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ENVIRONMENTAL HEALTH SERVICE

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Го:	Alameda	County Water District	Date: 2/22/2006
	43885 Gr	immer Road	
	Fremont,	CA 94538	Job No: C1Q-5487-011
Attn:	Ms. Eileer	n Chen	
We a	are sending the	e following items:	
Date	HENE LE	Copies	Description
1	0-Feb-06	1	Quarterly Summary Report - Fourth Quarter 2005
			76 Service Station #5487
			28250 Hesperian Blvd.
			Hayward, California
	e are transmit For your [ Information	ted:  For action  specified below	For review
	For your [ Information	☐ For action ☐	
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Remar	For your [Information	For action specified below	By: Eric Hetrick





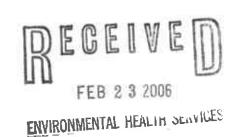
76 Broadway Sacramento, California 95818

February 10, 2006

Ms. Eileen Chen Alameda County Water District 43885 South Grimmer Boulevard Fremont, California 94538

Re:

Report Transmittal
Quarterly Report
Fourth Quarter - 2005
76 Service Station #5487
28250 Hesperlan Boulevard
Hayward, CA



Dear Ms. Chen:

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

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

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

Fax: 916-558-7639

Sincerely,

Thomas Kosel

Risk Management & Remediation

Home H. Koal

Attachment



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175 Bernal Road • Suite 200 San Jose, California 95119 USA 800.477.7411 Fax 408.225.8506

February 10, 2006

Ms. Eileen Chen Alameda County Water District 43885 South Grimmer Boulevard Fremont, California 94538

RE: **Quarterly Summary Report - Fourth Quarter 2005** 

> R. LEE DOOLEY NO. 0183 CERTIFIED

YDROGEOLOGIS

Delta Project Number: C1Q-5487-011

Dear Ms. Chen:

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

#### **Service Station**

76 Service Station No 5487

# Location

Eminonmental Hoatin

28250 Hesperian Boulevard Hayward, California

Sincerely,

Delta Environmental Consultants, Inc.

Eric G. Hetrick

Project Manager

R. Lee Dooley **CHG 183** 

Shelby Lathrop, Cono CC:

A member of:

# QUARTERLY SUMMARY REPORT Fourth Quarter 2005 76 Branded Facility No. 5487 28250 Hesperian Boulevard Hayward, California

#### PREVIOUS ASSESSMENT

The Site is located at 28250 Hesperian Boulevard in Hayward, California. Two gasoline underground storage tanks (USTs), one waste oil UST and their associated piping were removed from the site in January of 1989 during the UST replacement activities. Seven soil samples from the sidewalls of the gasoline UST excavation and one soil sample from the base of the waste oil UST were collected for laboratory analysis. Following collection of the soil samples, approximately 2,000 gallons of groundwater was extracted from the gasoline UST excavation and properly disposed.

Laboratory analytical results from the soil samples collected from the gasoline UST excavation sidewalls revealed the presence of total petroleum hydrocarbons as gasoline (TPH-g) at concentrations ranging from below the laboratory detection limits to 130 milligrams per kilogram (mg/kg). Additionally, analysis of the soil sample collected from the base of the former waste oil UST indicated the presence of 800 mg/kg TPH as diesel (TPH-d), 60 mg/kg of TPH-g, and 3.6 mg/kg of benzene.

Based on the results of the soil samples collected following the UST removal activities, the waste oil UST excavation was extended laterally on all sides and extended to approximately 21 feet by 29 feet by ten feet deep on February 1, 1989. During the over-excavation activities, four sidewall samples were collected from the excavation for confirmation laboratory analysis. Laboratory analysis of the soil samples collected from the sidewalls of the waste oil UST excavation indicated the presence of concentrations of TPH-d ranging from below the laboratory detection limit to 180 mg/kg and TPH-g ranging from below the laboratory detection limit to 110 mg/kg.

On February 14, 1989, approximately 17,500 gallons of groundwater was extracted from the gasoline UST excavation and disposed of in preparation for the installation of new USTs. A groundwater sample collected during the extraction event contained 110 micrograms per liter (ug/l) of TPH-d and 2.2 ug/l of benzene.

The northeast sidewall of the waste oil UST excavation was extended an additional eight feet laterally on February 17, 1989 and February 24, 1989. Confirmation soil sampling from the final completed excavation did not reveal the presence of petroleum hydrocarbons in excess of the laboratory detection limits. However, a groundwater sample collected from the base of the excavation revealed the presence of 1,300 ug/l TPH-d, 500 ug/l TPH-g, and 52 ug/l benzene. Based on these results, approximately 4,500 gallons of groundwater was extracted from the waste oil UST excavation and disposed.

Based on the laboratory results of the soil and groundwater samples collected from the UST excavation areas, five groundwater monitoring wells (MW-1 through MW-5) were advanced at the site. Laboratory analytical results of soil samples collected during the well installations of monitor wells MW-1 through MW-4 did not indicate the presence of TPH-g or benzene, toluene, ethyl benzene and xylenes (BTEX) in excess of the laboratory detection limits with the exception of 1.4 mg/kg TPH-g in a soil sample collected from MW-4 at a depth of nine feet below grade level. Further, laboratory analysis from a soil sample collected during the installation of monitor well MW-5 showed the presence of TPH-g at 900 mg/kg and benzene at 3.1 mg/kg.

