#### **RECEIVED**

By lopprojectop at 10:48 am, Feb 21, 2006



76 Broadway Sacramento, California 95818

February 10, 2006

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

Re:

Report Transmittal Quarterly Report Fourth Quarter – 2005 76 Service Station #6034 4700 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

max H. Koal

Attachment



#### RECEIVED

By lopprojectop at 10:48 am, Feb 21, 2006

www.deltaenv.com

#### Solving environment-related business problems worldwide

3164 Gold Camp Drive • Suite 200 Rancho Cordova, California 95670 USA 916.638.2085 800.477.7411 Fax 916.638.8385

February 15, 2006

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

Re: Semi-Annual Summary Report – Fourth Quarter 2005

Delta Project No. C106034011

Dear Mr. Wickham:

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

DANIEL J. DAVIS

No. 6435

#### **Service Station**

#### Location

76 Service Station No. 6034

4700 First Street Livermore, California

Sincerely,

Delta Environmental Consultants, Inc.

Ben Wright Staff Geologist

Forward:

CC:

6 mild

Daniel J. Davis, R.G. Senior Project Manager

TRC - Semi-Annual Monitoring Report

Ms. Shelby Lathrop, ConocoPhillips (electronic copy)

A member of:

Inogen°

Environmental Alliance

# Fourth Quarter 2005 76 Service Station No. 6034

4700 First Street Livermore, California

#### PREVIOUS ASSESSMENT

Two underground storage tanks (UST)s, one waste oil UST, and the product piping were removed from the site in August 1989. Petroleum hydrocarbon concentrations in soil samples collected beneath the fuel USTs were non-detect to moderate. The fuel UST pit was subsequently over excavated to a depth of 17.5 feet below ground surface (bgs), where groundwater was encountered, in order to remove hydrocarbon impacted soil. Petroleum hydrocarbon concentrations in soil samples collected from beneath the waste oil UST were non-detect.

In October 1989, four monitoring wells (MW-1 through MW-4) were installed to depths ranging from 26 to 29 feet bgs. Groundwater was encountered at depths ranging from 14.5 to 17.5 feet bgs.

In April 1991, three additional monitor wells (MW-5 through MW-7) were installed to an average depth of 25 feet bgs. Groundwater was initially encountered at a depth of approximately 16 feet bgs.

In August 1995, an oxygen-releasing compound (magnesium peroxide) was placed in well MW-2 to enhance biodegradation of petroleum hydrocarbons. Also, a non-attainment zone status was sought from the regulatory agencies.

On October 30, 2003, five soil borings (SB-1 though SB-5) were completed to depths of 20 feet bgs. Adsorbed-phase methyl tertiary butyl ether (MTBE) was detected in two of the four samples analyzed at concentrations ranging from 0.042 to 0.064 mg/kg, which exceed the applicable Tier 1 environmental screening level (ESL) of the San Francisco Bay Regional Water Quality Control Board of 0.023 mg/kg. In addition, MTBE in the groundwater sample collected from SB-3 was detected at 13 micrograms per liter ( $\mu$ g/l), above the applicable ESL of 5  $\mu$ g/l.

Groundwater samples collected from MW-2 over the past two years have detected MTBE concentrations ranging from 1.5 to 5.9  $\mu$ g/l.

#### **SENSITIVE RECEPTORS**

The site is located adjacent to and northwest of Arroyo Seco, an intermittent drainage stream.

#### **GROUNDWATER MONITORING AND SAMPLING**

Groundwater at the site is currently monitored and sampled on a semi-annual basis during the second and fourth quarters of each year. During the fourth quarter sampling event maximum hydrocarbon concentrations were as follows: total purgeable petroleum hydrocarbons (TPPH) (270 µg/l, MW-2), ethylbenzene (4.6 µg/l, MW-2), total xylenes (10

 $\mu$ g/l, MW-2), and MTBE (1.5  $\mu$ g/l, MW-2). The groundwater flow direction and gradient were northwest at 0.02 ft/ft. The depth to groundwater varied from a minimum 14.01 feet (MW-4) to a maximum 15.65 feet (MW-7). Overall, the dissolved hydrocarbon trend is decreasing for MW-2 and MW-4.

#### **REMEDIATION STATUS**

Remediation is not currently being conducted at the site.

#### **CHARACTERIZATION STATUS**

Based on the most current groundwater and soil analytical data, the dissolved gasoline plume appears to be delineated. The dissolved MTBE concentration in the sample from MW-2 was most recently reported at 1.5  $\mu$ g/I. Groundwater in the site area is designated as a possible drinking water source.

#### RECENT CORRESPONDENCE

No recent correspondence was documented during this reporting period.

#### THIS QUARTER ACTIVITIES (Fourth Quarter 2005)

TRC conducted monitoring and sampling of groundwater on October 24, 2005.

#### **WASTE DISPOSAL SUMMARY**

No waste was generated this quarter.

#### **NEXT QUARTER ACTIVITIES (First Quarter 2006)**

The monitor well network will next be monitored and sampled by TRC during the second quarter 2006.

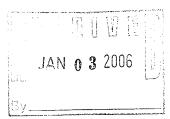
Delta will evaluate site requirements and path to closure based on discussions with the Alameda County Health Care Agency.

**CONSULTANT:** Delta Environmental Consultants, Inc.



December 5, 2005

ConocoPhillips Company 76 Broadway Sacramento, CA 95818



ATTN:

MS. SHELBY LATHROP

SITE:

**76 STATION 6034** 

4700 FIRST STREET

LIVERMORE, CALIFORNIA

RE:

SEMI-ANNUAL MONITORING REPORT

**JULY THROUGH DECEMBER 2005** 

Dear Ms. Lathrop:

Please find enclosed our Semi-Annual Monitoring Report for 76 Station 6034, located at 4700 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. Eric Hetrick, Delta Environmental Consultants, Inc. (2 copies)

Enclosures 20-0400/6034R08.QMS



#### SEMI-ANNUAL MONITORING REPORT JULY THROUGH DECEMBER 2005

76 Station 6034 4700 First Street Livermore, California

Prepared For:

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

By:

Senior Project Geologist, Irvine Operations November 30, 2005

	LIST OF ATTACHMENTS
Summary Sheet	Summary of Gauging and Sampling Activities
Tables	Table Key
	Table 1: Current Fluid Levels and Selected Analytical Results
	Table 2: Historic Fluid Levels and Selected Analytical Results
	Table 3: Additional Analytical Results
Figures	Figure 1: Vicinity Map
	Figure 2: Groundwater Elevation Contour Map
	Figure 3: Dissolved-Phase TPPH 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
	Groundwater Sampling Field Notes
Laboratory	Official Laboratory Reports
Reports	Quality Control Reports
	Chain of Custody Records
Statements	Purge Water Disposal
	Limitations

#### Summary of Gauging and Sampling Activities July through December 2005 76 Station 6034 4700 First Street Livermore, CA

Project Coordinator: Shelby Lathrop

Telephone: **916-558-7609** 

Water Sampling Contractor: TRC

Compiled by: Jeremiah Hurn

Date(s) of Gauging/Sampling Event: 10/24/2005

**Sample Points** 

Groundwater wells:

7 onsite.

O offsite

Wells gauged: 7

Wells sampled: 2

Purging method: **Diaphragm pump** 

Purge water disposal: Onyx/Rodeo Unit 100 Other Sample Points: 0

Type: n/a

**Liquid Phase Hydrocarbons (LPH)** 

Wells with LPH: 0

Maximum thickness (feet): n/a

LPH removal frequency: n/a

Method: n/a

Treatment or disposal of water/LPH: n/a

**Hydrogeologic Parameters** 

Depth to groundwater (below TOC):

Minimum: 14.01 feet

Maximum: 15.65 feet

Average groundwater elevation (relative to available local datum): 504.77 feet Average change in groundwater elevation since previous event: -0.19 feet

Interpreted groundwater gradient and flow direction:

Current event: 0.02 ft/ft, northwest

Previous event: 0.02 ft/ft, northwest (6/13/2005)

**Selected Laboratory Results** 

Wells with detected **Benzene**:

Wells above MCL (1.0 µg/l): n/a

Maximum reported benzene concentration: n/a

Wells with **TPPH 8260B** 

2

0

Maximum: 270 μg/l (MW-2)

Wells with MTBE

1

Maximum: 1.5 μg/l (MW-2)

Notes:

MW-1=Monitored Only, MW-3=Monitored Only, MW-5=Monitored Only, MW-6=Dry well, MW-7=Monitored Only,

## **TABLES**

#### TABLE KEY

#### **STANDARD ABBREVIATIONS**

-- e 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-D = total petroleum hydrocarbons with diesel distinction

TPPH = total purgeable petroleum hydrocarbons 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 6034 in October 2003. Historical data compiled prior to that time were provided by Gettler-Ryan Inc.

Table 1
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
October 24, 2005
76 Station 6034

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B	Comments
-	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	$(\mu g/l)$	(μg/l)	$(\mu g/l)$	(µg/l)	
MW-1		(Screen I	nterval in fe	et: 11.0-2	8.5)									
10/24/20	05 520.64	15.63	0.00	505.01	-0.14									Monitored Only
MW-2	•	(Screen I	nterval in fe	et: 11.0-2	5.0)									
10/24/20	05 519.82	15.23	0.00	504.59	-0.11		270	ND<0.50	ND<0.50	4.6	10		1.5	
MW-3		(Screen I	nterval in fe	et: 11.0-2	5.0)									
10/24/20	05 519.66	14.17	0.00	505.49	-0.19									Monitored Only
MW-4		(Screen I	nterval in fe	et: 11.0-2	5.0)									
10/24/20	05 519.61		0.00	505.60	-		66	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
MW-5		(Screen I	nterval in fe	et: 10.0-2	4.0)									
10/24/20	05 520.27	15.51	0.00	504.76	-0.20						-			Monitored Only
MW-6		(Screen I	nterval in fe	et: 10.0-2	4.0)									
10/24/20	05 518.75	-	<b></b>											Dry well
MW-7		(Screen I	nterval in fe	et: 10.0-2	4.0)									
10/24/20	05 518.83	-	0.00	503.18	•							<b></b>		Monitored Only

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
November 1989 Through October 2005
76 Station 6034

