#### **RECEIVED**



3:06 pm, Nov 07, 2007

Alameda County
Environmental Health

October 31, 2007

Ms. Donna Drogos Supervising Hazardous Materials Specialist Alameda County Health Agency 1131 Harbor Bay Parkway Alameda, California 94502

Re:

Report Transmittal

**Quarterly Status Report – Third Quarter 2007** 

76 Service Station #0018 6201 Claremont Avenue Oakland, CA

Dear Ms. Drogos:

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 me at (916) 558-7612.

Sincerely,

Bill Burgh

Bill Borgh

Site Manager – Risk Management and Remediation

Attachment



1590 Solano Way #A Concord, CA 94520

925.688.1200 PHONE 925.688.0388 FAX

www.TRCsolutions.com

October 31, 2007

TRC Project No. 153275

Ms. Donna Drogos Supervising Hazardous Materials Specialist Alameda County Health Care Services 1131 Harbor Bay Parkway Alameda, California 94502-6577

RE: Quarterly Status Report – Third Quarter 2007 and Additional Request for Closure Status Site Closure Requested January 2006 76 Service Station #0018, 6201 Claremont Avenue, Oakland, California Alameda County

Dear Ms. Drogos:

On behalf of ConocoPhillips Company (ConocoPhillips), TRC is submitting the Third Quarter 2007 Status Report and Request for Closure Status for the subject site. The subject site is an active service station located on the northern corner of the intersection of Claremont and College Avenues in Oakland, California. The nearest surface water is Harwood (Claremont) Creek, located approximately 0.25 miles northeast of the site.

Site closure was requested in January 2006. Please advise if additional information is required in order for a review of closure applicability to be made.

#### PREVIOUS ASSESSMENTS

March 1997: Kaprealian Engineering Inc. (KEI) collected soil and grab groundwater samples during underground storage tank (UST) and product line replacement activities. A groundwater sample collected from the former gasoline UST excavation contained 6,100 parts per billion (ppb) total petroleum hydrocarbons as gasoline and 54 ppb benzene.

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

December 2000: Gettler-Ryan Inc. installed three groundwater-monitoring wells to depths of 30 to 30.5 feet below ground surface (bgs). Groundwater samples contained low concentrations of total petroleum hydrocarbons as gasoline (TPH-g), benzene, and methyl tertiary butyl ether (MTBE).

October 2003: Site environmental consulting responsibilities were transferred to TRC.

QSR – Third Quarter 2007 and Additional Request for Closure Status Closure Requested January 2006 76 Service Station #0018, Oakland, California October 31, 2007 Page 2

#### SENSITIVE RECEPTORS

April 24, 2006: TRC completed a sensitive receptor survey for the site. According to the Department of Water Resources (DWR) records, no water supply wells are located within a one-half mile radius of the site.

#### MONITORING AND SAMPLING

Three onsite wells are currently monitored quarterly. All three wells were gauged and sampled this quarter. The groundwater flow direction is toward the southwest at a calculated hydraulic gradient of 0.008 feet per foot.

#### CHARACTERIZATION STATUS

Total petroleum hydrocarbons as gasoline (TPH-g) and benzene, toluene, ethyl benzene, and total xylenes (BTEX) were not detected above laboratory reporting limits in any of the three wells.

MTBE was only detected in well MW-1 at a concentration of 14 micrograms per liter (µg/l).

#### **REMEDIATION'STATUS**

Remediation is not currently being conducted at the site.

#### RECENT CORRESPONDENCE

No correspondence this quarter.

#### **CURRENT QUARTER ACTIVITIES**

September 22, 2007: TRC performed groundwater monitoring and sampling. Wastewater generated from well purging and equipment cleaning was stored at TRC's groundwater monitoring facility in Concord, California, and transported by Onyx to the ConocoPhillips Refinery in Rodeo, California, for treatment and disposal.

#### CONCLUSIONS AND RECOMMENDATIONS

TPH-g and MTBE concentrations have decreased over time, and currently are below all laboratory reporting limits with the exception of MTBE, which was detected in one well (MW-1) at a concentration of 14  $\mu$ g/l. This concentration of 14  $\mu$ g/l of MTBE is just above the primary Maximum Contaminant Levels (MCLs) as established by the California Department of Health Services. Based on this data, and the absence of any water supply wells within a one-half mile radius of the Site, TRC requested that the site be approved for no further action as requested in January 2006.

TRC requests a reply from the ACHCS regarding the January 2006 recommendation for no further action and closure review.



QSR – Third Quarter 2007 and Additional Request for Closure Status. Closure Requested January 2006 76 Service Station #0018, Oakland, California October 29, 2007 Page 3

WOODBURNE

Environmental consulting responsibilities for the Site are being transferred to Delta Consultants. Please direct all future questions regarding the Site to Delta Consultants project manager Daniel Davis at (916) 503-1260.

Sincerely,

Keith Woodburne, P.G. Senior Project Manager

Attachment:

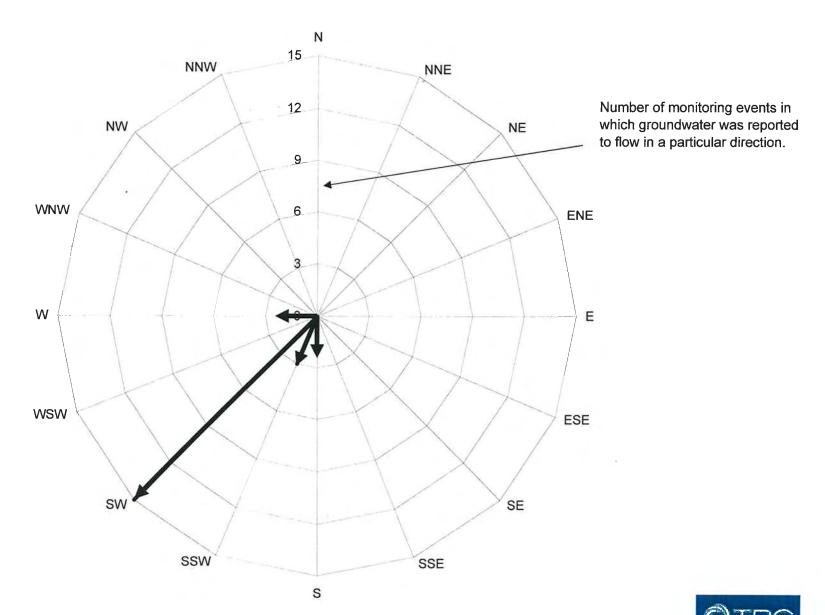
cc:

Historical Groundwater Flow Directions – October 2000 through September 2007 Quarterly Monitoring Report, July through September 2007 (TRC, October 17, 2007)

