R058



January 7, 2006

ConocoPhillips Company 76 Broadway Sacramento, CA 94563 JM 17 2003

ATTN:

MR. THOMAS KOSEL

SITE:

76 STATION 6129 3420 35TH AVENUE

OAKLAND, CALIFORNIA

RE:

QUARTERLY MONITORING REPORT OCTOBER THROUGH DECEMBER 2005

Dear Mr. Kosel:

Please find enclosed our Quarterly Monitoring Report for 76 Station 6129, located at 3420 35th 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. Eric Hetrick, Delta Environmental Consultants, Inc. (2 copies)

Enclosures: 20-0400/6129R07.QMS



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February 15, 2006

Mr. Donald Hwang Alameda County Health Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502

Re: Quarterly Summary Report – Fourth Quarter 2005

Delta Project Number: C106129011

Dear Mr. Hwang:

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

DANIEL J. DAVIS

No. 6435

Service Station

Location

76 Service Station No. 6129

3420 35th Avenue Oakland, California

Sincerely,

Delta Environmental Consultants, Inc.

Ben Wright Staff Geologist

Forward:

CC:

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

TRC - Quarterly Monitoring Report

Ms. Shelby Lathrop, ConocoPhillips (electronic copy)

Inogen Environmental Alliance

QUARTERLY SUMMARY REPORT Fourth Quarter 2005 76 Service Station No. 6129 3420 35th Avenue Oakland, CA

PREVIOUS ASSESSMENT

According to Kaprealian Engineering, Inc. (KEI), in 1989 two 10,000-gallon gasoline underground storage tanks (USTs) and one 550-gallon waste oil UST were removed from the site. Analytical results of soil samples collected beneath the former gasoline USTs, used-oil UST and product piping indicated that low concentrations of petroleum hydrocarbons were present in each of the sampling areas. Three groundwater monitoring wells (MW-1 through MW-3) were installed in 1989 to depths of approximately 44 feet below ground surface (bgs).

In 1990, four soil borings (EB1 through EB4) were drilled at the site in the vicinity of MW-3 in an attempt to define the hydrocarbon impact to soil. Based on the results of the soil sampling, approximately 230 cubic yards of soil were excavated from an area between the dispenser islands and around well MW-3 in 1991. Excavation was performed so as to not destroy well MW-3. Analytical results from confirmation soil samples indicated that the majority of the impacted soil had been removed.

On November 12 and 13, 2003, as part of a due diligence investigation, four soil borings (SB-1 and SB-3 through SB-5) were drilled to total depths of approximately 31.5 to 36.5 feet bgs. Proposed boring SB-2 was unable to be drilled due to the presence of subsurface utilities and/or structures. Groundwater was encountered in the borings at a depth of approximately 35 feet bgs. Methyl tertiary butyl ether (MTBE) was reported at concentrations varying from 0.37 to 0.41 milligrams per kilogram (mg/kg) in the soil samples collected between 26 and 31 feet bgs. All other constituents were reported below the laboratory reporting limit for the soil samples analyzed. The three existing groundwater wells were sampled on November 13, 2003. Analytical results indicated the presence of MTBE at concentrations between 240 and 3,700 micrograms per liter (μ g/l), with the most elevated concentrations occurring in wells MW-2 (2,100 μ g/l) and MW-3 (3,700 μ g/l).

SENSITIVE RECEPTORS

A 1,000-foot radius well search was completed as requested on September 28, 2004 by the Alameda County Public Works Agency (ACPWA). The results showed a six-inch diameter irrigation well located at 3397 Arkansas Street, approximately 800 feet west-northwest of the site. The well was drilled in August 1977 to total depth 62 feet bgs with depth to water reported at 18 feet bgs. Alameda County Health Care Services update of July 30, 1984 reported the well owner as Arthur Smith.

MONITORING AND SAMPLING

Groundwater monitoring and sampling activities were conducted at the site from January 1990 through May 1991. Sampling activities were re-initiated during the third quarter 2004. The monitoring well network is scheduled to be sampled on a quarterly basis.

During the most recent groundwater monitoring event, conducted on December 6, 2005, depth to groundwater ranged from 28.78 feet (MW-3) to 29.59 feet (MW-1) below top of casing (TOC). The groundwater flow direction was west at a gradient of 0.03 foot per foot (ft/ft), consistent with historic events. During the December 2005 sampling event, maximum detectable hydrocarbon concentrations were as follows: total purgeable petroleum hydrocarbons (TPPH) (430 µg/l in MW-3), benzene (<0.50 µg/l in all samples), total xylenes (3.6 µg/l in MW-3) and MTBE (1,800 µg/l in MW-3).

WASTE DISPOSAL SUMMARY

In 1991, based on the results from borings EB1 through EB4, approximately 230 cubic yards of soil were excavated from the area between the dispensers and the pump islands in the area around MW-3.

REMEDIATION STATUS

Remediation is not currently being conducted at the site.

CHARACTERIZATION STATUS

Hydrocarbon concentrations in the soil and groundwater have not been completely delineated. MTBE in soil and groundwater are above environmental screening levels (ESLs). Additional assessment activity has been proposed to delineate both the vertical and horizontal extent (up- and downgradient) of the MTBE contamination.

RECENT CORRESPONDENCE

 During a meeting with Alameda County Health Agency conducted on November 30, 2005, it was agreed that a site conceptual model (SCM) for the site would be completed. The SCM has been submitted under separate cover.

THIS QUARTER ACTIVITIES (Fourth Quarter 2005)

1. TRC conducted the quarterly monitoring and sampling event at the site.

WASTE DISPOSAL SUMMARY

No waste was generated during the quarter.

NEXT QUARTER ACTIVITIES (First Quarter 2006)

- TRC will conduct the quarterly groundwater monitoring and sampling event at the site.
- 2. Delta will submit a SCM to Alameda County Health Agency. The SCM will include a work plan for determining lateral and vertical soil and groundwater contamination at the site.

CONSULTANT: Delta Environmental Consultants, Inc.



QUARTERLY MONITORING REPORT OCTOBER THROUGH DECEMBER 2005

76 Station 6129 3420 35th Avenue Oakland, California

Prepared For:

Mr. Thomas Kosel
CONOCOPHILLIPS COMPANY
76 Broadway
Sacramento, CA 94563

By:

Senior Project Geologist, Irvine Operations January 5, 2006

	LIST OF ATTACHMENTS	
Summary Sheet	Summary of Gauging and Sampling Activities	:
Tables	Table Key Table 1: Current Fluid Levels and Selected Analytical Results Table 2: Historic Fluid Levels and Selected Analytical Results Table 3: Additional Analytical Results	
Figures	Figure 1: Vicinity Map Figure 2: Groundwater Elevation Contour Map Figure 3: Dissolved-Phase TPPH Concentration Map Figure 4: Dissolved-Phase Benzene Concentration Map Figure 5: Dissolved-Phase MTBE Concentration Map	
Graphs	Groundwater Elevations vs. Time Benzene Concentrations vs. Time MTBE 8260B Concentrations vs. Time	
Field Activities	General Field Procedures Groundwater Sampling Field Notes	
Laboratory Reports	Official Laboratory Reports Quality Control Reports Chain of Custody Records	
Statements	Purge Water Disposal Limitations	:

Summary of Gauging and Sampling Activities October 2005 through December 2005 76 Station 6129 3420 35th Ave. Oakland, CA