Date Sampled		ation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B	Comments
	(fee	et)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	
MW-1		(S	creen Int	erval in feet	: 11.0-28.5	5)									
11/18/1							ND		ND	ND	ND	ND			
3/8/19							ND		ND	ND	ND	ND			
6/5/19						10.00	ND		ND	ND	ND	ND			
9/7/19							ND		ND	1.2	ND	ND			
12/24/1	990						ND		ND	ND	ND	0.4			•
4/10/19	991						ND		ND	ND	ND	ND			
7/10/19	91						ND		ND	ND	ND	ND			
4/22/19	93 5	20.88	15.47	0.00	505.41										
7/20/19	93 5	20.88	18.04	0.00	502.84	-2.57									
10/20/19	993 5	20.64	15.69	0.00	504.95	2.11			. <b></b>						
1/20/19	94 5	20.64	15.65	0.00	504.99	0.04								<b>~</b> u	
4/21/19	94 5	20.64	15.58	0.00	505.06	0.07	ND		ND	ND	· ND	ND			
7/21/19	94 5	20.64	15.62	0.00	505.02	-0.04		-							Sampled Annually
10/19/19	994 5	20.64	15.28	0.00	505.36	0.34		~							
1/18/19	95 5	20.64	14.56	0.00	506.08	0.72									
4/17/19	95 5	20.64	14.82	0.00	505.82	-0.26	ND		ND	ND	ND	ND			
7/18/19	95 5	20.64	14.78	0.00	505.86	0.04									
10/17/19	995 5	20.64	14.83	0.00	505.81	-0.05									
1/17/19	96 5	20.64	14.96	0.00	505.68	-0.13									
4/17/19	96 5	20.64	14.47	0.00	506.17	0.49	ND		ND	ND	ND	ND	ND		
7/16/19	96 5	20.64	14.57	0.00	506.07	-0.10									
10/16/19	996 5	20.64	14.50	0.00	506.14	0.07									
4/8/199	97 5	20.64	15.05	0.00	505.59	-0.55				***					Sampling Discontinued
10/6/19	97 5	20.64	15.00	0.00	505.64	0.05									

Page 1 of 13

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
November 1989 Through October 2005
76 Station 6034

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B		Comments
<del></del>	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)		
	continued														
4/2/199				505.84	0.20										
10/7/199				505.92	80.0										
4/14/199				505.75	-0.17										
10/12/19		14.79	0.00	505.85	0.10										
4/10/200	00 520.64	14.93	0.00	505.71	-0.14			m us							
10/2/200	00 520.64	15.18	0.00	505.46	-0.25										
4/2/200	1 520.64	14.72	0.00	505.92	0.46										
10/5/200	1 520.64	15.51	0.00	505.13	-0.79										
4/1/2002	2 520.64	15.40	0.00	505.24	0.11										
10/16/200	02 520.64	15.54	0.00	505.10	-0.14										
4/3/2003	3 520.64	15.41	0.00	505.23	0.13										
10/2/200	3 520.64	15.58	0.00	505.06	-0.17									,	Monitored Only
4/30/200	4 520.64	15.65	0.00	504.99	-0.07										Monitored only
12/1/200	4 520.64	15.81	0.00	504.83	-0.16								~~		Sampled Semi-Annually
6/13/200	5 520.64	15.49	0.00	505.15	0.32					Pri de la					Monitored Only
10/24/200	05 520.64	15.63	0.00	505.01	-0.14										Monitored Only
MW-2	(S	creen Inte	erval in feet	: 11.0-25.0	)										
11/18/198					- <del>-</del>	53000		540	500	130	22000				
3/8/1990	)					26000		230	410	1300	2100				
6/5/1990	)					31000		250	460	950	9200				
9/7/1990	)					ND		ND	1.5	ND	ND				
12/24/199	90			· <u></u>		32000		440	340	460	13000				
4/10/199	1					22000		170	190	490	6200				
7/10/199	1				<b></b>	14000		70	160	570	5400	***			

6034

Page 2 of 13

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
November 1989 Through October 2005
76 Station 6034

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPPH 8260B	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)	
	continue	1												
10/14/19						11000		79	130	660	4700			
1/14/19	92				'	5600		36	120	450	2600			
4/6/199						760		6.3	2.1	ND	130	***		
7/7/199	92					44000		160	1100	1000	17000			
10/16/19	992					290		2.3	ND	5.1	15			
1/14/19	93					19000		75	430	900	8400			
4/22/19	93 520.1	7 14.98	0.00	505.19		49000		150	1000	3000	18000		P-100	
7/20/19	93 520.1	7 17.41	0.00	502.76	-2.43	25000		68	94	1000	6200			
10/20/19	993 519.8	2 15.08	0.00	504.74	1.98	12000		27	10	100	3000			
1/20/19	94 519.8	2 15.02	0.00	504.80	0.06	20000		ND	ND	270	3300			
4/21/19	94 519.8	2 14.96	0.00	504.86	0.06	27000		85	65	880	5300			
7/21/19	94 519.8	2 14.99	0.00	504.83	-0.03	31000		58	29	940	6200			
10/19/19	994 519.8	2 14.80	0.00	505.02	0.19	4100		16	3.5	8.6	1100			
1/18/19	95 519.8	2 14.10	0.00	505.72	0.70	5100		6.8	7.3	100	1500			
4/17/19	95 519.8	2 14.13	0.00	505.69	-0.03	320		1.3	0.67	6.6	74			
7/18/19	95 519.8	2 14.11	0.00	505.71	0.02	12000		25	24	550	3700			
10/17/19	995 519.8	2 14.15	0.00	505.67	-0.04	77000		60	58	760	8300	220		
1/17/19	96 519.8	2 14.35	0.00	505.47	-0.20	7000		15	ND	150	1600	370		
4/17/19	96 519.8	2 13.93	0.00	505.89	0.42	19000		ND	ND	600	4900	6100		
7/16/19	96 519.8	2 14.00	0.00	505.82	-0.07	23000		16	22	900	4500	410		
10/16/19	996 519.8	2 14.12	0.00	505.70	-0.12	14000		28	31	1600	6900	9600		
1/13/19	97 519.8	2				4300		12	5.0	28	890	1300		
4/8/199	97 519.8	2 14.49	0.00	505.33		4700		ND	6.5	170	830	290		
10/6/19	97 519.8	2 14.41	0.00	505.41	0.08	5800		14	ND	19	860	<b>570</b> ·		

Page 3 of 13

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
November 1989 Through October 2005
76 Station 6034

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground- water Elevation (feet)	Change in Elevation (feet)	TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B	Comments
		<del></del>	(1001)	(Icci)	(ICCI)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	
<b>MW-2</b> 4/2/199	continued 8 519.82		0.00	505.56	0.15	24000		ND	ND	080	5200	6000		
	98 519.82			505.47	-0.09	41000		ND ND	ND ND	980	5200	6800	2500	
4/14/19		*		505.47	-0.19	720				2100	7800	3700	2700	
	99 519.82			505.28	0.04	2200		1.2	ND	29	260	95 52	57	
	00 519.82			505.10	-0.22	ND		ND	ND	78	480	52	11	
	00 519.82		0.00	504.91	-0.22	ND		ND ND	ND ND	0.815	2.99	28.5	40.1	•
4/2/200			0.00	505.70	0.79	ND ND		ND ND	ND ND	0.71	1.0	9.2	11	
	1 519.82		0.00	504.80	-0.90					ND	ND	ND	ND	
4/1/200			0.00	504.88	0.08	1300		4.4	ND<2.5	29	79	ND<25	12	
	02 519.82		0.00	504.76		3500		5.1	ND<5.0	120	460	ND<50	14	
4/3/200			0.00		-0.12	240		ND<0.50		8.2	15		ND<2.0	
				504.86	0.10	1300		1.5	1.8	23	160		6.6	
	3 519.82		0.00	504.71	-0.15		15000	ND<13	ND<13	290	1400		ND<50	
	)4 519.82		0.00	504.57	-0.14		8000	ND<13	ND<13	140	550		ND<13	
	)4 519.82		0.00	504.45	-0.12		4700	ND<1.0	ND<1.0	81	240		5.9	•
	519.82		0.00	504.70	0.25		3300	ND<0.50		47	200		2.5	
10/24/20	05 519.82	15.23	0.00	504.59	-0.11		270	ND<0.50	ND<0.50	4.6	10		1.5	
MW-3		Screen Inte	rval in feet	: 11.0-25.0	)									
11/18/19						ND		0.35	ND	ND	ND			
3/8/199						ND		ND	ND	ND	ND			
6/5/199						ND		ND	ND	ND	ND			
9/7/199	0					1100	•	11	ND	6.6	16			
12/24/19	90					ND		ND	ND	ND	ND			
4/10/199	)1					ND		ND	ND	ND	ND			
7/10/199	1					ND		ND	ND	ND	ND			

Page 4 of 13

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
November 1989 Through October 2005
76 Station 6034

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPPH 8260B	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)	$(\mu g/l)$	(μg/l)	$(\mu g/l)$	
MW-3	continued	!								-				
10/14/19						ND		ND	ND	ND	ND			
1/14/19						ND		ND	ND	ND	ND			
4/6/199						ND		ND	ND	ND	ND			
7/7/199						ND		ND	ND	ND	ND			
10/16/19	92					ND		ND	ND	ND	ND			
1/14/19	93					ND		ND	ND	ND	ND			
4/22/19	93 519.91	14.33	0.00	505.58		ND		ND	ND	ND	ND			
7/20/199	93 519.91	16.90	0.00	503.01	-2.57	ND		ND	ND	ND	ND			
10/20/19	93 519.66	14.42	0.00	505.24	2.23	ND		ND	ND	ND	ND			
1/20/199	94 519.66	14.37	0.00	505.29	0.05									Sampled Annually
4/21/199	94 519.66	14.30	0.00	505.36	0.07	ND		ND	ND	ND	ND			•
7/21/199	94 519.66	14.34	0.00	505.32	-0.04									Sampled Semi-Annually
10/19/19	94 519.66	14.08	0.00	505.58	0.26	ND		ND	0.61	ND	0.51			•
1/18/199	5 519.66	13.23	0.00	506.43	0.85									
4/17/199	95 519.66	13.20	0.00	506.46	0.03	ND		ND	ND	ND	ND			
7/18/199	5 519.66	13.19	0.00	506.47	0.01			•••						
10/17/19	95 519.66	13.24	0.00	506.42	-0.05	ND		ND	ND	ND	ND	ND		Sampled Annually
1/17/199	96 519.66	13.68	0.00	505.98	-0.44									•
4/17/199	6 519.66	13.04	0.00	506.62	0.64	ND		ND	ND	ND	ND	ND		
7/16/199	6 519.66	13.24	0.00	506.42	-0.20									
10/16/19	96 519.66	13.10	0.00	506.56	0.14								m	
4/8/199	7 519.66	13.73	0.00	505.93	-0.63									Sampling Discontinued
10/6/199	7 519.66	13.70	0.00	505.96	0.03									. 5
4/2/199	8 519.66	13.43	0.00	506.23	0.27									

Page 5 of 13

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
November 1989 Through October 2005
76 Station 6034

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G	TPPH 8260B	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)	
MW-3	continued													
	98 519.66		0.00	506.33	0.10									
4/14/199			0.00	506.19	-0.14									
	99 519.66		0.00	506.28	0.09									
4/10/200			0.00	506.15	-0.13									
10/2/200			0.00	506.04	-0.11									
4/2/200			0.00	506.28	0.24									
10/5/200			0.00	505.56	-0.72									
4/1/200			0.00	505.68	0.12									
10/16/20	02 519.66	14.16	0.00	505.50	-0.18									
4/3/200		13.98	0.00	505.68	0.18				, <b></b>					
10/2/200	3 519.66	14.15	0.00	505.51	-0.17									Monitored Only
4/30/200			0.00	505.46	-0.05									Monitored only
12/1/200	94 519.66	14.37	0.00	505.29	-0.17				<u></u>					Sampled Semi-Annually
6/13/200			0.00	505.68	0.39									Monitored Only
10/24/20	05 519.66	14.17	0.00	505.49	-0.19	~~								Monitored Only
MW-4	(S	creen Inte	rval in feet	: 11.0-25.0)	)									
11/18/19						990		9.8	10	7.1	4.7			
3/8/199						1200		18	8.4	37	28			
6/5/1990						1400		1.2	4.7	24	12			
9/7/1990	0					15000		100	140	210	4600			
12/24/199	90					1400		ND	8.7	15	10			
4/10/199	1					950		0.84	4.3	9.6	5.0			
7/10/199	1					830		8.4	19	7.7	7.2			
10/14/199	91					880		3.8	2.2	8.6	5.8			

