## RECEIVED

By dehloptoxic at 1:36 pm, Feb 01, 2007



76 Broadway Sacramento, California 95818

January 26, 2007

Mr. Don Hwang Alameda County Health Agency 1131 Harbor Bay Parkway Alameda, California 94502

Re:

Report Transmittal Quarterly Report

Fourth Quarter - 2006 and Additional Request for Closure Status

Closure Requested January, 2006

76 Service Station #0018 6201 Claremont Avenue

Oakland, CA

Dear Mr. Hwang:

During the Third Quarter 2006, a request for closure status was included in the quarterly report submittal. The original request for closure was submitted approximately one year ago. Please let us know if you require additional information in order to evaluate the request.

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

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

Shelby S. Lathrop (Contractor)
ConocoPhillips
Risk Management & Remediation
76 Broadway
Sacramento, CA 95818
Phone: 916-558-7609
Fax: 916-558-7630

Fax: 916-558-7639

Sincerely,

Thomas Kosel

Risk Management & Remediation

Homes H. Koal

Attachment



1590 Solano Way #A Concord, CA 94520

925.688.1200 PHONE 925.688.0388 FAX

www.TRCsolutions.com

January 26, 2007

TRC Project No. 42016510

Mr. Don Hwang Hazardous Materials Specialist Alameda County Health Care Services 1131 Harbor Bay Parkway Alameda, California 94502-6577

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

Dear Mr. Hwang:

On behalf of ConocoPhillips Company (ConocoPhillips), TRC is submitting the Fourth Quarter 2006 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 – Fourth Quarter 2006 and Additional Request for Closure Status Closure Requested January, 2006 76 Service Station #0018, Oakland, California January 26, 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 0.01 feet per foot.

#### CHARACTERIZATION STATUS

Total petroleum hydrocarbons as gasoline (TPH-g) were only detected in site well MW-1 at a concentration of 570 micrograms per liter ( $\mu$ g/l).

Benzene was not detected above laboratory reporting limits in the three wells sampled.

MTBE was only detected in well MW-1 at a concentration of 18 µg/l.

#### REMEDIATION STATUS

Remediation is not currently being conducted at the site.

#### RECENT CORRESPONDENCE

No correspondence this quarter.

#### CURRENT QUARTER ACTIVITIES

December 22, 2006: 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

Based on the low residual TPH-g and MTBE concentrations in groundwater in MW-1 and on the non-detect concentrations reported in site wells MW-2 and MW-3 over the past several years, and on 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 in January 2006.

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



QSR – Fourth Quarter 2006 and Additional Request for Closure Status Closure Requested January, 2006 76 Service Station #0018, Oakland, California January 26, 2007 Page 3

If you have any questions regarding this report, please call me at (925) 688-2488.

Sincerely,

Keith Woodburne, P.G. Senior Project Manager

Attachment:

cc:

Quarterly Monitoring Report, October through December 2006 (TRC, January 17, 2007) Historical Groundwater Flow Directions – October 2000 through December 2006

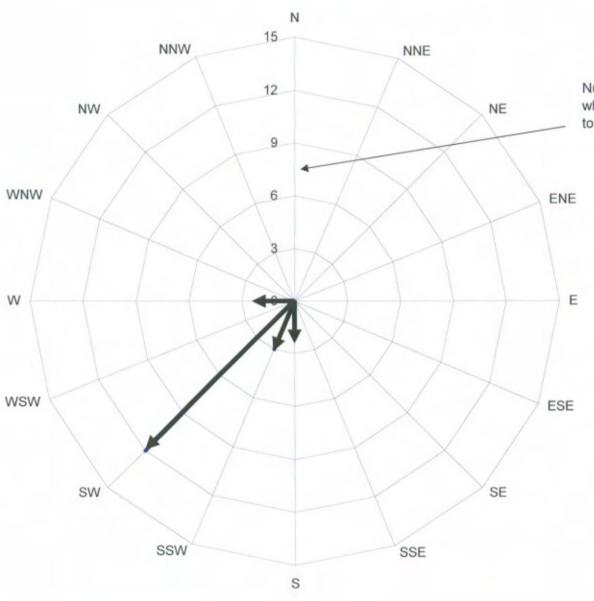
Shelby Lathrop, ConocoPhillips (electronic upload only)

WOODBURNE

No. 7607



### Historical Groundwater Flow Directions for Tosco (76) Service Station No. 0018 October 2000 through December 2006



Number of monitoring events in which groundwater was reported to flow in a particular direction.





January 17, 2007

ConocoPhillips Company 76 Broadway Sacramento, CA 95818

ATTN:

MS. SHELBY LATHROP

SITE:

**76 STATION 0018** 

6201 CLAREMONT AVENUE OAKLAND, CALIFORNIA

RE:

QUARTERLY MONITORING REPORT

OCTOBER THROUGH DECEMBER 2006

Dear Ms. Lathrop:

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) 753-0101.

Sincerely,

**TRC** 

Anju Farfan

QMS Operations Manager

CC: Mr. Keith Woodburne, TRC (4 copies)



#### **QUARTERLY MONITORING REPORT OCTOBER THROUGH DECEMBER 2006**

**76 STATION 0018** 6201 Claremont Avenue Oakland, California

Prepared For:

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

By:

Senior Project Geologist, Irvine Operation

January 11, 2007

21 Technology Drive • Irvine, California 92618 Main: 949-727-9336 • Fax: 949-727-7399

CERTIFIED HYDROGEOLOGIS

	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 – 12/22/06 Groundwater Sampling Field Notes – 12/22/06
Laboratory Reports	Official Laboratory Reports Quality Control Reports Chain of Custody Records
Statements	Purge Water Disposal Limitations