	··········		
Project Coordinator: Th Telephone: 91		Water Sampling C Compiled by: Je	
Date(s) of Gauging/Sam	pling Event: 12/6/20		; ;
Sample Points			
Groundwater wells: Purging method: Diaph Purge water disposal: O Other Sample Points: 0	nyx/Rodeo Unit 100		Wells sampled: 3
Liquid Phase Hydroca	rbons (LPH)		
	laximum thickness (fee	t): n/a Method: n/a	:
Hydrogeologic Param	eters		
Average change in groun Interpreted groundwater Current event: 0.0	evation (relative to avai Idwater elevation since	lable local datum): 72.30 previous event: -1.77 fe ction:	
Selected Laboratory R	esults	·	;
Wells with detected Ben		Wells above MCL (1.0 μ n/a	g/l): n/a
Wells with TPPH 8260	B 2	Maximum: 430 μg/l (MW-3)
Wells with MTBE	2	Maximum: 1,800 μg/	
			· :

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. e3quivalent to parts per billion, pph)
 mg/l = milligrams per liter (approx. equivalent to parts per million, ppm)

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

ANALYTES

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

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

MTBE = methyl tertiary butyl ether

PCB = polychlorinated biphenyls

PCE = tetrachloroethene

TBA = tertiary butyl alcohol

TCA = trichloroethane TCE = trichloroethene

TPH-G = total petroleum hydrocarbons with gasoline distinction
TPH-D = total petroleum hydrocarbons with diesel distinction

TPPH = total purgeable petroleum hydrocarbons
TRPH = total recoverable petroleum hydrocarbons

TAME = tertiary amyl methyl ether

1,1-DCA = 1,1-dichloroethane

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

1,1-DCE = 1,1-dichloroethene

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

NOTES

- 1. Elevations are in feet above mean sea level. Depths are in feet below surveyed top-of-casing.
- 2. Groundwater elevations for wells with LPH are calculated as: 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 76 Station 6129 in August 2004.

Table 1
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
December 6, 2005
76 Station 6129

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8260B	Comments
	(feet)	(feet)	(fcet)	(feet)	(feet)	(μg/l)	(μg/l)	(µg/l)	(μg/l)	(µg/l)	(μg/l)	(μ g /l)	
MW-1 12/6/200	05 102.24	29.59	0.00	72.65	-2.26		ND<50	-		ND<0.50	1.8	ND<0.50	
MW-2 12/6/200 MW-3	05 102.16	29.13	0.00	73.03	-1.62		340	ND<0.50	ND<0.50	ND<0.50	ND<1.0	, 780	
12/6/200	5 100.00	28.78	0.00	71.22	-1.43		430	ND<0.50	1.6	ND<0.50	3.6	1800	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
January 1990 Through December 2005
76 Station 6129

	Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	ТРН-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8260B				Comments
1/5/1990 ND		(feet)	(feet)	(fcet)	(feet)	(feet)	(μg/l)	(μg/l)	(μg/l)	(µg/l)	(μg/l)	(μ g /l)	(μg/l)	 			
5/11/1990 ND ND 7.1 ND																	
8/9/1990 ND - ND ND ND ND ND ND							ND		ND	ND	ND	ND					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		•		-			ND		ND	7.1	ND	ND					•
2/12/1991 ND ND 0.32 ND ND ND ND ND S/9/1991 ND	8/9/199	90					ND	••	ND	ND	ND	ND					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	11/14/19	90					ND		ND	ND	ND	ND					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2/12/199	91	***				ND		0.32	ND	ND	ND					
8/27/2004 102.24 30.65 0.00 71.59 ND<0 ND<0.50	5/9/199	91					ND		ND	ND	ND	ND					
11/23/2004 102.24 29.35 0.00 72.89 1.30 ND<50 ND<50 ND<0.50 ND<0.5	11/13/20	003						180	ND<1.0	ND<1.0	ND<1.0	ND<2.0	240				
2/9/2005 102.24 26.89 0.00 75.35 2.46 ND<50 ND<0.50 ND<0.5	8/27/200	04 102.24	4 30.65	0.00	71.59			ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50		٠		
5/17/2005 102.24 26.56 0.00 75.68 0.33 ND<50 ND<0.50 ND<0.	11/23/20	004 102.24	4 29.35	0.00	72.89	1.30		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50				
7/27/2005 102.24 27.33 0.00 74.91 -0.77 - ND<50 ND<0.50 ND<0.	2/9/200)5 102.24	4 26.89	0.00	75.35	2.46		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	9.3				
12/6/2005 102.24 29.59 0.00 72.65 -2.26 ND<50 ND<0.50 0.93 ND<0.50 1.8 ND<0.50 MW-2 1/5/1990 ND ND ND ND ND ND ND 5/11/1990 ND ND ND ND ND ND ND ND 8/9/1990 ND ND ND ND ND ND ND 11/14/1990 ND ND ND ND ND ND ND 2/12/1991 ND ND ND ND ND ND ND 5/9/1991 ND	5/17/200	05 102.24	4 26.56	0.00	75.68	0.33	•••	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	1.9				
MW-2 1/5/1990 ND ND ND ND ND ND 5/11/1990 ND ND ND ND ND ND 8/9/1990 ND ND ND ND ND ND 11/14/1990 ND ND ND ND ND ND 11/14/1991 ND ND ND ND ND ND 5/9/1991 ND ND ND ND ND ND ND 11/13/2003 ND ND ND ND ND ND ND 11/13/2004 102.16 30.28 0.00 71.88 950 ND<5.0 ND<5.0 ND<5.0 ND<6.0 ND<1.0 4.2	7/27/200	05 102.24	4 27.33	0.00	74.91	-0.77		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50				
1/5/1990 ND	12/6/200	05 102.24	4 29.59	0.00	72.65	-2.26		ND<50	ND<0.50	0.93	ND<0.50	1.8	ND<0.50				
1/5/1990 ND	MW-2									•							
8/9/1990 ND ND ND ND ND ND 11/14/1990 ND ND ND ND ND ND 2/12/1991 ND ND ND ND ND ND ND 5/9/1991 ND ND ND ND ND ND ND 11/13/2003 ND 8/27/2004 102.16 30.28 0.00 71.88 950 ND 11/23/2004 102.16 28.75 0.00 73.41 1.53 53 ND	1/5/199	90	***				ND		ND	ND	ND	ND					
11/14/1990 ND ND ND ND ND ND 2/12/1991 ND ND 0.42 ND 0.51 5/9/1991 ND ND ND ND ND ND ND 11/13/2003 ND ND ND ND ND ND ND ND 11/13/2004 102.16 30.28 0.00 71.88 950 ND<5.0 ND<5.0 ND<5.0 ND<5.0 ND<1.0 1400 11/23/2004 102.16 28.75 0.00 73.41 1.53 53 ND<0.50 ND<0.50 ND<0.50 ND<1.0 4.2	5/11/199	90		**	••		ND		ND	ND	ND	ND	***				
2/12/1991 ND ND 0.42 ND 0.51 5/9/1991 ND 11/13/2003 ND 11/13/2003 ND 8/27/2004 102.16 30.28 0.00 71.88 950 ND 11/23/2004 102.16 28.75 0.00 73.41 1.53 53 ND<0.50 ND<0.50 ND<0.50 ND<1.0 4.2	8/9/199	00					ND	•	ND	ND	ND	ND					
5/9/1991 ND ND ND ND ND ND 11/13/2003 ND 8/27/2004 102.16 30.28 0.00 71.88 950 ND<5.0 ND<5.0 ND<5.0 ND<1.0 1400 11/23/2004 102.16 28.75 0.00 73.41 1.53 53 ND<0.50 ND<0.50 ND<0.50 ND<1.0 4.2	11/14/19	90					ND		ND	ND	ND	ND	. <u></u>				
11/13/2003 ND<2000 ND<20 ND<20 ND<20 ND<20 ND<40 2100 8/27/2004 102.16 30.28 0.00 71.88 950 ND<5.0 ND<5.0 ND<5.0 ND<10 1400 11/23/2004 102.16 28.75 0.00 73.41 1.53 53 ND<0.50 ND<0.50 ND<0.50 ND<1.0 4.2	2/12/199	91		~~	**		ND		NĐ	0.42	ND	0.51					
8/27/2004 102.16 30.28 0.00 71.88 950 ND<5.0 ND<5.0 ND<5.0 ND<10 1400 11/23/2004 102.16 28.75 0.00 73.41 1.53 53 ND<0.50 ND<0.50 ND<0.50 ND<1.0 4.2	5/9/199	1					ND		ND	ND	ND	ND					
11/23/2004 102.16 28.75 0.00 73.41 1.53 53 ND<0.50 ND<0.50 ND<0.50 ND<1.0 4.2	11/13/20	003						ND<2000	ND<20	ND<20	ND<20	ND<40	2100				
	8/27/200	04 -102.16	30.28	0.00	71.88	· ·		950	ND<5:0	ND<5.0	ND<5.0	ND<10	1400	 		1. 14	· · · · · · · · · · · · · · · · · · ·
	11/23/20	04 102.16	.28.75	0.00	73.41	1.53		<i>5</i> 3	ND<0.50	ND<0.50	ND<0.50	ND<1.0	4.2				
2/9/2005 102.16 26.08 0.00 76.08 2.67 - ND<500 ND<0.50 ND<0.50 ND<0.50 ND<1.0 400	2/9/200	5 102.16	26.08	0.00	76.08	2.67	· _	ND<500	ND<0.50	ND<0.50	ND<0.50	ND<1.0	400				

