#### **RECEIVED**

3:27 pm, Feb 05, 2009

Alameda County Environmental Health



February 3, 2009

Barbara Jakub Alameda County Health Agency 1131 Harbor Bay parkway, Suite250 Alameda, California 94502-577

Re:

Quarterly Summary Report—Fourth Quarter 2008

76 Service Station # 0018 RO # 0243

6201 Claremont Ave.

Oakland, CA

Dear Ms. Jakub:

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 call me at (916) 558-7666.

Sincerely,

Terry L. Grayson Site Manager

Risk Management & Remediation

February 3, 2009

Ms. Barbara Jakub Alameda County Health Care Services 1131 Harbor Bay Parkway Alameda, California 94502-6577



RE: Quarterly Summary Report - Fourth Quarter 2008

Delta Project No.: C1Q-0018-604

ACEH Case No: RO243

Dear Ms. Jakub:

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

#### **Service Station**

#### Location

ConocoPhillips Site No. 0018

6201 Claremont Avenue Oakland, Alameda County, California

Sincerely,

**Delta Consultants** 

Daniel Cassalia Project Manager

Lee Dooley

Certified Hydrogeologist

No. 0183

STEP OF CALIFORN

R. LEE DOOLEY

NO. 0183

Cc: Mr. Terry Grayson - ConocoPhillips (electronic copy only)



# **Quarterly Summary Report Fourth Quarter – 2008**

#### 76 Branded Facility No. 0018 6201 Claremont Avenue Oakland, Alameda County, CA

#### PREVIOUS ASSESSMENT ACTIVITIES

March 1997 Kaprealian Engineering Inc. (KEI) collected nine soil and one grab groundwater sample during UST and product line replacement activities. One soil sample collected from the UST excavation contained 2.6 milligrams per kilograms (mg/kg) of total petroleum hydrocarbons as gasoline (TPH-G). Another soil sample collected from beneath a dispenser island contained 1.4 mg/kg TPH-G, 0.012 mg/kg benzene, and 1.4 mg/kg methyl tertiary butyl ether (MTBE). The groundwater sample collected from the UST excavation contained 6,100 micrograms per liter ( $\mu$ g/L) of TPH-G and 54  $\mu$ g/L benzene.

March 1998 Tosco was issued a Notice of Responsibility by Alameda County Health Care Services (ACHCS).

<u>December 2000</u> Gettler-Ryan Inc. installed three groundwater monitoring wells to depths of 30 feet below ground surface (bgs). Five soil samples were collected from the borings for the wells. Sample MW-1-25.5, from a depth of 25.5 foot bgs, contained 19 mg/kg of TPH-G and 0.018 mg/kg of benzene. Initial groundwater samples contained low ( $\leq$ 120 micrograms per liter (ug/l)) concentrations of TPH-G, benzene, and MTBE.

November 2000 A quarterly monitoring program, utilizing the three on-site monitoring wells (MW-1 through MW-3), was initiated.

October 2003 Site environmental consulting responsibilities were transferred to TRC.

January 2006 TRC completed a No Further Action Required Report - Request for Closure.

April 2006 TRC completed a sensitive receptor survey.

October 2007 Site environmental consulting responsibilities were transferred to Delta Consultants.

#### SENSITIVE RECEPTORS

A sensitive receptor survey for the site was conducted in April 2006. According to the Department of Water Resources (DWR) records, no water supply wells are located within one-half mile of the site.

#### **REMEDIATION STATUS**

Remediation is not currently being conducted at the site.

#### MONITORING AND SAMPLING

The groundwater monitoring well network, consisting of three on-site monitoring wells, has been monitored and sampled on a quarterly basis since October 2000. During the most recent groundwater sampling event conducted on December 12, 2008, reported depth to groundwater ranged from 20.82 feet (MW-1) to 22.55 feet (MW-2) below top of casing (TOC), with 0.15 feet average decrease in groundwater elevation across the site. Groundwater elevation beneath the site typically fluctuates by approximately 5 feet annually.

The groundwater flow direction during the fourth quarter 2008 was reported southwest at a gradient of 0.005 feet per feet (ft/ft). This is mainly consistent with a gradient of 0.01 ft/ft

southwest during the previous sampling event (September 19, 2008). Reported historical groundwater flow direction has been primarily to the southwest.

During the fourth quarter 2008, groundwater samples were collected from all three on-site wells (MW-1, MW-2, MW-3). Samples were analyzed for TPH-G by GC/MS; benzene, toluene, ethylbenzene and xylenes (BTEX), MTBE, and ethanol by US Environmental Protection Agency (EPA) Method 8260. In addition, well MW-1 was also analyzed for oxygenates (tertiary butyl alcohol (TBA), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), and di-isopropyl ether (DIPE)), 1,2-dichloroethane (1,2-DCA), and ethylene dibromide (EDB) by EPA Method 8260.

All analytes except MTBE were below the laboratory reporting imits for fourth quarter samples. During the fourth quarter 2008, MTBE was reported in only one of the three wells sampled (MW-1), with concentrations of 9.6  $\mu$ g/l. The MTBE concentration in well MW-1 has been below 20  $\mu$ g/L for the past ten consecutive sampling events. The maximum historical MTBE concentration detected in MW-1 was 150  $\mu$ g/L in February and August 2001. MTBE has never been detected in well MW-2, and has only been detected sporadically in well MW-3. The most recent detection of MTBE in well MW-3 was at a concentration of 3.4  $\mu$ g/L (September 2006). TPH-g continued it's decline in MW-1 and is now below the laboratory reporting limit. Benzene was not detected in any of the three wells during the fourth quarter 2008 sampling event. Benzene has not been detected in any site well since at 2005.

#### CONCLUSIONS AND RECOMMENDATIONS

The fourth quarter 2008 analytical data indicates that the petroleum hydrocarbon and oxygenate concentrations observed beneath the southern portion of the site (MW-1) during the fourth quarter 2008 have remained mostly stable. Concentrations in MW-1 appear to fluctuate seasonally with variation in groundwater elevation. However, based upon historic data, concentrations of MTBE in well MW-1 appear to be gradually declining.

Groundwater monitoring will continue on a quarterly basis. Groundwater analysis will include TPH-G, BTEX compounds, and MTBE by EPA Method 8260B.

#### RECENT CORRESPONDENCE

Delta submitted a Site Conceptual Model (SCM) on September 12, 2008. In this SCM Delta identified two data gaps 1) the investigation of the former UST location in the southern portion of the site, and 2) the down-gradient extent of dissolved MTBE. **Delta recommended the drilling of two soil borings within the foot-print of the former UST location and the collection of soil samples from depths of 5, 10, and 15 feet bgs.** The soil samples will be analyzed for TPH-G, TPH-D, and BTEX compounds. MTBE would not have been associated with pre-1962 fuels.

**Delta recommended collection of a groundwater sample southwest of the site (Figure 4).** Direct-push drill equipment will be used to collect a groundwater sample at a depth of 15 to 20 feet bg. The sample will be analyzed for TPH-G, BTEX compounds, MTBE, and TBA.

#### THIS QUARTER'S ACTIVITIES (Fourth Quarter 2008)

 TRC performed the Fourth Quarter 2008 quarterly monitoring and sampling events, and prepared quarterly monitoring reports.

#### **NEXT QUARTER'S ACTIVITIES (First Quarter 2009)**

- TRC to conduct the First Quarter 2009 groundwater monitoring and sampling event and prepare a quarterly monitoring report.
- Delta submitted the fourth quarter status report for 2008.
- After approval of SCM Delta will recommend the implementation and completion the scope of work proposed

**CONSULTANT:** 

**Delta Consultants** 



21 Technology Drive Irvine, CA 92618

949.727.9336 PHONE 949.727.7399 FAX

www.TRCsolutions.com

DATE:

January 16, 2009

TO:

ConocoPhillips Company

76 Broadway

Sacramento, CA 95818

ATTN:

MR TERRY GRAYSON

SITE:

**76 STATION 0018** 

6201 CLAREMONT AVENUE OAKLAND, CALIFORNIA

RE:

QUARTERLY MONITORING REPORT OCTOBER THROUGH DECEMBER 2008

Dear Mr. Grayson:

Please find enclosed our Quarterly Monitoring Report for 76 Station 0018, located at 6201 Claremont Avenue, Oakland, California. If you have any questions regarding this report, please call us at (949) 727-9336.