# Summary of Gauging and Sampling Activities October 2006 through December 2006 76 Station 0018 6201 Claremont Boulevard

Oakland, CA

Project Coordinator: <b>Shelby Lathrop</b> Telephone: <b>916-558-7609</b>	Water Sampling Contractor: <i>TRC</i> Compiled by: <b>Christina Carrillo</b>
Date(s) of Gauging/Sampling Event: 12/22/06	complication.
Sample Points	
Groundwater wells: 3 onsite, 0 offsite Purging method: Diaphragm pump Purge water disposal: Onyx/Rodeo Unit 100	Wells gauged: 3 Wells sampled: 3
Other Sample Points: <b>0</b> Type: <b>n/a</b>	
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: n/a
Hydrogeologic Parameters	
Depth to groundwater (below TOC): Minimum: 1 Average groundwater elevation (relative to available Average change in groundwater elevation since previ Interpreted groundwater gradient and flow direction: Current event: 0.01 ft/ft, southwest Previous event: 0.01 ft/ft, south (09/15/06)	ious event: -1.34 feet
Selected Laboratory Results	
Wells with detected <b>Benzene: 0</b> W Maximum reported benzene concentration: <b>n/a</b>	/ells above MCL (1.0 μg/l): <b>n/a</b>
	aximum: 570 μg/l (MW-1) aximum: 18 μg/l (MW-1)
Notes:	

# **TABLES**

#### TABLE KEY

#### STANDARD ABBREVIATIONS

-- e not analyzed, measured, or collected

LPH = liquid-phase hydrocarbons

Trace = less than 0.01 foot of LPH in well

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

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

#### **ANALYTES**

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

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

MTBE = methyl tertiary butyl ether

PCB = polychlorinated biphenyls

PCE = tetrachloroethene

TBA = tertiary butyl alcohol
TCA = trichloroethane
TCE = trichloroethene

TPH-G = total petroleum hydrocarbons with gasoline distinction

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

TPH-D = total petroleum hydrocarbons with diesel distinction

TRPH = total recoverable petroleum hydrocarbons

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

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

1,1-DCE = 1,1-dichloroethene

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

#### **NOTES**

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

#### REFERENCE

TRC began groundwater monitoring and sampling for 76 Station 0018 in October 2003. Historical data compiled prior to that time were provided by Gettler-Ryan Inc.

# Contents of Tables Site: 76 Station 0018

Date

Well/

Date

Table 2a

Water

TBA

Thickness

Ethanol

(8260B)

water

Elevation

Ethylene-

dibromide

(EDB)

Elevation

1,2-DCA

(EDC)

(8015M)

DIPE

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

TAME

Xylenes

benzene

(8021B)

(8260B)

(GC/MS)

ETBE

Table 1
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

#### December 22, 2006 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)									
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	
MW-2		(Screen I	nterval in fe	et: 10.0-3	0.0)									
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	
MW-3		(Screen I	nterval in fe	et: 10.0-3	0.0)									
12/22/0	6 208.98	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	

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> 12/22/06	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50						
<b>MW-2</b> 12/22/06		ND<250											
<b>MW-3</b> 12/22/06		ND<250											

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
August 2000 Through December 2006
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- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	(µg/l)	(µg/l)	(µg/l)	$(\mu g/l)$	(μg/l)	(µg/l)	$(\mu g/l)$	
MW-1	(	Screen Inte	erval in fee	t: 10.0-30.0	))									
08/24/0	00 208.15	18.55	0.00	189.60		120		0.67	ND	0.86	1.4	54	54	
11/16/0	00 208.15	20.30	0.00	187.85	-1.75	169		ND	1.20	1.74	0.629	68.6	97.7	
02/09/0	208.15	20.16	0.00	187.99	0.14	330		1.3	ND	1.0	4.6	140	150	
05/11/0	208.15	17.68	0.00	190.47	2.48	1250		ND	ND	ND	ND	145	122	
08/10/0	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	
11/07/0	208.15	22.68	0.00	185.47	-2.30	250		ND<0.50	1.5	ND<0.50	ND<0.50	120	100	
02/06/0	208.15	16.20	0.00	191.95	6.48	790		ND<2.5	12	8.8	ND<2.5	90	72	
05/08/0	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	
08/09/0	208.15	20.21	0.00	187.94	-2.67		450	ND<0.50	ND<0.50	ND<0.50	ND<1.0		100	
11/29/0	208.15	22.33	0.00	185.82	-2.12		110	ND<0.50	ND<0.50	ND<0.50	ND<1.0		72	
02/03/0	3 208.15	16.41	0.00	191.74	5.92	'	540	ND<0.50	ND<0.50	ND<0.50	ND<1.0		40	
05/05/0	3 208.15	16.09	0.00	192.06	0.32		670	ND<2.5	ND<2.5	ND<2.5	ND<5.0		57	
09/04/0	3 208.15	21.46	0.00	186.69	-5.37									No analysis; past holding time
11/13/0	3 208.15	21.52	0.00	186.63	-0.06		97	ND<0.50	5.0	0.82	3.5		29	
01/29/0	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	
05/07/0	4 208.15	16.74	0.00	191.41	0.77		180	ND<0.50	ND<0.50	ND<0.50	ND<1.0		25	
08/27/0	4 208.15	19.40	0.00	188.75	-2.66		100	ND<0.50	ND<0.50	ND<0.50	ND<1.0		21	
11/23/0	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	
02/09/0	5 208.15	15.81	0.00	192.34	4.01		5700	ND<0.50	ND<0.50	ND<0.50	ND<1.0		40	
06/16/0	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	
09/27/0	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	
12/30/0	5 208.15	14.62	0.00	193.53	4.53		68	ND<0.50	ND<0.50	ND<0.50	ND<1.0		12	
03/08/0	6 208.15	11.69	0.00	196.46	2.93		130	ND<0.50	ND<0.50	ND<0.50	ND<1.0		21	