Page 1 of 2

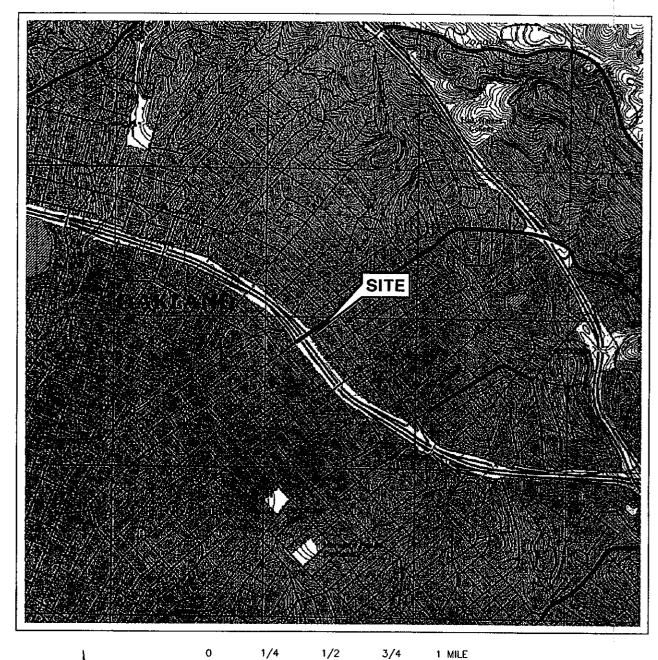
6129

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
January 1990 Through December 2005
76 Station 6129

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8260B	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μ g/l)	(μg/l)	(μg/l)	
MW-2	continued	l											
5/17/20	05 102.10	5 24.53	0.00	77.63	1.55		ND<50	'ND<0.50	ND<0.50	ND<0.50	ND<1.0	330	
7/27/20	05 102.10	6 27.51	0.00	74.65	-2.98		ND<500	ND<5.0	ND<5.0	ND<5.0	ND<10	580	
12/6/20	05 102.10	6 29.13	0.00	73.03	-1.62		340	ND<0.50	ND<0.50	ND<0.50	ND<1.0	780	
MW-3							•						
1/5/199	00		0.00			ND		ND	ND	ND	ND		
5/11/19	90					ND		ND	ND	ND	ND		
8/9/199	00					ND	·	ND	ND	ND	ND	·	
11/14/19	90					ND		ND	ND	ND	ND		
2/12/19	91					ND		ND	ND	ND	ND		
5/9/199	1					ND		ND	ND	ND	ND		
11/13/20	03					••	2600	ND<20	ND<20	ND<20	ND<40	3700	
8/27/20	04 100.00	29.61	0.00	70.39			1700	ND<10	ND<10	ND<10	ND<20	2600	
11/23/20	04 100.00	28.48	0.00	71.52	1.13		1500	ND<10	ND<10	ND<10	ND<20	1800	
2/9/200	5 100.00	26.45	0.00	73.55	2.03	••	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<1.0	2100	
5/17/20	05 100.00	25.61	0.00	74.39	0.84		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<1.0	1200	
7/27/20	05 100.00	27.35	0.00	72.65	-1.74		ND<1000	ND<10	ND<10	ND<10	ND<20	1400	
12/6/20	05 100.00	28.78	0.00	71,22	-1.43		430	ND<0.50	1.6	ND<0.50	3.6	1800	

Table 3
ADDITIONAL ANALYTICAL RESULTS
76 Station 6129

Date Sampled	EDC	EDB	TAME 8260B	TBA 8260B	DIPE 8260B	ETBE 8260B	Ethanol 8260B							
	(μg/l)	(μg/l)	(μg/l)	(μ g/ l)	(μg/l)	(μg/l)	(μg/l)			 				
MW-1												-		_
11/13/2003	ND<4.0	ND<4.0	ND<4.0	ND<200	ND<4.0	ND<4.0	ND<1000							
8/27/2004	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<1.0	ND<0.50	ND<50							
11/23/2004	ND<0.50	ND<0.50	ND<0,50	ND<5.0	ND<1.0	ND<0.50	ND<50							
2/9/2005	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50							
5/17/2005	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50							
7/27/2005	ND<0,50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50				-			
12/6/2005	ND<0.50	ND<0.50	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<250					•		
MW-2						4.5					mar Os			
11/13/2003	ND<80	ND<80	ND<80	ND<4000	ND<80	ND<80	ND<20000						•	
8/27/2004	ND<5.0	ND<5.0	ND<5.0	ND<50	24	ND<5.0	ND<500							
11/23/2004	ND<0.50	ND<0.50	ND<0,50	ND<5.0	18	ND<0.50	ND<50							
2/9/2005	ND<5.0	ND<5.0	ND<5.0	ND<50	19	ND<5.0	ND<500							
5/17/2005	ND<0.50	ND<0.50	ND<0.50	ND<5.0	12	ND<0.50	ND<50							
7/27/2005	ND<5.0	ND<5.0	ND<5.0	140	16	ND<5.0	ND<500							
12/6/2005	ND<0.50	ND<0,50	ND<0.50	61	15	ND<0.50	ND<250							
34337.2														
MW-3 11/13/2003	ND<80	ND<80	ND<80	ND<4000	ND<80	ND<80	ND<20000	÷						
8/27/2004		ND<10	ND<10	ND<100	ND<20	ND<10	ND<1000							
11/23/2004	ND<10	ND<10	ND<10	ND<100	ND<20	ND<10	ND<1000							
2/9/2005	ND<10	ND<10	ND<10	130	ND<10	ND<10	ND<1000		٠					
5/17/2005	ND<10	ND<10	ND<10	ND<100	ND<10	ND<10	ND<1000							
7/27/2005	ND<10	ND<10	ND<10	360	ND<10	ND<10	ND<1000							
12/6/2005	ND<0.50	ND<0.50	ND<0.50	160	ND<0.50	ND<0.50	ND<250							