Bill Borgh, ConocoPhillips (electronic upload only)



#### Historical Groundwater Flow Directions for Tosco (76) Service Station No. 0018 October 2000 through September 2007







21 Technology Drive Irvine, CA 92618

949.727.9336 PHONE 949.727.7399 FAX

www.TRCsolutions.com

DATE:

October 17, 2007

TO:

ConocoPhillips Company

76 Broadway

Sacramento, CA 95818

ATTN:

MR. BILL BORGH

SITE:

**76 STATION 0018** 

6201 CLAREMONT AVENUE OAKLAND, CALIFORNIA

RE:

QUARTERLY MONITORING REPORT JULY THROUGH SEPTEMBER 2007

Dear Mr. Borgh:

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: Mr. Keith Woodburne, TRC (4 copies)

Enclosures 20-0400/0018R16.QMS

#### QUARTERLY MONITORING REPORT JULY THROUGH SEPTEMBER 2007

76 STATION 0018 6201 Claremont Avenue Oakland, California

Prepared For:

Mr. Bill Borgh CONOCOPHILLIPS COMPANY 76 Broadway Sacramento, California 95818

By:

Senior Project Geologist, Irvine Operations

Date: 10-12-07



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SUSAN FRANZEN KINGARD

CERTIFED ENGINEERANG

	LIST OF ATTACHMENTS
Summary Sheet	Summary of Gauging and Sampling Activities
Tables	Table Key Contents of Tables Table 1: Current Fluid Levels and Selected Analytical Results Table 1a: Additional Current Analytical Results Table 2: Historic Fluid Levels and Selected Analytical Results Table 2a: Additional Historic Analytical Results
Figures	Figure 1: Vicinity Map Figure 2: Groundwater Elevation Contour Map Figure 3: Dissolved-Phase TPH-G (GC/MS) Concentration Map Figure 4: Dissolved-Phase Benzene Concentration Map Figure 5: Dissolved-Phase MTBE Concentration Map
Graphs	Groundwater Elevations vs. Time Benzene Concentrations vs. Time
Field Activities	General Field Procedures Field Monitoring Data Sheet – 09/22/07 Groundwater Sampling Field Notes – 09/22/07
Laboratory Reports	Official Laboratory Reports Quality Control Reports Chain of Custody Records
Statements	Purge Water Disposal Limitations

# Summary of Gauging and Sampling Activities July 2007 through September 2007 76 Station 0018 6201 Claremont Avenue Oakland, CA

Project Coordinator: Bill Borgh Telephone: 916-558-7612	Water Sampling Contractor: <i>TRC</i> Compiled by: <b>Christina Carrillo</b>
Date(s) of Gauging/Sampling Event: <b>09/22/07</b>	Complica Sy. Cimbalia Carrillo
Sample Points	
Groundwater wells: <b>3</b> onsite, <b>0</b> offsite Purging method: <b>Diaphragm pump</b> Purge water disposal: <b>Onyx/Rodeo Unit 100</b> Other Sample Points: <b>0</b> Type: <b>n/a</b>	Wells gauged: 3 Wells sampled: 3
Liquid Phase Hydrocarbons (LPH)	
Wells with LPH: <b>0</b> Maximum thickness (feet): LPH removal frequency: <b>n/a</b> Treatment or disposal of water/LPH: <b>n/a</b>	n/a Method: <b>n/a</b>
Hydrogeologic Parameters —	
Depth to groundwater (below TOC): Minimum: 2 Average groundwater elevation (relative to available Average change in groundwater elevation since prev Interpreted groundwater gradient and flow directions Current event: 0.008 ft/ft, southwest Previous event: 0.009 ft/ft, southwest (06/2)	local datum): <b>187.28 feet</b> ious event: <b>-1.30 feet</b> :
Selected Laboratory Results	
Wells with detected <b>Benzene: 0</b>	/ells above MCL (1.0 μg/l): <b>n/a</b>
Wells with TPH-G by GC/MS 0 Wells with MTBE 8260B 1 M	aximum: <b>14 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 TOC = top of casing (surveyed reference elevation)

#### **ANALYTES**

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

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

MTBE = methyl tertiary butyl ether

PCB = polychlorinated biphenyls

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

TPH-G = total petroleum hydrocarbons with gasoline distinction

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

TPH-D = total petroleum hydrocarbons with diesel distinction

TRPH = total recoverable petroleum hydrocarbons

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

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

1,1-DCE = 1,1-dichloroethene

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

#### **NOTES**

- 1. Elevations are in feet above mean sea level. Depths are in feet below surveyed top-of-casing.
- 2. Groundwater elevations for wells with LPH are calculated as: 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

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

Table 1
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
September 22, 2007
76 Station 0018

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation		TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(μg/l)	(µg/l)	(µg/l)	
MW-1		(Screen I	nterval in fe	et: 10.0-3	0.0)									
9/22/200	7 208.15	•	0.00	186.92	-1.22		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		14	
MW-2		(Screen I	nterval in fe	et: 10.0-3	0.0)									
9/22/200	7 210.27	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	
MW-3		(Screen I	nterval in fe	et: 10.0-3	0.0)									
9/22/200	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	

Table 1 a
ADDITIONAL CURRENT ANALYTICAL RESULTS
76 Station 0018

Date Sampled	TBA	Ethanol (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> 9/22/2007	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
<b>MW-2</b> 9/22/2007		ND<250						
<b>MW-3</b> 9/22/2007		ND<250						

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
August 2000 Through September 2007
76 Station 0018