Groundwater analysis of collected groundwater samples from monitor wells MW-1 through MW-5 did not indicate the presence of petroleum hydrocarbons in excess of the laboratory detection limits with the exception of groundwater samples collected from MW-1 and MW-4 which indicate the presence of benzene at concentrations of 2.1 ug/l and 0.33 ug/l, respectively.

Due to fluctuating concentrations of petroleum hydrocarbons in groundwater samples collected from monitor well MW-5, two additional wells (MW-6 and MW-7) were installed at the site in June 1992. Laboratory analytical results of the soil sample collected from monitor MW-7 did not indicate the presence of hydrocarbon concentrations in excess of the laboratory detection limits. However, the soil sample collected during the installation of monitor well MW-6 contained 410 mg/kg TPH-g and 115 mg/kg total BTEX. Analysis of groundwater samples collected from these two wells was similar to the soil analytical results. Analytical results revealed that sample collected from monitor well MW-7 were below the laboratory detection limit, however, sample collected from monitor well MW-6 contained TPH-g concentrations ranging from 300 ug/l to 540 ug/l and benzene concentrations ranging from 12 ug/l to 66 ug/l.

Currently, groundwater monitoring wells MW-5, MW-6 and MW-7 are sampled annually during the first quarter of each year. The highest concentrations of benzene and MTBE are consistently detected in wells adjacent to the UST cavity and pump islands (wells MW-4, MW-5, and MW-6) in the southeastern portion of the site.

#### MONITORING AND SAMPLING

Groundwater monitoring is performed annually during the first quarter of each year. As this site is monitored and sampled on an annual basis, the following is a re-statement from the First Quarter, 2005 Quarterly Summary Report dated April 2, 2005.

Currently, groundwater samples are collected from three site wells (MW-5, MW-6, MW-7) on an annual basis during the first quarter of each year. The sampled wells are submitted to Severn Trent Laboratories for analysis of total purgeable petroleum hydrocarbons (TPPH), BTEX and MTBE. Additionally, well MW-6 is monitored for ethanol.

During the first quarter 2005, groundwater samples and depth to water measurements were collected from the referenced wells on March 2, 2005. During the event, depth to groundwater measurements ranged from 4.01 feet (MW-7) to 6.30 feet (MW-3).

Laboratory analytical results of the groundwater samples collected from wells MW-5, MW-6 and MW-7 indicated the presence of MTBE at concentrations of 350  $\mu$ g/l, 390  $\mu$ g/l and 120  $\mu$ g/l, respectively. Additionally, benzene concentrations were detected in wells MW-5 and MW-6 at respective concentrations of 8.2  $\mu$ g/l and 3.0  $\mu$ g/l. Finally, TPH-g concentrations were detected in monitoring well MW-5 at a concentration of 110  $\mu$ g/l. No additional analytes were detected in excess of the laboratory detection limits.

#### **REMEDIATION STATUS**

Approximately 650 cubic yards of soil were removed from the gasoline and waste oil UST areas during the lateral extension of each excavation in January 1989. Additionally, an approximate total of 24,000 gallons of hydrocarbon-impacted groundwater was extracted from the gasoline and waste oil UST excavations in January and February 1989.

### **CHARACTERIZATION STATUS**

Based on the laboratory analytical results from soil samples collected during the UST over-excavation activities, it appears that hydrocarbon-saturated soils have been removed from the site. However, based on annual groundwater monitoring data, specifically MTBE concentrations, collected from the most downgradient monitor well (MW-7), the extent of contamination in groundwater has not been adequately delineated in the downgradient direction.

#### RECENT CORRESPONDENCE

Historical correspondence from 2003 includes a letter from the City of Hayward dated April 18, 2003, where the City stated that the oversight of the UST Site Contamination Case for the 28250 Hesperian Boulevard property was transferred to the Alameda County Department of Environmental Health (ACDEH). The letter referred to Mr. Scott Seery, Hazardous Materials Specialist with the ACDEH, as the contact for the site. Recently, the site was managed by Mr. Don Hwang of the ACDEH.

ConocoPhillips and Delta have initiated verbal correspondences and dialog with the ACDEH. These correspondences resulted in the submittal of a Supplemental Site Assessment Work Plan in the fourth quarter 2005. Following submittal of the work plan, Delta was notified that the site was transferred from the ACDEH to the Alameda County Water District (ACWD) and that Ms. Eileen Chen is the new Case Manager for the site. Based on this information, Delta submitted the Assessment Work Plan and the third quarter 2005 Quarterly Summary Report to the ACWD. Approval of the assessment work plan is pending.

# THIS QUARTER ACTIVITIES (Fourth Quarter 2005)

- Delta submitted a Third Quarter Quarterly Summary Report on November 25, 2005.
- Delta prepared and submitted a Supplemental Site Assessment Work Plan.

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

• Upon approval from the ACWD, Delta anticipates the completion of the proposed assessment activities described in the Supplemental Site Assessment Work Plan to further assess the dissolved-phase hydrocarbon plume in the area of MW-6.

