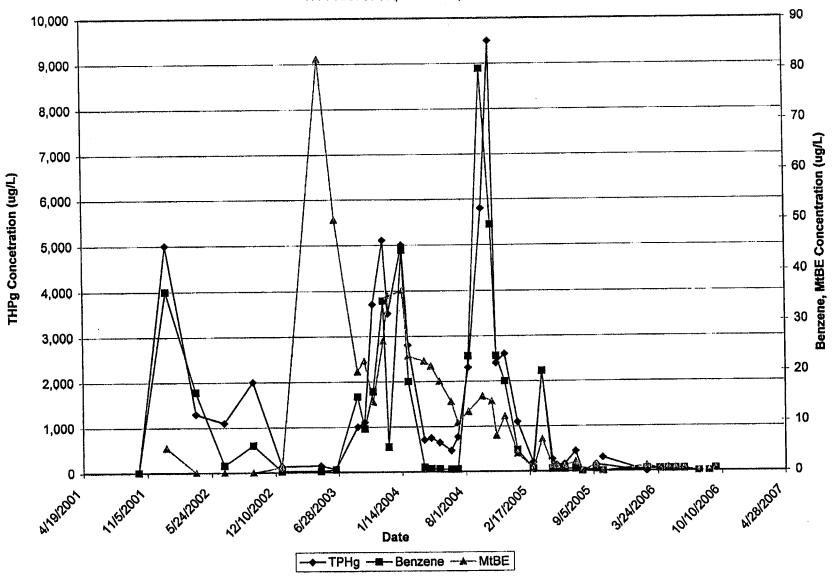


Graph 1
U-3 TPHg, Benzene, and MtBE Groundwater Concentrations
76 Service Station No. 4186
1771 First Street, Livermore, California



Graph 2
U-6 TPHg, Benzene, and MtBE Groundwater Concentrations
76 Service Station No. 4186

1771 First Street, Livermore, California



Appendix A Field Notes

ConocoPhilline Ozona Injection System Data Sheet

		4101		С	onocoPi	hillips	Ozone	Injecti	on Sys	tem Da	ita Silee	Cit	y:	Liveri	nore	
Station No	7-	4(80		1	Well I.D.		- l		Well I.D.	02	- 2		Well I.D.	02		
							Run Time	Flowrate	Pressure	Temp.	Run Time	Flowrele	Pressure	Temp.	Run Time	Flowrate
Date	Notes	Status	Cycles/	Hour Meter	Pressure	Temp.	(min)	(aolm)	(psi)	(°F)	(min)	(aoim)	(pel)	(°F)	(min)	(mp/m)
Julio	,,,,,,,	ONOFF	Day		(psi)	(°F)		(401117)	35		8	,	36		8	
11 July 06	A	offlon	18	13124	34		<u> </u>				8		37		8.	
29 July 06	A	off/on	18	13206	35		8	· · · · · · · · · · · · · · · · · · ·	36	<u> </u>	8		36		8	
8 Aug Db	A	offlon	18	13254	35		8		36				38		Я	
22 Aug 06		off/on	18	13317	36		8'		35		8		36		8	
5 Sept 06	A	off on	18	13.416	35		8		34		8		37		8	
19 Sept 06	19 Sept of	off on	18	13478	38		8		36	<u> </u>				4		
	Well I.D.	17 100 11 11 11	-4		Well I.D.	Ö2	-5		Well I.D.		02-6		Well I.D.		2-7	
	 	Temp.	Run Time	Flowrate	Pressure	Temp,	Run Time	Flowrate	Pressure	Temp.	Run Time	Flowrate	Pressure	Temp.	Run Time	Flowrele (code)
Date	Pressure (pel)	(°F)	(min)	(edin)	(pel)	(°F)	(min)	(acim)	(pel)	(°F)	(min)	(acim)	(pel)	(°F)	(min)	(aofm)
11 5 11 06	36	 \\\\	8	, , , , , , , , , , , , , , , , , , ,	34		8		31		8		37		8	
11 July 06	37	-	8		35		8		33		8		37		8	
29 July 06			8		34		8		31	ļ	8		36		8	
8 Aug Ob	36	 	8		35	-	8		32		8		38		8.	
22 Aug 06	37	 	8		33		8		31		8		36	,	8	
5 Sept Ob	37	 	8		35	 	8		33		8		38		8	
19 Sept 06	35		<u> </u>	1	1 2			-	7				Well I.D.			
	Well I.D.	D	2-8		Well I.D.	0	2-9		Well I.D.		02-10	Flowrete	Pressure	Temp	Run Time	Flowrate
	Pressure	Temp.	Run Time	Rowrele	Pressure	Temp.	Run Time	Flowreld		Temp.	Run Time	(scim)	(pel)	(°F)	(min)	(aolm)
Date	(pel)	(°F)	(min)	(eofm)	(psl)	(°F)	(min)	(acim)	(pel)	(°F)	(min)	(acam)	(1007)	<u> </u>	1	
11 July 06	35		8		35	ļ	8	ļ	39		8			 	<u> </u>	
29 July 06	36		8		36		8	 	39				 		 	
8 Aug 06			8		35		8		39		18					
22 Aug 06			8		37		8		40	_ 	8				 	
5 Sep+ 06	34		8		35		8		39		8	<u> </u>	_			
in Sept 06			8		37		8	J	41		8					
100000000	Well I.D.		., ., .		Well I.D.				Well I.D.				Well I.D.			
·		Temp.	Run Time	Flowrele	Pressure	Temp.	Run Time	Flowret	• Pressure	Temp.	Run Time	Flowrate	Pressure	Temp.	Run Time (min)	Flowrete (cofm)
Date	Pressure (psi)	(°F)	(min)	(eafm)	(psi)	(°F)	(min)	(ac/m)	(pel)	(°F)	(mln)	(acfm)	(pei)	(°F)	(11817)	\ <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>
and an experience of the second		1					_									
												- 	_	 		
							_	-				 		1	1	
											_	-	_			
				1		<u> </u>							_			1