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
November 1989 Through October 2005
76 Station 6034

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(μg/l)	(μg/l)	$(\mu g/l)$	$(\mu g/l)$	(μg/l)	(µg/l)	(µg/l)	
MW-4														
1/14/19				~~		1500		4.2	7.1	18	9.2			
4/6/199	2					660		1.3	3.8	2.9	4.1			
7/7/199	2					340		ND	2.2	2.4	2.4			
10/16/19	92					300		2.1	ND	4.8	13			
1/14/199	93					920		ND	6.3	12	3.9			
4/22/199	93 520.12	14.30	0.00	505.82		1100		8.8	1.0	7.2	6.0			
7/20/199	93 520.12	16.35	0.00	503.77	-2.05							MA		Not sampled - Sampling access denied
10/20/19	93 519.61	14.16	0.00	505.45	1.68	640		ND	2.5	2.3	1.9			
1/20/199	94 519.61	14.15	0.00	505.46	0.01	1200		ND	2.6	4.7	7.4			
4/21/199	94 519.61	14.13	0.00	505.48	0.02	380		0.83	1.2	1.2	1.7			
7/21/199	94 519.61	14.26	0.00	505.35	-0.13	320		0.51	1.4	1.0	1.6	·		
10/19/19	94 519.61	13.95	0.00	505.66	0.31	750		ND	3.6	4.2	3.4			
1/18/199	5 519.61	13.16	0.00	506.45	0.79	790		1.5	3.3	1.2	2.6	•••		
4/17/199	5 519.61	13.19	0.00	506.42	-0.03	570		2.8	ND	3.3	3.9			
7/18/199	5 519.61	13.21	0.00	506.40	-0.02	340		1.0	1.9	2.8	2.7			
10/17/19	95 519.61	13.22	0.00	506.39	-0.01	260		1.1	0.57	0.69	1.6	2.0		
1/17/199	6 519.61	13.02	0.00	506.59	0.20									Sampled Semi-Annually
4/17/199	6 519.61	13.08	0.00	506.53	-0.06	720		3.0	2.6	6.1	6.9	ND		
7/16/199	6 519.61	12.91	0.00	506.70	0.17									
10/16/19	96 519.61	12.98	0.00	506.63	-0.07	1100		6.6	23	24	85	15		
1/13/199	7 519.61		0.00											
4/8/199	7 519.61	13.36	0.00	506.25		470		1.2	1.9	1.2	6.9	ND		
10/6/199	7 519.61	13.42	0.00	506.19	-0.06	240		ND	0.85	0.83	2.3	ND		

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
November 1989 Through October 2005
76 Station 6034

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground- water Elevation (feet)	Change in Elevation (feet)	TPH-G (μg/l)	TPPH 8260B (μg/l)	Benzene (μg/l)	Toluene (μg/l)	Ethyl- benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (μg/l)	MTBE 8260B (μg/l)	Comments
MW-4	continued										(1.8 -)	(1.8.7)	(16.7)	
4/2/199		12.76	0.00	506.85	0.66	270		ND	1.2	ND	4.5	10		
10/7/199	98 519.61	13.04	0.00	506.57	-0.28	350		ND	ND	ND	4.8	ND		
4/14/199	9 519.61	13.21	0.00	506.40	-0.17	250	***	1.6	ND	3.1	5.6	ND	16	
10/12/19	99 519.61	13.16	0.00	506.45	0.05	200		1.4	ND	2.3	3.9	ND		
4/10/200	00 519.61	13.48	0.00	506.13	-0.32	52.8		ND	ND	ND	ND	ND		
10/2/200	00 519.61	13.25	0.00	506.36	0.23	57		ND	ND	0.50	0.90	30		
4/2/200	1 519.61	13.11	0.00	506.50	0.14	ND		ND	ND	ND	ND	ND		
10/5/200	1 519.61	14.04	0.00	505.57	-0.93	150		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0		
4/1/2002	2 519.61	13.76	0.00	505.85	0.28	130		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0		
10/16/20	02 519.61	14.10	0.00	505.51	-0.34	130		ND<0.50	ND<0.50	ND<0.50	ND<1.0		3.8	
4/3/2003	3 519.61	13.69	0.00	505.92	0.41	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<1.0		3.6	
10/2/200	3 519.61	14.20	0.00	505.41	-0.51		81	ND<0.50	0.86	4.1	9.4		ND<2.0	
4/30/200	4 519.61	14.12	0.00	505.49	0.08		51	ND<0.50	ND<0.50	ND<0.50	ND<1.0		1.5	
12/1/200		14.17	0.00	505.44	-0.05		130	ND<0.50	ND<0.50	ND<0.50	ND<1.0		1.6	
	5 519.61	13.68	0.00	505.93	0.49		69	ND<0.50	ND<0.50	ND<0.50	ND<1.0		0.60	
10/24/200	05 519.61	14.01	0.00	505.60	-0.33		66	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
MW-5		creen Inte	rval in feet	: 10.0-24.0	)									
4/10/199						630		35	14	47	30			
7/10/199						220		5.1	8.7	9.1	9.7			
10/14/199						660		55	4.4	50	66			
1/14/199						99		1.0	1.2	ND	0.32	1.2		
4/6/1992						240		ND	ND	0.35	ND			
7/7/1992						76		0.48	1.1	0.32	1.3	1.5		
10/16/199	92		mm			180		7.8	1.1	17	6.4	2.0		

Page 8 of 13

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
November 1989 Through October 2005
76 Station 6034

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPPH 8260B	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)	$(\mu g/l)$	$(\mu g/l)$	
MW-5														
1/14/19	•					91		ND	0.53	1.2	11			
4/22/19			0.00	505.34		94		1.2	ND	ND	1.3	0.82		
7/20/19				503.20	-2.14	89		1.1	0.51	ND	1.8	2.2	~-	
10/20/19			0.00	504.71	1.51	110		0.8	ND	ND	ND			
1/20/19		15.39	0.00	504.88	0.17	ND		ND	ND	ND	ND			
4/21/19			0.00	504.86	-0.02	ND		ND	ND	ND	ND			
7/21/19			0.00	504.72	-0.14	ND		ND	ND	ND	ND			
	994 520.27	15.20	0.00	505.07	0.35	ND		ND	0.71	ND	0.57			
1/18/19		14.52	0.00	505.75	0.68	ND		ND	ND	ND	ND			
4/17/19		14.50	0.00	505.77	0.02	ND		ND	ND	ND	ND			
7/18/19			0.00	505.86	0.09	ND		ND	ND	ND	1.1			
10/17/19	95 520.27	14.46	0.00	505.81	-0.05	ND		ND	ND	ND	ND	ND		
1/17/19		14.48	0.00	505.79	-0.02									Sampled Annually
4/17/19			0.00	506.05	0.26	ND		ND	ND	ND	ND	ND		
	96 520.27		0.00	506.00	-0.05	~~								
	96 520.27	14.15	0.00	506.12	0.12									
4/8/199		14.71	0.00	505.56	-0.56									Sampling Discontinued
10/6/19		14.71	0.00	505.56	0.00									
4/2/199	8 520.27	14.28	0.00	505.99	0.43									
10/7/199	98 520.27	14.40	0.00	505.87	-0.12									
4/14/199	99 520.27	14.63	0.00	505.64	-0.23									
10/12/19	99 520.27	14.48	0.00	505.79	0.15									
4/10/200	00 520.27	14.76	0.00	505.51	-0.28									
10/2/200	00 520.27	14.65	0.00	505.62	0.11									

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
November 1989 Through October 2005
76 Station 6034

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation		TPH-G	TPPH 8260B	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)	
	continued													
4/2/200				506.07	0.45				-					
10/5/20				504.80	-1.27				Pa 100					
4/1/200		15.18	0.00	505.09	0.29									
10/16/20		15.50	0.00	504.77	-0.32	HH								
4/3/200	3 520.27	15.14	0.00	505.13	0.36									
10/2/20	03 520.27	15.66	0.00	504.61	-0.52									Monitored Only
4/30/20	04 520.27	15.55	0.00	504.72	0.11					Pi			,	Monitored only
12/1/20	04 520.27	15.62	0.00	504.65	-0.07									Sampled Semi-Anually
6/13/20	05 520.27	15.31	0.00	504.96	0.31									Monitored Only
10/24/20	005 520.27	15.51	0.00	504.76	-0.20									Monitored Only
MW-6	(5	Screen Inte	erval in feet	: 10.0-24.0	)									
4/10/19	91			·		ND	***	ND	ND	ND	ND			
7/10/19	91			**************************************		ND		ND	ND	ND	ND			
10/14/19	91					ND		ND	ND	ND	ND			
1/14/19	92					ND		ND	ND	ND	ND			
4/6/199	2					ND		ND	ND	ND	ND			
7/7/199	2					ND		ND	ND	ND	ND			
10/16/19	92													Obstructed
1/14/19	93											•••		Obstructed
4/22/199	93 519.34		0.00											Obstructed
7/20/199	93 519.34		0.00											Obstructed
10/20/19	93 518.75	14.20	0.00	504.55	·	ND		ND	ND	ND	ND			
1/20/199	94 518.75	14.14	0.00	504.61	0.06	ND		ND	ND	ND	ND			
4/21/199	94 518.75	14.10	0.00	504.65	0.04	ND		ND	ND	ND	ND			

Page 10 of 13

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
November 1989 Through October 2005
76 Station 6034

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPPH 8260B	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)	$(\mu g/l)$	
MW-6	continued											-		
7/21/19			0.00	504.63	-0.02	ND		ND	ND	ND	ND			
	994 518.75													Obstructed by roots
1/18/19														Obstructed by roots
4/17/19			0.00	504.93		ND		ND	ND	ND	ND			
7/18/19			0.00	504.91	-0.02	ND		ND	ND	ND	ND			
10/17/19	995 518.75	13.90	0.00	504.85	-0.06	ND		ND	ND	ND	ND	2.2		
1/17/19	96 518.75								<u></u>					Sampled Annually - Obstructed by roots
4/17/19	96 518.75	13.66	0.00	505.09		ND		ND	ND	ND	ND ·	ND		
7/16/19	96 518.75													Obstructed by roots
10/16/19	96 518.75	13.72	0.00	505.03			<b></b> ′							
4/8/199	7 518.75													Obstructed by roots
10/6/19	97 518.75					~~								Obstructed by roots
4/2/199	8 518.75											·		Obstructed by roots
10/7/19	98 518.75													Obstructed by roots
4/14/19	99 518.75	13.82	0.00	504.93						***				
10/12/19	99 518.75	13.72	0.00	505.03	0.10									
4/10/20	00 518.75	13.40	0.00	505.35	0.32									
10/2/20	00 518.75	13.63	0.00	505.12	-0.23									
4/2/200	1 518.75	13.31	0.00	505.44	0.32				~-		••			
10/5/20	01 518.75													Obstruction in Well
4/1/200														Obstruction in Well
10/16/20	02 518.75							**			N			Dry
4/3/200	3 518.75	~~												Dry