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



April 4, 2005

ConocoPhillips Company 76 Broadway Sacramento, CA 95818

ATTN:

MS. SHELBY LATHROP

SITE:

**76 STATION 5487** 

28250 HESPERIAN BOULEVARD

HAYWARD, CALIFORNIA

RE:

ANNUAL MONITORING REPORT

APRIL 2004 THROUGH MARCH 2005

Dear Ms. Lathop:

Please find enclosed our Annual Monitoring Report for 76 Station 5487, located at 28250 Hesperian Boulevard, Dublin, 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. Erick Hetrick, Delta Environmental (3 copies)

Enclosures 20-0400/5487R02.QMS



# ANNUAL MONITORING REPORT APRIL 2004 THROUGH MARCH 2005

76 STATION 5487 5487 Hesperian Boulevard Hayward, California

Prepared For:

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

By:

Demil James



Senior Project Geologist, Irvine Operations April 1, 2005

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

17,45% 12,6%

# **Summary of Gauging and Sampling Activities** April 2004 through March 2005 76 Station 5487 28250 Hesperian Boulevard Hayward, CA

Project Coordinator: Shelby Lathrop

Water Sampling Contractor: TRC

Telephone: **916-558-7609** 

Compiled by: Valentina Tobon

Date(s) of Gauging/Sampling Event: 03/02/05

**Sample Points** 

Groundwater wells:

6 onsite.

1 offsite

Wells gauged: 7

Wells sampled: 3

Purging method: Diaphragm pump

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

Type: **n/a** 

Liquid Phase Hydrocarbons (LPH)

Wells with LPH: 0

Maximum thickness (feet): n/a

LPH removal frequency: **n/a** 

Method: n/a

Treatment or disposal of water/LPH: n/a

**Hydrogeologic Parameters** 

Depth to groundwater (below TOC):

Minimum: 4.01 feet

Maximum: 6.3 feet

Average groundwater elevation (relative to available local datum): 6.26 feet Average change in groundwater elevation since previous event: 0.86 feet

Interpreted groundwater gradient and flow direction:

Current event: 0.008 ft/ft, south

Previous event: **0.006 ft/ft, south (02/20/04)** 

Selected Laboratory Results

Wells with detected Benzene:

Wells above MCL (1.0 µg/l): 2

Maximum reported benzene concentration: 8.2 μg/l (MW-5)

Wells with TPPH 8260B

1

2

Maximum: 110 μg/l (MW-5)

Wells with MTBE

3

Maximum: 390 μg/l (MW-6)

Notes:

MW-1=Monitored only, MW-2=Monitored only, MW-3=Monitored only, MW-4=Monitored only,

#### TABLE KEY

#### STANDARD ABREVIATIONS

-- e not analyzed, measured, or collected

LPH = liquid-phase hydrocarbons

Trace = less than 0.01 foot of LPH in well

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

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

#### **ANALYTES**

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

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

MTBE = methyl tertiary butyl ether

PCB = polychlorinated biphenyls

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

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

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

TAME = tertiary amyl methyl ether

1.1-DCA = 1.1-dichloroethane

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

1.1-DCE = 1.1-dichloroethene

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

#### NOTES

- 1. Elevations are in feet above mean sea level. Depths are in feet below surveyed top-of-casing.
- 2. Groundwater elevations for wells with LPH are calculated as: 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.
- 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 resurvey.
- 9. Historical data has been validated for this report. Values presented in the following tables supercede those from previous reports.

#### <u>REFERENCE</u>

TRC began groundwater monitoring and sampling for 76 Station 5487 in October 2003. Historical data compiled prior to that time were provided by Gettler-Ryan Inc.

Table 1
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 2, 2005
76 Station 5487

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B		Comments
	(feet)	(feet)	(feet)	(feet)	(fect)	(μg/l)	(μg/l)	(µg/l)	(μ <b>g</b> /l)	(μg/l)	(µg/l)	(μg/l)	(μg/l)		
MW-1		(Screen I	nterval in f	eet: 4.0-21	3.0)										
03/02/05	11.73	5.02	0.00	6.71	0.99		-						ea ,		Monitored only
MW-2		(Screen I	nterval in f	eet: 4.0-24	1.0)										
03/02/05	12.58	5.75	0.00	6.83	1.05			<b>"-</b>		· <del></del>					Monitored only
MW-3		(Screen I	nterval in f	eet: 5.0-2	5.0)										
03/02/05	11.99	6.30	0.00	5.69	0.27	_		-			***				Monitored only
MW-4		(Screen I	nterval in f	eet: 5.0-2	5.0)										
03/02/05	11.58	4.78	0.00	6.80	1.05	-									Monitored only
MW-5		(Screen I	nterval in f	eet: 4.0-24	1.0)										
03/02/05	10.79	4.74	0.00	6.05	0.89	-	110	8.2	1 <b>.2</b>	88.0	2.1		350		
MW-6		(Screen I	nterval in f	cet: 5.0-18	3.0)										
03/02/05	5 11.18	4.80	0.00	6.38	0.83	-	ND<200	3.0	0.58	0.68	ND<1.0		390	,	
MW-7		(Screen l	nterval in f	eet: 3.5-1	9.0)										
03/02/05	5 9.39	4.01	0.00	5.38	0.92	-	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		120		

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 1989 Through March 2005
76 Station 5487