A = System down-breaker thrown Notes:

B = Hour meter not working.

C = New hour meter installed.

D = Programmed runtime increased to 100%

Ozone Injection System Groundwater Monitoring Data

Station	No.	T-4186
Station	110.	

City	Livermore
CILY	CIVITATION

		Monitoring Well: U −3					Monitorin	g Well:	V-6		Monitoring Well:				
Date	ORP (mV)	DO (mg/l)	рН	Electrical Conductivity (µS)	Temp.	ORP (mV)	DO (mg/l)	pН	Electrical Conductivity (µS)	Temp. (deg C)	ORP (mV)	DO (mg/l)	рΗ	Electrical Conductivity (µS)	Temp. (deg C)
29 July 06	37	2.61				186	1,77			-					
30 Ang 06	(7	1.78	-	_		104	1.97								-
19 Sept 06	8	(.53	_		_	137	1.56	_		•					
													-		
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Date	QRP (mV)	DO (mg/l)	рН	Electrical Conductivity (µS)	Temp. (deg C)	ORP (mV)	DO (mg/l)	рН	Electrical Conductivity (µS)	Temp. (deg C)	ORP (mV)	DO (mg/l)	pН	Electrical Conductivity (µS)	Temp. (deg C)
													-		
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Ozone Injection System Maintenance and Inspection Log

Station No.	T-4186							City:		vermon	2
						1				Ohaali	Test all
	Notes - a: Breaker Thrown	Status	Status	Check	Measure	Check Electrical	Adjust	Particle	Check	Check	
Date	b: Hour Meter Malfunction	Upon	Upon -	Hose	Blower	Fittings and	Controller	Filter	Flow	Well	Safety
Date	c: New Hour Meter	Arrival	Departure	Fittings	Running	Controller	Program	Inspect/	Pressure	Head	Qverride
	d: Rainbird Meter Malfunction	On/Off	Qn/Off	Valves	Amperage	Operation		Replace	Assembly	Connect	Systems
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Appendix B Laboratory Analytical Reports



ANALYTICAL REPORT

Job Number: 720-4842-1

Job Description: Conoco Phillips #4186, Livermore

For: Environ Strategy 30 Hughs Suite 209 Irvine, CA 92618

Attention: Mr. Jinghui Niu

Dimple Sharma

Project Manager I dsharma@stl-inc.com

08/08/2006

cc: Mr. Darren Azarian

Ms. Lindia Liu

Mr. Sonny Nguyen

Mr. Kevin O'Malley

Project Manager: Dimple Sharma

METHOD SUMMARY

Client: Environ Strategy

Job Number: 720-4842-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS Purge-and-Trap	STL-SF STL-SF	SW846 8260B	SW846 5030B

LAB REFERENCES:

STL-SF = STL-San Francisco

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

SAMPLE SUMMARY

Client: Environ Strategy

Job Number: 720-4842-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-4842-1	U-3	Water	07/29/2006 1410	08/01/2006 1415
720-4842-2	U-6	Water	07/29/2006 1430	08/01/2006 1415

Analytical Data

Job Number: 720-4842-1

Client Sample ID:

Client: Environ Strategy

U-3

Lab Sample ID: Client Matrix:

720-4842-1 Water

Date Sampled:

07/29/2006 1410

Date Received:

08/01/2006 1415

8260B Volatile Organic Compounds by GC/MS

Method: Preparation:

Dilution:

8260B 5030B Analysis Batch: 720-11639

Instrument ID:

Varian 3900A

Lab File ID:

c:\satumws\data\200608\08

Initial Weight/Volume:

10 mL

100

Date Analyzed: Date Prepared: 08/03/2006 0440 08/03/2006 0440 Final Weight/Volume:

10 mL

Analyte	Result (ug/L)	Qualifier	RL
Benzene	90		50
Ethylbenzene	400		50
MTBE	750		50
Toluene	ND		50
Xylenes, Total	ND		100
Gasoline Range Organics (GRO)-C6-C12	ND		5000
Surrogate	%Rec		Acceptance Limits
Toluene-d8	94		77 - 121
1,2-Dichloroethane-d4	101		73 - 130

Analytical Data

Job Number: 720-4842-1

Client: Environ Strategy

Client Sample ID:

U-6

Lab Sample ID: Client Matrix:

720-4842-2 Water

Date Sampled: 07/29/2006 1430

Date Received: 08/01/2006 1415

8260B Volatile Organic Compounds by GC/MS

Method:

8260B

Analysis Batch: 720-11630

Instrument ID: Varian 3900A

Preparation:

5030B

Lab File ID:

c:\saturnws\data\200608\08

Dilution:

1.0

Initial Weight/Volume:

10 mL

Date Analyzed:

08/03/2006 1317 08/03/2006 1317 Final Weight/Volume:

10 mL

Date Prepared:	08/03/2006	1317
Analyte		

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	340		50
Surrogate	%Rec		Acceptance Limits
Toluene-d8	95		77 - 121
1,2-Dichloroethane-d4	96		73 - 130

DATA REPORTING QUALIFIERS

Lab Section Qualifier Description

Client: Environ Strategy

Job Number: 720-4842-1

QC Association Summary

Lab Sample ID	Client Sample ID	Client Matrix	Method	Prep Batch
GC/MS VOA			The second secon	garage and a specific particular and the specific particular and appropriate finding specific particular and the s
Analysis Batch:720-11	1630			
LCS 720-11630/5	Lab Control Spike	Water	8260B	
LCSD 720-11630/4	Lab Control Spike Duplicate	Water	8260B	
MB 720-11630/6	Method Blank	Water	8260B	
720-4842-2	U-6	Water	8260B	
720-4842-2MS	Matrix Spike	Water	8260B	
720-4842-2MSD	Matrix Spike Duplicate	Water	8260B	
Analysis Batch:720-1	1639			
I CS 720-11639/17	Lab Control Spike	Water	8260B	
LCSD 720-11639/16	Lab Control Spike Duplicate	Water	8260B	
MB 720-11639/18	Method Blank	Water	8260B	
720-4842-1	U-3	Water	8260B	
	Matrix Spike	Water	8260B	
720-4851-B-2 MS 720-4851-B-2 MSD	Matrix Spike Duplicate	Water	8260B	

Job Number: 720-4842-1

Method Blank - Batch: 720-11630

Method: 8260B Preparation: 5030B

Lab Sample ID: MB 720-11630/6

Dilution:

Client: Environ Strategy

Client Matrix: Water

1.0

Date Analyzed: 08/03/2006 1041 Date Prepared: 08/03/2006 1041 Analysis Batch: 720-11630

Prep Batch: N/A

Units: ug/L

Instrument ID: Varian 3900A

Lab File ID: c:\saturnws\data\200608\08

Initial Weight/Volume: 10 mL Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Benzene	ND	and the same and the	0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
Surrogate	% Rec	Acceptance	Limits
Toluene-d8	90	77 - 12	1
1,2-Dichloroethane-d4	95	73 - 130	D

Job Number: 720-4842-1

Client: Environ Strategy

Laboratory Control/

Laboratory Control Duplicate Recovery Report - Batch: 720-11630

Method: 8260B Preparation: 5030B

LCS Lab Sample ID: LCS 720-11630/5

Client Matrix:

Water

Dilution: Date Analyzed: Date Prepared:

08/03/2006 0957 08/03/2006 0957

Analysis Batch: 720-11630

Prep Batch: N/A

Units: ug/L

Instrument ID: Varian 3900A

Lab File ID:

c:\satumws\data\200608\0{

Initial Weight/Volume: Final Weight/Volume:

10 mL 10 mL

LCSD Lab Sample ID: LCSD 720-11630/4

Client Matrix:

Water 1.0

Dilution: Date Analyzed: Date Prepared:

08/03/2006 1019 08/03/2006 1019

Analysis Batch: 720-11630

Prep Batch: N/A

Units: ug/L

Instrument ID: Varian 3900A

Lab File ID: c:\saturnws\data\200608\080

Initial Weight/Volume: 10 mL

Final Weight/Volume: 10 mL

	9	6 Rec.					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene	93	94	69 - 129	1	25	A delicate and a second second second second	andright a Charle State of State of the color of the State of the Stat
MTBE	89-	95	65 - 165	7	25		
Toluene	94	99	70 - 130	5	25		
Surrogate	L	.CS % Rec	LCSD %	Rec	Accer	otance Limits	Processor and an of the contraction of the contract
Toluene-d8	g	5	96		7	7 - 121	
1,2-Dichloroethane-d4	•	9	91		7	3 - 130	

Job Number: 720-4842-1

Client: Environ Strategy

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 720-11630

Method: 8260B Preparation: 5030B

MS Lab Sample ID:

720-4842-2

Analysis Batch: 720-11630

Instrument ID: Varian 3900A

Client Matrix:

Water

c:\saturnws\data\200608\f Lab File ID:

Dilution:

1.0

Prep Batch: N/A

Date Analyzed: Date Prepared: 08/03/2006 1340 08/03/2006 1340 Initial Weight/Volume: 10 mL Final Weight/Volume: 10 mL

MSD Lab Sample ID: 720-4842-2

Analysis Batch: 720-11630

Instrument ID: Varian 3900A

Client Matrix:

Water

Dilution:

1.0

Prep Batch: N/A

Lab File ID: c:\saturnws\data\200608\08

Date Analyzed: Date Prepared:

08/03/2006 1402 08/03/2006 1402 Initial Weight/Volume: 10 mL Final Weight/Volume: 10 mL

	%	Rec.				
Analyte	MS _	MSD	Limit	RPD	RPD Limit	MS Qual MSD Qual
Benzene	93	92	69 - 129	0	20	and the second s
MTBE	98	95	65 - 165	2	20	
Toluene	94	97	70 - 130	4	20	
Surrogate		MS % Rec	MSD	% Rec	Acce	eptance Limits
Toluene-d8	7	94	97		7	7 - 121
1,2-Dichloroethane-d4		90	90		7	3 - 130

Job Number: 720-4842-1

Method Blank - Batch: 720-11639

Method: 8260B Preparation: 5030B

Lab Sample ID: MB 720-11639/18

Client Matrix: Water Dilution: 1.0

Client: Environ Strategy

Dilution: 1.0

Date Analyzed: 08/02/2006 1924

Date Prepared: 08/02/2006 1924

Analysis Batch: 720-11639

Prep Batch: N/A Units: ug/L Instrument ID: Varian 3900A

Lab File ID: c:\saturnws\data\200608\08

Initial Weight/Volume: 10 mL Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
Surrogate	% Rec	Α	cceptance Limits
Toluene-d8	91		77 - 121
1,2-Dichloroethane-d4	90		73 - 130

Job Number: 720-4842-1

Client: Environ Strategy

Laboratory Control/

Laboratory Control Duplicate Recovery Report - Batch: 720-11639

Method: 8260B Preparation: 5030B

LCS Lab Sample ID: LCS 720-11639/17

Client Matrix:

Water

1.0

Dilution: Date Analyzed: Date Prepared:

08/02/2006 1839 08/02/2006 1839 Analysis Batch: 720-11639

Prep Batch: N/A

Units: ug/L

Instrument ID: Varian 3900A

Lab File ID:

c:\saturnws\data\200608\0{

Initial Weight/Volume:

10 mL

Final Weight/Volume:

10 mL

LCSD Lab Sample ID: LCSD 720-11639/16

Client Matrix: Dilution:

Date Analyzed:

Date Prepared:

Water

1.0

08/02/2006 1902 08/02/2006 1902 Analysis Batch: 720-11639

Prep Batch: N/A

Units: ug/L

Instrument ID: Varian 3900A

Lab File ID: c:\satumws\data\200608\080

Initial Weight/Volume: 10 mL

Final Weight/Volume: 10 mL

	9	<u>6 Rec.</u>					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene	95	97	69 - 129	2	25	anne de la company de la co	
MTBE	92	91	65 - 165	2	25		
Toluene	100	97	70 - 130	3	25		
Surrogate	L	.CS % Rec	LCSD %	Rec	Acce	ptance Limits	
Toluene-d8	g	2	92			77 - 121	
1,2-Dichloroethane-d4	8	4	87		7	73 - 130	

Job Number: 720-4842-1

Client: Environ Strategy

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 720-11639

Method: 8260B

Preparation: 5030B

MS Lab Sample ID: 720-4851-B-2 MS

Instrument ID: Varian 3900A

Client Matrix:

Water

Dilution:

Lab File ID:

c:\saturnws\data\200608\f

Date Analyzed:

08/02/2006 2115

Initial Weight/Volume: 10 mL Final Weight/Volume: 10 mL

Date Prepared:

08/02/2006 2115

Analysis Batch: 720-11639

Instrument ID: Varian 3900A

MSD Lab Sample ID: 720-4851-B-2 MSD Client Matrix:

Water

Analysis Batch: 720-11639

Lab File ID: c:\saturnws\data\200608\08

Dilution:

1.0

Prep Batch: N/A

Prep Batch: N/A

Initial Weight/Volume: 10 mL

Date Analyzed: Date Prepared: 08/02/2006 2137 08/02/2006 2137 Final Weight/Volume: 10 mL

	<u>%</u>	Rec.				
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual MSD Qual
Benzene	99	96	69 - 129	3	20	e de la company de la comp La company de la company d
мтве	100	101	65 - 165	1	20	
Toluene	99	98	70 - 130	1	20	
Surrogate		MS % Rec	MSD %	6 Rec	Acce	eptance Limits
Toluene-d8		93	94		7	7 - 121
1,2-Dichloroethane-d4		91	91		7:	3 - 130

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LOGIN SAMPLE RECEIPT CHECK LIST

Client: Environ Strategy Job Number: 720-4842-1

Login Number: 4842

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the	True	
COC. Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



ANALYTICAL REPORT

Job Number: 720-5297-1

Job Description: Conoco Phillips #4186, Livermore

For: Environ Strategy 30 Hughs Suite 209 Irvine, CA 92618

Attention: Mr. Jinghui Niu

Dimple Sharma

Project Manager I

dsharma@stl-inc.com

09/08/2006

cc: Mr. Darren Azarian

Ms. Lindia Liu

Mr. Sonny Nguyen

Mr. Kevin O'Malley

Project Manager: Dimple Sharma

METHOD SUMMARY

Client: Environ Strategy

Job Number: 720-5297-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS	STL SF	SW846 8260	В
Purge-and-Trap	STL SF		SW846 5030B

LAB REFERENCES:

STL SF = STL San Francisco

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

SAMPLE SUMMARY

Client: Environ Strategy

Job Number: 720-5297-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-5297-1	U-3	Water	08/30/2006 1100	08/30/2006 1137
720-5297-2	U-6	Water	08/30/2006 1045	08/30/2006 1137

Analytical Data

Job Number: 720-5297-1

Client: Environ Strategy

Client Sample ID:

U-3

Lab Sample ID:

720-5297-1

Client Matrix:

Water

Date Sampled:

08/30/2006 1100

Date Received:

08/30/2006 1137

8260B Volatile Organic Compounds by GC/MS

Method:

8260B

Analysis Batch: 720-12880

Instrument ID:

Varian 3900C

Preparation:

5030B

Lab File ID:

c:\saturnws\data\200609\09

Dilution:

100

Initial Weight/Volume:

40 mL

Date Analyzed: Date Prepared:

09/06/2006 1922 09/06/2006 1922 Final Weight/Volume:

40 mL

Analyte	Result (ug/L)	Qualifier	RL
Benzene	54		50
Ethylbenzene	110		50
MTBE	560		50
Toluene	ND		50
Xylenes, Total	ND		100
Gasoline Range Organics (GRO)-C6-C12	ND		5000
Surrogate	%Rec		Acceptance Limits
Toluene-d8 (Surr)	97		77 - 121
1,2-Dichloroethane-d4 (Surr)	111		73 - 130

Analytical Data

Client: Environ Strategy

Job Number: 720-5297-1

Client Sample ID:

U-6

Lab Sample ID:

720-5297-2

Client Matrix:

Water

Date Sampled:

08/30/2006 1045

Date Received:

08/30/2006 1137

8260B Volatile Organic Compounds by GC/MS

Method:

8260B

Analysis Batch: 720-12880

Instrument ID:

Varian 3900C

Preparation: Dilution:

5030B

Lab File ID:

c:\saturnws\data\200609\09

1.0

Initial Weight/Volume:

40 mL

Date Analyzed: Date Prepared: 09/06/2006 1949 09/06/2006 1949 Final Weight/Volume:

40 mL

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	280		50
Surrogate	%Rec		Acceptance Limits
Toluene-d8 (Surr)	119		77 - 121
1,2-Dichloroethane-d4 (Surr)	113		73 - 130

DATA REPORTING QUALIFIERS

Lab Section Qualifier Description

Client: Environ Strategy

Job Number: 720-5297-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA			and the state of t	manner om manifest by such the first of the last to th	The state of the s
Analysis Batch:720-1	2880	•			
LCS 720-12880/2	Lab Control Spike	T	Water	8260B	
LCSD 720-12880/1	Lab Control Spike Duplicate	Т	Water	8260B	
MB 720-12880/3	Method Blank	Т	Water	8260B	
720-5297-1	U-3	T	Water	8260B	
720-5297-2	U-6	т	Water	8260B	
720-5341-A-1 MS	Matrix Spike	Ť	Water	8260B	