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Table 2 HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS August 2000 Through December 2006 **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- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
*****	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(µg/l)	(µg/l)	(µg/l)	$(\mu g/l)$	$(\mu g/l)$	(µg/l)	(µg/l)	
	continued										.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
06/08/0		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		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	
MW-2		creen Inte	erval in feet	: 10.0-30.0	)									
08/24/0		19.69	0.00	190.58		ND		ND	ND	ND	ND	ND	ND	
11/16/0		21.61	0.00	188.66	-1.92	ND		ND	ND	ND	ND	ND	ND	
02/09/0		21.52	0.00	188.75	0.09	ND		ND	ND	ND	ND	ND	ND	
05/11/0		18.76	0.00	191.51	2.76	ND		ND	ND	ND	ND	ND	ND	
08/10/0		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	
11/07/0		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	
02/06/0		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		
05/08/0		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		
08/09/0		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	
11/29/0		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	
02/03/03		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	
05/05/03		17.15	0.00	193.12	0.28		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	<del></del>	ND<2.0	
09/04/03		22.75	0.00	187.52	-5.60									No analysis; past holding time
11/13/0		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	
01/29/04		18.73	0.00	191.54	4.29		ND<50	0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
05/07/04		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	
08/27/04		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	
11/23/04		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	
02/09/05		16.72	0.00	193.55	4.48		ND<50	0.69	1.5	ND<0.50	1.4		ND<0.50	
06/16/05	5 210.27	16.73	0.00	193.54	-0.01		ND<50	ND<0.50		ND<0.50	ND<1.0		ND<0.50	
0018								Page 2	of 4					

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
August 2000 Through December 2006
76 Station 0018

Date Sampled		Depth to Water	LPH Thickness		Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
*****	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(µg/l)	(µg/l)	$(\mu g/l)$	$(\mu g/l)$	(µg/l)	(µg/l)	$(\mu g/l)$	
MW-2	continued													
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	W No.	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	
MW-3	(5	Screen Inte	erval in feet	t: 10.0-30.0	<b>)</b> )									
08/24/0	0 208.98	18.68	0.00	190.30		ND		ND	ND	ND	ND	4.7	2.3	
11/16/0	0 208.98	20.56	0.00	188.42	-1.88	ND		ND	ND	ND	ND	ND	ND	
02/09/0	1 208.98	20.45	0.00	188.53	0.11	ND		ND	ND	ND	ND	ND	ND	
05/11/0	1 208.98	17.75	0.00	191.23	2.70	ND		ND	ND	ND	ND	ND	ND	
08/10/0	1 208.98	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	
11/07/0	1 208.98	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	
02/06/0	2 208.98	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		
05/08/0	2 208.98	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	2 208.98	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	
11/29/0	2 208.98	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	
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		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	
05/07/04	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	
08/27/0	4 208.98	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	
0018	i.							Page 3	3 of 4					

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
August 2000 Through December 2006
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- 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													
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	3 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		ND<0.50	
09/30/0	5 208.98	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.
12/30/0	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	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	
06/08/0	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	
09/15/0	6 208.98	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	6 208.98	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	

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 0018

TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ЕТВЕ	TAME
(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
· · · · · ·	· · ·					
ND	ND			ND	ND	ND
ND	ND			ND	ND	ND
ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND
ND<100	ND<1000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
ND<500	ND<2500	ND<10	ND<10	ND<10	ND<10	ND<10
ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
ND<5.0	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
ND<5.0	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
7.5	ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
ND<5.0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
ND<5.0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	(μg/l)  ND ND ND ND<100 ND<100 ND<100 ND<100 ND<100 ND<100 ND<100 ND<100 ND<500 ND<100 ND<500 ND<5.0	(μg/l)         (μg/l)           ND         ND           ND	(μg/l)         (μg/l)         dibromide (EDB)           (μg/l)         (μg/l)         (μg/l)           ND         ND            ND         ND            ND         ND         ND           ND	(μg/l)         (μg/l)         dibromide (EDB)         (EDC)           (μg/l)         (μg/l)         (μg/l)         (μg/l)           ND         (μg/l)         (μg/l)           ND         ND            ND         ND         ND           ND         ND <t< td=""><td>(μg/l)         (μg/l)         dibromide (EDB)         (EDC)           (μg/l)         (μg/l)         (μg/l)         (μg/l)           ND         (μg/l)         (μg/l)         (μg/l)           ND         ND           ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND         ND           ND&lt;</td><td>(μg/l)         (μg/l)         (μg/l)</td></t<>	(μg/l)         (μg/l)         dibromide (EDB)         (EDC)           (μg/l)         (μg/l)         (μg/l)         (μg/l)           ND         (μg/l)         (μg/l)         (μg/l)           ND         ND           ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND           ND         ND         ND         ND         ND         ND           ND<	(μg/l)         (μg/l)

MW-2

Page 1 of 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)
MW-2	continued						
08/24/00		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		ND<50					
06/16/05		ND<50					
09/27/05		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					
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<1000000	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
11/07/01		ND<500000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
11/0//01	110 20		1111	1.17 -1.0	110 -1.0	110 -1.0	1117 -11.0

Page 2 of 3

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 0018

Date Sampled	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ЕТВЕ	TAME
PROCESS	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(μg/l)
MW-3	continued						
08/09/02			ND	ND			<del></del>
11/29/02	2		ND	ND			
02/03/03	3		ND<2.0	ND<2.0			<del></del>
05/05/03	3		ND<1.0	ND<1.0			<del></del>
11/13/03	3	ND<500					
01/29/04	ļ <u></u>	ND<500					<del></del>
05/07/04	ļ <b></b>	ND<50					<del></del>
08/27/04	. <u></u>	ND<50					<del></del>
11/23/04	ļ <u></u>	ND<50					<del>-</del>
02/09/05	;	ND<50					<del></del>
06/16/05	;	ND<50					<del></del>
09/30/05	; <u></u>	ND<250					<del></del>
12/30/05	; <u></u>	ND<250					<del></del>
03/08/06	·	ND<250					
06/08/06	·	ND<250	~~				<del></del>
09/15/06	, )	ND<250					<del></del>
12/22/06		ND<250					<del></del>