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation		TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
-	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	$(\mu g/l)$	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
MW-1	(3	Screen Inte	erval in fee	t: 10.0-30.0	0)									
8/24/200	0 208.15	18.55	0.00	189.60		120		0.67	ND	0.86	1.4	54	54	
11/16/200	00 208.15	20.30	0.00	187.85	-1.75	169		ND	1.20	1.74	0.629	68.6	97.7	
2/9/2001	208.15	20.16	0.00	187.99	0.14	330		1.3	ND	1.0	4.6	140	150	
5/11/200	1 208.15	17.68	0.00	190.47	2.48	1250		ND	ND	ND	ND	145	122	
8/10/200	1 208.15	20.38	0.00	187.77	-2.70	580		ND<0.50	ND<0.50	ND<0.50	ND<0.50	110	150	
11/7/200	1 208.15	22.68	0.00	185.47	-2.30	250		ND<0.50	1.5	ND<0.50	ND<0.50	120	100	
2/6/2002	2 208.15	16.20	0.00	191.95	6.48	790		ND<2.5	12	8.8	ND<2.5	90	72	
5/8/2002	2 208.15	17.54	0.00	190.61	-1.34	890		ND<2.5	ND<2.5	ND<2.5	ND<2.5	78	81	
8/9/2002	2 208.15	20.21	0.00	187.94	-2.67		450	ND<0.50	ND<0.50	ND<0.50	ND<1.0		100	
11/29/200	208.15	22.33	0.00	185.82	-2.12		110	ND<0.50	ND<0.50	ND<0.50	ND<1.0		72	
2/3/2003	208.15	16.41	0.00	191.74	5.92		540	ND<0.50	ND<0.50	ND<0.50	ND<1.0		40	
5/5/2003		16.09	0.00	192.06	0.32		670	ND<2.5	ND<2.5	ND<2.5	ND<5.0		57	
9/4/2003	208.15	21.46	0.00	186.69	-5.37									No analysis; past holding time
11/13/200	3 208.15	21.52	0.00	186.63	-0.06		97	ND<0.50	5.0	0.82	3.5		29	, ,1
1/29/2004	4 208.15	17.51	0.00	190.64	4.01		520	ND<0.50	ND<0.50	ND<0.50	ND<1.0		44	
5/7/2004	208.15	16.74	0.00	191.41	0.77		180	ND<0.50	ND<0.50	ND<0.50	ND<1.0		25	
8/27/2004		19.40	0.00	188.75	-2.66		100	ND<0.50	ND<0.50	ND<0.50	ND<1.0		21	
11/23/200	4 208.15	19.82	0.00	188.33	-0.42		410	ND<0.50	ND<0.50	ND<0.50	ND<1.0		45	
2/9/2005	208.15	15.81	0.00	192.34	4.01		5700	ND<0.50	ND<0.50	ND<0.50	ND<1.0		40	
6/16/2005	5 208.15	15.85	0.00	192.30	-0.04		200	ND<0.50	ND<0.50	ND<0.50	ND<1.0		24	
9/27/2005	5 208.15	19.15	0.00	189.00	-3.30		300	ND<0.50	ND<0.50	ND<0.50	ND<1.0		19	
12/30/200		14.62	0.00	193.53	4.53		68	ND<0.50	ND<0.50	ND<0.50	ND<1.0		12	
3/8/2006	208.15	11.69	0.00	196.46	2.93		130	ND<0.50	ND<0.50	ND<0.50	ND<1.0		21	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
August 2000 Through September 2007
76 Station 0018

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation		TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	(µg/l)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	(µg/l)	(μg/l)	
MW-1	continued													
6/8/200	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	
9/15/200	06 208.15	17.49	0.00	190.66	-3.21		96	ND<0.50	ND<0.50	ND<0.50	ND<0.50		6.1	
12/22/20	06 208.15	18.68	0.00	189.47	-1.19		570	ND<0.50	ND<0.50	ND<0.50	ND<0.50		18	
3/28/200	07 208.15	18.40	0.00	189.75	0.28		190	ND<0.50	ND<0.50	ND<0.50	ND<0.50	No ess	18	
6/25/200	07 208.15	20.01	0.00	188.14	-1.61		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		4.2	
9/22/200	07 208.15	21.23	0.00	186.92	-1.22		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		14	
MW-2	(\$	Screen Inte	erval in feet	t: 10.0-30.0	))									
8/24/200	00 210.27	19.69	0.00	190.58		ND		ND	ND	ND	ND	ND	ND	
11/16/20	00 210.27	21.61	0.00	188.66	-1.92	ND		ND	ND	ND	ND	ND	ND	
2/9/200	1 210.27	21.52	0.00	188.75	0.09	ND		ND	ND	ND	ND	ND	ND	
5/11/200	01 210.27	18.76	0.00	191.51	2.76	ND		ND	ND	ND	ND	ND	ND	
8/10/200	01 210.27	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	
11/7/200	01 210.27	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	
2/6/200	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		
5/8/200	2 210.27	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		
8/9/200	2 210.27	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	
11/29/20	02 210.27	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	
2/3/200	3 210.27	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	
5/5/200	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	
9/4/200	3 210.27	22.75	0.00	187.52	-5.60									No analysis; past holding time
11/13/20	03 210.27	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	
1/29/200	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	
5/7/200	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	
8/27/200	)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	
0018								Page 2	2 of 4					

## Table 2 HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS August 2000 Through September 2007

**76 Station 0018** 

	Date Sampled El		Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation		TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	$(\mu g/l)$	$(\mu g/l)$	(µg/l)	(µg/l)	(μg/l)	(µg/l)	(µg/l)	
	MW-2 co	ntinued													, , , , , , , , , , , , , , , , , , ,
	11/23/2004	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	
	2/9/2005	210.27	16.72	0.00	193.55	4.48		ND<50	0.69	1.5	ND<0.50	1.4		ND<0.50	
	6/16/2005	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	
	9/27/2005	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	
	12/30/2005	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	
	3/8/2006	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	
	6/8/2006	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	
	9/15/2006	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	
	12/22/2006	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	
	3/28/2007	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	
	6/25/2007	210.27	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	
	9/22/2007	210.27	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	
]	MW-3	(S	creen Inte	rval in feet	: 10.0-30.0	0)									
	8/24/2000	208.98	18.68	0.00	190.30	•	ND		ND	ND	ND	ND	4.7	2.3	
	11/16/2000	208.98	20.56	0.00	188.42	-1.88	ND		ND	ND	ND	ND	ND	ND	
	2/9/2001	208.98	20.45	0.00	188.53	0.11	ND		ND	ND	ND	ND	ND	ND	
	5/11/2001	208.98	17.75	0.00	191.23	2.70	ND		ND	ND	ND	ND	ND	ND	
	8/10/2001	208.98	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	
	11/7/2001	208.98	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	
	2/6/2002	208.98	17.19	0.00	191.79	5.83	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		
	5/8/2002	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		
	8/9/2002	208.98	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	
	11/29/2002	208.98	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	
	2/3/2003	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	
C	018								Page 3	3 of 4					

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
August 2000 Through September 2007
76 Station 0018

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Elevation		TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	$(\mu g/l)$	
MW-3	continued													
5/5/200	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	
9/4/200	208.98	21.71	0.00	187.27	-5.55									No analysis; past holding time
11/13/20	003 208.98	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	
1/29/20	04 208.98	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	
5/7/200	)4 208.98	16.79	0.00	192.19	1.00		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		0.55	
8/27/20	04 208.98	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	
11/23/20	004 208.98	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	
2/9/200	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	
6/16/20	05 208.98	15.67	0.00	193.31	0.05		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
9/30/200	05 208.98	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.
12/30/20	005 208.98	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	•
3/8/200	6 208.98	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	
6/8/200	6 208.98	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	
9/15/200	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	
12/22/20	06 208.98	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	
3/28/200	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	
6/25/200	07 208.98	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	
9/22/200	07 208.98	21.61	0.00	187.37	-1.31		ND<50		ND<0.50				ND<0.50	