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(μg/l)	$(\mu g/l)$	(µg/l)	(μ <b>g/l)</b>	(μg/l)	(µg/l)	(μg/l)	
MW-1	(	Screen Int	terval in fee	t: 4.0-28.0	 )									
04/26/	89 –		0,00	-		ND		2.1	ND	ND	ND			
08/16/	89					ND		ND	ND	ND	ND			
11/14/	89					ND		ND	ND	ND	ND		-	
02/16/	90		-	_		ND		ND	ND	ND	ND		-	
05/16/	90	**		-		ND		ND	ND	ND	ND			
08/29/	90		-			ND		ND	ND	ND	0.74			
11/15/	90					ND		ND	ND	ND	ND			
02/11/	91					ND		ND	ND	ND	ND		**	
05/10/	91					ND		ND	ND	ND	ND			
08/02/	91			_	· —	ND		ND	ND	ND	ND		n <del>-</del>	•
11/07/	91					ND	44	ND	ND	ND	ND			
08/04/	92 -					ND		ND	ND	ND	ND			
05/03/	93 12.5	7 6.87	0.00	5.70			MA	*-	-			<del></del>		
·08/05/	93 12.5	7.49	0.00	5.08	-0.62	ND	44	ND	ND	ND	ND			
11/05/	93 11.73	6.98	0.00	4.75	-0.33								₩.	
02/07/	94 11.73	6.26	0.00	5.47	0.72					••			•	•
05/02/	94 11.7	6.27	0.00	5.46	-0.01									
08/02/	94 11.7	6.89	0.00	4.84	-0.62	ND		ND	ND	ND	ND	F*	<del></del>	•
11/02/	94 11.73	3 7.07	0.00	4.66	-0.18				. **			· ·	·	
02/01/	95 11.7	3 5.17	0.00	6.56	1.90	'					·		PR	
05/02/	95 11.7	3 5.65	0.00	6.08	-0.48			40						
08/03/	95 11.7	6.21	0.00	5.52	-0.56	ND		ND	ND	ND	ND		u.	
11/06/	95 11.7	3 6.80	0.00	4.93	-0.59									
02/02/	96 11.7	3 3.88	0.00	7.85	2.92		-			·	<b></b> ·			Sampled annual

Page 1 of 9

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 1989 Through March 2005
76 Station 5487

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzeлe	Total Xylenes	MTBE 8021B	MTBE 8260B		Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(µg/l)	(µg/1)	(μg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)		<del> </del>
MW-1	continue														A 11 11 11 1
02/07/9		4.63	0.00	7.10						-	**				Sampling discontinued
02/09/9		2.70	0.00	9.03	1.93						••	,	-		
02/02/9	9 11.73	5.42	0.00	6.31	-2.72			-		Lu	w.				
02/04/0	0 11.73	4.08	0.00	7.65	1.34			· <del></del>			·		-		
02/02/0	11.73	5.26	0.00	6.47	-1.18								-		
03/02/0	2 11.73	5.65	0.00	6.08	-0,39								_		
02/22/0	3 11.73	5.87	0.00	5.86	-0.22				-						
02/20/0	11.73	6.01	0.00	5.72	-0.14		<b></b>					u.	_		Monitored Only
03/02/0	5 11.73	5.02	0.00	6.71	0.99			••							Monitored only
MW-2		Screen Int	erval in fee	et: 4.0-24.0	1)										
04/26/8			ne.		´	ND		·ND	ND	ND	ND				
08/16/8	39					ND		ND	ND	ND	ND				
11/14/8	39	<del></del>				ND		ND	ND	ND	ND				
02/16/9	90					ND		ND	ND	ND	ND				
05/16/9	<del></del> 0	44				ND		ND	ND	ND	ND				
08/29/9	90					МD		ND	ND	ND	ND				
11/15/9		_		4		ND		ND	ND	ND	ND				
02/11/9	91	••			<b></b> .	ND		ND	ND	ND	ND	••			• .
05/10/9		·	·	_		ND		ND	ND	ND	ND				
08/02/9				<del></del>		ND		ND	ND	ND	ND				•
11/07/9						ND		ND	ND	ND	ND				
08/04/9						ND		ND	ND	ND	ND			•	
05/03/9			0.00	5.59		·									
08/05/9			0.00	4.92	-0.67	ND		ND	ND	ND	ND				
. 00,007	ري. در	1.01	3.00	, 7.,72	0.07	* ***		1,25	2125	- 1					

Page 2 of 9

Town they all publish

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 1989 Through March 2005
76 Station 5487

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	
MW-2	continued													
11/05/9	3 12.58	7.97	0.00	4.61	-0.31				-			••		
02/07/9	12.58	7.09	0.00	5.49	0.88		**		_					•
05/02/9	12.58	7.23	0.00	5.35	-0.14				-					
08/02/9	12.58	7.87	0.00	4.71	-0.64	ND		ND	ND	ND	ND			
11/02/9	12.58	7.98	0.00	4.60	-0.11								••	
02/01/9	5 12.58	6.13	0.00	6.45	1.85							·	<b>-</b> -	·
05/02/9	5 12.58	7.04	0.00	5.54	-0.91					••				
08/03/9	5 12.58	7.19	0.00	5.39	-0.15	ND		ND	ND	ND	ND			
11/06/9	<b>12.58</b>	7.80	0.00	4.78	-0.61									
02/02/9	96 12.58	5.91	0.00	6.67	1.89		=+		••					Sampled annually
02/07/9	7 12.58	5.65	0.00	6.93		••			-					Sampling discontinued
02/09/9	98 12.58	3.63	0.00	8.95	2.02	·								
02/02/9	99 12.58	6.36	0.00	6.22	-2.73									
. 02/04/0	00 12.58	6.04	0.00	6.54	0.32	<u>-</u>		-		-				
02/02/0	12.58	6.44	0.00	6.14	-0.40	_		-		_		••		
03/02/0	12.58	6.61	0.00	5.97	-0.17									
02/22/0	3 12.58										-			
02/20/0	12.58	6.80	0.00	5.78	<del></del>	<b></b> .								Monitored Only
03/02/0	)5 12.58	5.75	0.00	6.83	1.05		••							Monitored only
MW-3	(	Screen In	terval in fee	et: 5.0-25.0	))									
04/26/8	,					ND		ND	ND	ND	ND		. ••	
08/16/8	39				<u>.</u> ,	ND	P#	ND	ND	ND	ND			
11/14/8	39	-				ND		ND	ND	ND	ND			
02/16/9	90		<del></del>			ND	<b></b>	ND	ИD	ND	ND		<del>ren</del>	