- 9:49am Iwinters

2006

M A P S\0018VM.DWG Jun 30,

SCALE 1: 24,000

#### SOURCE:

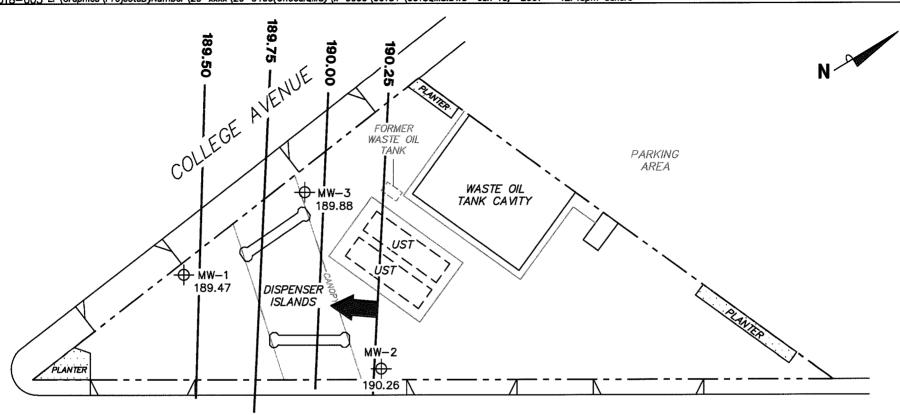
United States Geological Survey 7.5 Minute Topographic Map: Oakland East & Oakland West Quadrangles





#### VICINITY MAP

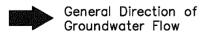
76 Station 0018 6201 Claremont Avenue Oakland, California



#### **LEGEND**

MW-3 Monitoring Well with
Groundwater Elevation (feet)

190.25 — Groundwater Elevation Contour



#### NOTES:

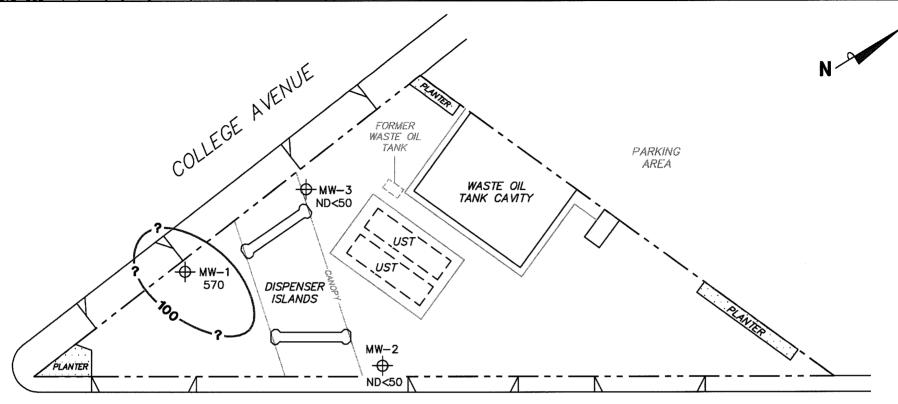
Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. UST = underground storage tank.

#### GROUNDWATER ELEVATION CONTOUR MAP December 22, 2006

76 Station 0018 6201 Claremont Avenue Oakland, California

TRE





#### **LEGEND**

MW-3 

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

Dissolved-Phase TPH-G (GC/MS) Contour (µg/l)

#### NOTES:

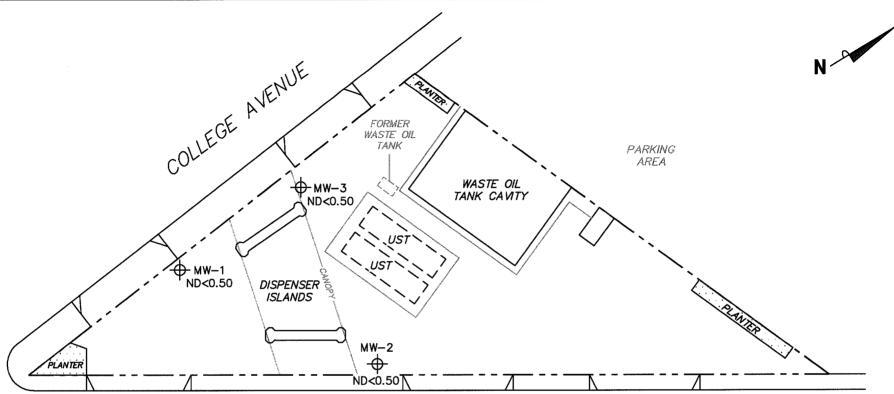
Contour lines are interpretive and based on laboratory analysis results of groundwater samples. TPH-G (GC/MS) = total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B.  $\mu g/I$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report. UST = underground storage tank.

DISSOLVED-PHASE TPH-G (GC/MS) CONCENTRATIONS MAP December 22, 2006

76 Station 0018 6201 Claremont Avenue Oakland, California

TRC





#### **LEGEND**

MW-3 

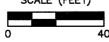
→ Monitoring Well with

Dissolved—Phase Benzene Concentration (µg/I)

#### NOTES:

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

#### SCALE (FEET)



#### **DISSOLVED-PHASE BENZENE CONCENTRATIONS MAP** December 22, 2006

76 Station 0018 6201 Claremont Avenue Oakland, California



MW-2

ND<0.50

#### **LEGEND**

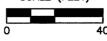
PLANTER

\_\_\_\_\_\_Dissolved—Phase MTBE Contour (µg/l)

#### NOTES:

Contour lines are interpretive and based on laboratory analysis results of groundwater samples. MTBE = methyl tertiory butyl ether.  $\mu g/l =$  micrograms per liter. ND = not detected at limit indicated on official laboratory report. UST = underground storage tank. Results obtained using EPA Method 8260B.