Sincerely,

TRC

Anju Farfan

Groundwater Program Operations Manager

CC:

Ms. Debbie Bryan, Delta Consultants (4 copies)

Enclosures 20-0400/0018R21.QMS

#### QUARTERLY MONITORING REPORT OCTOBER THROUGH DECEMBER 2008

76 STATION 0018 6201 Claremont Avenue Oakland, California

Prepared For:

Mr. Terry Grayson CONOCOPHILLIPS COMPANY 76 Broadway Sacramento, California 95818

By:

Senior Project Geologist, Irvine Operations

Date: 1/15/69



	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 – 12/22/08 Groundwater Sampling Field Notes – 12/22/08
Laboratory Reports	Official Laboratory Reports Quality Control Reports Chain of Custody Records
Statements	Purge Water Disposal Limitations

### Summary of Gauging and Sampling Activities October 2008 through December 2008 76 Station 0018

#### 6201 Claremont Avenue Oakland, CA

Project Coordinator: Telephone:	Terry Grayson 916-558-7666		Water Sampling Contractor: <i>TRC</i> Compiled by: <b>Chrisitna Carrillo</b>
Date(s) of Gauging/Sa		L2/22/0	
Sample Points			
Groundwater wells: Purging method: <b>Sub</b> Purge water disposal: Other Sample Points:	mersible pum <sub>l</sub> Veolia/Rodeo	Unit 10	Points gauged: 3 Points sampled: 3
<b>Liquid Phase Hydro</b>	carbons (LPH)		
Sample Points with LPH LPH removal frequency Treatment or disposal	H: <b>0</b> Maximu /:	ım thickn	ness (feet): Method:
Hydrogeologic Para	meters		
Average change in gro Interpreted groundwat	elevation (relativ undwater elevati er gradient and i .005 ft/ft, sout	e to avail on since flow direc t <b>hwest</b>	
<b>Selected Laboratory</b>	Results		
Sample Points with det Maximum reported			Sample Points above MCL (1.0 µg/l):
Sample Points with <b>T</b> Sample Points with <b>M</b>	_	S 0 1	Maximum: <b>9.6 μg/l (MW-1)</b>

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 IOC = 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

IBA = 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-)

#### **NOIES**

- 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: Surface Elevation Measured Depth to Water + (Dp x LPH Thickness), 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 0018 in October 2003. Historical data compiled prior to that time were provided by Gettler-Ryan Inc

## Contents of Tables 1 and 2 Site: 76 Station 0018

A	4	E	_4
Curr	ent	E_VE	IIL

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)
Table 1a Historic D	Well/ Date	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME					
	Well/	Depth to	LPH	Crayad	Ohamana in								
Table 2	Date	Water	Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)
Table 2a	Well/ Date	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME					

# Table 1 CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS December 22, 2008 76 Station 0018

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyi- 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-1 12/22/0	8 208.15	20.82	(Scree 0.00	n Interva 187.33	l in feet: 10 0.29	.0-30.0) 	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		9.6	
<b>MW-2</b> 12/22/0	8 210.27	22.55	(Scree 0.00	n Interva 187.72	l in feet: 10 0.07	.0-30.0) 	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	~~	ND<0.50	
MW-3 12/22/03	8 208.98	21.40	(Scree 0.00	n Interva 187.58	l in feet: 10 0.09	.0-30.0)	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	



Table 1 a
ADDITIONAL CURRENT ANALYTICAL RESULTS
76 Station 0018

Date Sampled	TBA	Ethanot (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME
	(μg/l)	(μg/l)	(µg/l)	(µg/l)	(μg/l)	(µg/l)	(μg/l)
<b>MW-1</b> 12/22/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
<b>MW-2</b> 12/22/08		ND<250				<del></del> .	
<b>MW-3</b> 12/22/08	~~	ND<250					



Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
August 2000 Through December 2008
76 Station 0018

Sampled Ele	evation	Water			***									Comments
			Thickness	water Elevation	ın Elevatıon	TPH-G	TPH-G	_		Ethyl-	Total	MTBE	MTBE	
	· e · A	(C +)	48			(8015M)	(GC/MS)	Benzene	Totuene	benzene	Xylenes	(8021B)	(8260B)	
(1	feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	(µg/l)	(μg/l)	(µg/l)	(μg/l)	
MW-1			(Scre	en Interval	in feet: 10.	.0-30.0)								
08/24/00	208.15	18.55	0.00	189.60		120		0.67	ND	0.86	1.4	54	54	
11/16/00	208.15	20.30	0.00	187.85	-1.75	169		ND	1.20	1.74	0.629	68.6	97.7	
02/09/01	208.15	20.16	0.00	187.99	0.14	330		1.3	ND	1.0	4.6	140	150	
05/11/01	208.15	17.68	0.00	190.47	2.48	1250		ND	ND	ND	ND	145	122	
08/10/01	208.15	20.38	0.00	187.77	-2.70	580		ND<0.50	ND<0.50	ND<0.50	ND<0.50	110	150	
11/07/01	208.15	22.68	0.00	185.47	-2.30	250		ND<0.50	1.5	ND<0.50	ND<0.50	120	100	
02/06/02	208.15	16.20	0.00	191.95	6.48	790		ND<2.5	12	8.8	ND<2.5	90	72	
05/08/02	208.15	17.54	0.00	190.61	-1.34	890		ND<2.5	ND<2.5	ND<2.5	ND<2.5	78	81	
08/09/02	208.15	20.21	0.00	187.94	-2.67		450	ND<0.50	ND<0.50	ND<0.50	ND<1.0		100	
11/29/02	208.15	22.33	0.00	185.82	-2.12		110	ND<0.50	ND<0.50	ND<0.50	ND<1.0		72	
02/03/03	208.15	16.41	0.00	191,74	5.92		540	ND<0.50	ND<0.50	ND<0.50	ND<1.0		40	
05/05/03	208.15	16.09	0.00	192.06	0.32		670	ND<2.5	ND<2.5	ND<2.5	ND<5.0		57	
09/04/03	208.15	21.46	0.00	186.69	-5.37									No analysis; past holding time
11/13/03	208.15	21.52	0.00	186.63	-0.06		97	ND<0.50	5.0	0.82	3.5		29	
01/29/04	208.15	17.51	0.00	190.64	4.01		520		ND<0.50		ND<1.0		44	
05/07/04	208.15	16.74	0.00	191.41	0.77		180		ND<0.50		ND<1.0		25	
08/27/04	208.15	19.40	0.00	188.75	-2.66		100		ND<0.50		ND<1.0		21	
11/23/04	208.15	19.82	0.00	188.33	-0.42		410		ND<0.50		ND<1.0		45	
02/09/05	208.15	15.81	0.00	192.34	4.01		5700		ND<0.50		ND<1.0	70	40	
06/16/05	208.15	15.85	0.00	192.30	-0.04				ND<0.50		ND<1.0		24	
09/27/05	208.15	19.15	0.00	189.00	-3.30				ND<0.50		ND<1.0		19	
	208.15	14.62	0.00	193.53	4.53		68		ND<0.50		ND<1.0		12	

ŮTRC

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
August 2000 Through December 2008
76 Station 0018