Report Basis T = Total

Job Number: 720-5297-1

Client: Environ Strategy

Method Blank - Batch: 720-12880

Method: 8260B Preparation: 5030B

Lab Sample ID: MB 720-12880/3

Client Matrix: Water

Dilution: 1.0
Date Analyzed: 09/06/2006 1050
Date Prepared: 09/06/2006 1050

Analysis Batch: 720-12880

Prep Batch: N/A Units: ug/L 2880 in

Instrument ID: Varian 3900C

Lab File ID: C:\SaturnWS\data\mb-wa-6

Initial Weight/Volume: 40 mL Final Weight/Volume: 40 mL

Analyte	Result	Qual	RL
Benzene	ND	nakan nakai safti kangan mananda nakapan menanda menin menanda (Mikabi Menemun	0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
Surrogate	% Rec	Acceptance	e Limits
Toluene-d8 (Surr)	115	77 - 1	21
1,2-Dichloroethane-d4 (Surr)	110	73 - 1	30

Job Number: 720-5297-1 Client: Environ Strategy

Method: 8260B Lab Control Spike/ Preparation: 5030B Lab Control Spike Duplicate Recovery Report - Batch: 720-12880

Instrument ID: Varian 3900C Analysis Batch: 720-12880 LCS Lab Sample ID: LCS 720-12880/2

C:\SaturnWS\data\ls-wa-6-Lab File ID: Prep Batch: N/A Client Matrix: Water

Initial Weight/Volume: 40 mL Units: ug/L Dilution: 1.0

Final Weight/Volume: 40 mL 09/06/2006 0930 Date Analyzed: Date Prepared: 09/06/2006 0930

Instrument ID: Varian 3900C Analysis Batch: 720-12880 LCSD Lab Sample ID: LCSD 720-12880/1

Lab File ID: C:\SatumWS\data\ld-wa-6-0! Prep Batch: N/A Client Matrix: Water

Initial Weight/Volume: 40 mL Units: ug/L 1.0 Dilution:

Final Weight/Volume: 40 mL 09/06/2006 0956 Date Analyzed: 09/06/2006 0956 Date Prepared:

Analyte	LÇS	LCSD	Limit	RPD	RPD Limit LCS Qual LCSD Qual
Benzene	101	107	69 - 129	6	25
MTBE	109	110	65 - 165	1	2 5
Toluene	111	116	70 - 130	4	25
Surrogate	LCS % Rec		LCSD %	Rec	Acceptance Limits
Toluene-d8 (Surr)	1	15	114		77 - 121
1,2-Dichloroethane-d4 (Surr)	1	08	106		73 - 130

Method: 8260B Matrix Spike - Batch: 720-12880 Preparation: 5030B

Instrument ID: Varian 3900C Analysis Batch: 720-12880 Lab Sample ID: 720-5341-A-1 MS-

Lab File ID: C:\SaturnWS\data\ms-wa-5 Prep Batch: N/A Client Matrix: Water Initial Weight/Volume: 40 mL Units: ug/L Dilution:

Final Weight/Volume: 40 mL Date Analyzed: 09/06/2006 1335 Date Prepared: 09/06/2006 1335

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Benzene MTBE	0.0 0.0	250 250	253 229	101 92	69 - 129 65 - 165	
Toluene	0.0	250	248	99	70 - 130	

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	Pleasanton, G	CA 94566								Attn:	Dee H South	lutohi	Inson		~		Caracter Mor Cost Object							٦.				
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LOGIN SAMPLE RECEIPT CHECK LIST

Client: Environ Strategy

Job Number: 720-5297-1

Login Number: 5297

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



ANALYTICAL REPORT

Job Number: 720-5559-1

Job Description: Conoco Phillips #4186, Livermore

For: Environ Strategy 30 Hughs Suite 209 Irvine, CA 92618

Attention: Mr. Jinghui Niu

Dimple Sharma

Project Manager I dsharma@stl-inc.com

09/29/2006

cc: Mr. Darren Azarian

Ms. Lindia Liu

Mr. Sonny Nguyen

Mr. Kevin O'Malley

Project Manager: Dimple Sharma

METHOD SUMMARY

Client: Environ Strategy

Job Number: 720-5559-1

Descripti	on	Lab Location	Method	Preparation Method
Matrix:	Water			
Volatile Org	ganic Compounds by GC/MS	STL SF	SW846 8260E	3
	Purge-and-Trap	STL SF		SW846 5030B

LAB REFERENCES:

STL SF = STL San Francisco

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition. November 1986 And Its Updates.