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 0018

Date Sampled	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME
W	(µg/l)	(µg/l)	(μg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
MW-1							
8/24/2000	ND	ND			ND	ND	ND
11/16/2000	ND	ND			ND	ND	ND
2/9/2001	ND	ND	ND	ND	ND	ND	ND
5/11/2001	ND	ND	ND	ND	ND	ND	ND
8/10/2001	ND<100	ND<1000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
11/7/2001	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
2/6/2002	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
5/8/2002	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
8/9/2002	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
11/29/2002	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
2/3/2003	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
5/5/2003	ND<500	ND<2500	ND<10	ND<10	ND<10	ND<10	ND<10
11/13/2003	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
1/29/2004	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
5/7/2004	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
8/27/2004	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
11/23/2004	7.5	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
2/9/2005	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
6/16/2005	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
9/27/2005	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
12/30/2005	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
3/8/2006	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
6/8/2006	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
9/15/2006	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
12/22/2006	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
3/28/2007	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 0018

MW-1 6/25/200 9/22/200 MW-2 8/24/200 11/16/200 2/9/2001 5/11/200 8/10/200 11/7/200 11/13/200 1/29/2004 5/7/2004		l)	(ua/1)					
6/25/200 9/22/200 MW-2 8/24/200 11/16/200 2/9/2001 5/11/200 8/10/200 11/7/200 11/13/200 1/29/2004			(μg/l)	(μg/l)	(μg/l)	(µg/l)	(µg/l)	(µg/l)
9/22/200°  MW-2 8/24/2000 11/16/200 2/9/2001 5/11/200 8/10/2002 11/7/200 11/13/200 1/29/2004								
MW-2 8/24/2000 11/16/200 2/9/2001 5/11/2003 8/10/2003 11/7/2003 11/13/200 1/29/2004			ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
8/24/2000 11/16/200 2/9/2001 5/11/200: 8/10/200: 11/7/200: 11/13/200 1/29/2004	7 ND<	<10 N	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
11/16/200 2/9/2001 5/11/200: 8/10/200: 11/7/200: 11/13/200 1/29/2004								
2/9/2001 5/11/2003 8/10/2003 11/7/2003 11/13/200 1/29/2004	) ND	)	ND			ND	ND	ND
5/11/200 8/10/200 11/7/200 11/13/200 1/29/2004	0 ND	)	ND			ND	ND	ND
8/10/2003 11/7/2003 11/13/200 1/29/2004	ND	)	ND	ND	ND	ND	ND	ND
11/7/200 11/13/200 1/29/2004	. ND	)	ND	ND	ND	ND	ND	ND
11/13/200 1/29/2004	ND<1	100 N	VD<1000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
1/29/2004	ND<	20 N	D<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	3	N	D<500				-	
5/7/2004		N	D<500					
5, ,, 2001		N	ND<50					
8/27/2004	. <u></u>	N	ND<50					
11/23/200	4	N	ND<50					
2/9/2005		N	ND<50					
6/16/2005		N	ND<50					
9/27/2005		N	D<250					
12/30/200	5	N	D<250					
3/8/2006		N	D<250					
6/8/2006		N.	D<250					
9/15/2006		N.	D<250					
12/22/200		N.	D<250					
3/28/2007		N:	D<250					
6/25/2007		N.	D<250					
9/22/2007			D<250					

MW-3

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 0018

Date Sampled	TBA	Ethanol (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)
	ontinued						
8/24/2000	ND	ND			ND	ND	ND
11/16/2000	ND	ND			ND	ND	ND
2/9/2001	ND	ND	ND	ND	ND	ND	ND
5/11/2001	ND	ND	ND	ND	ND	ND	ND
8/10/2001	ND<100	ND<1000000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
11/7/2001	ND<20	ND<500000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
8/9/2002			ND	ND			
11/29/2002			ND	ND			
2/3/2003			ND<2.0	ND<2.0			
5/5/2003			ND<1.0	ND<1.0			
11/13/2003		ND<500					
1/29/2004		ND<500					
5/7/2004		ND<50					
8/27/2004		ND<50					
11/23/2004		ND<50					
2/9/2005		ND<50					
6/16/2005		ND<50	-				
9/30/2005		ND<250					
12/30/2005		ND<250					
3/8/2006		ND<250					
6/8/2006		ND<250					
9/15/2006		ND<250					
12/22/2006		ND<250					
3/28/2007		ND<250					
6/25/2007		ND<250					<u></u>
9/22/2007		ND<250					
		*					





0 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: 125

125703

FACILITY:

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

**NOLES**:

OAKLAND, CALIFORNIA 8100 NOITATS 97

**6201 CLAREMONT AVENUE** 

125703

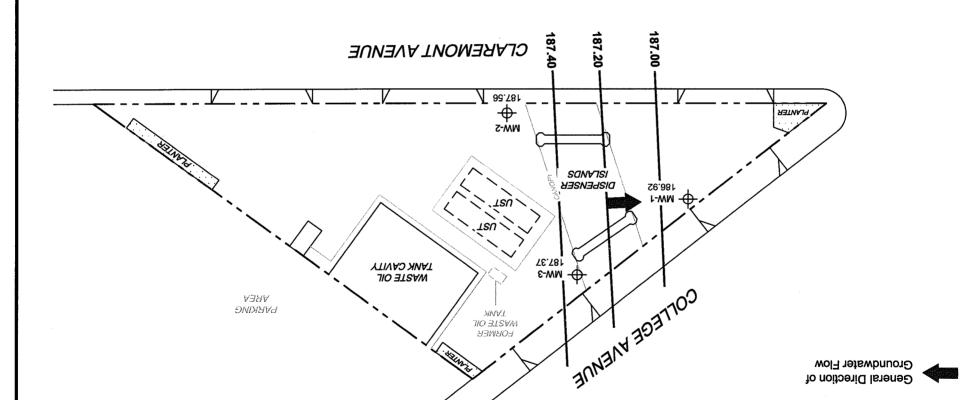
FACILITY:

:TOELOR9

September 22, 2007 **ЧАМ ЯПОТИОЭ GROUNDWATER ELEVATION** 

**FIGURE 2** 

SCALE (FEET)