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-	Total	MTBE	MTBE	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(GC/WS) (μg/l)	(μg/l)	(μg/l)	benzene (μg/l)	Xytenes (μg/l)	(8021 <b>B</b> ) (μg/l)	(8260B) (μg/l)	
MW-1	continued				<del> </del>					(12)	(1-8)	(1-8-1)	(1181-)	
03/08/0		11.69	0.00	196.46	2.93		130	ND<0.50	ND<0.50	ND<0.50	ND<1.0		21	
06/08/0	6 208.15	14.28	0.00	193.87	-2.59		66	ND<0.50	ND<0.50	ND<0.50	ND<1.0		16	
09/15/0	6 208.15	17.49	0.00	190.66	-3.21		96	ND<0.50	ND<0.50	ND<0.50	ND<0.50		6.1	
12/22/0	6 208.15	18.68	0.00	189.47	-1.19		570	ND<0.50	ND<0.50	ND<0.50	ND<0.50		18	
03/28/0	7 208.15	18.40	0.00	189.75	0.28		190	ND<0.50	ND<0.50	ND<0.50	ND<0.50		18	
06/25/0	7 208.15	20.01	0.00	188.14	-1.61		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		4.2	
09/22/0	7 208.15	21.23	0.00	186.92	-1.22		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		14	
12/14/0	7 208.15	21.02	0.00	187.13	0.21		76	ND<0.50	ND<0.50	ND<0.50	ND<1.0		16	
03/26/0	8 208.15	16.87	0.00	191.28	4.15		230	ND<0.50	ND<0.50	ND<0.50	ND<1.0		18	
06/20/0	8 208.15	18.82	0.00	189.33	-1.95		100	ND<0.50	ND<0.50	ND<0.50	ND<1.0		13	
09/19/0	8 208.15	21.11	0.00	187.04	-2.29		63	ND<0.50	ND<0.50	ND<0.50	ND<1.0		12	
12/22/08	8 208.15	20.82	0.00	187.33	0.29		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		9.6	
MW-2			(Scree	n Interval	in feet: 10.	0-30.0)								
08/24/00	0 210.27	19.69	0.00	190.58		ND		ND	ND	ND	ND	ND	ND	
11/16/00		21.61	0.00	188.66	-1.92	ND		ND	ND	ND	ND	ND	ND	
02/09/01	1 210.27	21.52	0.00	188.75	0.09	ND		ND	ND	ND	ND	ND	ND	
05/11/01		18.76	0.00	191.51	2.76	ND		ND	ND	ND	ND	ND	ND	
08/10/01	1 210.27	21.65	0.00	188.62	-2.89	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<2.0	
11/07/01	1 210.27	24.25	0.00	186.02	-2.60	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<1.0	
02/06/02	2 210.27	18.22	0.00	192.05	6.03	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		
05/08/02		18.63	0.00	191.64	-0.41	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0		
08/09/02		21.53	0.00	188.74	-2.90		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
11/29/02	2 210.27	23.73	0.00	186.54	-2.20		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
0018								Page 2	2 of 5					

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
August 2000 Through December 2008
76 Station 0018

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water	Change in	ТР <b>Н-</b> G	TPH-G			Ethyl-	Total	MTDE	МТВЕ	Comments
				Elevation	Elevation	(8015M)	(GC/MS)	Benzene	Toluene	benzene	Xylenes	MTBE (8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	
MW-2	continued													
02/03/0		17.43	0.00	192.84	6.30		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
05/05/0	3 210.27	17.15	0.00	193.12	0.28		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	•
09/04/0	3 210.27	22.75	0.00	187.52	-5.60									No analysis; past holding time
11/13/0	3 210.27	23.02	0.00	187.25	-0.27		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
01/29/0	4 210.27	18.73	0.00	191.54	4.29		ND<50	0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
05/07/0	4 210.27	17.79	0.00	192.48	0.94		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
08/27/0	4 210.27	19.66	0.00	190.61	-1.87		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
11/23/0	4 210.27	21.20	0.00	189.07	-1.54		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
02/09/0	5 210.27	16.72	0.00	193.55	4.48		ND<50	0.69	1.5	ND<0.50	1.4		ND<0.50	
06/16/0	5 210.27	16.73	0.00	193.54	-0.01		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
09/27/0	5 210.27	20.41	0.00	189.86	-3.68		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
12/30/0	5 210.27	14.79	0.00	195.48	5.62		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
03/08/0	6 210.27	13.25	0.00	197.02	1.54		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
06/08/0	6 210.27	15.36	0.00	194.91	-2.11		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
09/15/0	6 210.27	18.61	0.00	191.66	-3.25		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
12/22/0	6 210.27	20.01	0.00	190.26	-1.40		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
03/28/0	7 210.27	19.60	0.00	190.67	0.41		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
06/25/0		21.34	0.00	188.93	-1.74		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
09/22/0		22.71	0.00	187.56	-1.37		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
12/14/0		22.52	0.00	187.75	0.19		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
03/26/0		17.79	0.00	192.48	4.73		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
06/20/0		21.13	0.00	189.14	-3.34		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
09/19/0	8 210.27	22.62	0.00	187.65	-1.49		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
0018 .								Page 3	3 of 5					<b>CTRC</b>

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
August 2000 Through December 2008
76 Station 0018

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	Comments
				Elevation	Elevation	(8015M)	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	(μg/l)	(µg/l)	$(\mu g/l)$					
MW-2	continued	ļ												
12/22/0	08 210.27	7 22.55	0.00	187.72	0.07		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
MW-3			(Scre	en Interva	l in feet: 10	.0-30.0)								
08/24/0	00 208.98	18.68	0.00	190.30		ND		ND	ND	ND	ND	4.7	2.3	
11/16/0	00 208.98	3 20.56	0.00	188.42	-1.88	ND		ND	ND	ND	ND	ND	ND	
02/09/0	208.98	3 20.45	0.00	188.53	0.11	ND		ND	ND	ND	ND	ND	ND	
05/11/0	208.98	3 17.75	0.00	191.23	2.70	ND		ND	ND	ND	ND	ND	ND	
08/10/0	208.98	3 20.70	0.00	188.28	-2.95	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<2.0	
11/07/0	208.98	3 23.02	0.00	185.96	-2.32	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	1.5	
02/06/0	208.98	3 17.19	0.00	19 <b>1</b> .79	5.83	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		
05/08/0	208.98	17.59	0.00	191.39	-0.40	ND<50	~~	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0		
08/09/0	208.98	3 20.48	0.00	188.50	-2.89		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
11/29/0	208.98	3 22.64	0.00	186.34	-2.16		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
02/03/0	3 208.98	16.46	0.00	192.52	6.18		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
05/05/0	3 208.98	16.16	0.00	192.82	0.30		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2.6	
09/04/0	3 208.98	21.71	0.00	187.27	-5.55									No analysis; past holding time
11/13/0	3 208.98	21.93	0.00	187.05	-0.22		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
01/29/0	)4     208.98	17.79	0.00	191.19	4.14		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
05/07/0	208.98	16.79	0.00	192.19	1.00		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		0.55	
08/27/0	208.98	19.70	0.00	189.28	-2.91	~=	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
11/23/0	4 208.98	20.30	0.00	188.68	-0.60		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
02/09/0	5 208.98	15.72	0.00	193.26	4.58		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		1.6	
06/16/0	5 208.98	15.67	0.00	193.31	0.05		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	<b></b> .	ND<0.50	



Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
August 2000 Through December 2008
76 Station 0018