SCALE (FEET)



#### DISSOLVED-PHASE MTBE CONCENTRATIONS MAP December 22, 2006

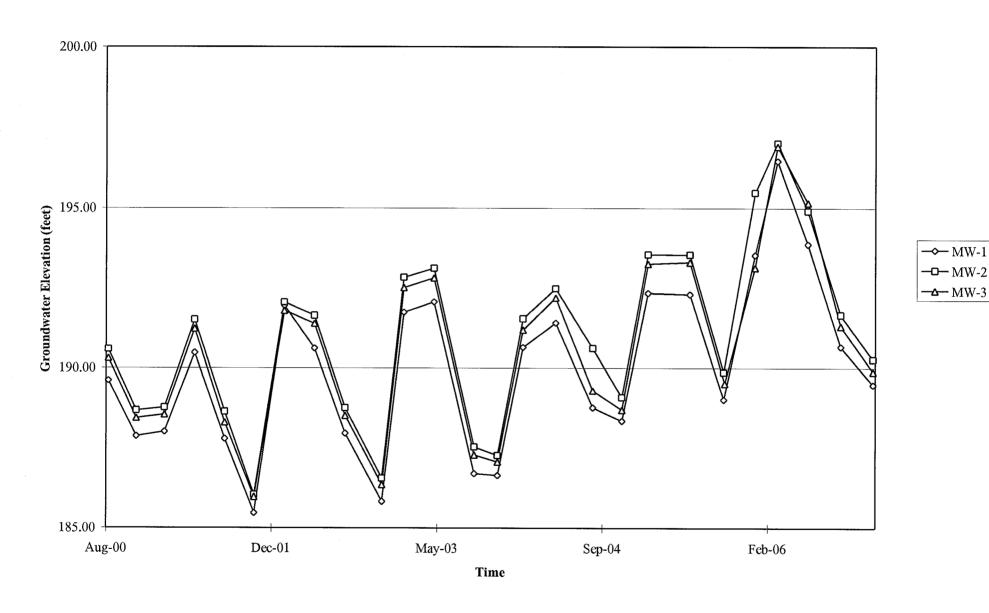
76 Station 0018 6201 Claremont Avenue Oakland, California

FIGURE 5

TRE

# **GRAPHS**

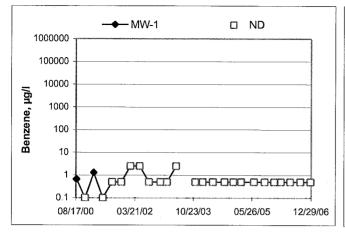
# Groundwater Elevations vs. Time 76 Station 0018

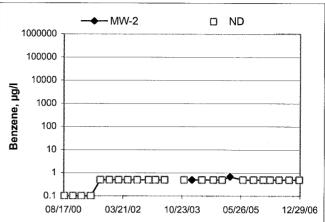


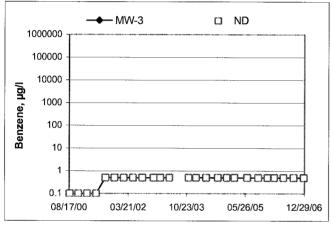
Elevations may have been corrected for apparent changes due to resurvey

#### **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 (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

echnician: <u>Chri S</u>	_ Job	#/Task #: <u>'</u>	+1060C	01/1/10	O	Date: 12-22-06
Site # 0018	Project	Manager	Kieth W	roadburn	e	Pageof
Time Well # Gauged TOC	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
nw-3 0504 X	29.91	19.10	-	<u></u> .	0541	2/
	29,99	18.68			0557	21
nn-10509 X nn-20514 X	29.51	20.01	•	***************************************	0612	211
MAC O STILL	25.11.27					
						300 Line 100
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		12		<del></del>		
					<del> </del>	
			<u> </u>			
					<b></b>	
		ļ				
,						
FIELD DATA COMPLETE	QA/Q0	<del>1</del>	,coc		MELL BOX (	CONDITION SHEETS
- IZZZ ZYTY ODIVIT CETE		, , , , , , , , , , , , , , , , , , ,	(1)		······································	1
WTT CERTIFICATE	MANIFE	ST	DRUM IN	VENTORY	TRA	AFFIC CONTROL

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

		Te	chnician:	Chris	, )				
Site: OO	18	Pro	ject No.: 4	1060X	)/		Date	12-2	2-06
Well No	Mu	-3	PERMIT	Purge Meth	od:	DIA			
Depth to W	/ater (feet):	19/10	·	Depth to Pro	oduct (feet):_		0		
Total Depti		29.91		LPH & Wate	er Recovered	(gallons):	A		
	ımn (feet):			Casing Dian	neter (Inches	s): <i>2''</i>			
80% Recha	arge Depth(fe	eet): <u> </u>	6	1 Well Volum	ne (gallons):	s): 2"			
		ü							
Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (úS/cm)	Temperati		D.O.	ORP	Turbidity
0533		(1001)	7	504	10,9		<b> </b>	<del> </del>	
	1 5 6 6		14	486	15,4	621			
	0538		6	1490	16,1	6.17			
		A							
Stat	ic at Time Sa	mpled	Tot	l al Gallons Pu	rned	T	Sample	Tima	<u> </u>
	20.11		6		900		<u>054</u>		
Comments	3:		The second secon			<u> </u>	<u> </u>	<del> </del>	
	•			Ŷ.					
Well No	MW-	-11		Purae Metho	·d·	DIA			
	ater (feet)			Purge Metho	· · · · · · · · · · · · · · · · · · ·	1) (1)		<del></del>	
Tetal Desire	(feet)	20 GA	<del></del>	Depth to Pro	duct (feet):_				
				LPH & Water	Recovered	(gallons):	6		
	mn (feet):	7 40	V	Casing Diam					
ou w Recha	rge Depth(te	et): 20,9L	<u>L</u>	1 Well Volum	ie (gallons):_	<u> </u>			
									. r.s.
Time	Time	Depth to	Volume	Conduc-	Tomorest				
Start	Stop	Water (feet)	Purged (gallons)	tivity (u\$/cm)	Temperatur	pH	D.O.	ORP	Turbidity
655O		(1000)	(yallons)	(CC)	14.8	6.6.3			
			4	218	16,7	64.8			
	0554		Ġ.	709	16.5	6.51			
				,					
Stati	c at Time Sai	moled	Taka	l Colless D			l		
	10 51	inhien	1019	l Gallons Pun	gea		Sample	Time	