1 MILE

SCALE 1: 24,000

SOURCE:

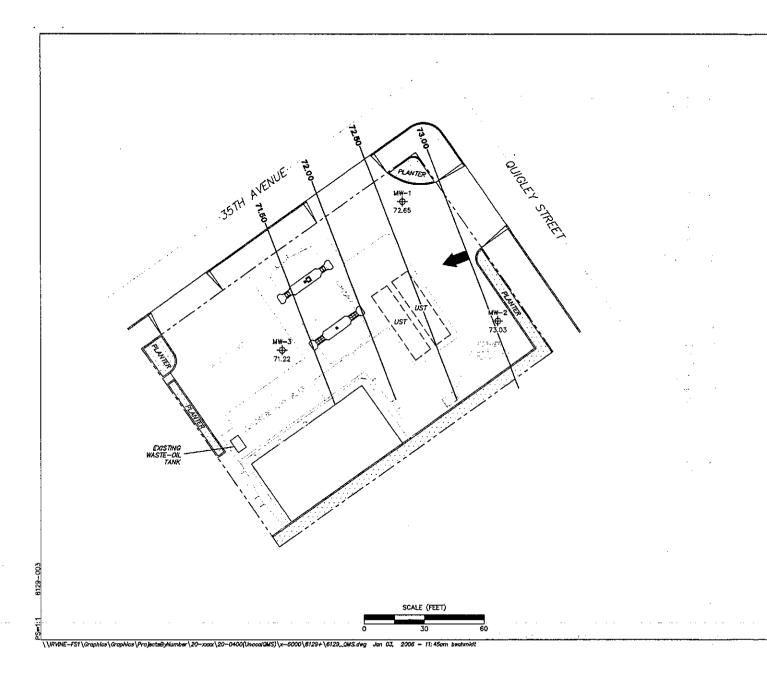
United States Geological Survey 7.5 Minute Topographic Map: Ookland Eost Quadrangle

TRC



VICINITY MAP

76 Station 6129 3420 35th Avenue Oakland, California





LEGEND

MW-3

Monitoring Well with
Groundwater Elevation (feet)

73.00 --- Groundwater Elevation Contour



General Direction of Groundwater Flow

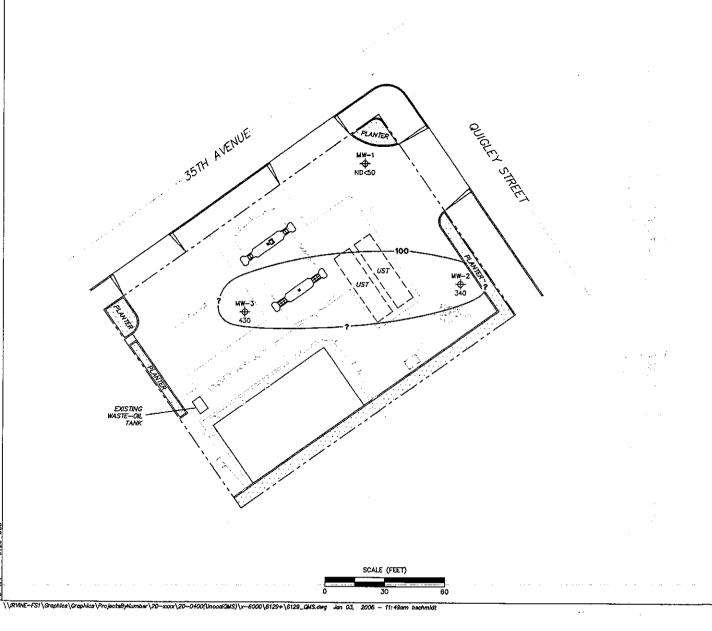
NOTES:

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

GROUNDWATER ELEVATION CONTOUR MAP December 6, 2005

> 76 Station 5129 3420 35th Avenue Oakland, California

TRC





LEGEND

MW-3 ♦ Monitoring Well with
Dissolved-Phase TPPH
Concentration (μg/I)

_100 — Dissolved—Phase TPPH
Contour (µg/l)

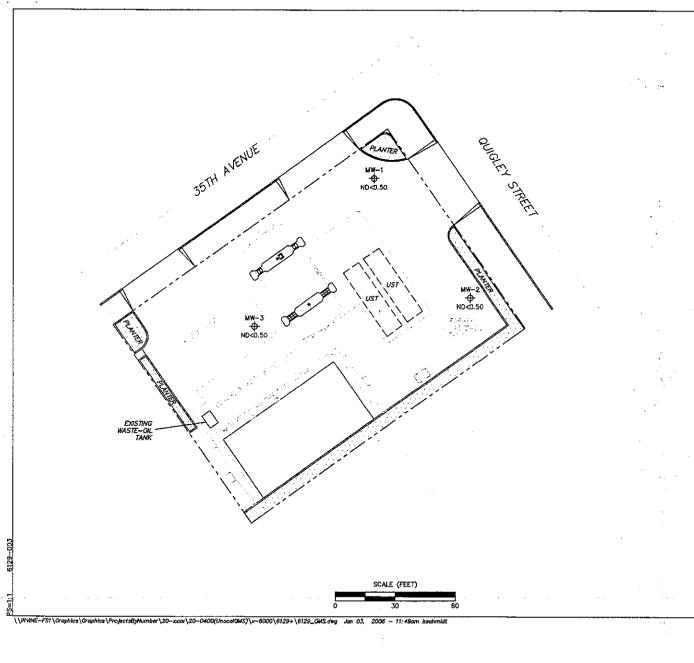
NOTES:

Contour lines are interpretive and based on laboratory analysis results of groundwater PPH = total purgeable petroleum hydrocarbons. UST = underground storage tank, ug/1 = micrograms per liter, NO = not detected at limit indicated on official laboratory report. Results obtained using EPA Method 22608.

DISSOLVED-PHASE TPPH CONCENTRATION MAP December 6, 2005

> 76 Station 6129 3420 35th Avenue Oakland, California

TRC



N

LEGEND

MW-3

Monitoring Well with
Dissolved-Phase Benzene
Concentration (μg/!)