Contour 187.40 — Groundwater Elevation

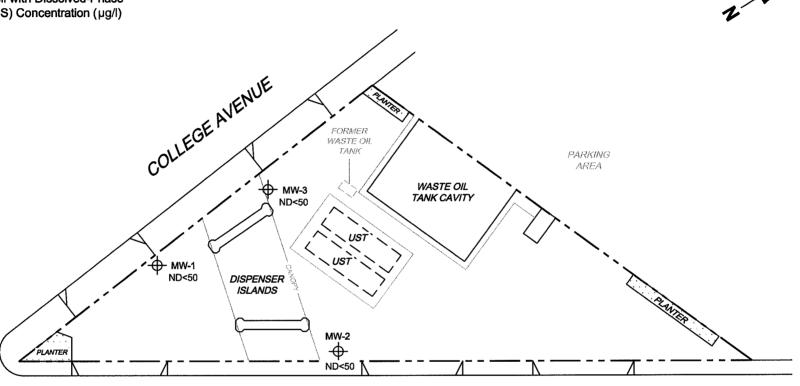
Groundwater Elevation (feet)

MW-3 + Monitoring Well with

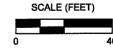
**TEGEND** 

#### **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:

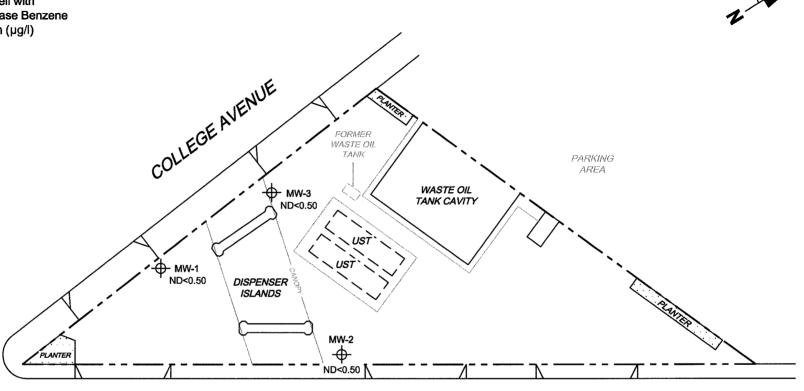
FACILITY:

76 STATION 0018 6201 CLAREMONT AVENUE OAKLAND, CALIFORNIA

125703

DISSOLVED-PHASE TPH-G (GC/MS)
CONCENTRATION MAP
September 22, 2007

#### **LEGEND**



#### **CLAREMONT AVENUE**



#### NOTES:

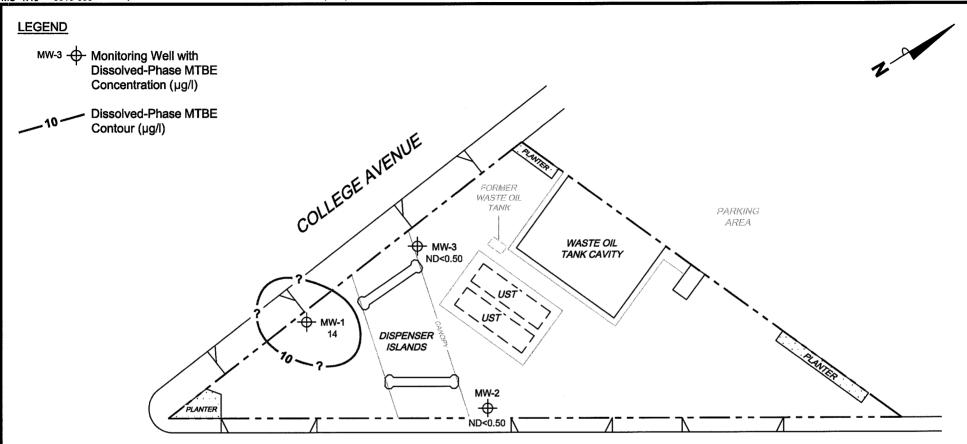
µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. UST = underground storage tank.



PROJECT: 125703

FACILITY:

76 STATION 0018 6201 CLAREMONT AVENUE OAKLAND, CALIFORNIA DISSOLVED-PHASE BENZENE CONCENTRATION MAP September 22, 2007



#### **CLAREMONT AVENUE**



#### NOTES:

Contour lines are interpretive and based on laboratory analysis results of groundwater samples.

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.



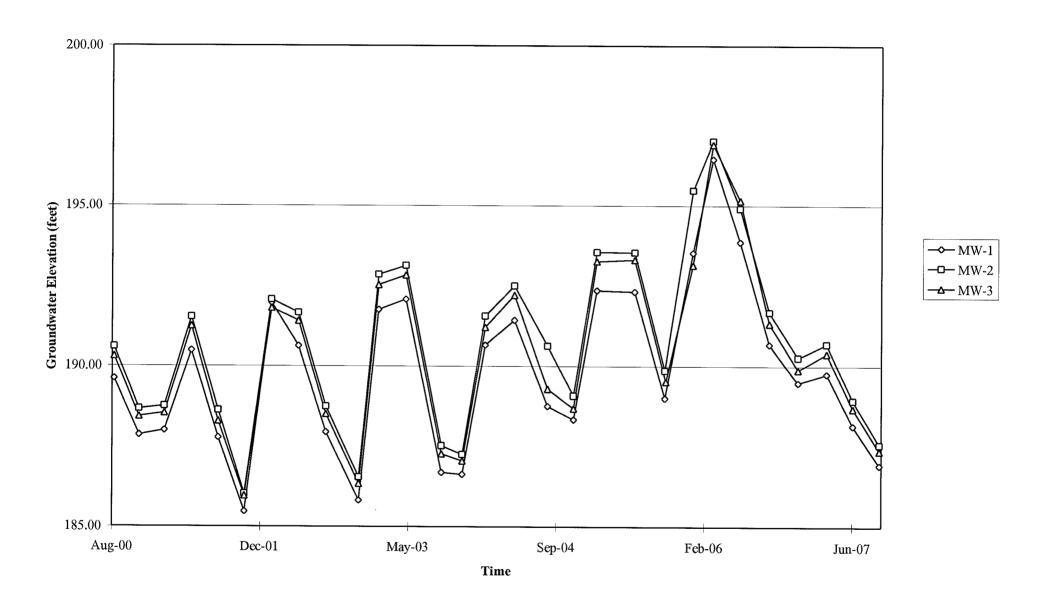
PROJECT: 125703

FACILITY:

76 STATION 0018 6201 CLAREMONT AVENUE OAKLAND, CALIFORNIA DISSOLVED-PHASE MTBE CONCENTRATION MAP September 22, 2007

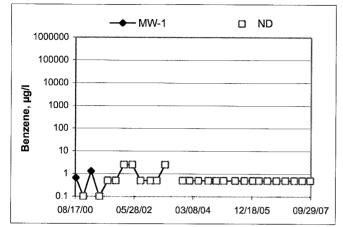
## **GRAPHS**

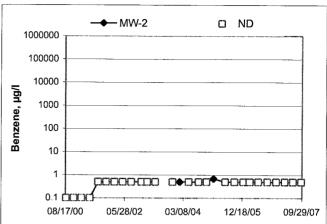
## Groundwater Elevations vs. Time 76 Station 0018