Comments:

### **GROUNDWATER SAMPLING FIELD NOTES**

		Ted	chnician: _	Chri	5	<del></del>			
Site: 00/2	8	Pro	ject No.: <u> </u>	106000	)		Date	12-6	12-06
Well No	MW	<u>-2</u>		Purge Meth	od:	DIA			
Depth to Wa	ater (feet):	20.0	<u> </u>	Depth to Pro	oduct (feet):	(	7		
Total Depth	(feet)	29.51		LPH & Wate	oduct (feet): er Recovered (	galions):	0		
Water Colun	nn (feet):	9.50	<b>)</b>	Casing Diar	neter (Inches):	<b>プ</b> //		···	
80% Rechar	ge Depth(fe	eet): 21.9		1 Well Volur	ne (gallons):	2			
Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (u\$/cm)	Temperature	pH	D.O.	ORP	Turbidity
0606			2	489	15,2	6.87			
	0000		1-4	1491	15.4	16.62			
	0609	The state of the s	6	1489	16:0	6.49			
						<del>                                     </del>		<u> </u>	
Statio	at Time Sa	mpled	Tota	al Gallons Pu	rged		Sample	I Time	
	30.12		6				0612		
Comments:		*							
				Maria			· · · · · · · · · · · · · · · · · · ·		
Nell No				Purge Metho	d:	ANGE			
Depth to Wat	ter (feet):				duct (feet):				
					Recovered (g				
Vater Colum					eter (Inches):_			-	
0% Recharg	ge Depth(fee	et)			e (gallons):				
					(30515)		······································		/ F
Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F,C)	рН	D.O.	ORP	Turbidity
Static	at Time Sar	npled	Tota	l Gallons Pur	ged	<u> </u>	Sample	Time	
omments:									



Date of Report: 01/02/2007

Anju Farfan

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

RE: 0018

BC Work Order: 0613469

Enclosed are the results of analyses for samples received by the laboratory on 12/22/2006 19:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Hooker

Client Service Rep

**Authorized Signature** 



Project: 0018

Project Number: [none]

Project Manager: Anju Farfan

Reported: 01/02/2007 10:21

# **Laboratory / Client Sample Cross Reference**

Laboratory	Client Sample Informat	tion			
0613469-01	COC Number:		Receive Date:	12/22/2006 00:00	Delivery Work Order:
	Project Number:	0018	Sampling Date:	12/22/2006 05:41	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:	Chris M. of TRCI	·		Cooler ID:
0613469-02	COC Number:		Receive Date:	12/22/2006 00:00	Delivery Work Order:
	Project Number:	0018	Sampling Date:	12/22/2006 05:57	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:	Chris M. of TRCI	·		Cooler ID:
0613469-03	COC Number:		Receive Date:	12/22/2006 00:00	Delivery Work Order:
	Project Number:	0018	Sampling Date:	12/22/2006 06:12	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:	Chris M. of TRCI			Cooler ID:



Project: 0018

Project Number: [none]

Project Manager: Anju Farfan

Reported: 01/02/2007 10:21

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

BCL Sample ID: 0613469-01	Client Sam	ple Name	e: 0018, MW-3, MW	-3, 12/22/20	06 5:41:0	00AM, Chris M.						
					Prep	Run		Instru-		QC	МВ	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	12/28/06	12/28/06 21:08	DKC	MS-V6	1	BPL1504	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:08	DKC	MS-V6	1	BPL1504	ND	
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:08	DKC	MS-V6	1	BPL1504	ND	
Toluene	ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:08	DKC	MS-V6	1	BPL1504	ND	21/10/20/20/40/20 10 10 10 10 10 10 10 10 10 10 10 10 10
Total Xylenes	ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:08	DKC	MS-V6	1	BPL1504	ND	
Ethanol	ND	ug/L	250	EPA-8260	12/28/06	12/28/06 21:08	DKC	MS-V6	1	BPL1504	ND	V11
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	EPA-8260	12/28/06	12/28/06 21:08	DKC	MS-V6	1	BPL1504	ND	
1,2-Dichloroethane-d4 (Surrogate)	103	%	76 - 114 (LCL - UCL)	EPA-8260	12/28/06	12/28/06 21:08	DKC	MS-V6	1	BPL1504		
Toluene-d8 (Surrogate)	92.8	%	88 - 110 (LCL - UCL)	EPA-8260	12/28/06	12/28/06 21:08	DKC	MS-V6	1	BPL1504		
4-Bromofluorobenzene (Surrogate)	96.3	%	86 - 115 (LCL - UCL)	EPA-8260	12/28/06	12/28/06 21:08	DKC	MS-V6	1	BPL1504		