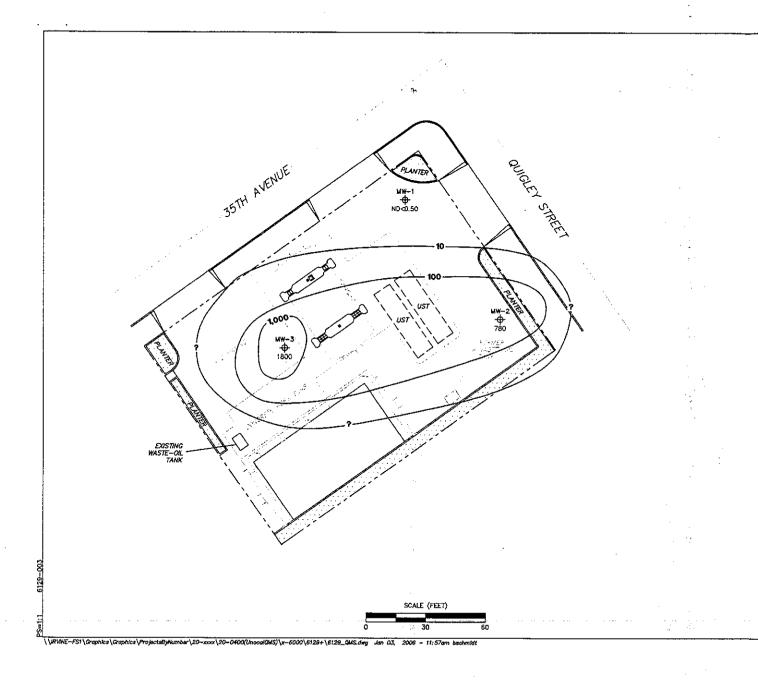
NOTES:

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

DISSOLVED-PHASE BENZENE CONCENTRATION MAP December 6, 2005

> 76 Station 6129 3420 35th Avenue Oakland, California

TRC





LEGEND

MW−3

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

_1.000 — Dissolved—Phase MTBE Contour (µg/l)

NOTES:

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

MTBE = methyl tertiory butly ether, µg/l = micrograms per liter. UST = underground storage tank. Results obtained using EPA Method 8260B.

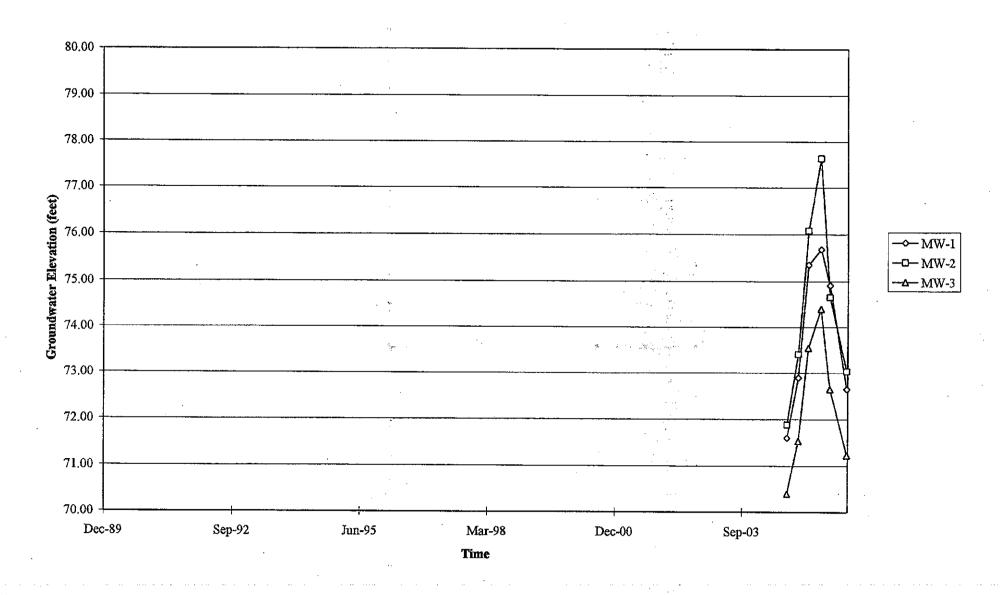
DISSOLVED-PHASE MTBE CONCENTRATION MAP December 6, 2005

> 76 Station 6129 3420 35th Avenue Oakland, California

TRE

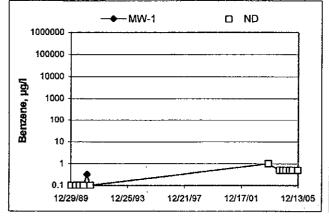
GRAPHS

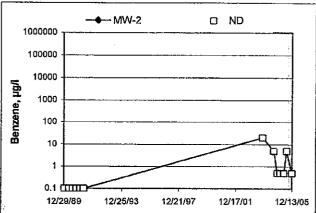
Groundwater Elevations vs. Time 76 Station 6129

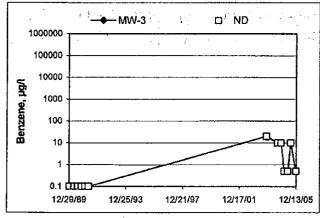


Benzene Concentrations vs Time

76 Station 6129

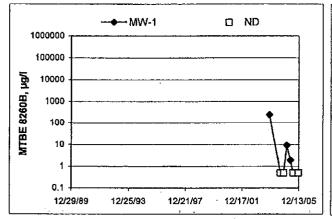


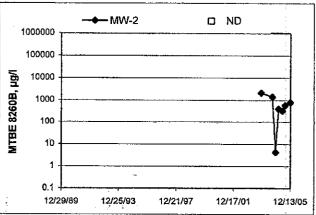


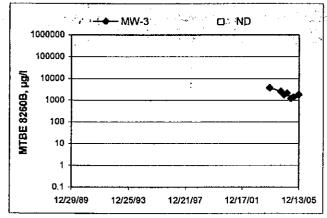


MTBE 8260B Concentrations vs Time

76 Station 6129







GENERAL FIELD PROCEDURES

Groundwater Monitoring and Sampling Assignments

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

Fluid Level Measurements

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

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

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

Purging and Groundwater Parameter Measurement

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

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

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

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

Groundwater Sample Collection

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

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

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

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

Sequence of Gauging, Purging and Sampling

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

Decontamination

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

Exceptions

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

1/5/04 version

FIELD MONITORING DATA SHEET

Technician:	NIC	11	Job	#/Task #:	40500	M/FAZ	20	Date: 12-06 - 05
Site #	612	9	Projec	t Manager	A. Col	1) FA		Pageof
Well #	Time Gauged	тос	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
M11)-1	7926		4346	2959			1043	7/1
411)-2	0934		43.55	29.15			1119	7//
MIL)-3	1940		47.62	1978	ينت		1156	2
		The section of		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	grand days of	Salar Carlo	and a second	A Commence of the second of th
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FIELD DAT	COMPL	EIE	<u> aydc</u>		<u> </u>	W	FLT ROX C	ONDITION SHEETS
WTT CERT	FICATE		MANIFES	ST	DRUM IX	/FNTORY	TDA	FIC CONTROL
	· · · · · · · · · · · · · · · · · · ·						111/3	TO COTTITUE.

GROUNDWATER SAMPLING FIELD NOTES

	Technician:	NICK	<u>. </u>		
Site: 6/29	Project No.:	41050001		Date: 12-	06-05
Well No.: <u>MW-/</u>		Purge Method:	43	· · · · · · · · · · · · · · · · · · ·	. :
Depth to Water (feet): 29.59		Depth to Product (feet):		<u> </u>	
Total Depth (feet): 43.46		LPH & Water Recovered	d (gallons):		
Water Column (feet): 13.87		Casing Diameter (Inches			
80% Recharge Depth (feet): 32.34	<u>5</u>	1 Well Volume (gallons)			
Time Time Depth Start Stop To Water (feet)	Volume Purged (gallons)	Conduc- Tempera tivity (uS/cm) (F. C	pH	Turbidity	b;o.
10 KO7. 1000 1000	2	635 184	7.24		
	4	655 19.0	7,32		
1207-	b	665 19.1	9.19	4	
1037	 	000			:
Static at Time Sampled	17.	otal Gallons Purged.	<u> </u>	Time Sampl カソス	ed Control
29.84		<u> </u>			
	<u></u>		<u>".</u>		
Well No.:		Purge Method:	WB		
Total Depth (feet): 43,53		LPH & Water Recovere			
Water Column (feet): 14.42		Casing Diameter (Inche	1,1		,
80% Recharge Depth (feet): 32.0	 	1 Well Volume (gallons)		·	• :
Time Depth Start Stop To Wate (feet)	r Purged	Conduc Temper tivity (uS/cm) (F.1	∜ ypH ⊹	Turbidity	D.Ø
1052	2	608 18.3	> 7.28		:
	11	637 185			
	 7 		4 4 4		
1119	6	643 19,	1 7.1)	<u> </u>	
			·		
Static at Time Sampled	1	otal Gallons Purged		Time Samp	led
29.78					