Page 11 of 13

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
November 1989 Through October 2005
76 Station 6034

Date Sampled	TOC Elevation (feet)	Depth to Water	LPH Thickness	Ground- water Elevation		TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B	Comments
		(feet)	(feet)	(feet)	(feet)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	
<b>MW-6</b> 10/2/200	<b>continued</b> 03 518.75													
	03 518.75 04 518.75													Inaccessible
12/1/200			==						NA 800					Unable to locate
					-									Dry well
6/13/200														Dry well
10/24/20	05 518.75		-											Dry well
MW-7		Screen Int	erval in feet	: 10.0-24.0	)									
4/10/199						ND		ND	ND	ND	ND			
7/10/199						ND		ND	ND	ND	ND			
10/14/19	91					ND		ND	ND	ND	ND			
1/14/199	92				**	ND		ND	ND	ND	ND			
4/6/199	2					ND	***	ND	ND	ND	ND			
7/7/199	2					ND		ND	ND	ND	ND			
10/16/19	92	~~	***			ND		ND	ND	ND	ND			
1/14/199	93					ND		ND	ND	ND	ND			
4/22/199	93 519.37	14.25	0.00	505.12		ND		ND	ND	ND	ND			
7/20/199	93 519.37	16.68	0.00	502.69	-2.43	ND		ND	ND	ND	ND			
10/20/19	93 518.83	14.29	0.00	504.54	1.85	ND		ND	ND	ND	ND			
1/20/199	94 518.83	14.22	0.00	504.61	0.07	ND		ND	ND	ND	ND			
4/21/199	94 518.83	14.17	0.00	504.66	0.05	ND		ND	ND	ND	ND			
7/21/199	94 518.83	14.21	0.00	504.62	-0.04	ND		ND	ND	ND	ND			
10/19/19	94 518.83		0.00	504.78	0.16	ND		ND	0.87	ND	0.61			
	5 518.83		0.00	505.49	0.71	ND		ND	ND	ND	ND			
4/17/199			0.00	505.45	-0.04	ND		ND	ND	ND	ND			
7/18/199				505.47	0.02	ND		ND	ND	ND	ND			

Page 12 of 13

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
November 1989 Through October 2005
76 Station 6034

(feet) (feet) (feet) (feet) (μg/l) (μg/l) (μg/l) (μg/l) (μg/l) (μg/l) (μg/l) (μg/l)	
<b>MW-7 continued</b> 10/17/1995 518.83 13.41 0.00 505.42 -0.05 ND ND ND ND ND 3.5	
	Sampled Annually
4/17/1996 518.83 13.21 0.00 505.62 0.35 ND ND ND ND ND ND	
7/16/1996 518.83 13.22 0.00 505.61 -0.01	
10/16/1996 518.83 13.58 0.00 505.25 -0.36	
	ampling Discontinued
10/6/1997 518.83 13.65 0.00 505.18 0.08	
4/2/1998 518.83 13.55 0.00 505.28 0.10	
10/7/1998 518.83 13.64 0.00 505.19 -0.09	•
4/14/1999 518.83 13.75 0.00 505.08 -0.11	
10/12/1999 518.83 13.61 0.00 505.22 0.14	
4/10/2000 518.83 13.85 0.00 504.98 -0.24	
10/2/2000 518.83 14.19 0.00 504.64 -0.34	
4/2/2001 518.83 13.86 0.00 504.97 0.33 Sar	ampling Discontinued
10/5/2001 518.83 14.30 0.00 504.53 -0.44	
4/1/2002 518.83 14.23 0.00 504.60 0.07	
10/16/2002 518.83 14.30 0.00 504.53 -0.07	
4/3/2003 518.83 14.27 0.00 504.56 0.03	
10/2/2003 518.83 14.35 0.00 504.48 -0.08	Monitored Only
4/30/2004 518.83 14.35 0.00 504.48 0.00	Monitored only
12/1/2004 518.83 14.66 0.00 504.17 -0.31 San	ampled Semi-Annually
344-15-2-	Monitored Only
10/04/0007 710 00 47 07 000	Monitored Only

Page 13 of 13

Table 3
ADDITIONAL ANALYTICAL RESULTS
76 Station 6034

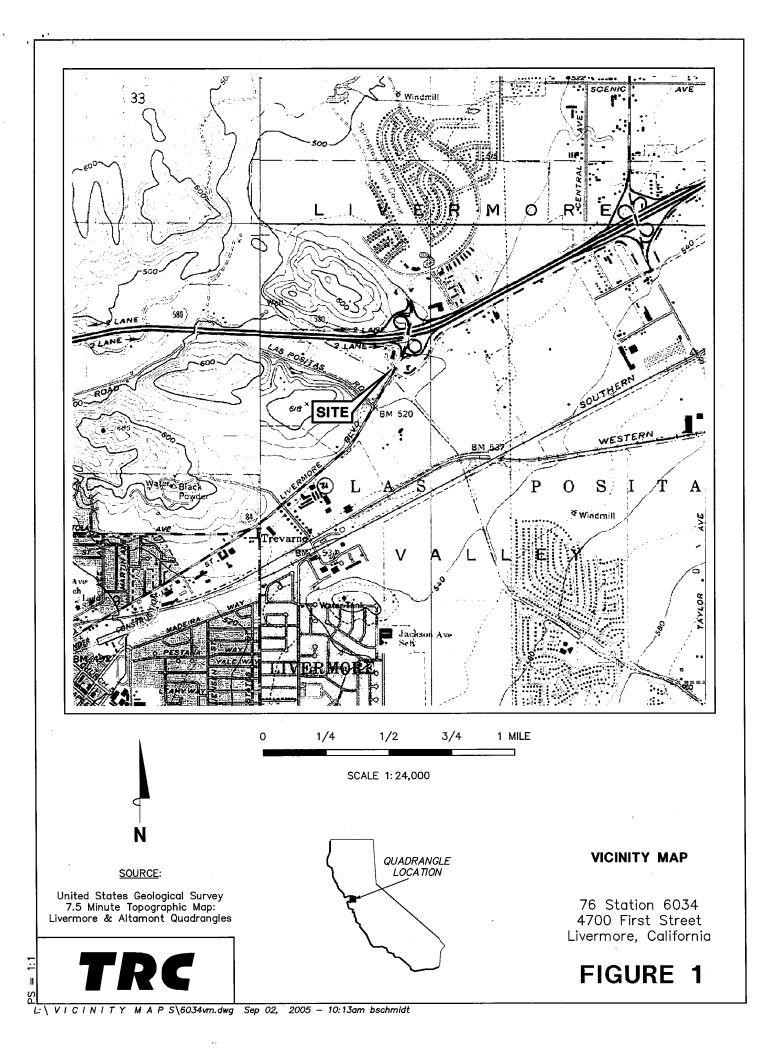
Date Sampled	EDC	Chloro- form	TCE	EDB	Pre-Purge DO	Post Purge DO	TAME 8260B	TBA 8260B	DIPE 8260B	ETBE 8260B	Ethanol 8260B	TOG
<u> </u>	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(mg/l)	(mg/l)	(µg/l)	(μg/l)	(µg/l)	(μg/l)	(µg/l)	(mg/l)
MW-1												
3/8/1990		ND	ND									4.7
6/5/1990		ND	ND									ND
9/7/1990		ND	ND									ND
12/24/1990		ND	ND									ND
4/10/1991		ND	ND									ND
7/10/1991		ND	ND									ND
4/21/1994		ND	ND									ND
4/17/1995		0.69	ND									ND
4/17/1996		ND	ND									ND
7/16/1996					4.24	4.28		del tra			,	<b>***</b>
MW-2												
7/18/1995						4.22						
10/17/1995						3.96						
1/17/1996						5.25						
4/17/1996						2.59						
7/16/1996					4.46	4.35				-		
10/16/1996					3.87	2.92						
1/13/1997					4.76							
4/8/1997					3.76	3.42	~~					
10/6/1997					4.13	3.59						
4/2/1998			~		6.32	3.16						
10/7/1998					3.85							
4/14/1999	ND			ND	3.14		ND	ND	ND	ND	ND	
10/12/1999			~-		2.96		ND	ND	ND	ND	ND	
4/10/2000	ND			ND	3.47		ND	ND	ND	ND	ND	
10/2/2000	ND			ND	3.77		ND	ND	ND	ND	ND	