Project: 0018

Project Number: [none]
Project Manager: Anju Farfan

Reported: 01/02/2007 10:21

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

BCL Sample ID: 061	3469-02	Client Samı	ple Name	e: 0018, MW-1, MW	-1, 12/22/20	06 5:57:0	0AM, Chris M.						
						Prep	Run		instru-		QC	МВ	Lab
Constituent		Result	<u>Units</u>	PQL MDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene		ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	ND	
1,2-Dibromoethane		ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	ND	
1,2-Dichloroethane		ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	ND	
Ethylbenzene		ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	ND	
Methyl t-butyl ether		18	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	ND	
Toluene		ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	ND	
Total Xylenes		ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	ND	
t-Amyl Methyl ether		ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	ND	
t-Butyl alcohol		ND	ug/L	10	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	ND	V11
Diisopropyl ether		ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	ND	
Ethanol		ND	ug/L	250	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	ND	V11
Ethyl t-butyl ether		ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	ND	
Total Purgeable Petroleum Hydrocarbons		570	ug/L	50	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	ND	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1,2-Dichloroethane-d4 (Surre	ogate)	105	%	76 - 114 (LCL - UCL)	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504	VIII	
Toluene-d8 (Surrogate)	:	96.5	%	88 - 110 (LCL - UCL)	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504		
4-Bromofluorobenzene (Suri	rogate)	107	%	86 - 115 (LCL - UCL)	EPA-8260	12/28/06	12/28/06 21:33	DKC	MS-V6	1	BPL1504		1117 11111 11h hills had december 1111 1111

Project: 0018

Project Number: [none]

Project Manager: Anju Farfan

Reported: 01/02/2007 10:21

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

BCL Sample ID: 0613469-03	Client Sam	ple Name	e: 0018, MW-2, MW	-2, 12/22/20	06 6:12:0	00AM, Chris M.						
Constituent	Result	Units	PQL MDL	Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:58	DKC	MS-V6	1	BPL1504	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:58	DKC	MS-V6	1	BPL1504	ND	No
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:58	DKC	MS-V6	1	BPL1504	ND	
Toluene	ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:58	DKC	MS-V6	1	BPL1504	ND	
Total Xylenes	ND	ug/L	0.50	EPA-8260	12/28/06	12/28/06 21:58	DKC	MS-V6	1	BPL1504	ND	
Ethanol	ND	ug/L	250	EPA-8260	12/28/06	12/28/06 21:58	DKC	MS-V6	1	BPL1504	ND	V11
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	EPA-8260	12/28/06	12/28/06 21:58	DKC	MS-V6	1	BPL1504	ND	(17)(47)(47)
1,2-Dichloroethane-d4 (Surrogate)	99.9	%	76 - 114 (LCL - UCL)	EPA-8260	12/28/06	12/28/06 21:58	DKC	MS-V6	1	BPL1504		
Toluene-d8 (Surrogate)	97.5	%	88 - 110 (LCL - UCL)	EPA-8260	12/28/06	12/28/06 21:58	DKC	MS-V6	1	BPL1504		
4-Bromofluorobenzene (Surrogate)	102	%	86 - 115 (LCL - UCL)	EPA-8260	12/28/06	12/28/06 21:58	DKC	MS-V6	1	BPL1504		



Project: 0018

Project Number: [none]

Project Manager: Anju Farfan

Reported: 01/02/2007 10:21

# **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	BPL1504	Matrix Spike	0613555-01	0	18.970	25.000	ug/L		75.9		70 - 130
		Matrix Spike Duplicat	e 0613555-01	0	19.191	25.000	ug/L	1.2	76.8	20	70 - 130
Toluene	BPL1504	Matrix Spike	0613555-01	0	24.602	25.000	ug/L		98.4		70 - 130
		Matrix Spike Duplicat	e 0613555-01	0	24.736	25.000	ug/L	0.5	98.9	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BPL1504	Matrix Spike	0613555-01	ND	10.331	10.000	ug/L		103		76 - 114
		Matrix Spike Duplicat	e 0613555-01	ND	10.700	10.000	ug/L		107		76 - 114
Toluene-d8 (Surrogate)	BPL1504	Matrix Spike	0613555-01	ND	9.4907	10.000	ug/L		94.9		88 - 110
		Matrix Spike Duplicat	e 0613555-01	ND	9.4052	10.000	ug/L		94.1		88 - 110
4-Bromofluorobenzene (Surrogate)	BPL1504	Matrix Spike	0613555-01	ND	10.454	10.000	ug/L		105		86 - 115
		Matrix Spike Duplicat	e 0613555-01	ND	10.661	10.000	ug/L		107		86 - 115



Project: 0018

Project Number: [none]

Project Manager: Anju Farfan

Reported: 01/02/2007 10:21

Page 6 of 8

# **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	Percent RPD Recovery	RPD	Lab Quals
Benzene	BPL1504	BPL1504-BS1	LCS	19.856	25.000	0.50	ug/L	79.4	70 - 130		
Toluene	BPL1504	BPL1504-BS1	LCS	26.184	25.000	0.50	ug/L	105	70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BPL1504	BPL1504-BS1	LCS	10.675	10.000		ug/L	107	76 - 114		
Toluene-d8 (Surrogate)	BPL1504	BPL1504-BS1	LCS	9.7094	10.000		ug/L	97.1	88 - 110		
4-Bromofluorobenzene (Surrogate)	BPL1504	BPL1504-BS1	LCS	10.297	10.000		ug/L	103	86 - 115		



Project: 0018

Project Number: [none]