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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 1989 Through March 2005
76 Station 5487

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B	 Comments
·	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(μg/l)	(μ <b>g/</b> l)	(μg/l)	(μg/l)	(μg/l)	(µg/l)	(μg/l)	
MW-3		d				•								
05/16/	90		48	**		ND		ND	ND	ND	ND			
08/29/				·		ND		ND	0.52	ND	ND			
11/15						ND		ND	ND	ND	ND		P.0	
02/11/				-		ND		ND	ND	ND	ND			
05/10/	91			-		ND		ND	ND	ND	ND			•
08/02/	91					ND		ND	ND	ND	ND			
11/07/	91					ИD		ND	ND	ND	ND			
08/04/	92					ND		ND	ND	ND	ND			
05/03/	93 12.40	6.82	0.00	5.64							·			
08/05/	93 12.40	5 7.50	0.00	4.96	-0.68			<b>u</b> _		•-				
11/05	93 11.99	7.35	0.00	4.64	-0.32									
02/07	94 11.99	6.58	0.00	5.41	0.77									
05/02	94 11.99	6.62	0.00	5.37	-0.04									
08/02	94 11.99	7. <b>2</b> 4	0.00	4.75	-0.62	ND		ND	ND	ND	ND			
11/02	94 11.99	7.42	0.00	4.57	-0.18	**					-			
0 <b>2</b> /01.	95 11.9	5.55	0.00	6.44	1.87			_						
05/02	95 11.9	9 5.70	0.00	6.29	-0.15			_						
08/03	95 11.9	9 6.59	0.00	5.40	-0.89	ND		ND	ND	ND	ND			
11/06	95 11.9	7.20	0.00	4.79	-0.61	"							_	
02/02	96 11.99	9 4.08	0.00	7.91	3.12						'			Sampled annually
02/07	97 11.9	9 5.04	0.00	6.95										Sampling discontinued
02/09	98 11.9	9 3.11	0.00	8.88	1.93								••	
02/02	99 11.9	5.69	0.00	6.30	-2.58					77			·	•
02/04	00 11.9	9 4.26	0.00	7.73	1.43	-	••				IL.			

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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 1989 Through March 2005
76 Station 5487

Date Sampled		Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPPH 8260B	Benzene	Товиеле	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	
MW-3	continue					131101								
02/02/0		4.91	0.00	7.08	-0.65		-	-		-				-
03/02/0			0.00	5.92	-1.16			-	••	-				
02/22/0			0.00	5.62	-0.30									
02/20/0		6.57	0.00	5.42	-0.20				••	7147			h=	Monitored Only
03/02/0	5 11.99	6.30	0.00	5.69	0.27									Monitored only
MW-4	G	Screen Int	erval in fee	t: 5.0-25.0	)									
04/26/8	9					ND		0.33	ND	ND	ND			
08/16/8	9			<u></u>		ND	77	ND	ND	ND	ND			
11/14/8	9					ND		ND	ND	ND	ND			
02/16/9	0			75		ND		ND	ND	ND	ND	4-		
05/16/9	0			**	_	ND		ND	ND	ND	ND			
08/29/9	0 –		•			ND		ND	ND	ND	ND			
11/15/9	0					ND		ND	ND	ND	ND		<b>W.A</b>	
02/11/9	1 -		44			ND		ND	ND	ND	ND			
05/10/9	1					ND		ND	ND	ND	ИD			
08/02/9	1					ND		ND	ND	ND	ND	Łu.		
11/07/9	1	•	77			ND		ND	ND	ND	ND			
08/04/9	2					ND		ND	ND	ND	ND			
05/03/9	3 12.09	6.60	0.00	5.49										
08/05/9	3 12.09	7.28	0.00	4.81	-0.68	ND	·	ND	ND	ND	ND			•
11/05/9	3. 11.58	7.07	0.00	4.51	-0.30				·					
02/07/9	4 11.58	6.21	0.00	5.37	0.86		-	* <del></del>					••	
05/02/9	4 11.58	6.32	0.00	5.26	-0.11									
08/02/9	4 11.58	6.95	0.00	4.63	-0.63	МD		ND	ND	ND	ND			

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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 1989 Through March 2005
76 Station 5487