SAMPLE SUMMARY

Client: Environ Strategy

Job Number: 720-5559-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-5559-1	U-3	Water	09/19/2006 1000	09/19/2006 1027
720-5559-2	U-6	Water	09/19/2006 0930	09/19/2006 1027

Analytical Data

Client: Environ Strategy

Job Number: 720-5559-1

Client Sample ID:

U-3

Lab Sample ID: Client Matrix:

720-5559-1

Water

Date Sampled:

09/19/2006 1000

Date Received: 09/19/2006 1027

8260B	Volatile	Organic	Compounds	hv	GC/MS

Method:

8260B

Analysis Batch: 720-13538

Instrument ID:

Varian 3900C

Preparation:

5030B

Lab File ID:

c:\saturnws\data\200609\09

Dilution:

100

Initial Weight/Volume:

40 mL

Date Analyzed:

Final Weight/Volume:

40 mL

Date Prepared:

09/26/2006 1636 09/26/2006 1636

Analyte Result (ug/L) Qualifier RL Benzene ND 50 Ethylbenzene ND 50 MTBE 680 50 Toluene ND 50 Xylenes, Total ND 100 Gasoline Range Organics (GRO)-C6-C12 ND 5000 Surrogate %Rec

Toluene-d8 (Surr) 1,2-Dichloroethane-d4 (Surr)

108 104 Acceptance Limits 77 - 121 73 - 130

Analytical Data

Client: Environ Strategy

Job Number: 720-5559-1

Client Sample ID:

U-6

Lab Sample ID:

720-5559-2

Client Matrix:

Water

Date Sampled:

09/19/2006 0930

Date Received:

09/19/2006 1027

8260B Volatile	Organic Com	pounds by	GC/MS
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Method:

8260B

Analysis Batch: 720-13670

Instrument ID:

Varian 3900E

Preparation:

5030B

Lab File ID:

c:\varianws\data\200609\09

Dilution:

1.0

Initial Weight/Volume:

10 mL

Date Analyzed:

09/27/2006 1244

Final Weight/Volume:

10 mL

Date Prepared:

09/27/2006 1244

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Ethylbenzene	0.59		0.50
MTBE	0.51		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	290		50
Surrogate	%Rec		Acceptance Limits
Toluene-d8 (Surr)	92		77 - 121
1,2-Dichloroethane-d4 (Surr)	101		73 - 130

DATA REPORTING QUALIFIERS

Lab Section Qualifier Description

Client: Environ Strategy

Job Number: 720-5559-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:720-13	3538				
LCS 720-13538/4	Lab Control Spike	Т	Water	8260B	
MB 720-13538/5	Method Blank	T	Water	8260B	
720-5559-1	U-3	T	Water	8260B	
Analysis Batch:720-1	3670				
LCS 720-13670/2	Lab Control Spike	T	Water	8260B	
LCSD 720-13670/1	Lab Control Spike Duplicate	T	Water	8260B	
MB 720-13670/3	Method Blank	T	Water	8260B	
720-5558-A-2 MS	Matrix Spike	T	Water	8260B	
720-5558-A-2 MSD	Matrix Spike Duplicate	T	Water	8260B	
720-5559-2	U-6	Ŧ	Water	8260B	

Report Basis T = Total

Client: Environ Strategy Job Number: 720-5559-1

Method Blank - Batch: 720-13538

Method: 8260B Preparation: 5030B

Lab Sample ID: MB 720-13538/5 Analysis Batch: 720-13538 Instrument ID: Varian 3900C

Client Matrix: Water Prep Batch: N/A Lab File ID: c:\saturnws\data\200609\0§
Dilution: 1.0 Units: ug/L Lab File ID: c:\saturnws\data\200609\0§
Initial Weight/Volume: 40 mL

 Dilution:
 1.0
 Units:
 ug/L
 Initial Weight/Volume:
 40
 mL

 Date Analyzed:
 09/26/2006
 1056
 Final Weight/Volume:
 40
 mL

 Date Prepared:
 09/26/2006
 1056

Analyte Result Qual RL Benzene ND 0.50 Ethylbenzene ND 0.50 MTBE ND 0.50 Toluene ND 0.50 Xylenes, Total ND 1.0 Gasoline Range Organics (GRO)-C6-C12 ND 50

 Surrogate
 % Rec
 Acceptance Limits

 Toluene-d8 (Surr)
 108
 77 - 121

 1.2-Dichloroethane-d4 (Surr)
 106
 73 - 130

Lab Control Spike - Batch: 720-13538 Method: 8260B Preparation: 5030B

Lab Sample ID: LCS 720-13538/4 Analysis Batch: 720-13538 Instrument ID: Varian 3900C

Lau Sample D. LCS 720-13536/4 Analysis batch. 720-13536 Instrument D: Varian 3900C