Technician: Project No.: Well No.: Purge Method: 1 Depth to Product (feet): Depth to Water (feet):_. Total Depth (feet): ____ LPH & Water Recovered (gallons): Water Column (feet):_ 1 Well Volume (gallons). 2 80% Recharge Depth (feet): Depth Conduc-Time Volume Temperature tivity To Water Purged Stop Turbidity (gallons) (feet) (üS/cm) Static at Time Sampled Total Gallons Purged Time Sampled ∵⁄0 Comments: Well No.: ___ Purge Method: Depth to Product (feet): LPH & Water Recovered (gallons):___ Total Depth (feet): Water Column (feet): Casing Diameter (Inches): 80% Recharge Depth (feet):_ 1 Well Volume (gallons):____ Time Time :Depth 8 Volume Conduc-Temperature Start Stop To Water Purged tivity Turbidity (feet) (gallons) (uS/cm) (F.C) Static at Time Sampled Total Gallons Purged Time Sampled

Comments:



Date of Report: 12/19/2005

Anju Farfan

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

RE: 6129

BC Lab Number: 0512078

Enclosed are the results of analyses for samples received by the laboratory on 12/07/05 22:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Hooker

Client Service Rep

Authorized Signature

Project Number: [none]
Project Manager: Anju Farfan

Reported: 12/19/05 11:23

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Informa	tion	 <u> </u>	
0512078-01	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	— 6129 MW-1 MW-1 Nick of TRCI	Receive Date: 12/07/05 22:30 Sampling Date: 12/16/05 10:43 Sample Depth:	Delivery Work Order (LabW: Global ID: T0600101465 Matrix: W Samle QC Type (SACode): CS Cooler ID:
0512078-02	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 6129 MW-2 MW-2 Nick of TRCI	Receive Date: 12,07/05 22:30 Sampling Date: 12,06/05 11:19 Sample Depth: Sample Matrix: Water	Delivery Work Order (LabW: Global ID: T0600101465 Matrix: W Samle QC Type (SACode): CS Cooler ID:
0512078-03	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 6129 MW-3 MW-3 Nick of TRCI	Receive Date: 12,07/05 22:30 Sampling Date: 12,06/05 11:56 Sample Depth: Sample Matrix: Water	Delivery Work Order (LabW: Global ID: T0600101465 Matrix: W Samle QC Type (SACode): CS Cooler ID:

Project: 6129

Project Number: [none] Project Manager: Anju Farfan

Reported: 12/19/05 11:23

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0512078-01	Client Sam	ple Nam	e: 6129,	MW-1, N	IW-1, 12/6	/2005 10	:43:00AM, Nic						
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	nalyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quais
Benzene	ND	ug/L	0.50	ğışı	EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
Ethylbenzene	ND	ug/L	0.50	•	EPA-8260	12/13/05	12/14/05 13:51	MCF	MŞ-V10	1	BOL0546	ND	
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
Toluene	0.93	ug/L	0.50	<u>1,</u>	EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
Total Xylenes	1.8	ug/L	1.0		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260		2007	MCF	MS-V10	1	BOL0546	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
Ethanol	ND	ug/L	250		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	V11
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MŞ-V10	1	BOL0546	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	• •	EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
1,2-Dichloroethane-d4 (Surrogate)	108	%	76 - 114	CL - UCL)	EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546		
Toluene-d8 (Surrogate)	103	%	88 - 110 4	.CL - UCL)	EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546		
4-Bromofluorobenzene (Surrogate)	98.7	%	86 - 115 ʾ(L	.CL - UCL)	EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546		

Project: 6129 Project Number: [none]

Project Manager: Anju Farfan

Reported: 12/19/05 11:23

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0512078-02	Client Sam	ple Name	e: 612	MW-2, N	1W-2, 12/6	/2005 11	:19:00AM, N	ick ***					
						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	12/13/05	12/14/05 14:13	3 MCF	MS-V10	1	BOL0546	ND	
1,2-Dibromoethane	ND	ug/L	0.50	<u>.</u>	EPA-8260	12/13/05	12/14/05, 14:1:	3 MCF	MS-V10	1	BOL0546	ND	
1,2-Dichloroethane	ND	ug/L	0.50	enter	EPA-8260	12/13/05	12/14/05 14:13	3 MCF	MS-V10	1.	BOL0546	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:1:	3 € MCF	MS-V10	1	BOL0546	ND	
Methyl t-butyl ether	780	ug/L	25		EPA-8260	12/13/05	12/14/05 20:4	8 MCF	MS-V10	50	BOL0546	ND	A01
Toluene	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:1:	3 MCF	MS-V10	1	BOL0546	ND	·
Total Xylenes	ND	ug/L	1.0	•	EPA-8260	12/13/05	12/14/05 14:1:	3 MCF	MS-V10	1	BOL0546	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:1:	MCF.	MS-V10	1	BOL0546	ND	
t-Butyl alcohol	61	ug/L	10 🦸		EPA-8260	12/13/05	12/14/05 14:1:	MCF	MS-V10	1	BOL0546	ND .	
Dilsopropyl ether	15	ug/L	0.50	Ā	EPA-8260	12/13/05	12/14/05 14:48	MCF	MS-V10	. 1	BOL0546	ND	
Ethanol	ND ,	ug/L	250 1		EPA-8260	12/13/05	12/14/05 14:13	3 ☆ MCF	MS-V10	1	BOL0546	ND	V11
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:13	3 MCF	MS-V10	1	BOL0546	ND	
Total Purgeable Petroleum Hydrocarbons	340	ug/L	50		EPA-8260	12/13/05	12/14/05 14:13	3 MCF	MS-V10	1	BOL0546	ND	A53
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114	LCL - UCL)	EPA-8260	12/13/05	12/14/05 20:48	3 ≰ MCF	MS-V10	50	BOL0546	~ · · · · · · · · · · · · · · · · · · ·	
1,2-Dichloroethane-d4 (Surrogate)	109	%	76 - 114	CL - UCL)	EPA-8260	12/13/05	12/14/05 14:13	3 MCF	MS-V10	1	BOL0546		· · · · · · · · · · · · · · · · · · ·
Toluene-d8 (Surrogate)	101	%	88 - 110	LCL - UCL)	EPA-8260	12/13/05	12/14/05 14:13	3 MCF	MS-V10	1	BOL0546		
Toluene-d8 (Surrogate)	101	%	88 - 110	LCL - UCL)	EPA-8260	12/13/05	12/14/05 20:48	MCF	MS-V10	50	BOL0546		
4-Bromofluorobenzene (Surrogate)	99.9	%	86 - 115	(LCL - UCL)	EPA-8260	12/13/05	12/14/05 20:48	3 / MCF	MS-V10	50	BOL0546		
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115	LCL - UCL)	EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546		

Project: 6129

Project Number: [none]