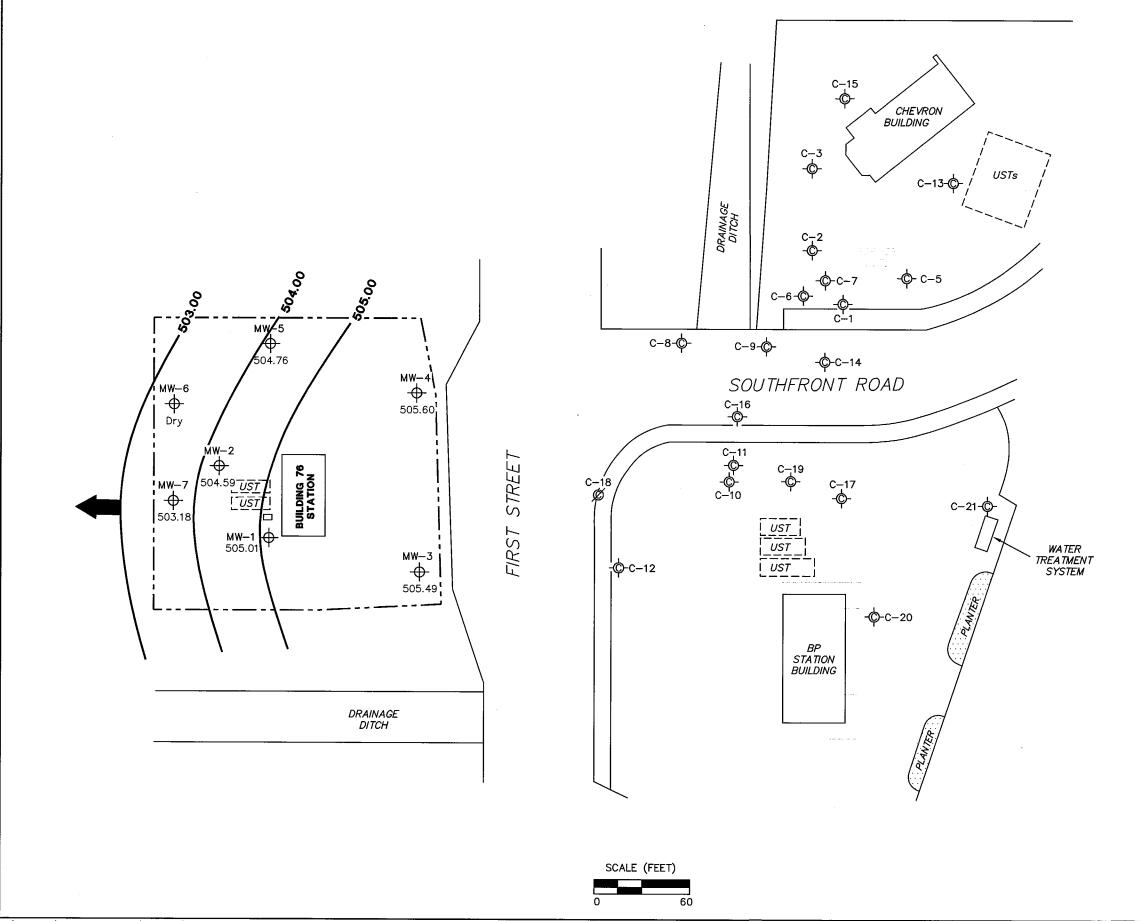
Page 1 of 2

Table 3
ADDITIONAL ANALYTICAL RESULTS
76 Station 6034

Date Sampled	EDC	Chloro- form	TCE	EDB	Pre-Purge DO	Post Purge DO	TAME 8260B	TBA 8260B	DIPE 8260B	ETBE 8260B	Ethanol 8260B	TOG	
	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(mg/l)	(mg/l)	(μg/l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(mg/l)	
MW-2 c													
4/2/2001	ND			ND	3.95		ND	ND	ND	ND	ND		
10/5/2001	ND<2			ND<2	2.89		ND<2	ND<100	ND<2	ND<2	ND<1000		
4/1/2002	ND<2			ND<2	3.15		ND<2	ND<100	ND<2	ND<2	ND<500		
10/16/2002	ND<2			ND<2	3.08		ND<2	ND<100	ND<2	ND<2	ND<500		
4/3/2003	ND<2			ND<2	2.60		ND<2	ND<100	ND<2	ND<2	ND<500		
10/2/2003	ND<50			ND<50	3.53		ND<50	ND<2500	ND<50	ND<50	ND<13000		
4/30/2004	ND<13			ND<13	1.78		ND<13	ND<130	ND<25	ND<13	ND<1300		
12/1/2004	ND<1.0			ND<1.0	5.42	5.66	ND<1.0	32	ND<2.0	ND<1.0	ND<100		
6/13/2005	ND<0.50			ND<0.50	5.76	4.79	ND<0.50	9.6	ND<0.50	ND<0.50	ND<50		
10/24/2005	ND<0.50			ND<0.50	2.29	2.16	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<250		
<b>MW-3</b> 7/16/1996			***		4.19	4.20				₩			
MW-4													
7/16/1996					4.25	4.30							
1/13/1997					4.97					**			
4/14/1999	ND			ND			ND	ND	ND	ND	ND		
10/2/2003											ND<500		
4/30/2004										***	ND<50		
12/1/2004											ND<50		
6/13/2005				***							ND<50		
10/24/2005											ND<250		
MW-5													
7/16/1996					4.18	4.21							
<b>MW-7</b> 7/16/1996					4.20	4.19							

Page 2 of 2







C-21-¢- Chevron Monitoring Well

C-18 Ø Abandoned Chevron Well

**505.00** — Groundwater Elevation Contour

General Direction of Groundwater Flow

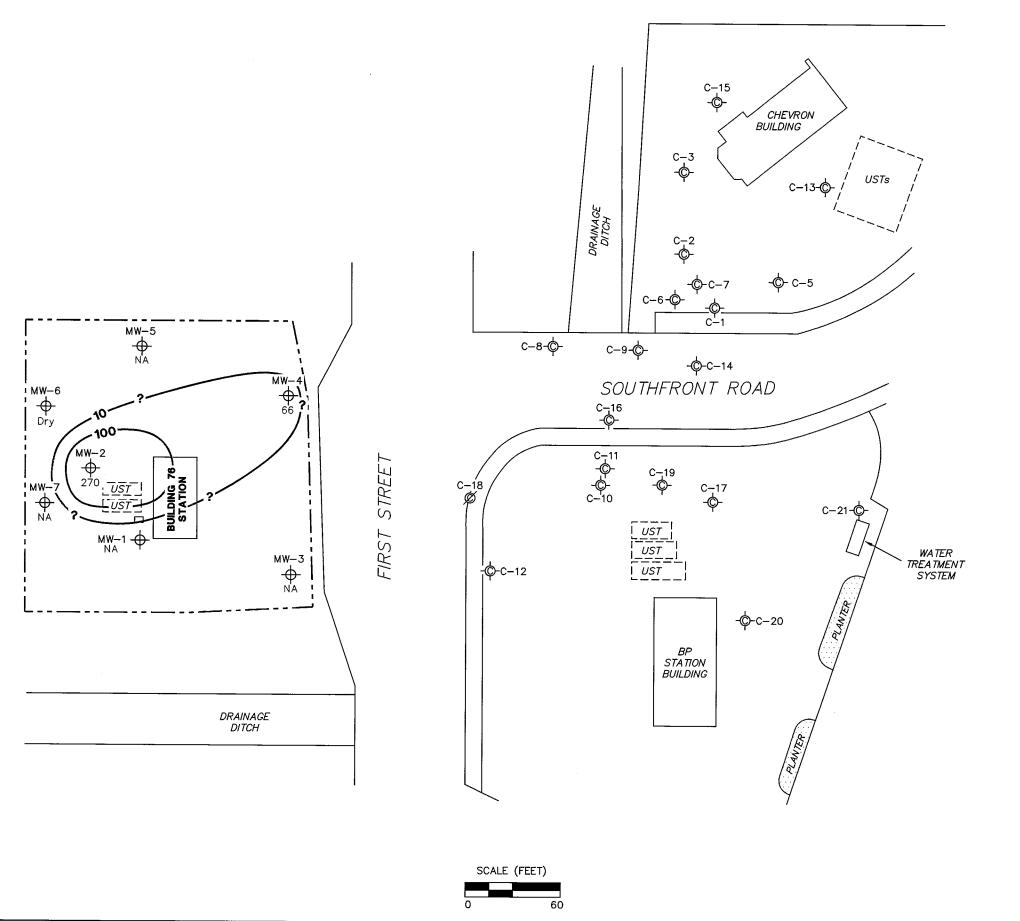
#### NOTES:

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
October 24, 2005

76 Station 6034 4700 First Street Livermore, California

TRC





MW-7 

Monitoring Well with
Dissolved—Phase TPPH
Concentration (μg/l)

C-21-Q- Chevron Monitoring Well

\_\_\_\_\_\_Dissolved—Phase TPPH Contour (µg/I)

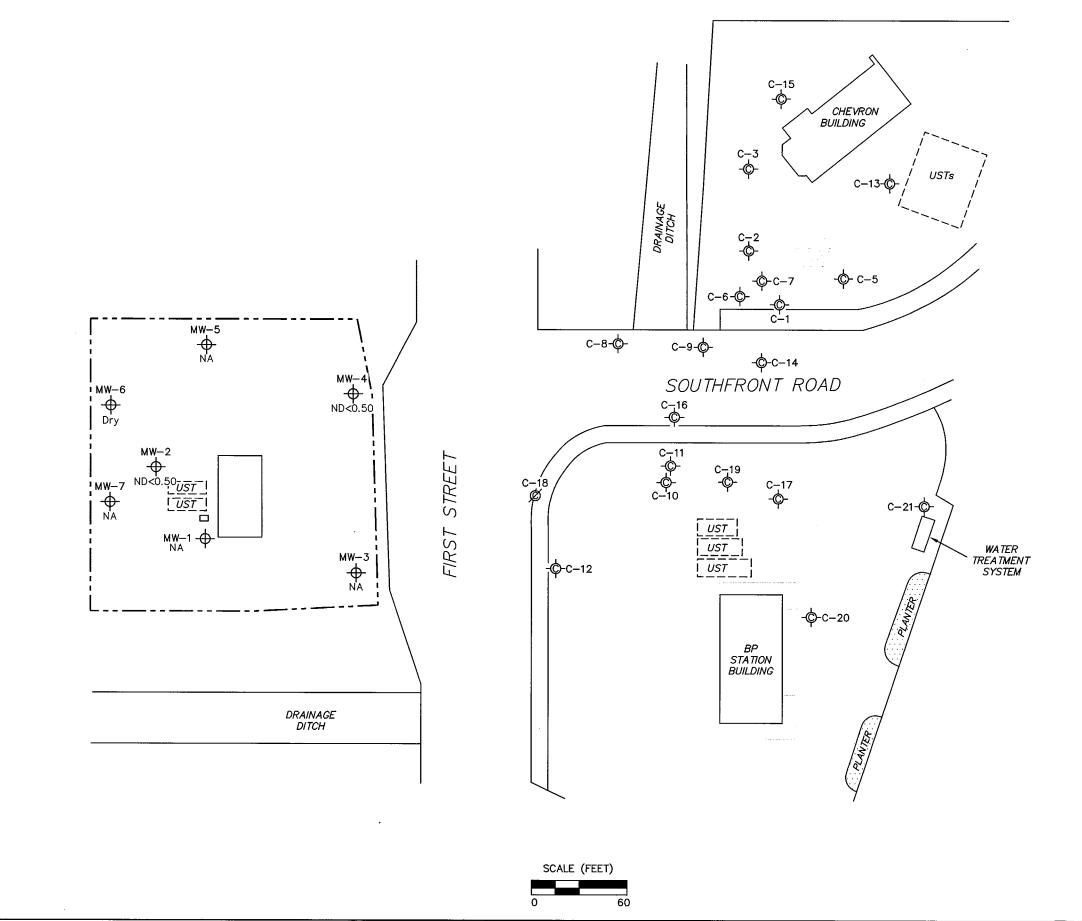
#### NOTES:

Contour lines are interpretive and based on laboratory analysis results of groundwater samples. TPPH = total purgeable petroleum hydrocarbons. 
µg/l = micrograms per liter. NA = not analyzed, measured, or collected. UST = underground storage tank. Results obtained using EPA Method 8260B.