Client Matrix: Water Prep Batch: N/A Lab File ID: c:\saturnws\data\200609\0s Dilution: 1.0 Units: ug/L Lab File ID: c:\saturnws\data\200609\0s Initial Weight/Volume: 40 mL

Date Analyzed: 09/26/2006 0909 Final Weight/Volume: 40 mL
Date Prepared: 09/26/2006 0909

Analyte Spike Amount Result % Rec. Limit Qual Benzene 25.0 22.8 91 69 - 129 MTBE 25.0 25.1 65 - 165 100 Toluene 25.0 26.5 106 70 - 130

 Surrogate
 % Rec
 Acceptance Limits

 Toluene-d8 (Surr)
 110
 77 - 121

 1,2-Dichloroethane-d4 (Surr)
 100
 73 - 130

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Environ Strategy Job Number: 720-5559-1

Method Blank - Batch: 720-13670

Method: 8260B Preparation: 5030B

Lab Sample ID: MB 720-13670/3

Client Matrix: Water

Dilution:

1.0

Date Analyzed: 09/27/2006 1005 Date Prepared: 09/27/2006 1005 Analysis Batch: 720-13670

Prep Batch: N/A

Units: ug/L

Instrument ID: Varian 3900E

Lab File ID: c:\varianws\data\200609\0§

Initial Weight/Volume: 10 mL Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
MTBE	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50
Surrogate	% Rec	Accep	tance Limits
Toluene-d8 (Surr)	93	77	' - 121
1,2-Dichloroethane-d4 (Surr)	102	73	3 - 130

Client: Environ Strategy

Job Number: 720-5559-1

Lab Control Spikel

Lab Control Spike Duplicate Recovery Report - Batch: 720-13670

Method: 8260B Preparation: 5030B

LCS Lab Sample ID: LCS 720-13670/2

Client Matrix: Dilution:

Water

Date Analyzed: Date Prepared:

1.0

09/27/2006 0839 09/27/2006 0839 Analysis Batch: 720-13670

Prep Batch: N/A

Units: ug/L

Instrument ID: Varian 3900E

Lab File ID: Initial Weight/Volume: 10 mL

c:\varianws\data\200609\0§

Final Weight/Volume:

10 mL

LCSD Lab Sample ID: LCSD 720-13670/1

Client Matrix:

Water

Dilution: Date Analyzed: Date Prepared:

Toluene-d8 (Surr)

1,2-Dichloroethane-d4 (Surr)

1.0

09/27/2006 0900 09/27/2006 0900 Analysis Batch: 720-13670

Prep Batch: N/A

Units: ug/L

91

97

Instrument ID: Varian 3900E

Lab File ID: c:\varianws\data\200609\092

77 - 121

73 - 130

Initial Weight/Volume: 10 mL

Final Weight/Volume: 10 mL

% Rec. Analyte LCS **LCSD** Limit **RPD** RPD Limit LCS Qual LCSD Qual Benzene 86 89 69 - 129 4 25 MTBE 99 103 65 - 165 4 25 Toluene 84 89 70 - 130 25 6 Surrogate LCS % Rec LCSD % Rec Acceptance Limits

94

97

Client: Environ Strategy Job Number: 720-5559-1

Matrix Spike/ Method: 8260B
Matrix Spike Duplicate Recovery Report - Batch: 720-13670 Preparation: 5030B

MS Lab Sample ID: 720-5558-A-2 MS Analysis Batch: 720-13670 Instrument ID: Varian 3900E

Client Matrix: Water Prep Batch: N/A Lab File ID: c:\varianws\data\200609\t

Dilution: 1.0 Initial Weight/Volume: 10 mL

 Date Analyzed:
 09/27/2006 1056
 Final Weight/Volume:
 10 mL

 Date Prepared:
 09/27/2006 1056
 1056

MSD Lab Sample ID: 720-5558-A-2 MSD Analysis Batch: 720-13670 Instrument ID: Varian 3900E

Client Matrix: Water Prep Batch: N/A Lab File ID: c:\varianws\data\200609\0\$

 Dilution:
 1.0
 Initial Weight/Volume: 10 mL

 Date Analyzed:
 09/27/2006 1118
 Final Weight/Volume: 10 mL

% Rec. MSD Limit **RPD RPD Limit** MS Qual MSD Qual Analyte MS Benzene 91 93 69 - 129 3 20 **MTBE** 98 102 65 - 165 20 4 Toluene 88 70 - 130 20 90 2 Surrogate MS % Rec MSD % Rec Acceptance Limits Toluene-d8 (Surr) 94 92 77 - 121 1,2-Dichloroethane-d4 (Surr) 101 102 73 - 130

Date Prepared:

09/27/2006 1118

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LOGIN SAMPLE RECEIPT CHECK LIST

Client: Environ Strategy Job Number: 720-5559-1

Login Number: 5559

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	