Date Sampled		Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(μg/l)	(μ <b>ջ</b> /l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	
MW-4	continued													
11/02/9		7.13	0.00	4.45	-0.18			••						Sampled annually
02/01/9	5 11.58	5.23	0.00	6.35	1.90									
05/02/9	5 11.58	5.43	0.00	6.15	-0.20		. ••	-						
08/03/9	5 11.58	6.33	0.00	5.25	-0.90	ND		ND	ND	ND	ND			
11/06/9	5 11. <b>5</b> 8	6.90	0.00	4.68	-0.57		_	-						
02/02/9	6 11.58	3.71	0.00	7.87	3.19	~~	••							
02/07/9	7 11.58	4.46	0.00	7.12			_							Sampling discontinued
02/09/9	8 11.58	2.55	0.00	9.03	1.91					-	448			
02/02/9	9 11.58	5.37	0.00	6.21	-2.82		_							
02/04/0	0 11.58	4.09	0.00	7.49	1.28									
02/02/0	1 11.58	5.12	0.00	6.46	-1.03								_	
03/02/0	2 11.58	5.51	0.00	6.07	-0.39							· <b></b>		
02/22/0	3 11.58	6.12	0.00	5.46	-0.61		**			_				
02/20/0	4 11.58	5.83	0.00	5.75	0.29						-	•••		Monitored Only
03/02/0	5 11.58	4.78	0.00	6.80	1.05				20					Monitored only
MW-5	(	Screen Int	erval in fee	:t: 4.0-24.0	n									
04/26/8						ND		ND	ND	ND	ND			
08/16/8	9				<b>M</b> L	4400		1400	84	200	950			
08/31/8	s9 <b></b>					910	_	120	7.1	50	53			
11/14/8	9			_		73		4.7	0.97	2.9	16			
02/16/9	0			_		ND		ND	NĎ	ND	ND			
05/16/9	00		· -			1100		310	2.8	70	110			
08/29/9						ND		0.7	ND	0.57	1.1			
11/15/9						ND		ND	ND	ND	0.47			

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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 1989 Through March 2005
76 Station 5487

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPPH <b>82</b> 60B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μջ/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	
MW-5	continue	đ												
02/11/9	1			-	B	58		23	ND	2.9	1.3			
05/10/9			-			ND		ND	ND	ND	ND			
08/02/9	1					100		43	0.33	12	5.2			
11/07/9	1			-		700	_	43	1.7	29	24			
02/05/9	2					120	-	20	ND	4.4	4.7			
05/05/9	)2			**		170	_	45	0.48	9	6.8			
08/04/9	2					80	-	13	ND	4.5	6.9			
11/05/9	2					120	-	16	ND	3.5	3			
02/02/9	3					77		5	ND	1.2	1.3			
05/03/9	3 11.18	6.16	0.00	5.02		260		35	ND	2.3	3.1	••		
08/05/9	3 11.18	6.97	0.00	4.21	-0.81	530	_	210	0.62	54	44	**		
11/05/9	3 10.79	6.81	0.00	3.98	-0.23	110		12	ND	2.3	2.3		-	
02/07/9	10.79	5.70	0.00	5.09	1.11	180	***	22	ND	6.4	5.9			
05/02/9	10.79	5.96	0.00	4.83	-0.26	170		38	0.73	8.5	8.4		-	
08/02/9	94 10.79	6.68	0.00	4.11	-0.72	59	_	16	ND	2.4	3.1	**		
11/02/9	94 10.79	6.86	0.00	3.93	-0.18	450		73	1.6	6.2	11			
02/01/9	95 10.79	4.85	0.00	5.94	2.01	170		11	ND	2.4	3.9			
05/02/9	95 10.79	4.95	0.00	5.84	-0.10	ND		7.5	0.51	1.2	1.6		••	
08/03/9	5 10.79	6.03	0.00	4.76	-1.08	ND		12	ND	0.7	ND			
11/06/9	95 10.79	6.70	0.00	4.09	-0.67	160		80	ND	7.4	10	120		
02/02/9	96 10.79	3.50	0.00	7.29	3.20	64		20	ND	3.9	6.1	150	-	
02/07/9	97 10.79	4.26	0.00	6.53	<del></del>	85		16	0.56	1.7	3.8	250		
02/09/9	98 10.79	2,29	0.00	8.50	1.97	220		54	ND	3.2	5.9	230		
02/02/9	99 10.79	5.07	0.00	5.72	-2.78	61		19	ND	1.3	2.1	110	- <del>-</del>	

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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 1989 Through March 2005
76 Station 5487