DISSOLVED-PHASE TPPH CONCENTRATION MAP October 24, 2005

> 76 Station 6034 4700 First Street Livermore, California

TRC





MW−7 → Monitoring Well with Dissolved—Phase Benzene Concentration (µg/l)

C-21-\$\operation \operation \text{Monitoring Well}

C-18 Ø Abandoned Chevron Well

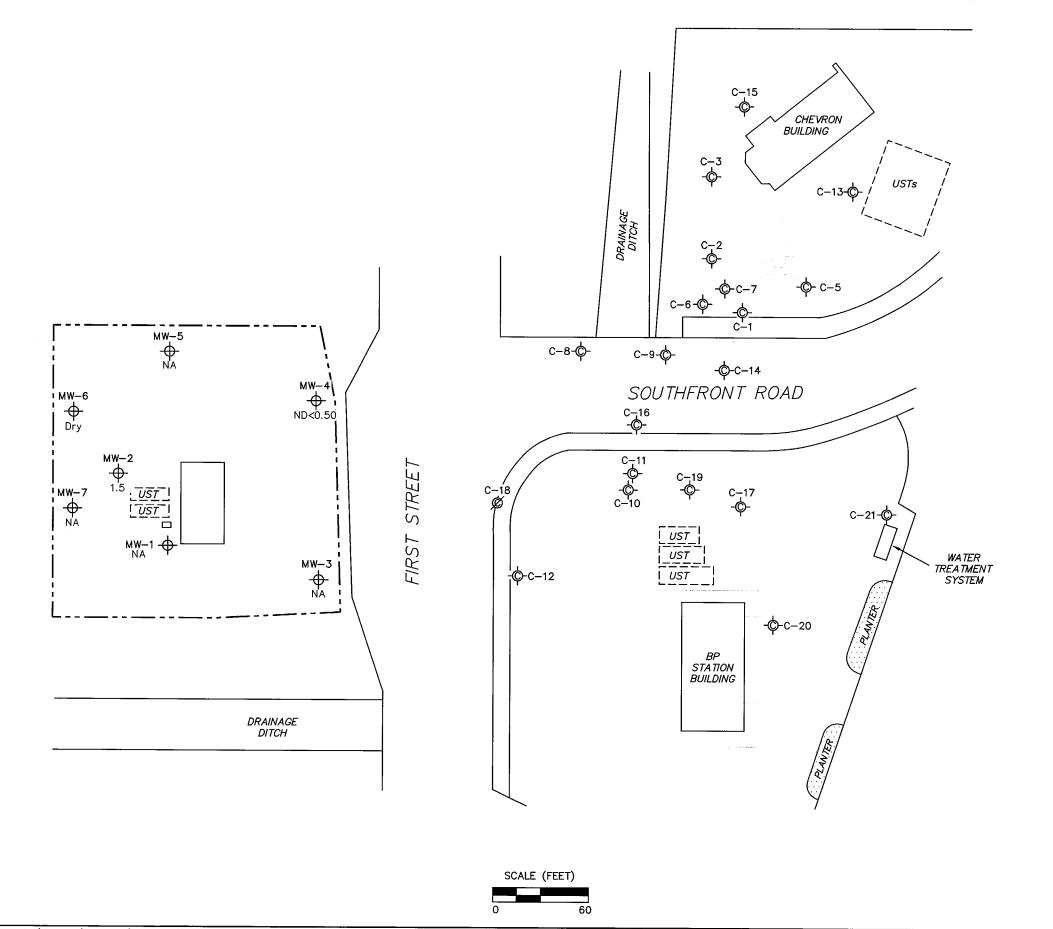
#### NOTES:

µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. NA = not analyzed, measured, or collected. UST = underground storage tank.

DISSOLVED-PHASE BENZENE CONCENTRATION MAP October 24, 2005

> 76 Station 6034 4700 First Street Livermore, California

TRC





MW−7 → Monitoring Well with Dissolved—Phase MTBE Concentration (µg/!)

C−21 -�- Chevron Monitoring Well

C-18 ∅ Abandoned Chevron Well

#### NOTES:

MTBE = methyl tertiary butyl ether. µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. NA = not analyzed, measured, or collected. UST = underground storage tank. Results obtained using EPA Method 8260B.

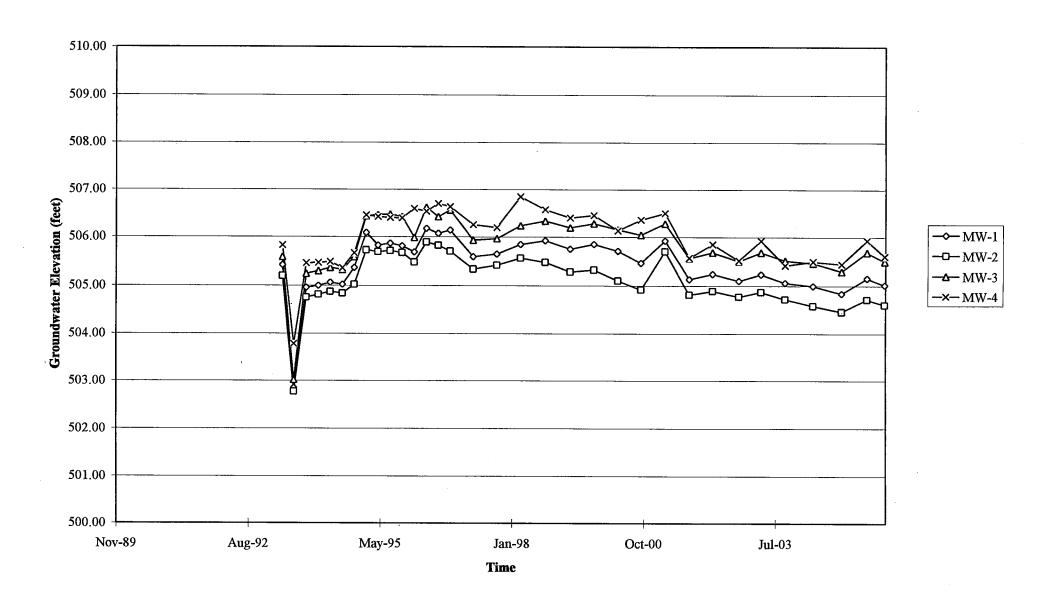
DISSOLVED-PHASE MTBE CONCENTRATION MAP October 24, 2005

> 76 Station 6034 4700 First Street Livermore, California

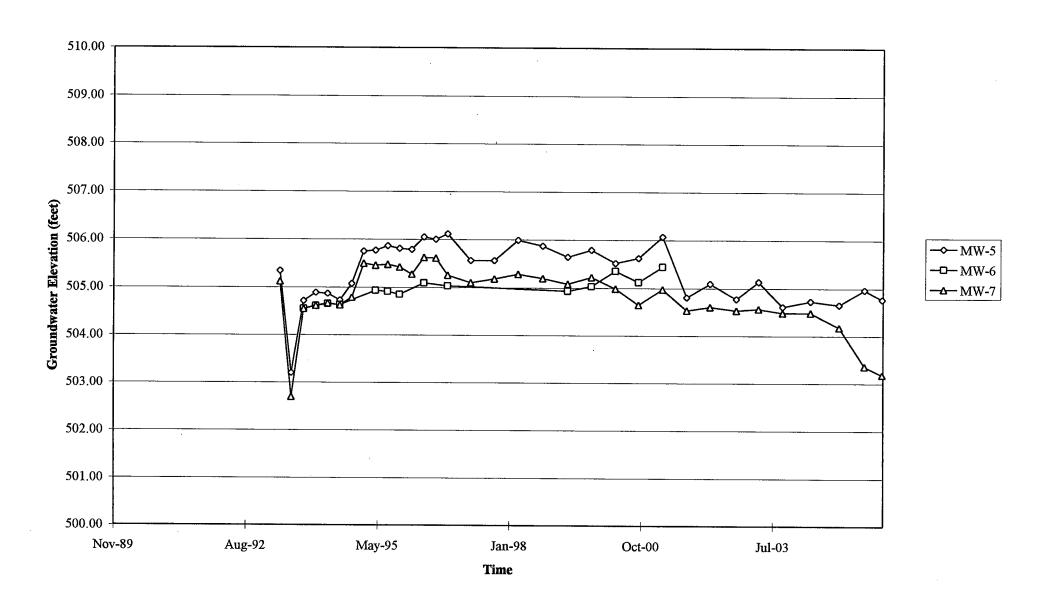
TRC

## **GRAPHS**

### Groundwater Elevations vs. Time 76 Station 6034

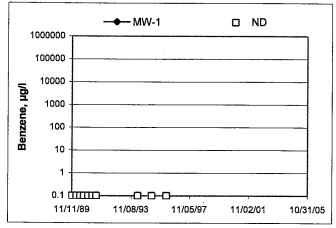


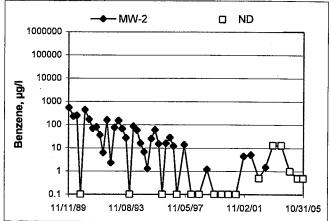
### Groundwater Elevations vs. Time 76 Station 6034

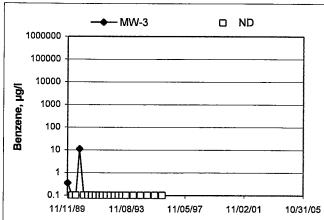


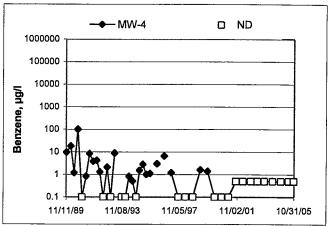
#### **Benzene Concentrations vs Time**

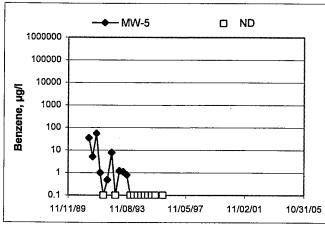
76 Station 6034

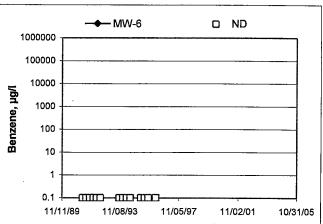


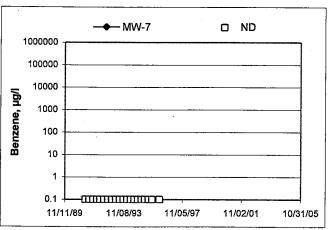












### GENERAL FIELD PROCEDURES

### **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 (surveyors 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:		151	Job	#/Task #:	Date: _	1 of 1				
Site#	603x	2	Projec	t Manager	_/	1. G	llins		Page _	of
Well #	Time Gauged	тос	Total Depth	Depth to Water	i	pth o duct	Product Thickness (feet)	Time Sampled	Miso	c. Well Notes
Atu-1		V	27.79	15.63	é	لا	વ	NS	2 4 ,	No
Mn-3		1	1 1	14.17		1			1	
Nw.5	1		23.54	15.51						
Mw.6			12.52	BENK						"pey"
Mw-7	1121			15.65				<b>V</b>	V	
Mw-4	1127			14.01				1215		
Mu-Z	1135	V	25.59	15.23	V		A	1215	~	
		-			-	<del></del>				
	<u> </u>								<u> </u>	
			-		-				-	
	<b></b>				<del>                                     </del>		<del></del>			
			<del>                                     </del>			······				
						· ·				
		<u> </u>			<u> </u>					
	<u></u>	<u>L</u> ,		<u></u>						
FIELD DAT	QA/QC	· · · · · · · · · · · · · · · · · · ·		<b>c</b> oc	. <u>N</u>	ELL BOX C	ONDITION	N SHEETS		
WTT CERT	IFICATE		MANIFE	ST	DRI	JM IN	<b>VENTORY</b>	TRA	FFIC CON	ITROL