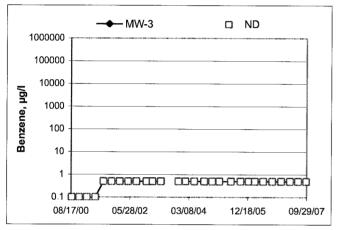


#### **Benzene Concentrations vs Time**

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 (surveyo rs mark or notch if present) to the nearest 0.01 foot. Unless otherwise instructed, a well with less than 0.67 foot between the measured top of water and the measured bottom of the well casing is considered dry, and is not sampled. If the well contains 0.67 foot or more of water, an attempt is made to bail and/or sample as specified on the TSR.

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

#### **Purging and Groundwater Parameter Measurement**

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

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

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

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

#### **Groundwater Sample Collection**

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

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

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

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

#### Sequence of Gauging, Purging and Sampling

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

#### **Decontamination**

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

#### **Exceptions**

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

1/5/04 version

## FIELD MONITORING DATA SHEET

chnician:	JOL	<u> </u>	Job	#/Task #: <sub>-</sub>	Date: 09-22-07			
Site #	001	8	Projec	t Manager	A. Co.	11ins		Pageof
Well #	Time Gauged	тос	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
w 2	0829		29,52	22.7/			0904	
	0834		30.18	21.61			0921	211
1W-1:	0840		29.71				0945	2"
<u></u>		-						
							·	
	_							
FIELD D	ATA CØM	PLETE	QA	6c	CC		WELL BOX	CONDITION SHEETS
WTT CE	RTIFICAT	E	MANI	FEST	DRUM	INVENTORY	/ TF	RAFFIC CONTROL

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

JOE

Technician: Date: 09-22-07 Project No: 125703 Site: 00/8 Purge Method:\_\_ Well No. Depth to Water (feet): 22.7/ Depth to Product (feet):\_ Total Depth (feet) 29.52 LPH & Water Recovered (gallons): Casing Diameter (Inches):\_ Water Column (feet):\_\_\_\_ 80% Recharge Depth(feet): 24.07 1 Well Volume (gallons):\_\_

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (FC)	рН	D.O.	ORP	Turbidity		
0856			1	471.7	17.8	6.69					
			2.	469.0	17-4	6.64			ļ		
	0859		3	474.3	17-3	6.84					
Sta	tic at Time S	 ampled	Tota	al Gallons Pu	rged	Sample Time					
*	Z2.79		3			0	904				
Comment											

MW-3 Purge Method: Well No. Depth to Water (feet): 21.6/ Depth to Product (feet):\_ LPH & Water Recovered (gallons): Total Depth (feet) Casing Diameter (Inches):\_\_ Water Column (feet):\_\_\_\_ 80% Recharge Depth(feet): 23.32 1 Well Volume (gallons):\_

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F(C)	рН	D.O.	ORP	Turbidity		
0914			1	467.3	16.8	6.54					
			2	473.1	17.4	6.49					
	0915		3	484.9	17.6	6,49					
Stat	ic at Time S	ampled	Tot	l al Gallons Pu	rged		Sample	Sample Time			
57	書 2	2,83	3			09	2_/				
Comments											
							-				

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

Technician: JOE Date: <u>09-22-0</u>つ Site: 0018 Project No.: 125703 Well No. Purge Method: DIA Depth to Water (feet): 21.23 Depth to Product (feet): Total Depth (feet) 29. 7/ LPH & Water Recovered (gallons):\_\_\_\_\_ Casing Diameter (Inches): 21/ Water Column (feet): 8.48 80% Recharge Depth(feet): 22.92 1 Well Volume (gallons):\_\_\_\_ Volume Conduc-Depth to Temperature Time Time pН D.O. **ORP** Turbidity Purged tivity Water (F(C) Start Stop (uS/cm) (gallons) (feet) 17.2 6.87 479-3 0925 6.92 17.4 466.6 17.1 6.89 0926 481-3 Sample Time Total Gallons Purged Static at Time Sampled 0945 22.59 Comments: Purge Method: Well No. Depth to Product (feet): Depth to Water (feet): LPH & Water Recovered (gallons): Total Depth (feet) Casing Diameter (Inches):\_\_\_\_\_ Water Column (feet): 1 Well Volume (gallons): 80% Recharge Depth(feet):\_\_\_\_\_ Conduc-Depth to Volume Temperature Time Time рΗ D.O. ORP Turbidity Water Purged tivity (F,C) Start Stop (uS/cm) (gallons) (feet) Static at Time Sampled Total Gallons Purged Sample Time Comments:





Date of Report: 10/02/2007

Anju Farfan

TRC Alton Geoscience 21 Technology Drive Irvine, CA 92618-2302

RE: 0018

BC Work Order: 0711155

Enclosed are the results of analyses for samples received by the laboratory on 09/24/2007 21:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers

Client Service Rep

**Authorized Signature** 



Project: 0018

Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/02/2007 16:32

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

Laboratory	Client Sample Informat	tion			
0711155-01	COC Number:		Receive Date:	09/24/2007 21:00	Delivery Work Order:
	Project Number:	0018	Sampling Date:	09/22/2007 09:04	Global ID: T0600102231
	Sampling Location:	MW-2	Sample Depth:		Matrix: W
	Sampling Point:	MW-2	Sample Matrix:	Water	Samle QC Type (SACode): CS
	Sampled By:	TRCI	·		Cooler ID:
0711155-02	COC Number:		Receive Date:	09/24/2007 21:00	Delivery Work Order:
	Project Number:	0018	Sampling Date:	09/22/2007 09:21	Global ID: T0600102231
	Sampling Location:	MW-3	Sample Depth:		Matrix: W
	Sampling Point:	MW-3	Sample Matrix:	Water	Samle QC Type (SACode): CS
	Sampled By:	TRCI	·		Cooler ID:
0711155-03	COC Number:		Receive Date:	09/24/2007 21:00	Delivery Work Order:
	Project Number:	0018	Sampling Date:	09/22/2007 09:45	Global ID: T0600102231
	Sampling Location:	MW-1	Sample Depth:		Matrix: W
	Sampling Point:	MW-1	Sample Matrix:	Water	Samle QC Type (SACode): CS
	Sampled By:	TRCI			Cooler ID:



Project: 0018

Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/02/2007 16:32

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

BCL Sample ID: 0711155-01	Client Sam	ple Name	e: 0018, MW-2, MW-	-2, 9/22/200	7 9:04:00	)AM						
					Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL MDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:03	SDU	MS-V10	1	BQI1527	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:03	SDU	MS-V10	1	BQI1527	ND	
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:03	SDU	MS-V10	1	BQI1527	ND	
Toluene	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:03	SDU	MS-V10	1	BQI1527	ND	
Total Xylenes	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:03	SDU	MS-V10	1	BQI1527	ND	
Ethanol	ND	ug/L	250	EPA-8260	10/01/07	10/01/07 23:03	SDU	MS-V10	1	BQI1527	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	EPA-8260	10/01/07	10/01/07 23:03	SDU	MS-V10	1	BQI1527	ND	
1,2-Dichloroethane-d4 (Surrogate)	100	%	76 - 114 (LCL - UCL)	EPA-8260	10/01/07	10/01/07 23:03	SDU	MS-V10	1	BQI1527		
Toluene-d8 (Surrogate)	94.0	%	88 - 110 (LCL - UCL)	EPA-8260	10/01/07	10/01/07 23:03	SDU	MS-V10	1	BQI1527		
4-Bromofluorobenzene (Surrogate)	99.3	%	86 - 115 (LCL - UCL)	EPA-8260	10/01/07	10/01/07 23:03	SDU	MS-V10	1	BQI1527		



Project: 0018

Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/02/2007 16:32

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

<b>BCL Sample ID:</b> 0711155-	02 0	Client Sam	ole Name	e: 0018, MW-3, MW-	3, 9/22/200	7 9:21:00	)AM						
				,		Prep	Run		Instru-		QC	MB	Lab
Constituent		Result	Units	PQL MDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene		ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:21	SDU	MS-V10	1	BQI1527	ND	
Ethylbenzene		ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:21	SDU	MS-V10	1	BQI1527	ND	
Methyl t-butyl ether		ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:21	SDU	MS-V10	1	BQI1527	ND	
Toluene		ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:21	SDU	MS-V10	1	BQI1527	ND	
Total Xylenes		ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:21	SDU	MS-V10	1	BQI1527	ND	
Ethanol		ND	ug/L	250	EPA-8260	10/01/07	10/01/07 23:21	SDU	MS-V10	1	BQI1527	ND	
Total Purgeable Petroleum Hydrocarbons		ND	ug/L	50	EPA-8260	10/01/07	10/01/07 23:21	SDU	MS-V10	1	BQI1527	ND	
1,2-Dichloroethane-d4 (Surrogate)		98.4	%	76 - 114 (LCL - UCL)	EPA-8260	10/01/07	10/01/07 23:21	SDU	MS-V10	1	BQI1527		
Toluene-d8 (Surrogate)		93.3	%	88 - 110 (LCL - UCL)	EPA-8260	10/01/07	10/01/07 23:21	SDU	MS-V10	1	BQI1527		
4-Bromofluorobenzene (Surrogate	)	102	%	86 - 115 (LCL - UCL)	EPA-8260	10/01/07	10/01/07 23:21	SDU	MS-V10	1	BQI1527		



Project: 0018

Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/02/2007 16:32

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

<b>BCL Sample ID:</b> 0711155-03	Client Sam	ple Name	e: 0018, MW-1, MV	<i>l</i> -1, 9/22/200	7 9:45:00	DAM						
	-				Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL MDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527	ND	
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527	ND	
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527	ND	
Methyl t-butyl ether	14	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527	ND	
Toluene	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527	ND	
Total Xylenes	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527	ND	
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527	ND	
t-Butyl alcohol	ND	ug/L	10	EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527	ND	
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527	ND	
Ethanol	ND	ug/L	250	EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527	ND	
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527	ND	
1,2-Dichloroethane-d4 (Surrogate)	104	%	76 - 114 (LCL - UCL	) EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527		
Toluene-d8 (Surrogate)	94.4	%	88 - 110 (LCL - UCL	) EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527		
4-Bromofluorobenzene (Surrogate)	105	%	86 - 115 (LCL - UCL	) EPA-8260	10/01/07	10/01/07 23:38	SDU	MS-V10	1	BQI1527		



Project: 0018

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/02/2007 16:32

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

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

										Contr	ol Limits
Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	RPD	Percent Recovery Lab Quals
Benzene	BQI1527	Matrix Spike	0711099-01	0	24.800	25.000	ug/L		99.2		70 - 130
		Matrix Spike Duplicat	e 0711099-01	0	25.970	25.000	ug/L	4.7	104	20	70 - 130
Toluene	BQI1527	Matrix Spike	0711099-01	0	24.750	25.000	ug/L		99.0		70 - 130
		Matrix Spike Duplicat	e 0711099-01	0	25.430	25.000	ug/L	3.0	102	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BQI1527	Matrix Spike	0711099-01	ND	9.8300	10.000	ug/L		98.3		76 - 114
		Matrix Spike Duplicat	e 0711099-01	ND	9.9300	10.000	ug/L		99.3		76 - 114
Toluene-d8 (Surrogate)	BQI1527	Matrix Spike	0711099-01	ND	9.7800	10.000	ug/L		97.8		88 - 110
		Matrix Spike Duplicat	e 0711099-01	ND	9.8100	10.000	ug/L		98.1		88 - 110
4-Bromofluorobenzene (Surrogate)	BQI1527	Matrix Spike	0711099-01	ND	9.8300	10.000	ug/L		98.3		86 - 115
		Matrix Spike Duplicat	e 0711099-01	ND	10.020	10.000	ug/L		100		86 - 115



Project: 0018

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/02/2007 16:32

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

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

									Control Lin			
Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	DDD -	Percent Recovery	RPD	Lab Quals
Benzene	BQI1527	BQI1527-BS1	LCS	26.290	25.000	0.50	ug/L	105		70 - 130		-
Toluene	BQI1527	BQI1527-BS1	LCS	26.090	25.000	0.50	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BQI1527	BQI1527-BS1	LCS	9.7700	10.000		ug/L	97.7		76 - 114		
Toluene-d8 (Surrogate)		BQI1527-BS1	LCS	9.8100	10.000		ug/L	98.1		88 - 110		
4-Bromofluorobenzene (Surrogate)	BQI1527	BQI1527-BS1	LCS	10.140	10.000		ug/L	101		86 - 115		