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water	Change in	TPH-G	TPH-G			Ethyl-	Total	МТВЕ	MTBE	Comments
				Elevation	Elevation	(8015M)	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(μg/l)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	$(\mu g/l)$	
MW-3	continued											•		
09/30/0	)5 208.98	3 19.47	0.00	189.51	-3.80		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	9/27/05 samples broke during shipment.
12/30/0	)5 208.98	15.84	0.00	193.14	3.63		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
03/08/0	06 208.98	12.06	0.00	196.92	3.78		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
06/08/0	06 208.98	3 13.82	0.00	195.16	-1.76		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
09/15/0	06 208.98	17.67	0.00	191.31	-3.85		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		3.4	
12/22/0	06 208.98	3 19.10	0.00	189.88	-1.43		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
03/28/0	07 208.98	18.60	0.00	190.38	0.50		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
06/25/0	7 208.98	20.30	0.00	188.68	-1.70		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
09/22/0	7 208.98	21.61	0.00	187.37	-1.31		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
12/14/0	7 208.98	21.43	0.00	187.55	0.18		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
03/26/0	08 208.98	16.74	0.00	192.24	4.69		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
06/20/0	08 208.98	19.05	0.00	189.93	-2.31		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
09/19/0	08 208.98	21.49	0.00	187.49	-2.44		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
12/22/0	08 208.98	21.40	0.00	187.58	0.09		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	



Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 0018

	Date			Ethylene-				
	Sampled		Ethanol	dibromide	1,2-DCA			
		TBA	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME
-		(μg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(μg/l)	(μg/l)
N	AW-1							
	08/24/00	ND	ND			ND	ND	ND
	11/16/00	ND	ND			ND	ND	ND
	02/09/01	ND	ND	ND	ND	ND	ND	ND
	05/11/01	ND	ND	ND	ND	ND	ND	ND
	08/10/01	ND<100	ND<1000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	11/07/01	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	02/06/02	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	05/08/02	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	08/09/02	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	11/29/02	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	02/03/03	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	05/05/03	ND<500	ND<2500	ND<10	ND<10	ND<10	ND<10	ND<10
	11/13/03	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	01/29/04	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	05/07/04	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
	08/27/04	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
	11/23/04	7.5	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
	02/09/05	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	06/16/05	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	09/27/05	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	12/30/05	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	03/08/06	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	06/08/06	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	09/15/06	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	12/22/06	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

**CTRC** 

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 0018

Date			Ethylene-					
Sampled		Ethanol	dibromide	1,2-DCA				
	TBA	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME	
<del> </del>	(μg/l)	(μg/l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	
MW-1 co								
03/28/07	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
06/25/07	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
09/22/07	ND<10	ND<250	ND<0.50	ND<0,50	ND<0.50	ND<0.50	ND<0.50	
12/14/07	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
03/26/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
06/20/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
09/19/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
12/22/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
MW-2								
08/24/00	ND	ND			ND	ND	ND	
11/16/00	ND	ND			ND	ND	ND	
02/09/01	ND	ND	ND	ND	ND	ND	ND	
05/11/01	ND	ND	ND	ND	ND	ND	ND	
08/10/01	ND<100	ND<1000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	
11/07/01	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	
11/13/03		ND<500						
01/29/04		ND<500						
05/07/04		ND<50						
08/27/04		ND<50						
11/23/04		ND<50						
02/09/05	<del></del> .	ND<50						
06/16/05		ND<50	<del></del>					
09/27/05		ND<250						
12/30/05		ND<250	uu					
03/08/06		ND<250						

ŮTRC

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 0018

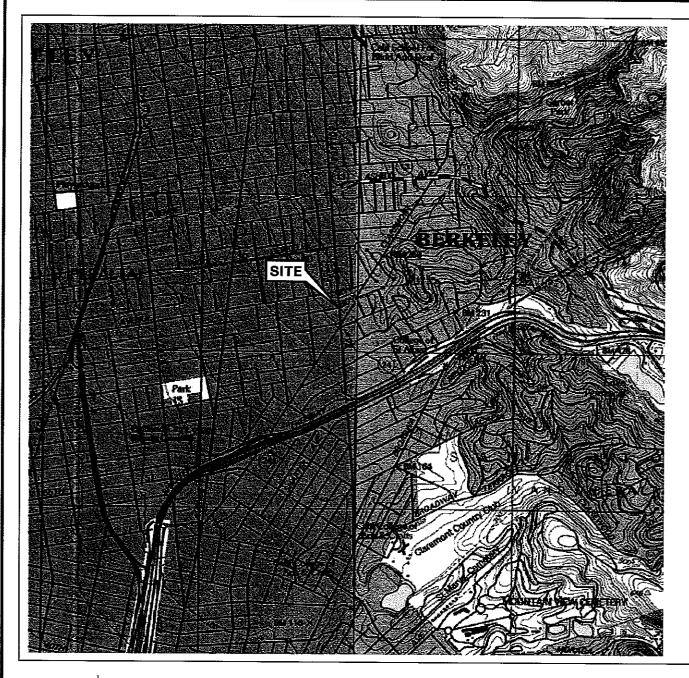
Date			Ethylene-				
Sampled		Ethanol	dibromide	1,2-DCA			
	TBA	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME
	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(µg/l)	(μg/l)	(μg/l)
MW-2	continued						
06/08/06		ND<250		·			
09/15/06		ND<250					
12/22/06		ND<250		· <b></b>			
03/28/07		ND<250					
06/25/07		ND<250	~~				
09/22/07		ND<250					
12/14/07	7	ND<250				77	
03/26/08	3	ND<250					
06/20/08	3	ND<250					
09/19/08	3	ND<250		~~			
12/22/08	3	ND<250					
MW-3							
08/24/00	) ND	ND			ND	ND	ND
11/16/00	) ND	ND			ND	ND	ND
02/09/01	ND	ND	ND	ND	ND	ND	ND
05/11/01	ND	ND	ND	ND	ND	ND	ND
08/10/01	ND<100	ND<1000000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
11/07/01	ND<20	ND<500000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
08/09/02			ND	ND			
11/29/02	<u></u>		ND	ND			
02/03/03			ND<2.0	ND<2.0			
05/05/03	<del></del>		ND<1.0	ND<1.0			
11/13/03		ND<500					
01/29/04		ND<500				M 54	
05/07/04		ND<50					·

**⊘**TRC

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 0018

Date			Ethylene-					
Sampled		Ethanol	dibromide	1,2-DCA				
	TBA	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME	
	(µg/l)	(μg/l)	(µg/l)	$(\mu g/l)$	(µg/l)	$(\mu g/l)$	(µg/l)	
MW-3 co	ontinued							 
08/27/04		ND<50						
11/23/04		ND<50						
02/09/05		ND<50			-			
06/16/05		ND<50						
09/30/05		ND<250					==	
12/30/05		ND<250						
03/08/06		ND<250						
06/08/06		ND<250						
09/15/06		ND<250						
12/22/06		ND<250						
03/28/07		ND<250						
06/25/07		ND<250						
09/22/07		ND<250						
12/14/07		ND<250						
03/26/08		ND<250					<b>u</b> _	
06/20/08		ND<250	25					
09/19/08		ND<250		25				
12/22/08		ND<250						







1/4 1/2 3/4 1 MILE

SCALE 1:24,000



SOURCE:

United States Geological Survey 7.5 Minute Topographic Map: Oakland East & Oakland West Quadrangle



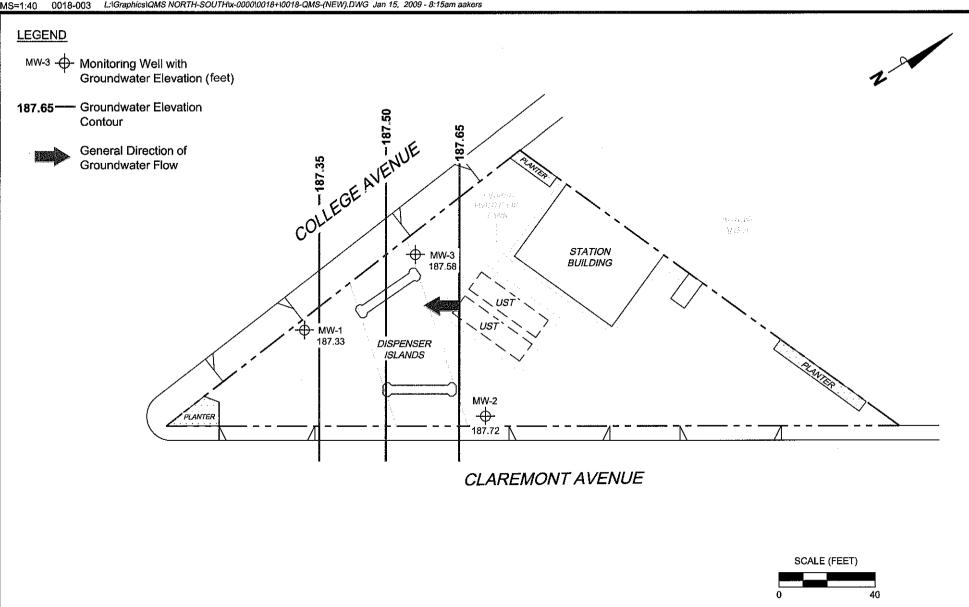
PROJECT:

154771

FACILITY:

**76 STATION 0018** 6201 CLAREMONT AVENUE OAKLAND, CALIFORNIA

VICINITY MAP



#### 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.



PROJECT: 154771

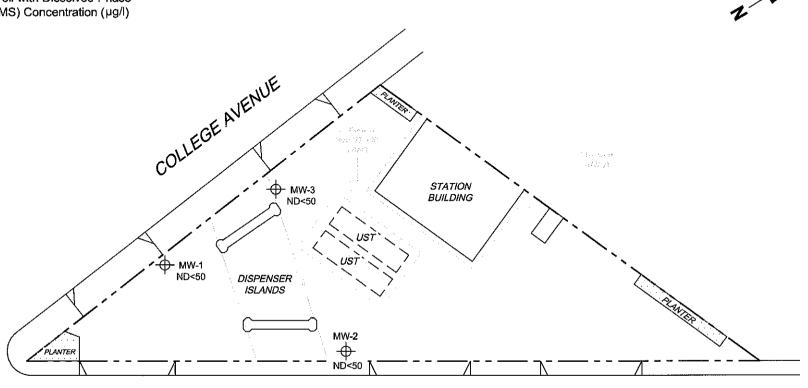
FACILITY:

**76 STATION 0018 6201 CLAREMONT AVENUE** OAKLAND, CALIFORNIA

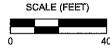
**GROUNDWATER ELEVATION CONTOUR MAP** December 22, 2008

#### LEGEND

MW-3 — Monitoring Well with Dissolved-Phase TPH-G (GC/MS) Concentration (µg/l)



#### **CLAREMONT AVENUE**



#### NOTES:

TPH-G (GC/MS) = total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B. µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. UST = underground storage tank.



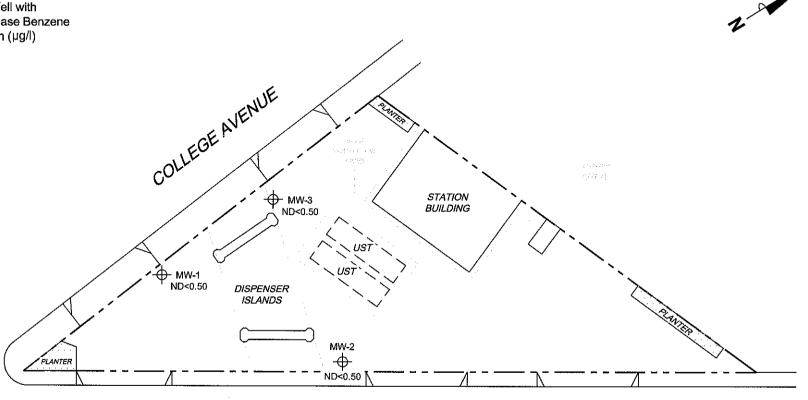
PROJECT: 154771

FACILITY:

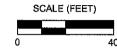
76 STATION 0018 6201 CLAREMONT AVENUE OAKLAND, CALIFORNIA DISSOLVED-PHASE TPH-G (GC/MS)
CONCENTRATION MAP
December 22, 2008

#### LEGEND

MW-3 — Monitoring Well with
Dissolved-Phase Benzene
Concentration (µg/l)



#### **CLAREMONT AVENUE**



#### NOTES:

μg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. UST = underground storage tank.



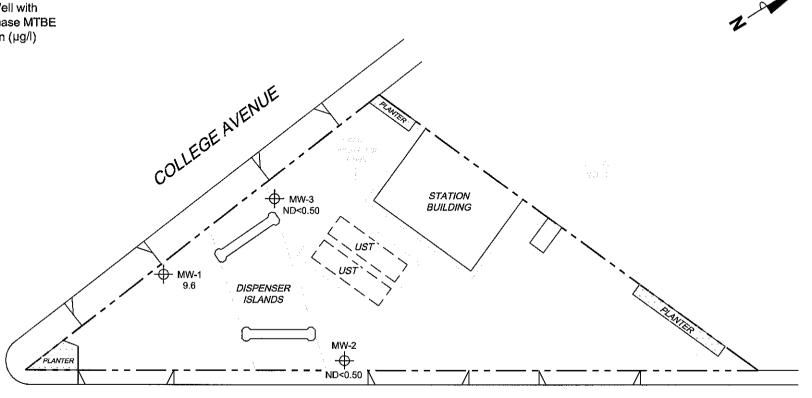
PROJECT: 154771

FACILITY:

76 STATION 0018 6201 CLAREMONT AVENUE OAKLAND, CALIFORNIA DISSOLVED-PHASE BENZENE CONCENTRATION MAP December 22, 2008

#### LEGEND

MW-3 - Monitoring Well with
Dissolved-Phase MTBE
Concentration (μg/l)



#### **CLAREMONT AVENUE**



#### NOTES:

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



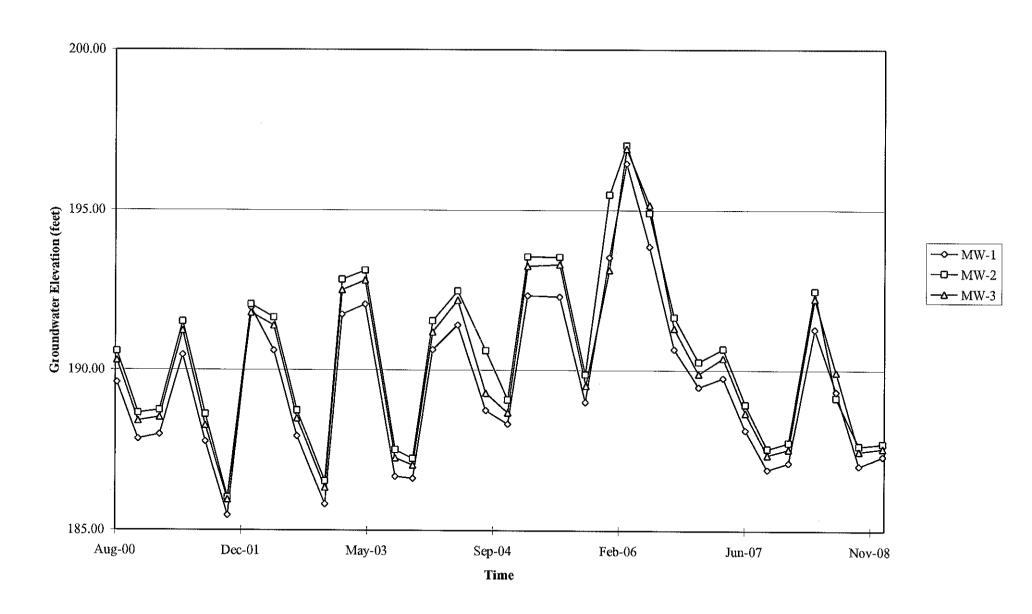
PROJECT: 154771

FACILITY:

76 STATION 0018 6201 CLAREMONT AVENUE OAKLAND, CALIFORNIA DISSOLVED-PHASE MTBE CONCENTRATION MAP December 22, 2008

# **GRAPHS**

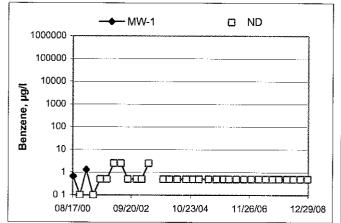
# Groundwater Elevations vs. Time 76 Station 0018

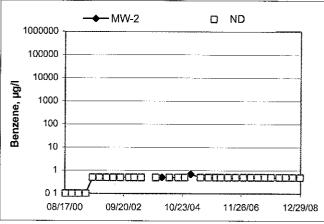


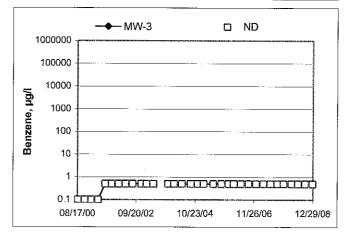
Elevations may have been corrected for apparent changes due to resurvey

#### Benzene Concentrations vs Time

76 Station 0018







#### 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 car e 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 is 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 a particular well, 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.

3/7/08 version

## **FIELD MONITORING DATA SHEET**

Technician:	Ric	1=y /	Jol	o #/Task #:	1547	71/FA	20	Date: 12/22/08
Site#	ools	5	Projec	t Manager	A-col	lins		Date: 12/22/08
Well#	тос	Time Gauged	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
mw-1	<u>×</u>	<b>653</b> ।	2972	20.52	·		0645	2 <sup>i</sup>
mw-3	$\sim$	0535	30.18	21.40			0652	24
mw-2	X	0539	29.53	22.55			6639	
	,							
·								
						3		
							a	
·							(1)	
	1		,				Cavillant.	
			7					
				*				
	,,						·	
· ·				. \$ 44.88 (A)	ÿ	1 1		
				1.00	, 18.5			
		·			-			
							<del></del>	
			· · · · · · · · · · · · · · · · · · · ·					*,
	<u>.                                    </u>					1,911 1	÷	
FIELD DATA	COMPLE	ETE 🗶	QA/QC	~	COC	> WE	ELL BOX CO	ONDITION SHEETS 🔀
MANIFEST	•••	DRUM IN	VENTOR'	/ X	TRAFFIC (	CONTROL		



#### **GROUNDWATER SAMPLING FIELD NOTES**

Technician: Ricky #

Site: 0018	Project No :	184771		Date: 12/22/88
Well No. <u>mω, i</u>		Purge Method:	Sub	
Total Depth (feet): 29.72  Water Column (feet): 80% Recharge Depth(feet): 22	<u>.</u>	Depth to Product (feet):_ LPH & Water Recovered Casing Diameter (Inches 1 Well Volume (gallons):_	(gallons): )2′¹	

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F 🗷	рН	D O (mg/L)	ORP	Turbidity
0603			2	709.5	11.3	7.02			
			4	670.4	14.4	6.89			
	0609		6	668.0	12/2	6.78			
Stat	ic at Time Sa	ampled	Tota	ıl Gallons Pur	ged	<u> </u>	Sample	Time	L
20.82				0695					
Comments	<b>5</b> ;		•						

Well No. <u> </u>	Purge Method: Sub
Depth to Water (feet): 21:40  Total Depth (feet) 30:18  Water Column (feet): 8.78  80% Recharge Depth(feet): 23:16	Depth to Product (feet):  LPH & Water Recovered (gallons):  Casing Diameter (Inches):  1 Well Volume (gallons):  2

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (FC	рН	D.O. (mg/L)	ORP	Turbidity	
0617			2	445.0	141.1	6.63				
			ધ	493.6	148	6.62				
	0622		6	491.6	15.7	6.54				
Stat	ic at Time Sa	ampled	Tota	al Gallons Pu	raed		Sample	Time		
21.	98			6	<u> </u>	0682				
Comments	<b>3</b> :						·			



### **GROUNDWATER SAMPLING FIELD NOTES**

Technician: Ricky H.

Site: <i>©</i> 6	18	Proj	ect No.:	154771	·		Date:	12/2	22/08			
Well No	nw.	, ユ	<u>.</u>	Purge Metho	od: <b>S</b>	مل ب						
Depth to W	/ater (feet):	22.85	5	Depth to Pro	duct (feet):	<del></del>	-					
					r Recovered(g							
Water Colu	ımn (feet):	29.53 6.98		Casing Diam	eter (Inches):_	2.''						
		eet): 23 · 9		1 Well Volum	ne (gallons):	2.		<del></del>				
Barantan and the William	Transport of the	T				<b></b>						
Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F, <b>©</b> )	рН	D O (mg/L)	ORP	Turbidity			
0626		(1000)	2	479.9	13-6	639						
			41	489.6	14.8	693						
	0631		_6	49.8	15.7	6.88						
Stat	ic at Time S	ampled	Tota	⊥ al Gallons Pur	aed		l Sample	 Time				
	23.01			6			636					
Comments	s:											
		<del>.</del>		nu.			<del> </del>	<del>- 7</del> .				
Well No				Purge Metho	d:							
				Depth to Prod	duct (feet):							
Total Depth	ــ(feet)				Recovered (g							
Water Colu	mn (feet):				eter (Inches):							
80% Recha	arge Depth(fe	eet):			e (gallons):			<del></del>				
Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (u8/cm)	Temperature (F,C)	ρH	D.O (mg/L)	ORP	Turbidity			
			/									
			/									
Stati	ic at Time Sa	ampled	Tota	al Gallons Purg	jed		Sample	Time				
									See See Common See			
Comments												



Date of Report: 12/29/2008

Anju Farfan

TRC 21 Technology Drive Irvine, CA 92618

RE:

0018

BC Work Order:

0816801

Invoice ID:

B055126

Enclosed are the results of analyses for samples received by the laboratory on 12/22/2008. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers

Client Service Rep

Authorities 10's at 10's

Authorized Signature

Project: 0018

Project Number: Inonei

Project Manager: Anju Fartan

Reported: 12/29/2008 15:26

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

Laboratory	Client Sample Information	On .			
0816801-01	COC Number: Project Number; Sampling Location: Sampling Point: Sampled By:	 0018  MW-1 Ricky H. of TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	12/22/2008 20:40 12/22/2008 06:45  Water	Delivery Work Order: Global ID: T0600102231 Location ID (FieldPoint): MW-1 Matrix: W Sample QC Type (SACode): CS Cooler ID:
0816801-02	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 0018  MW-3 Ricky H. of TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	12/22/2008 20:40 12/22/2008 06:52  Water	Delivery Work Order: Global ID: T0600102231 Location ID (FieldPoint): MW-3 Matrix: W Sample QC Type (SACode): CS Cooler ID:
0816801-03	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 0018  MVV-2 Ricky H. of TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	12/22/2008 20:40 12/22/2008 06:38  Water	Delivery Work Order: Global ID: T0600102231 Location ID (FieldPoint): MW-2 Matrix: W Sample QC Type (SACode): CS Cooler ID:

Project: 0018

Project Number: [none]