#### GROUNDWATER SAMPLING FIELD NOTES Technician: \_\_\_ Date: 10/24 41050001 Project No.: Purge Method:\_\_\_\_\_ Well No .: \_\_ Depth to Product (feet):\_\_\_\_ 14.01 Depth to Water (feet):\_\_\_\_ LPH & Water Recovered (gallons):\_ 25.40 Total Depth (feet): \_\_\_\_ Casing Diameter (Inches):\_\_\_ 11.39 Water Column (feet):\_\_ 16.29 1 Well Volume (gallons):\_\_\_\_ 80% Recharge Depth (feet):\_ Conduc-Temperature Volume Time Depth Time D.O. Turbidity Нg Purged tivity Stop To Water Start : (F,C) (uS/cm) · (gallons) (feet) 2 7.87 20.1 フルノ 1146 7.46 20.2 754 8.11 19.8 83 I 1151 Time Sampled Total Gallons Purged Static at Time Sampled 1157 KP. GY Comments: Well No .: Mw-Z Purge Method.\_\_ Depth to Product (feet):\_ Total Depth (feet): 25.59 LPH & Water Recovered (gallons):\_ Water Column (feet): 10.36 Casing Diameter (Inches):\_\_ 80% Recharge Depth (feet): 17.30 1 Well Volume (gallons):\_\_\_\_

Time	Time	Depth	Volume	Conduc-	Temperature ·	.		
Start	Stop	To Water	Purged	tivity		рН	Turbidity	D.O.
		(feet)	(gallons)	(uS/cm)	{F,C}			
1204			2	1205	19.6	6.97		2.29 mg/
			4	1219	20.3	7.84	<b>.</b>	2.19 kg/
	1209		6	1203	20.7	827		2.16 mg 1
								0
					·			
Sta	tic at Time Sar	πpled	. 7	otal Gallons P	ndeq		Time Samp	oled
· · · · ·	15.24	4		6			l'a	715
	/3/_			1				
Comments:					·		<del></del>	



Date of Report: 11/04/2005

Anju Farfan

TRC Alton Geoscience 21 Technology Drive

Irvine, CA 92618-2302

RE: 6034

BC Lab Number: 0510645

Enclosed are the results of analyses for samples received by the laboratory on 10/25/05 22:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Hooker

Client Service Rep

**Authorized Signature** 

Project: 6034

Project Number: [none]

Project Manager: Anju Farfan

Reported: 11/04/05 09:59

### **Laboratory / Client Sample Cross Reference**

Laboratory	Client Sample Informat	ion			
0510645-01	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 6034 MW-4 MW-4 Basi of TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:		Delivery Work Order (LabW: Global ID: T0600101477 Matrix: W Samle QC Type (SACode): CS Cooler ID:
0510645-02	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 6034 MW-2 MW-2 Basi of TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	m==	Delivery Work Order (LabW: Global ID: T0600101477 Matrix: W Samle QC Type (SACode): CS Cooler ID:

Project: 6034

Project Number: [none]

Project Manager: Anju Farfan

Reported: 11/04/05 09:59

Page 2 of 7

# Volatile Organic Analysis (EPA Method 8260)

					· · · · · · · · · · · · · · · · · · ·	Prep	11:57:00AM, B 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	10/31/05	11/01/05 14:54	svm	MS-V4	1	BOJ1361	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	10/31/05	11/01/05 14:54	svm	MS-V4	- <u> </u>	BOJ1361	ND	
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	10/31/05	11/01/05 14:54	svm	MS-V4	1	BOJ1361	ND	
Toluene	ND	ug/L	0.50		EPA-8260	10/31/05	11/01/05 14:54	svm	MS-V4	1	BOJ1361	ND	
Total Xylenes	ND	ug/L	1.0		EPA-8260	10/31/05	11/01/05 14:54	svm	MS-V4	1	BOJ1361	ND	
Ethanol	ND	ug/L	250		EPA-8260	10/31/05	11/01/05 14:54	svm	MS-V4	1	BOJ1361	ND	
Total Purgeable Petroleum Hydrocarbons	66	ug/L	50		EPA-8260	10/31/05	11/01/05 14:54	svm	MS-V4	1	BOJ1361	ND	
,2-Dichloroethane-d4 (Surrogate)	94.7	%	76 - 114 (LC	L - UCL)	EPA-8260	10/31/05	11/01/05 14:54	svm	MS-V4	1	BOJ1361		
oluene-d8 (Surrogate)	96.0	%	88 - 110 (LCI	L - UCL)	EPA-8260		11/01/05 14:54	svm	MS-V4	1	BOJ1361		
I-Bromofluorobenzene (Surrogate)	93.3	%	86 - 115 (LCI	L - UCL)	EPA-8260		11/01/05 14:54	svm	MS-V4	1	BOJ1361		

Project: 6034

Project Number: [none]

Project Manager: Anju Farfan

Reported: 11/04/05 09:59

# **Volatile Organic Analysis (EPA Method 8260)**

Sample ID: 0510645-02   Client Sampl			e: 6034, MV	V-2, N	IW-2, 10/2	4/2005 1	2:15:00PM, B	asi					· · · · · · · · · · · · · · · · · · ·
	<b>5</b> 1/					Prep	Run		Instru-		QC	MB	Lab
	Result	Units	PQL I	<u>VIDL</u>	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
	ND	ug/L	0.50		EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361	ND	
	ND	ug/L	0.50		EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361	ND	
	ND	ug/L	0.50		EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361	ND	
	4.6	ug/L	0.50		EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361	ND	
	1.5	ug/L	0.50		EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361	ND	
	ND	ug/L	0.50		EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361	ND	
	10	ug/L	1.0		EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361	ND	
	ND	ug/L	0.50	7	EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361	ND	
	ND	ug/L	10		EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361	ND	
	ND	ug/L	0.50		EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361	ND	
	ND	ug/L	250		EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361	ND	
	ND	ug/L	0.50		EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361	ND	
um	270	ug/L	50		EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361	ND	
Surrogate)	91.3	%	76 - 114 (LCL -	UCL)	EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361		
	97.2	%	88 - 110 (LCL -	UCL)	EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361		
(Surrogate)	94.9	%	86 - 115 (LCL -	UCL)	EPA-8260	10/31/05	11/01/05 03:38	svm	MS-V4	1	BOJ1361		
	um Surrogate)	Result   ND   ND   ND   4.6   1.5   ND   10   ND   ND   ND   ND   ND   ND   ND   N	Result         Units           ND         ug/L           ND         ug/L           ND         ug/L           4.6         ug/L           1.5         ug/L           ND         ug/L           Surrogate)         91.3         %           97.2         %	Result         Units         PQL         I           ND         ug/L         0.50           ND         ug/L         0.50           ND         ug/L         0.50           4.6         ug/L         0.50           ND         ug/L         0.50           ND         ug/L         1.0           ND         ug/L         0.50           ND         ug/L         0.50           ND         ug/L         0.50           ND         ug/L         0.50           um         270         ug/L         50           Surrogate)         91.3         %         76 - 114 (LCL - 97.2	Result         Units         PQL         MDL           ND         ug/L         0.50         0.50           ND         ug/L         0.50         0.50           4.6         ug/L         0.50         0.50           1.5         ug/L         0.50         0.50           ND         ug/L         1.0         0.50           ND         ug/L         0.50         0.50           ND         ug/L         0.50         0.50           ND         ug/L         0.50         0.50           um         270         ug/L         50           Surrogate)         91.3         %         76 - 114 (LCL - UCL)           97.2         %         88 - 110 (LCL - UCL)	Result         Units         PQL         MDL         Method           ND         ug/L         0.50         EPA-8260           ND         ug/L         0.50         EPA-8260           ND         ug/L         0.50         EPA-8260           4.6         ug/L         0.50         EPA-8260           ND         ug/L         0.50         EPA-8260           ND         ug/L         0.50         EPA-8260           ND         ug/L         1.0         EPA-8260           ND         ug/L         0.50         EPA-8260           um         270         ug/L         50         EPA-8260           Surrogate)         91.3         % 76 - 114 (LCL - UCL)         EPA-8260           97.2         % 88 - 110 (LCL - UCL)         EPA-8260	Result         Units         PQL         MDL         Method         Prep Date           ND         ug/L         0.50         EPA-8260         10/31/05           ND         ug/L         0.50         EPA-8260         10/31/05           ND         ug/L         0.50         EPA-8260         10/31/05           4.6         ug/L         0.50         EPA-8260         10/31/05           ND         ug/L         0.50         EPA-8260         10/31/05           ND         ug/L         0.50         EPA-8260         10/31/05           ND         ug/L         1.0         EPA-8260         10/31/05           ND         ug/L         0.50         EPA-8260         10/31/05           um         270         ug/L         50         EPA-8260	Result         Units         PQL         MDL         Method         Prep Date Date Date/Time         Run Date/Time           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38           4.6         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38 <td>Result         Units         PQL         MDL         Method         Prep Date         Run Date/Time         Analyst           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm           4.6         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm           1.5         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         s</td> <td>Result         Units         PQL         MDL         Method         Prep Date         Run Date/Time         Analyst ment ID           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           4.6         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           1.5         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4     &lt;</td> <td>Result         Units         PQL         MDL         Method         Prep Date         Run Date/Time         Analyst         Instrument ID         Dilution           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           4.6         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           1.5         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           ND</td> <td>Result         Units         PQL         MDL         Method         Prep Date         Run Date/Time         Analyst         Instrument ID         Dilution         Batch ID           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1         BOJ1361           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1         BOJ1361           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1         BOJ1361           4.6         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1         BOJ1361           1.5         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1         BOJ1361           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1         BOJ1361           ND         ug/L         0.50         EPA-8260         1</td> <td>  Result   Units   PQL   MDL   Method   Pate   Date   Time   Date   Nalyst   Method   Date   Date   Time   Nalyst   Method   Date   Nalyst   Method   Nalyst</td>	Result         Units         PQL         MDL         Method         Prep Date         Run Date/Time         Analyst           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm           4.6         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm           1.5         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         s	Result         Units         PQL         MDL         Method         Prep Date         Run Date/Time         Analyst ment ID           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           4.6         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           1.5         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4     <	Result         Units         PQL         MDL         Method         Prep Date         Run Date/Time         Analyst         Instrument ID         Dilution           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           4.6         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           1.5         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1           ND	Result         Units         PQL         MDL         Method         Prep Date         Run Date/Time         Analyst         Instrument ID         Dilution         Batch ID           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1         BOJ1361           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1         BOJ1361           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1         BOJ1361           4.6         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1         BOJ1361           1.5         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1         BOJ1361           ND         ug/L         0.50         EPA-8260         10/31/05         11/01/05         03:38         svm         MS-V4         1         BOJ1361           ND         ug/L         0.50         EPA-8260         1	Result   Units   PQL   MDL   Method   Pate   Date   Time   Date   Nalyst   Method   Date   Date   Time   Nalyst   Method   Date   Nalyst   Method   Nalyst

Project: 6034

Project Number: [none]