Project Manager: Anju Farfan

Reported: 12/19/05 11:23

Page 4 of 8

Volatile Organic Analysis (EPA Method 8260)

esult Unit ND ug/l ND ug/l ND ug/l ND ug/l 1800 ug/l 1.6 ug/l	s PQL - 0:50 - 0.50 - 0.50 - 0.50	MDL	Method EPA-8260 EPA-8260 EPA-8260 EPA-8260	Prep Date 12/13/05 12/13/05	12/14/05 14:36 12/14/05 14:36	Analyst MCF	Instru- ment ID MS-V10 MS-V10	Dilution 1	QC Batch ID BOL0546	MB Bias ND	Lab Quals
ND ug/l ND ug/l ND ug/l ND ug/l ND ug/l	0:50 0.50 0.50 0.50		EPA-8260 EPA-8260 EPA-8260	Date 12/13/05 12/13/05	Date/Time 12/14/05 14:36 12/14/05 14:36	MCF	ment ID MS-V10	1	BOL0546	Bias	
ND ug/l ND ug/l ND ug/l 1800 ug/l	0.50 0.50 0.50		EPA-8260 EPA-8260	12/13/05	12/14/05 14:36					ND	
ND ug/l ND ug/l 1800 ug/l	0.50		EPA-8260			MCF	MS-V10				
ND ug/l	_ 0.50	3		12/13/05				1	BOL0546	ND	
1800 ug/l	_ 0.50	3	EBA-8260		12/14/05 14:36.	MCF	MS-V10	1	BOL0546	ND	
-3	. 25 ું		Er: A-0∠00	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	
1.6 ug/l		4	EPA-8260	12/13/05	12/14/05 21:10	MCF	MS-V10	50	BOL0546	ND	A01
	0.50		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	
3.6 ug/l	1:0	9	EPA-8260		12/14/05 14:36		MS-V10	1	BOL0546	ND	
ND ug/L	0.50		EPA-8260		12/14/05 14:36	<u> </u>	MS-V10	1			
160 ug/L	. 10		EPA-8260				.w:	1		·	
ND ug/L	0.50	•	EPA-8260			4		1			
ND ug/L	. 250		EPA-8260	12/13/05		* *		1			V11
ND ug/L	0.50	}	EPA-8260	12/13/05	2 3.5 mg/s 2 mg		MS-V10	1	·		
430 ug/L	50		EPA-8260					1	BOL0546	ND	A53
101 %	76 - 114	CL - UCL)	EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546		
106 %	76 - 114	LCL - UCL)	EPA-8260	12/13/05	12/14/05 21:10	E C TON	MS-V10	50			
103 %	88 - 110 (LCL - UCL)	EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1			
101 %	88 - 110 ((CL - UCL)	EPA-8260	12/13/05	12/14/05 21:10	<u> </u>		50			
99.4 %	86 - 115 (LCL - UCL)	EPA-8260				MS-V10	1			
100 %	86 - 115 (LCL - UCL)	EPA-8260				MS-V10				
1 1 1 1	160 ug/L ND ug/L ND ug/L ND ug/L 130 ug/L 101 % 106 % 103 % 101 % 9.4 %	160 ug/L 10 ND ug/L 0.50 ND ug/L 250 ND ug/L 0.50 430 ug/L 50 101 % 76 - 114 106 % 76 - 114 103 % 88 - 110 101 % 88 - 110 19.4 % 86 - 115	160 ug/L 10 ND ug/L 0.50 ND ug/L 250 ND ug/L 0.50 130 ug/L 50 101 % 76 - 114 LCL - UCL) 106 % 76 - 114 (LCL - UCL) 103 % 88 - 110 (LCL - UCL) 101 % 88 - 110 (LCL - UCL) 101 % 86 - 115 (LCL - UCL)	160 ug/L 10 EPA-8260 ND ug/L 0.50 EPA-8260 ND ug/L 0.50 EPA-8260 ND ug/L 0.50 EPA-8260 130 ug/L 50 EPA-8260 1410 % 76 - 114 CL - UCL) EPA-8260 1410 % 88 - 110 (LCL - UCL) EPA-8260 1410 % 88 - 110 (LCL - UCL) EPA-8260 1410 % 88 - 110 (LCL - UCL) EPA-8260 1410 % 88 - 110 (LCL - UCL) EPA-8260 1410 % 86 - 115 (LCL - UCL) EPA-8260 1410 % 86 - 115 (LCL - UCL) EPA-8260	160 ug/L 10 EPA-8260 12/13/05 ND ug/L 0.50 EPA-8260 12/13/05 ND ug/L 250 EPA-8260 12/13/05 ND ug/L 0.50 EPA-8260 12/13/05 130 ug/L 50 EPA-8260 12/13/05 130 ug/L 50 EPA-8260 12/13/05 101 % 76 - 114 CCL - UCL) EPA-8260 12/13/05 106 % 76 - 114 CCL - UCL) EPA-8260 12/13/05 107 W 88 - 110 (CCL - UCL) EPA-8260 12/13/05 108 W 86 - 115 (CCL - UCL) EPA-8260 12/13/05	160 ug/L 10 EPA-8260 12/13/05 12/14/05 14:36 ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 ND ug/L 250 EPA-8260 12/13/05 12/14/05 14:36 ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 130 ug/L 50 EPA-8260 12/13/05 12/14/05 14:36 101 % 76 - 114 CCL - UCL) EPA-8260 12/13/05 12/14/05 14:36 106 % 76 - 114 (LCL - UCL) EPA-8260 12/13/05 12/14/05 21:10 107 % 88 - 110 (LCL - UCL) EPA-8260 12/13/05 12/14/05 14:36 108 % 88 - 110 (LCL - UCL) EPA-8260 12/13/05 12/14/05 14:36 109 % 88 - 110 (LCL - UCL) EPA-8260 12/13/05 12/14/05 14:36	160 ug/L 10 EPA-8260 12/13/05 12/14/05 14:36 MCF ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 MCF ND ug/L 250 EPA-8260 12/13/05 12/14/05 14:36 MCF ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 MCF ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 MCF 130 ug/L 50 EPA-8260 12/13/05 12/14/05 14:36 MCF 101 % 76 - 114 CL - UCL) EPA-8260 12/13/05 12/14/05 14:36 MCF 106 % 76 - 114 (LCL - UCL) EPA-8260 12/13/05 12/14/05 21:10 MCF 107 MCF 108 MCF 109 MCF 109 MCF 100 MCF	160 ug/L 10 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 130 ug/L 50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1430 ug/L 50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1501 % 76 - 114 CCL - UCL) EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1506 % 76 - 114 CCL - UCL) EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1508 % 88 - 110 (LCL - UCL) EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1509 % 88 - 110 (LCL - UCL) EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1501 % 88 - 110 (LCL - UCL) EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1501 % 88 - 110 (LCL - UCL) EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1502 MCF MS-V10 1503 MCF MS-V10 1503 MCF MS-V10 1504 MCF MS-V10 1504 MCF MS-V10 1505 MCF MS-V10 1506 MCF MS-V10 1506 MCF MS-V10 1507 MCF MS-V10 1508 MCF MS-V10	160	160 ug/L 10 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 ND ug/L 250 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 130 ug/L 50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 101 % 76 - 114 CL - UCL) EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 106 % 76 - 114 (LCL - UCL) EPA-8260 12/13/05 12/14/05 21:10 MCF MS-V10 50 BOL0546 107 W 88 - 110 (LCL - UCL) EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 108 W 88 - 110 (LCL - UCL) EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 109 W 86 - 115 (LCL - UCL) EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546	160 ug/L 10 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 ND ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 ND ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 ND ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 ND ND ug/L 0.50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 ND H30 ug/L 50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 ND H30 ug/L 50 EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 ND H30 ug/L CL - UCL) EPA-8260 12/13/05 12/14/05 14:36 MCF MS-V10 1 BOL0546 ND H30 MCF MS-V10 ND H30 M