Project Manager: Anju Farfan

Reported: 12/29/2008 15:26

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

BCL Sample ID:	0816801-01	Client Sample	e Name:	0018, MW-1, 12/2	22/2008 6:45:0	0AM, Ricky	H.						
				-		Prep	Run		Instru-		QC	МВ	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	12/26/08	12/27/08 08:07	JCC	MS-V4	1	BRL1849	ND	
1,2-Dibromoethane		ND	ug/L	0.50	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	1	BRL1849	ND	
1,2-Dichloroethane		ND	ug/L	0,50	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	í	BRL1849	ND	
Ethylbenzene		ND	ug/L	0.50	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	í	BRL1849	ND	
Methyl t-butyl ether		9.6	ug/L	0.50	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	1	BRL1849	ND	<del></del>
Toluene		ND	ug/L	0.50	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	1	BRL1849	NĐ	****
Total Xvienes		ND	ug/L	1.0	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	1	BRL1849	ND	**
t-Amyl Methyl ether		ND	ug/L	0.50	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	1	BRL1849	ND	
t-Butyl alcohol		ND	ug/L	10	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	i	BRL1849	ND	
Diisopropyl ether		ND	ug/L	0.50	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	1	BRL1849	ND	
Ethanol		ND	ug/L	250	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	i	BRL1849	ND	
Ethyl t-butyl ether		ND	ug/L	0.50	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	1	BRL1849	ND	
Total Purgeable Petroleum Hvdrocarbons	1	ND	ug/L	50	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	1	BRL1849	ND	
1,2-Dichloroethane-d4 (Su	rrogate)	98.8	%	76 - 114 (LCL - UCL)	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	í	BRL1849		
Toluene-d8 (Surrogate)		98.8	%	88 - 110 (LCL - UCL)	EPA-8260	12/26/08	12/27/08 08:07	JCC.	MS-V4	í	BRL1849		
4-Bromofluorobenzene (Su	rrogate)	97.5	%	86 - 115 (LCL - UCL)	EPA-8260	12/26/08	12/27/08 08:07	JCC	MS-V4	i	BRL1849		

Project: 0018

Project Number: Inone! Project Manager: Anju Farfan

Reported: 12/29/2008 15:26

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0	816801-02	Client Sample	e Name:	0018, MW-3, 12	/22/2008 6:52:0	00AM, Ricky	H.						
						Prep	Run		Instru-		QC	MB	Lab
Constituent		Result	Units	PQL MI	OL Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene		ND	ug/L	0.50	EPA-8260	12/26/08	12/27/08 08:32	JCC	MS-V4	i	BRL1849	ND	·
Ethylbenzene		ND	ug/L	0.50	EPA-8260	12/26/08	12/27/08 08:32	JCC	MS-V4	1	BRL1849	ND	
Methyl t-butyl ether	_	ND	ug/L	0.50	EPA-8260	12/26/08	12/27/08 08:32	JCC	MS-V4	1	BRL1849	ND	
Toluene		ND	ug/L	0.50	EPA-8260	12/26/08	12/27/08 08:32	JCC	MS-V4	1	BRL1849	ND	
Total Xvlenes		ND	ug/L	1.0	EPA-8260	12/26/08	12/27/08 08:32	JCC	MS-V4	í	BRL1849	ND	
Ethanol		ND	ug/L	250	EPA-8260	12/26/08	12/27/08 08:32	JCC	MS-V4	í	BRL1849	ND	
Total Purgeable Petroleum Hvdrocarbons		ND	ug/L	50	EPA-8260	12/26/08	12/27/08 08:32	JCC	MS-V4	1	BRL1849	ND	
1,2-Dichloroethane-d4 (Surr	ogate)	103	%	76 - 114 (LCL - UCL	-) EPA-8260	12/26/08	12/27/08 08:32	JCC	MS-V4	1	BRL1849		
Toluene-d8 (Surrogate)		100	%	88 - 110 (LCL - UCL	.) EPA-8260	12/26/08	12/27/08 08:32	JCC	MS-V4	1	BRL1849		
4-Bromofluorobenzene (Sur	rogate)	99.1	%	86 - 115 (LCL - UCL	.) EPA-8260	12/26/08	12/27/08 08:32	JCC	MS-V4	1	BRL1849		

TRC 21 Technology Drive

Irvine, CA 92618

Project: 0018

Project Number: Inone)

Project Manager: Anju Farfan

Reported: 12/29/2008 15:26

# Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0816801-03	Client Sampl	e Name:	0018, MW-2, 12/2	22/2008 6:38:0	0AM, Ricky	H.						
					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	12/26/08	12/27/08 08:56	JCC	MS-V4	1	BRL1849	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	12/26/08	12/27/08 08:56	JCC	MS-V4	1	BRL1849	ND	
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	12/26/08	12/27/08 08:56	JCC	MS-V4	1	BRL1849	ND	
Toluene	ND	ug/L	0,50	EPA-8260	12/26/08	12/27/08 08:56	JCC	MS-V4	1	BRL1849	ND	
Total Xylenes	ND	ug/L	1.0	EPA-8260	12/26/08	12/27/08 08:56	JCC	MS-V4	1	BRL1849	ND	
Ethanol	ND	ug/L	250	EPA-8260	12/26/08	12/27/08 08:56	JCC	MS-V4	1	BRL1849	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	EPA-8260	12/26/08	12/27/08 08;56	JCC	MS-V4	1	BRL1849	ND	
1,2-Dichloroethane-d4 (Surrogate)	103	%	76 - 114 (LCL - UCL)	EPA-8260	12/26/08	12/27/08 08:56	JCC	MS-V4	í	BRL1849		
Toluene-d8 (Surrogate)	96.7	%	88 - 110 (LCL - UCL)	EPA-8260	12/26/08	12/27/08 08:56	JCC	MS-V4	i	BRL1849		
4-Bromofluorobenzene (Surrogate)	95.0	%	86 - 115 (LCL - UCL)	EPA-8260	12/26/08	12/27/08 08:56	JCC	MS-V4	í	BRL1849		

TRC

21 Technology Drive Irvine, CA 92618



Project: 0018

Project Number: Inonei Project Manager: Anju Farfan Reported: 12/29/2008 15:26

### Volatile Organic Analysis (EPA Method 8260)

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

									<u>Cont</u>		ol Limits
			Source	Source		Spike			Percent		Percent
Constituent	Batch ID	QC Sample Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery Lab Quals
Benzene	BRL1849	Matrix Spike	0816792-02	0	28.200	25.000	ug/L		113		70 - 130
		Matrix Spike Duplicate	0816792-02	0	28.530	25.000	ug/L	0.9	114	20	70 - 130
Toluene	BRL1849	Matrix Spike	0816792-02	0.21000	27.330	25.000	ug/L		108		70 - 130
		Matrix Spike Duplicate	0816792-02	0.21000	27.770	25.000	ug/L	1.8	110	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BRL1849	Matrix Spike	0816792-02	ND	10.020	10.000	ug/L		100		76 - 114
		Matrix Spike Duplicate	0816792-02	ND	10.130	10,000	ug/L		101		76 - 114
Toluene-d8 (Surrogate)	BRL1849	Matrix Spike	0816792-02	ND	9.9400	10.000	ug/L		99.4		88 - 110
		Matrix Spike Duplicate	0816792-02	ND	10.050	10,000	ug/L		100		88 - 110
4-Bromofluorobenzene (Surrogate)	BRL1849	Matrix Spike	0816792-02	ND	10.210	10.000	ug/L		102		86 - 115
		Matrix Spike Duplicate	0816792-02	ND	9.7600	10.000	ug/L		97.6		86 - 115

TRC

21 Technology Drive Irvine, CA 92618

Project: 0018

Project Number: Inonei

Project Manager: Anju Fartan

Reported: 12/29/2008 15:26

## Volatile Organic Analysis (EPA Method 8260)

#### **Quality Control Report - Laboratory Control Sample**

÷										Control	<u>Limits</u>	
Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Percent Recovery	RPD	Lab Quals
Benzene	BRL1849	BRL1849-BS1	LCS	27.740	25,000	0.50	ug/L	111		70 - 130	· · · · · · · · · · · · · · · · · · ·	
Toluene	BRL1849	BRL1849-BS1	LCS	27.280	25.000	0.50	ug/L	109		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BRL1849	BRL1849-BS1	LCS	9.9100	10.000		ug/L	99.1	•	76 - 114		
Toluene-d8 (Surrogate)	BRL1849	BRL1849-BS1	LCS	9.9400	10.000		ug/L	99.4		88 - 110		
4-Bromofluorobenzene (Surrogate)	BRL1849	BRL1849-BS1	LCS	10.120	10.000		ug/L	101		86 - 115		