Project Manager: Anju Farfan

Reported: 11/04/05 09:59

# **Volatile Organic Analysis (EPA Method 8260)**

### **Quality Control Report - Precision & Accuracy**

										Contr	ol Limits
				Source		Spike			Percent		Percent
Constituent	Batch ID	QC Sample ID	QC Sample Type	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery Lab Quals
Benzene	BOJ1361	BOJ1361-MS1	Matrix Spike	ND	27.450	25.000	ug/L		110		70 - 130
		BOJ1361-MSD1	Matrix Spike Duplicate	ND	27.330	25.000	ug/L	0.913	109	20	70 - 130
Toluene	BOJ1361	BOJ1361-MS1	Matrix Spike	ND	25.560	25.000	ug/L		102		70 - 130
		BOJ1361-MSD1	Matrix Spike Duplicate	ND	25.730	25.000	ug/L	0.976	103	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BOJ1361	BOJ1361-MS1	Matrix Spike	ND	9.6900	10.000	ug/L		96.9		76 - 114
		BOJ1361-MSD1	Matrix Spike Duplicate	ND	9.1800	10.000	ug/L		91.8		76 - 114
Toluene-d8 (Surrogate)	BOJ1361	BOJ1361-MS1	Matrix Spike	ND	9.5900	10.000	ug/L		95.9		88 - 110
		BOJ1361-MSD1	Matrix Spike Duplicate	ND	9.6300	10.000	ug/L		96.3		88 - 110
4-Bromofluorobenzene (Surrogate)	BOJ1361	BOJ1361-MS1	Matrix Spike	ND	9.8300	10.000	ug/L		98.3		86 - 115
		BOJ1361-MSD1	Matrix Spike Duplicate	ND	9.9000	10.000	ug/L		99.0		86 - 115



Project: 6034
Project Number: [none]

Project Manager: Anju Farfan

Reported: 11/04/05 09:59

## **Volatile Organic Analysis (EPA Method 8260)**

**Quality Control Report - Laboratory Control Sample** 

									Co	ntrol	<u>Limits</u>	
Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	Pero RPD Reco		RPD	Lab Quals
Benzene	BOJ1361	BOJ1361-BS1	LCS	27.280	25.000	0.50	ug/L	109	70 -	130		
Toluene	BOJ1361	BOJ1361-BS1	LCS	26.300	25.000	0.50	ug/L	105	70 -	130		
1,2-Dichloroethane-d4 (Surrogate)	BOJ1361	BOJ1361-BS1	LCS	9.1200	10.000		ug/L	91.2	76 -	114		
Toluene-d8 (Surrogate)	BOJ1361	BOJ1361-BS1	LCS	9.6600	10.000		ug/L	96.6	88 -	110		
4-Bromofluorobenzene (Surrogate)	BOJ1361	BOJ1361-BS1	LCS	9.6300	10.000		ug/L	96.3	86 -	115		

Project: 6034

Project Number: [none]
Project Manager: Anju Farfan

**Reported:** 11/04/05 09:59

# **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	BOJ1361	BOJ1361-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromoethane	BOJ1361	BOJ1361-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BOJ1361	BOJ1361-BLK1	ND	ug/L	0.50	0.25	
Ethylbenzene	BOJ1361	BOJ1361-BLK1	ND	ug/L	0.50	0.14	
Methyl t-butyl ether	BOJ1361	BOJ1361-BLK1	ND	ug/L	0.50	0.15	
Toluene	BOJ1361	BOJ1361-BLK1	ND	ug/L	0.50	0.15	
Total Xylenes	BOJ1361	BOJ1361-BLK1	ND	ug/L	1.0	0.40	
t-Amyl Methyl ether	BOJ1361	BOJ1361-BLK1	ND	ug/L	0.50	0.31	
t-Butyl alcohol	BOJ1361	BOJ1361-BLK1	ND	ug/L	10	10	
Diisopropyl ether	BOJ1361	BOJ1361-BLK1	ND	ug/L	0.50	0.25	
Ethyl t-butyl ether	BOJ1361	BOJ1361-BLK1	ND	ug/L	0.50	0.27	
Total Purgeable Petroleum Hydrocarbons	BOJ1361	BOJ1361-BLK1	ND	ug/L	50	23	
1,2-Dichloroethane-d4 (Surrogate)	BOJ1361	BOJ1361-BLK1	88.9	%	76 - 114 (L		
Toluene-d8 (Surrogate)	BOJ1361	BOJ1361-BLK1	96.4	%	88 - 110 (L		
4-Bromofluorobenzene (Surrogate)	BOJ1361	BOJ1361-BLK1	89.8	%	86 - 115 (L		

Project Number: [none]
Project Manager: Anju Farfan

**Reported:** 11/04/05 09:59

Page 7 of 7

### Notes and Definitions

J Estimated value

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.		SAM	IPLE REC	RECEIPT FORM Rev. No. 10 01/21/04 Page Of												
Submission #: 05-1069	5 1	Project Co	ode:			TBI	Batch #									
SHIPPING INFOR Federal Express © UPS © BC Lab Field Service Ø Other (	Hand De	livery 🗇			Ice Ches Box	UB/		FAINER ne () er () (Sp	pecify)	-						
Refrigerant: Ice 🗵 Blue Ice 🛘	Non	e 🛛 💮 0	ther []	Comme	ents:											
	Containe			Comme												
All samples received? Yes 2 No 🛭	All sample	s container	s intact?	es No	0	Descrint	ion(s) matc	ዞ ሮፀርን ፡	Vas-Fr No	<u> </u>						
COC Received □YES □ NO		Ice CI	hest ID <u>P</u> rature:	./W	Emis	sivity	Date/	OC? Yes No ()  Date/Time /0/25 223 (  Analyst Init ###								
SAMPLE CONTAINERS		T			SAMPLE 1	NUMBERS		<i>-</i>								
		2	3	4	5	6	7	8	9	10						
OT GENERAL MINERAL! GENERAL PHYSICAL PT PE UNPRESERVED																
QT INORGANIC CHEMICAL METALS PT INORGANIC CHEMICAL METALS		<u> </u>							<b></b>							
PT CYANIDE									<del>                                     </del>							
PT NITROGEN FORMS								<del></del>								
PT TOTAL SULFIDE																
LOZ NITRATE / NITRITE					-											
100ml TOTAL ORGANIC CARBON																
от тох					·											
PT CHEMICAL OXYGEN DEMAND																
PIA PHENOLICS																
40mi VOA VIAL TRAVEL BLANK																
46mi VOA VIAL	A 13.	A.3.	( #		( 1	, ,	4 1	1 1	, ,	( )						
OT EPA 413.1, 413.2, 418.1																
PT ODOR																
RADIOLOGICAL				-												
BACTERIOLOGICAL				··												
40 ml VOA VIAL- 504																
OT EPA 508/608/8080																
OT EPA 515.1/8150					· ·											
OT EPA SIS TRANSIA DI ANIC								-								
OT EPA 525 TRAVEL BLANK 180mi EPA 547										· · · · · · · · · · · · · · · · · · ·						
00ml EPA 531.1																
OT EPA 548																
OT EPA 549																
OT EPA 632																
OT EPA 8015M					<del></del>											
OT QA/QC																
OT AMBER																
OZ. JAR																
2 OZ. JAR																
OIL SLEEVE					<u>-</u>											
CB VIAI.																
LASTIC BAG																
ERROUS IRON																
ENCORE.																
omments:	AN	Date/I	ime i	16	1105											

BC Laboratories, Inc.
eport To:
Client: TRE
Attn: Mine Green
Street Address: 2/ Lethology Dr. City, State, Zip: Leure Car 97618
City, State, Zip: Pune Cor 97618
?hone: 754-7440 Fax: 753-001
Email Address: alma Row & Tree Solution
Submittal #: 05- 10645' 2000
Sample Description
#
10.10

Mu-2

DISTRIBUTION

CHK BY

ence Phillips

State \_\_\_\_

Billing

Client:

City: \_

Attn:

Address:

# Chain of Ci

c. Chain o					of (	Cu	ıst	to(	ly	F	01	m							-		BCI	QUO	re id:	E:		
	Project #	: 40	25 G	ව්ය ፣	PARTO								quested				3	65	7	'8 L	,	Pa	ge	L	of	
	Project N	ame: (	Pen	uco	Plan Hey		$\int$	7	/^	/ 1	g/ R	/	ese de contra	,		/c	omme	nts:								
De	Project C				-		/ <sub>P7</sub>	nn sk	0	N	9	re/h	male de		$_{\varsigma}$ /											
7618	Sampler(					]/	10/	M/	Ŋ.	*		EVE E	i/tichi		/											
3 -0(/(		- >75≦	1				80 00 100 00	ms	7	/tik	as (	mď/	modelisek	) <u>/</u>	<u> </u>											
				£00.	101477		T 2	- S	(Te	4	ege	141.			San	nple	Matrix	K g	*sk	Are there		ts with I qual to			less than	
Stutien 5' esne	1				TRESO,		44	3	A	, **						Wate	Waste Water	arour	f of work days*		Y	es		No		
otion			Date		Time	0 800	Brex	\ \delta \		740					밁	ound	Iste V	Turn	ŏ	* Stand	dard Tu			15 wc	rk days	
		S	amp	led	Sample	F	1/0	Ø	150	W				_	33		S Othe	r	#			Not	tes	<del>,</del> -		
4		lo	24	as	1157	×	$4\times$	X	1							X		3			3 V	<u>}#3</u>	إكس	st	cc	
2_	·	¥	+	V	1215	1	1		X	X						V		1			$\underline{\mathbf{V}}$		•	<u> </u>		
				L																			. <u> </u>			
DISTRIB	11710																									
MUE	THON	$\sqrt{I}$		1																						
SUB-0	III ma	1																								
The state of the s	OF L.J	Distanting .																							· · · · · · · · · · · · · · · · · · ·	
				1																						
					`																				-F-h - M M	
											ļ										والمعارف وعموري					
Same as	above	Report			1	ple Dis	-			~.						41			ſ	oc oc	Specia	al Repo WIP	orting 	-	v Data	
1,05		Waters			1 10	Return elinquis			<u></u>	Disp	osal b		Archi	Tir		سبحبب	Received	- ЦВу	<del>!</del>				)ate	/	Time	
		Ye	S 1	∐ N	10	1	80	<i></i>	- -				10/24/65		343		K	che.	19.	42×70	æ		10/	0//45	1343	
Zi	р	Send C CA?	Copy to	State	· • · · · ·	elinguis	ے د	d	L		>		ole /0/25/05		3/0		Recolved	کے ر	) <u>_</u>	dez			O/2	5/0x	Time / 3/	S
		Ye		□N		èthaquis 11-11	<u>()</u> -0	ick	1 24			/	ate 0/25/05		145	1,	Received	ט כי	(.,	Mch	flie	. /C	)ate <u>)~                                    </u>	5-0	Time (174)	5~
BC Labor	atories, Inc	. – 410	0 Atla	as Ct.	. – Bakersfj	eld, C		3 <u>0</u> 8=	661	.327		156	/ / A/	27.	1918	- w	ww.bcla	bs.co	m			(pl	/		177	_
					, ,	シィウ		lea		∕(·		1/2 K 3 3		,ec		14	The	NO	-			1-1	ران	,	4	ر
												-														

### **STATEMENTS**

### **Purge Water Disposal**

Non-hazardous groundwater produced during purging and sampling 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 suspected of containing potentially hazardous material, such as liquid-phase hydrocarbons, was accumulated separately in a drum 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.