Project: 6129

Project Number: [none]
Project Manager: Anju Farfan

Reported: 12/19/05 11:23

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

	3 🙀								Control Limits			
			•	Source		Spike			Percent		Percent	
Constituent	Batch ID	QC Sample ID	QC Sample Type	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery Lab Quals	
Benzene	BOL0546	BOL0546-MS1	Matrix Spike	ND	22.770	25.000	ug/L		91.1		70 - 130	
		BOL0546-MSD1	Matrix Spike Duplicate	ND	22.710	25,000	ug/L	0.330	90.8	20	70 - 130	
Toluene	BOL0546	BOL0546-M\$1	Matrix Spike	ND	22.760	25.000	ug/L		91.0		70 - 130	
		BOL0546-MSD1	Matrix Šģike Duplicate	ND	23.190	-25.000	ug/L	1.96	92.8	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BOL0546	BOL0546-MS1	Matrix Spike	ND	10.580	10.000	uģ/L		106		76 - 114	
		BOL0546-MSD1	Matrix Spike Duplicate	ND	10.430	. 10.000	ug/L		104 ·		76 - 114	
Toluene-d8 (Surrogate)	BOL0546	BOL0546-MS1	Matrix Sake	ND	10.140	10.000	ug/L	-	101		88 - 110	
		BOL0546-MSD1	Matrix Spike Duplicate	ND	9.8100	10.000	ैं; +ug/L ं		98.1		88 - 110	
4-Bromofluorobenzene (Surrogate)	BOL0546	BOL0546-MS1	Matrix Spike	ND	9.9200	10.000	ug/L	• .	99.2		86 - 115	
		BOL0546-MSD1	Matrix Spike Duplicate	ND	10.350	ູ 10.000	ug/L		104		86 - 115	
			1. 1. (1)			- A	14.5				· · · · · · · · · · · · · · · · · · ·	

Project: 6129
Project Number: [none]

Project Manager: Anju Farfan

Reported: 12/19/05 11:23

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

· · · · · · · · · · · · · · · · · · ·							T		
					Spike		Percent	Control Limits Percent	
Constituent	Batch ID	QC Sample ID	QC Type	Result	Level	PQL	Units Recovery	RPD Recovery RPD	Lab Quals
Benzene	BOL0546	BOL0546-BS1	LCS	23.390	25.000	0.50	∯ug/L 93.6	70 - 130	
Toluene	BOL0546	BOL0546-BS1	LCS	24.230	25.000	0.50	_eug/L≝ 96,9	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BOL0546	BOL0546-BS1	LCS ; *	10.140	10.000	·	∮ug/L 101	76 - 114	
Toluene-d8 (Surrogate)	BOL0546	BOL0546-BS1	LCS	10.240	10.000		sug/L 102	88 - 110	
4-Bromofluorobenzene (Surrogate)	BOL0546	BOL0546-BS1	LCS	10.060	10.000		ug/L ³ 101	86 - 115	
							-		

Project: 6129

Project Number: [none] Project Manager: Anju Farfan

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Page 7 of 8

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
Велгеле	BOL0546	BOL0546-BLK1	ND .	ug/L	0.50	0.13	uca Quero
Ethylbenzene	BOL0546	BOL0546-BLK1	ND.	ng/L	0.50	0.14	
Methyl t-butyl ether	BOL0546	BOL0546-BLK1	ND 1	ug/L	0.50	0.15	
Toluene	BOL0546	BOL0546-BLK1	ND.	ug/L	0.50	0.15	 -
Total Xylenes	BO) 0546	BOL0546-BLK1	ND	uĝ/L	1.0	0.40	···
t-Amyl Methyl ether	BOL0 5 46	BOL0546-BLK1	ND #	ug/L	0.50	0.31	·····
t-Butyl alcohol	BOL0546	BOL0546-BLK1	ND .	ug/L	10	10	·····
Diisopropyl ether	BOL0546	BOL0546-BLK1	· ND		0.50	0.23	
Ethanol	BOL0546	BOL0546-BLK1	ND \$	ug/L	1000	110	
Ethyl t-butyl ether	BOL0546	BOL0546-BLK1	ND.	ug/£	0.50	0.27	
Total Purgeable Petroleum Hydrocarbons	BOL0546	BOL0546-BLK1	ND S	ug/L	50	23	•
1,2-Dichloroethane-d4 (Surrogate)	BOL0546	BOL0546-BLK1	400	.%			
Toluene-d8 (Surrogate)	BO£0 5 46	BOL0546-BLK1	100	70		LCL - UCL) LCL - UCL)	7-10-1
4-Bromofluorobenzene (Surrogate)	BOL0546	BQL0546-BLK1	95.5	<u>%</u>		LCL - UCL)	
· · · · · · · · · · · · · · · · · · ·			***************************************	-	. 00-113 (LOL - UCL)	

Relative Percent Difference

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

RPD

Project: 6129
Project Number: [none]
Project Manager: Anju Farfan

Reported: 12/19/05 11:23

Notes and Definitions

VII	The Continuing Calibration Verification (CCV) recovery	is not within established control limits.
J	Estimated value	
A53	Chromatogram not typical of gasoline.	
A01	PQL's and MDL's are raised due to sample dilution.	
ND	Analyte NOT DETECTED at or above the reporting limit	
dry	Sample results reported on a dry weight basis	

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| HINDOCSIWP801LAB DOCSIFORMS\SAMRECZWPD|

BC LABORATORIES, INC.

4100 Atlas Court © Bakersfield CA 93303 (661) 327-4911 © FAX (661) 327-1918

CHAIN OF CUSTODY

		$\frac{(661)527431111718(661)3271315}{(15-12078)}$				Analysis Requested							
Circle one: Phillips 66 / Unocal Address: 3420 35th Ave		Consultant Firmi TR	MATRIX (GW) Ground- water (S)		oxygenates	260B	in tessite	0X/5 by 82608	Requested				
city: OAKLAND		4-cligit site#: 6	Soil (V/W) Waste- water	BE by 8021B, by 8015M	i u	BTEX/MTBE/OXYS BY 8	ETHANOL by 8260B	88	141/ Time Requ				
State: Ci	A Zip:	Project#: 4/05	50001	(SL)	H 25		30	L by 826	\ <u>\</u>				
Phillips (66 /Unocal Mgr:Thomas Kose	Sampler Name: No	IL IVANOFF	Sludge	CINIT			NN P	BIEX	VOAS			
∟ab#	Sample Description	Field Point Name	Date & Time Sampled		BTEX/MTBE	TPH	BTE)	ETHANOL by 82 TPPH by 8260B	IPPH,	S √045 N Turnaround			
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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 Conoc oPhillips Refinery at Rodeo, California. Disposal at the Rodeo facility was authorized by ConocoPhillips in accordance with "ESD Standard Operating Procedures – Water Quality and Compliance", as revised on February 7, 2003. Documentation of compliance with ConocoPhillips requirements is provided by an ESD Form R -149, which is on file at TRC's Concord Office. Purge water containing a significant amount of liquid -phase hydrocarbons was accumulated separately in drums for transportation and disposal by Filter Recycling, Inc.

Limitations

The fluid level monitoring and groundwater sampling activities summarized in this report have been pettermed 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.