	Date Sampled		Depth to Water (feet)	LPH Thickness (feet)	Ground- water Elevation (feet)	Change in Elevation (feet)	TPH-G (μg/l)	TPPH 8260B (μg/l)	Benzene (µg/l)	Toluene (μg/l)	Ethyl- benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (μg/l)	MTBE 8260Β (μg/l)	Comments
-	16W 5		(2225)	(2700)	. ()	(2001)	(FB-7	(1-0-4)	(1-13-4)	VI 0 "7	(10)	10,			
	MW-5 02/04/00	continued 0 10.79	3.68	0.00	7.11	1.39	ND		8.4	ND	ND	ND	86		
	02/02/0		4.38	0.00	6.41	-0.70	ND		6.42	ND	ND	ND	223		
	03/02/02		5.68	0.00	5.11	-1.30	93		11	ND<0.50	ND<0.50	ND<0.50	350		
	02/22/03		5.84	0.00	4.95	-0.16		76	4.0	ND<0.50	ND<0.50	ND<1.0		180	
	02/20/04	4 10.79	5.63	0.00	5.16	0.21		610	47	ND<1.0	2.7	ND<2.0		270	
	03/02/0:	5 10.79	4.74	0,00	6.05	0.89		110	8.2	1.2	0.88	2.1		350	
N	1W-6	(S	creen Int	erval in fee	et: 5.0-18.0	))									
	08/04/9	-			••		540		12	7.9	35	110			
	11/05/9:	2 –					300		16	2.3	14	14			
	02/02/9	3 -					400		66	5.5	32	13	* *		
	05/03/9	3 11.47	6.28	0.00	5.19		520		47	2.6	33	48		••	
	08/05/9	3 11.47	7.05	0.00	4.42	-0.77	230		25	1.6	12	29		••	
	11/05/9	3 11.18	7.02	0.00	4.16	-0.26	100		1.8	ND	0.79	2.2			
	02/07/9	4 11.18	6.00	0.00	5.18	1.02	1100		130	14	13	130			
	05/02/9	4 11.18	6.18	0.00	5.00	-0.18	440		20	4.2	11	26	<del></del> .		
	08/02/9	4 - 11.18	6.88	0.00	4.30	-0.70	220		13	1	12	28			
	11/02/9	4 11.18	7.05	0.00	4.13	-0.17	840		30	2.5	26	57			•
	02/01/9	5 11.18	5.04	0.00	6.14	2.01	340		26	0.77	2.6	7		A-4	
	05/02/9	5 11.18	5.00	0.00	6.18	0.04	ND		5.7	ND	0.81	1.1			•
	08/03/9	5 11.18	6.26	0.00	4.92	-1.26	ND		0.76	ND	ND	ND			
	11/06/9	,	6.87		4.31	-0.61	210	4-	17	0.66	14	37	130		
	02/02/9		3.64		7.54	3.23	300		51	0.65	30	18	280	-	•
	02/07/9		4.41		6.77	•	66		5.8	1.2	2.1	6.6	450	. –	
	02/09/9	8 11.18	2.51	0.00	8.67	1.90	ND		1	ND	ND	ND	450		

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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 1989 Through March 2005
76 Station 5487

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Elevation	Change in Elevation	трн-о	TPPH 8260B	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE 8021B	MTBE 8260B	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	
MW-6	continue	i												
02/02/	99 11.18	5.14	0.00	6.04	-2.63	ND		2.6	ND	1	2.9	490		
02/04/0	00 11.18	4.11	0.00	7.07	1.03	110		3.9	ND	ND	ND	830		
02/02/0	01 11.18	5.06	0.00	6,12	-0.95	ND		4.79	ND	ND	ND	1800	1790	
03/02/0	02 11.18	6.09	0.00	5.09	-1.03	69		3.8	ND<0.50	ND<0.50	ND<0.50	780	900	
02/22/	03 11.18	6.05	0.00	5.13	0.04		ND<250	ND<2.5	ND<2.5	ND<2.5	ND<5.0		550	
02/20/	04 11.18	5.63	0.00	5.55	0.42		1900	ND<13	ND<13	ND<13	ND<25		2800	
03/02/	05 11.18	4.80	0.00	6.38	0.83		ND<200	3.0	0.58	0.68	ND<1.0		390	
MW-7	(	Screen Int	terval in fee	et: 3.5-19.0	))									
07/03/	96						70							
07/30/	96 9.39					ND		ND	ND	ND	ND	ND		
02/07/	97 9.39	3.75	0.00	5.64		ND		ND	ND	ND	ND	ND		
02/09/	98 9.39	1.69	0.00	7.70	2.06	ND		ND	ND	ИD	ND	ND		
02/02/	99 9.39	4.14	0.00	5.25	-2.45	ND		ND	ND	ND	ND	ND		
02/04/	00 9.39	3.97	0.00	5.42	0.17	ND		ND	ND	ND	ND	ND		
02/02/	01 9.39	4.05	0.00	5.34	-0.08	ND		ND	ND	ND	ND	ND		
03/02/		4.32	0.00	5.07	-0.27	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0		•
02/22/				3,75	-1.32			ND<0.50	ND<0.50	ND<0.50	ND<1.0		69	
02/20/				4.46	0.71		67	ND<0.50	ND<0.50	ND<0.50	ND<1.0		79	
03/02/				5.38	0.92		ND<50			ND<0.50			120	

Lock of L. Baselin

Userb#6

3.4

Table 3
ADDITIONAL ANALYTICAL RESULTS
76 Station 5487

Date Sampled	TPH-D	EDC	EDB	TAME 8260B	TBA 8260B	DIPE 8260B	ETBE 8260B	Ethanol 8260B	TOG	
	(μg/l)	(µg/l)	(μg/l)	(µg/l)	(μg/l)	(µg/l)	(μg/l)	(µg/l)	(mg/l)	 
MW-1										
11/14/89	ND	**	-					4-	ND	
02/16/90	ND								ND	
05/16/90	ND				4				ND	
08/29/90	ND								ND	
11/15/90	ND		'				÷-		ND	
02/11/91	ND								ND	
MW-2										
04/26/89	ND					••			ND	
11/14/89	ND								ND	
05/16/90								**	ND	
MW-3 04/26/89	ND				-				ND	
0-1/20/05	112			,					ND	
MW-4	3770								1.75	
04/26/89	ND				4-44			_	ND	
MW-5										
04/26/89				B# '				-	ND	
02/20/04			**			-		ND<1000		٠
03/02/05								ND<100		-
MW-6			-							
02/02/01		ND	ND	ND	ND	ND	ND	ND		
03/02/02		ND<10	ND<10	ND<10	ND<500	ND<10	ND<10	ND<2500		
02/22/03		ND<10	ND<10	ND<10	ND<500	ND<10	ND<10	ND<2500		
02/20/04		ND<50	ND<50	ND<50	ND<2500	ND<50	ND<50	ND<13000		
03/02/05		ND<2,0	ND<2.0	ND<2.0	330	ND<2.0	ND<2.0	ND<200		
-										