Project: 0018

Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/02/2007 16:32

## **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	BQI1527	BQI1527-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BQI1527	BQI1527-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BQI1527	BQI1527-BLK1	ND	ug/L	0.50		
Ethylbenzene	BQI1527	BQI1527-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BQI1527	BQI1527-BLK1	ND	ug/L	0.50		
Toluene	BQI1527	BQI1527-BLK1	ND	ug/L	0.50		
Total Xylenes	BQI1527	BQI1527-BLK1	ND	ug/L	0.50		
t-Amyl Methyl ether	BQI1527	BQI1527-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BQI1527	BQI1527-BLK1	ND	ug/L	10		
Diisopropyl ether	BQI1527	BQI1527-BLK1	ND	ug/L	0.50		
Ethanol	BQI1527	BQI1527-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BQI1527	BQI1527-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons	BQI1527	BQI1527-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BQI1527	BQI1527-BLK1	104	%	76 - 114 (LC	L - UCL)	
Toluene-d8 (Surrogate)	BQI1527	BQI1527-BLK1	98.9	%	88 - 110 (LC	CL - UCL)	
4-Bromofluorobenzene (Surrogate)	BQI1527	BQI1527-BLK1	100	%	86 - 115 (LC	CL - UCL)	



TRC Alton Geoscience

21 Technology Drive Irvine, CA 92618-2302 Project: 0018

Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/02/2007 16:32

#### **Notes And Definitions**

MDL Method

Method Detection Limit

ND

Analyte Not Detected at or above the reporting limit

PQL

Practical Quantitation Limit

RPD

Relative Percent Difference

1977 - 19		<del></del>								
BC LABORATORIES INC.	T		E RECEI	PT FORM	i Re	v. No. 10	01/21/04	Page	Of	
Submission #: 07 11155		Project C	ode:	<del>1/</del>			Batch#			
SHIPPING INFO							NG CONT			
Federal Express  UPS  BC Lab Field Service  Other	Hand De	livery □ 'v)			Ice Chest Box D		None Other □			
BC Lab Fleid Service 20 Other (	⊐ (obecii	JI	<del></del>					(Kiloodo)		_
Refrigerant: Ice D Blue Ice D	None	e □ Ot	her 🗆	Commer	ıts:					
. Coming of the control of the contr	e an emir	Jo D	None	Comme	nts:					
Custody Seals	meier? 7	a chia a				. 53.				
All samples received? Yes 反 No □	All sample	es container	s intact? \	res)⊠ No	0	Descrip	tion(s) matc	h COC? Y	S No E	<u> </u>
ÇOC Received		Ice C	hest ID	Blu	Emissiv	rityO	.98	Date/Ti	me 9/2	HO?
TYES NO		Tempe	erature: 2	· R · C	Contair	ner <u>Vo</u> r	<b>1</b> 25	Analys	Init OTO	
\$ 120	T	i incinoù	CIGI IU;	7.74	0.1451.5	AU 14455555				
SAMPLE CONTAINERS	1	2	T 3	1 4	SAMPLE	NUMBERS.	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
OT INORGANIC CHEMICAL METALS		<b></b>	ļ	ļ		<b></b>	<b> </b>			
PT INORGANIC CHEMICAL METALS		<b> </b>	ļ	<u> </u>		<b> </b>				<u> </u>
PT CYANIDE		<u> </u>	<b></b>	<b> </b>		<b> </b>	<b> </b>			
PT NITROGEN FORMS		<u> </u>		<b> </b>	<del> </del>	<b> </b>				
PT TOTAL SULFIDE	,			<del> </del>	<del> </del>					
20z. NITRATE / NITRITE		1								
100ml TOTAL ORGANIC CARBON			-	<del> </del>		<u> </u>				
OT TOX PT CHEMICAL OXYGEN DEMAND		1					10			
PT CHEMICAL OXYGEN DEMAND PtA PHENOLICS									1	
Pta PHENOLICS 40ml VOA VIAL TRAVEL BLANK										
40mi VOA VIAL	A 3	A.3	AB	(	()	(	( )	( )	(	
OT EPA 413.1, 413.2, 418.1	,									ļ
PT ODOR										
RADIOLOGICAL							<u> </u>			
BACTERIOLOGICAL				l						
10 ml VOA VIAL- 504							<del>  </del>			
T EPA 508/608/8080										
OT EPA 515.1/8150										
OT EPA 525										
T EPA 525 TRAVEL BLANK					,					
90ml EPA 547										
Oml EPA 531.1 T EPA 548				`						
T EPA 549										
T EPA 632									<b> </b>	
Т ЕРА 8015М						*			<b> </b>	
r QA/QC										
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DZ. JAR									<b> </b>	
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Comments:\_\_\_\_\_\_Sample Numbering Completed By:\_\_\_\_\_\_RML

BC LABORATORIES, INC.

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

CHAIN OF CUSTODY

	Analysis Requested													
MARIL M R R J	200.0 9888	D+1/165		MATRIX	1	7.1		/5IS	ece(					Time
Bill to: Conoco Phillips/TRC  Address: 6201 Clavemont Ave  City: Oakland		Consultant Firm: TRC  21 Techology Drive Irvine, CA 92618-2302 Attn: Anju Farfan  4-digit site#: 0018  Workorder #01062-4507851751		(GW)	1	TPH GAS by 8015M		8260 full list w/ oxygenates	BTEX/MTBE/OXYS BY 8260B,	ETHANOL by 8260B			4	
				Ground- water (S) Soil	25		TPH DIESEL by 8015							Requested
				(VVV)	\$260 by <b>8021</b>						by GC/MS			ğ
				Waste- water	Ĭ Š									0 4 1
State: CA Zip:		Project #: 125763		(SL)	111									
Conoco Phillips Mgr: Bill Borgh		Sampler Name: JOE LEWIS		Sludge							9			Ö
Lab#	Sample Description	Field Point Name	Date & Time Sampled			Q.	11	8280	BTEX E06/		Ī			
		MW-2	09-72-07 0904	Gw	$\rightarrow$					$\times$	X			
inger die Appellien, all Rei Untersein Ingentiering besonder Februarien Februarien in	2	MW-3	0921		$\rightarrow$					$\geq$	$\times$			
	-3	mw-1	V 0945	W					$\times$	X	$\times$			
					HK B	N	אומז	STRIF	UTIC	N				
					W	900	ST		OUT					
Comments:		Relinquished by (Signature)  Security  Relinquished by (Signature)						Received by:			Date & Time 09-22-07 //00			
GLOBAL ID:	T0600102231				W.			Reported by				& Time 4/07		(1)
		Relinguished by (S.	inalyre			Re Q	ceive	t by:	L	_ '	$\sim$	& Time  -07	i LBC	20
) = ANALYSI	S (C) = CONTAINER.	(P) = PRESER Riku	1-12-19-24-1	n 2	( w		Ter	ν' C	)cak	<b>~</b>	9	leylo	THE RESERVE AND ADDRESS OF STREET	2000

#### **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.