Project: 0018

Project Number: Inonei Project Manager: Anju Farfan

Reported: 12/29/2008 15:26

## 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	BRL1849	BRL1849-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BRL1849	BRL1849-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BRL1849	BRL1849-BLK1	ND	ug/L	0,50		
Ethylbenzene	BRL1849	BRL1849-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BRL1849	BRL1849-BLK1	ND	ug/L	0.50		
Toluene	BRL1849	BRL1849-BLK1	ND	ug/L	0.50		
Total Xylenes	BRL1849	BRL1849-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BRL1849	BRL1849-BLK1	ND	ug/L	0.50		
t-Butvl alcohol	BRL1849	BRL1849-BLK1	ND	ug/L	10		
Diisopropyl ether	BRL1849	BRL1849-BLK1	ND	ug/L	0.50		
Ethanol	BRL1849	BRL1849-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BRL1849	BRL1849-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons	BRL1849	BRL1849-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BRL1849	BRL1849-BLK1	97.6	%	76 - 114	(LCL - UCL)	
Toluene-d8 (Surrogate)	BRL1849	BRL1849-BLK1	97.3	%	88 - 110	(LCL - UCL)	
4-Bromofluorobenzene (Surrogate)	BRL1849	BRL1849-BLK1	95.5	%	86 - 115	(LCL - UCL)	
						`	



TRC

21 Technology Drive Irvine, CA 92618

Project: 0018

Project Number: Inonei Project Manager: Anju Fartan

Reported: 12/29/2008 15:26

#### **Notes And Definitions**

MDL

Method Detection Limit

ND

Analyte Not Detected at or above the reporting limit

PQL

Practical Quantitation Limit

RPD

Relative Percent Difference

	<del></del>									
BC LABORATORIES INC.		SAMP	LE RECEI	T FORM	îl R	ev. No. 12	06/24/08	Page	_Of	
Submission#: 08/68	71									
SHIPPING INF Federal Express □ UPS □ BC Lab Field Service ⊅ Oth		Delivery 🗆			lce Chest Box	t 🗹		TAINER ne □ er □ (Spe	cify)	
Refrigerant: Ice ☑ Blue Ic	e□ No	ne □ C	other □	Commer	nts:	## ## ## ## ## ## ## ## ## ## ## ## ##				
Custody Seals Ice Chest □		iners □ /es □ No □		Comme	ents:					
All samples received? Yes∕□ No □	All sam	oles containe	ers intact? Y	es d No		Descrip	tion(s) mat	ch COC?	Yest⊈ No	
COC Received  ☐ YES ☐ NO	Emissivit Temperat	y: <u>0.98</u> ure: A	Container:	Qtre	Thermome	eter ID: <u> </u>	rle3	ı	211 ne <u>12-23</u> Init <u>JNU</u>	2-0S
					SAMDI =	NUMBERS				
SAMPLE CONTAINERS	1	2	3	4	SAMPLE 5	NUMBERS 6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSI	CAL					1	<del>                                     </del>			10
PI PE UNPRESERVED									<u> </u>	
OT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE	e de la companya de l									
PT NITROGEN FORMS										
PT TOTAL SULFIDE	- Company									
20z. NITRATE / NITRITE								L		
PT TOTAL ORGANIC CARBON					<u> </u>					
PT TOX				<u> </u>						
PT CHEMICAL OXYGEN DEMAND				· · · · · · · · · · · · · · · · · · ·	<u> </u>					
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	<i>→</i> (	3 40	3) 17-13)		( )	1	( )	( )	( )	( )
OT EPA 413.1, 413.2, 418.1										
PT ODOR						<u></u>				
RADIOLOGICAL					<u> </u>					
BACTERIOLOGICAL						<u> </u>	<u> </u>			
40 ml VOA VIAL- 504						<b>_</b>	ļ .			
OT EPA 508/608/8080						<u> </u>				<u> </u>
OT EPA 515.1/8150			<del></del>			<u> </u>				<u></u>
OT EPA 525	_									<u> </u>
OT EPA 525 TRAVEL BLANK			<del> </del>							
100ml EPA 547		<del></del>			ļ					
100ml EPA 531.1			<del> </del>		ļ					<b></b>
OT PRA 548										
OT EPA 549	<del></del>		-			<u> </u>			,	
OT EPA 632 OT EPA 8015M		<del></del>				<b> </b>	ļ			
	<del></del>	<del>- :                                      </del>	<del></del>							
OT AMBER 8 OZ. JAR	<del></del>					<b> </b>				
32 OZ. JAR			<del>                                     </del>	·		<del> </del>				
SOIL SLEEVE	<del></del>			<del>-,</del>		<del></del>			·	
PCB VIAL										
PLASTIC BAG		<del></del>			-					
FERROUS IRON	1		1.							
ENCORE		<b>—</b>	<b> </b>							
						1	. 1		r !	. IF

Comments:
Sample Numbering Completed By:
A = Actual / C = Corrected

H2M Date/Time: 12-22-8

### BC LABORATORIES, INC.

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

#### CHAIN OF CUSTODY

		(001) 327-4911 FAX (001) 327-1918													
		08/68	<u>301 - 1</u>				An	ialy	/Sis	Re	que	ste	ed	el .	
Bill to: Conoco Phill	ips/ TRC	Consultant Firm: TR	•		MATRIX	10		HOPO STILL	18760 B. 1818-1-108	adis section i selection	itter et adapter	enmit adds.	Palestances a	share Section 1998 5	APPROXIMATION CONTRACT
Address: 6201 Clavemon	↓ AUE	21 Technology Drive Irvine, CA 92618-230 Attn: Anju Farfan			(GW) Ground- water (S) Soil	Gas by 8015			oxygenates	8260B			03	Sacos	ested
City:		4-digit site#: 001%			(WW)	1B	<u> </u>	5	gen		m		7		edn
Oakland		Workorder#01062	Workorder # 01062-4509118496			802	151	80	oxy	ΥS	260E	SI S	648260	1	le R
State: CA Zip:		Project #: ) < 1/77	roject #: ) < ( 7 7 7 )			E by	y 80	i. by	st w/	E/0)	by 8	GC/		118E6x	Ë
Conoco Phillips Mgi	-PT-T.Graysa	Sampler Name:	CICY /	Sludge	MIB	AS	ESE	=======================================	MTB	Ş	3 by	ÇD.	15	onno	
		Field Point Name	Date & Sampl			BTEX/MTBE by 8021B,	TPH GAS by 8015M	TPH DIESEL by 8015	8260 full list w/	BTEX/MTBE/OXYS BY	ETHANOL by 8260B	TPH -G by GC/MS	CDR/EDC	Brex	Turnaround Time Requested
	٣	$\omega_{e}$ (	12/22/08	0645	GW				-	X	X	X	X		570
	n	ω.3	Ì	0652	l l					-	1	T		X	
	m	W-3	7	0638	$\downarrow$						V	V			
					CHK BY	DIST	阳幽	שודול	)N	: 					
			9-1		MA		UB (	<del> </del>							
			4/							, , , , , , , , , , , , , , , , , , ,					
Comments:		Relinquished by: (Sig	The		$\overline{}$		_ / /	ived 11	\ -	] m	- 1		& Tin		(2 1)
GLOBAL ID: T0600 10	Relinquished by: (								ار ک باب		- (	Date & Time (Z 22.0% 1730  Date & Time			30
<u></u>		Riking	1-12-22	08	2040			É	2-		į	2-2	2cx	204	0

#### **STATEMENTS**

#### **Purge Water Disposal**

Non-hazardous groundwater produced during purging and sampling of monitoring wells was accumulated at TRC's groundwater monitoring facility at Concord, California, for transportation by a licensed carrier, 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 others.

#### 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.