Project Manager: Anju Farfan

Reported: 01/02/2007 10:21

# **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	BPL1504	BPL1504-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BPL1504	BPL1504-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BPL1504	BPL1504-BLK1	ND	ug/L	0.50		
Ethylbenzene	BPL1504	BPL1504-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BPL1504	BPL1504-BLK1	ND	ug/L	0.50		
Toluene	BPL1504	BPL1504-BLK1	ND	ug/L	0.50	W. A.* A. F. A. B	
Total Xylenes	BPL1504	BPL1504-BLK1	ND	ug/L	0.50	THE PERSON NAMED IN COLUMN TO SERVICE OF THE PERSON NAMED IN COLUMN TO SERVICE	
t-Amyl Methyl ether	BPL1504	BPL1504-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BPL1504	BPL1504-BLK1	ND	ug/L	10		
Diisopropyl ether	BPL1504	BPL1504-BLK1	ND	ug/L	0.50		
Ethanol	BPL1504	BPL1504-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BPL1504	BPL1504-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons	BPL1504	BPL1504-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BPL1504	BPL1504-BLK1	100	%	76 - 114 (	(LCL - UCL)	
Toluene-d8 (Surrogate)	BPL1504	BPL1504-BLK1	97.7	%	88 - 110 (	(LCL - UCL)	
4-Bromofluorobenzene (Surrogate)	BPL1504	BPL1504-BLK1	99.3	%	86 - 115 (	(LCL - UCL)	



TRC Alton Geoscience

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

Project Number: [none]

Project Manager: Anju Farfan

Reported: 01/02/2007 10:21

#### **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

V11 The Continuing Calibration Verification (CCV) recovery is not within established control limits.

								0.		· · ·
BC LABORATORIES INC.	0 10		PLE REC	EIPT FOF	RM	Rev. No. 1		/04 Pč	ige C	)f
Submission #: ()6 - 346	<u>9 1 P</u>	roject Co	ode:			IBE	latch #			
SHIPPING INFOR	MATION					SHIPPII	NG CONT	AINER		
Federal Express  UPS	Hand Del		ł		Ice Chest		Non			
BC Lab Field Service [3] Other [	] (Specify	′)			Box		Othe	r □ (Spe	city)	
			<u> </u>							
Refrigerant: Ice 🗹 Blue Ice 🗆	None	0	ther 🗆	Comme		······································				<u></u>
Custody Seals: Ice Chest 🗆 Intect? Yes 🗆 No 🗖	Containe Intact? Yes	rs 🗌 s 🛭 No 🗓	None 🖸	Comme	ents:					
All samples received? Yes 🗇 No 🛘	All sample	s container	s intact? Y	es El No	O	Descript	ion(s) match	COC? Ye	s of No I	0
COC Received		ice Ci	hest ID (	3/W	Emis	sivity(	3.98	Date/Tie	me 12/23	2/06
☐ YES ☐ NO			rature:	·5 °C	Conta	iner O	A	ł	Init OTO	
		Thermome	ter ID:	#4 <i>R</i>				Analysi	niii OIO	
	<u> </u>				SAMPLE N	UMBERS				
SAMPLE CONTAINERS		2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
					l			i		
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS PT TOTAL SULFIDE				<u> </u>						
PT TOTAL SULFIDE  202. NITRATE / NITRITE					<b></b>					
100ml TOTAL ORGANIC CARBON										
OT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40mi VOA VIAL	A3	A3	A.3		, ,	1 1	, ,	( 1	4	( )
QT EPA 413.1, 413.2, 418.1	7,									
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 mi VOA VIAL- 504										
QT EPA 508/608/8080				,' +						
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547						•				
100ml EPA 531.1										
QT EPA 548										
QT EPA 549					ļ					ļ
QT EPA 632										
QT EPA 8015M										
QT QA/QC						-				
OT AMBER										<del> </del>
8 OZ. JAR										<del> </del>
32 OZ. JAR		· · · · · · · · · · · · · · · · · · ·		·						<del>                                     </del>
SOIL SLEEVE										
PCB VIAL					<b> </b>			,		<b> </b>
PLASTIC BAG		-07								
FERROUS IRON										<b> </b>
ENCORE										<del> </del> -
					<u> </u>					

Comments:
Sample Numbering Completed By: Date/Time: 12/22/06 2800

BC LABORATORIES, INC.

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

#### **CHAIN OF CUSTODY**

		()()-	13469	8. 30 as 1000 max 11 a 2		Pili	ary	313	Rec	IUC	216	U.		
Bill to: Co	noco Phillips/ TRC	Consultant Firm: TR	RC .	MATRIX (GW)	8015			tes						
Address: ଅଧିତା Cla	remont Blud	21 Techology Drive Irvine, CA 92618-230 Attn: Anju Farfan		Ground- water (S) Soil	, Gas by			& oxygenates	8260B			03	83603	Requested
City: Oakle	and	4-digit site#: OO)	?	(WW)	21B	Σ	5		3 BY	<u> </u>		82603	र्व	25
•		Workorder #01062-		Waste- water	by 8021	015	by 8015	<u>×</u>	XX	8260	MS	by 6	1	H H
State: CA	Zip:	Project #: 410600		(SL)	3E to	by 8015M	ᆸ	ist w	BEIC	by	y G			F
Conoco Pl	nillips Mgr: Shelby Lathra	Sampler Name:		Sludge	MT	GAS	OES	full	Z	NOL	9	ED		Inea
Lab#	Sample Description	Field Point Name	Date & Time Sampled		BTEX/MTBE	TPH	TPH DIESEL	8260 full list w/ MTBE	BTEX/MTBE/OXYS	ETHANOL by 8260B	TPH —G by GC/MS	EPC/EDB	BTEX	Turnaround
	-1	Mw-3	12-22-06 0541	Gu						$\times$	$\times$		$\times$	St
	-2	mw-1	0567	,			-		$\times$	$\times$	$\geq$	$\times$		STI
	-3	MW-2	V 0612	<u> </u>						X	$\times$		$\times$	ST
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#### **STATEMENTS**

#### **Purge Water Disposal**

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

#### Limitations

The fluid level monitoring and groundwat er 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.