NEW ALTONOMISCHE

MW-7

5487

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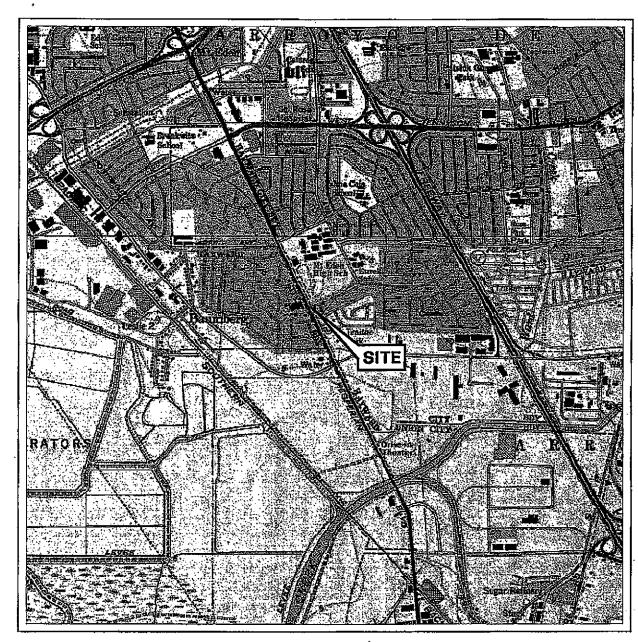
TO SEE DOMESTIC TWEETS TO

 $\mathcal{A}_{i}^{*}(G)(G)$ 

# Table 3 ADDITIONAL ANALYTICAL RESULTS 76 Station 5487

Date Sampled	ТРН-D	EDC	EDB	TAME 8260B	TBA 8260B	DIPE 8260B	ETBE 8260B	Ethanol 8260B	TOG
	(µg/l)	(μg/l)	(µg/l)	(μg/l)	(µg/1)	(μg/l)	(μg/l)	(µg/l)	(mg/l)
MW-7	continued							>T7> ~600	
02/20/04			**	*-				ND<500	
03/02/05								ND<50	

# **FIGURES**



1/4 1/2 3/4 1 MILE

SCALE 1: 24,000

SOURCE:

United States Geological Survey 7.5 Minute Topographic Map: Hayward Quadrangle

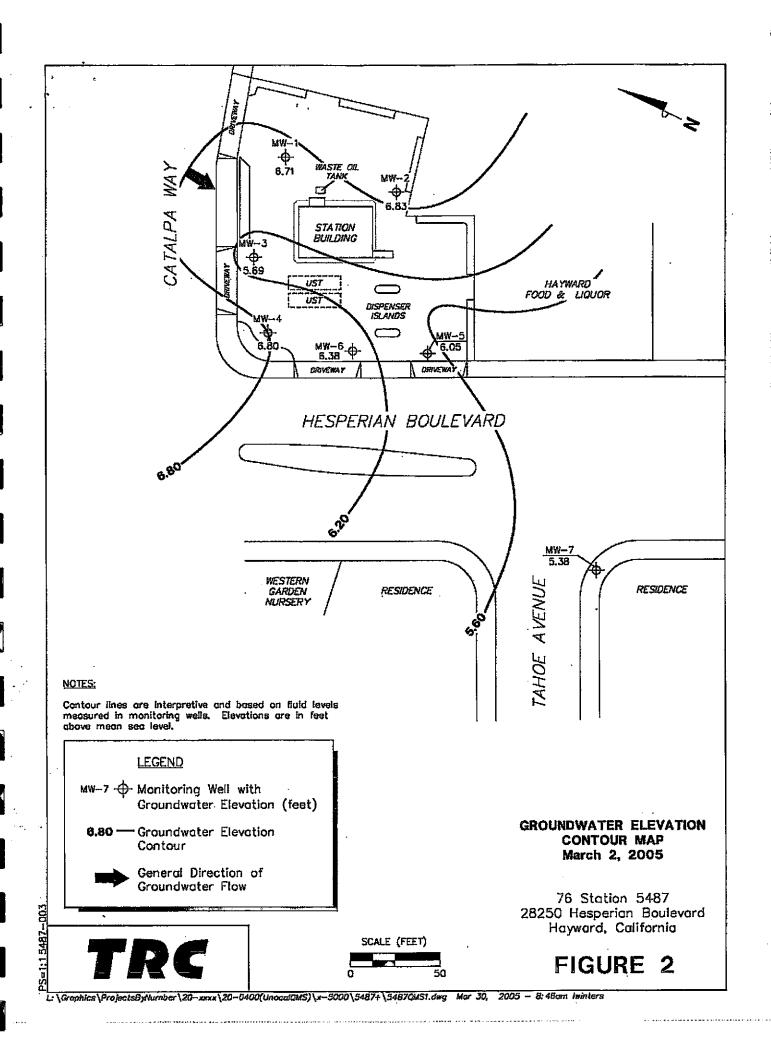
TRC

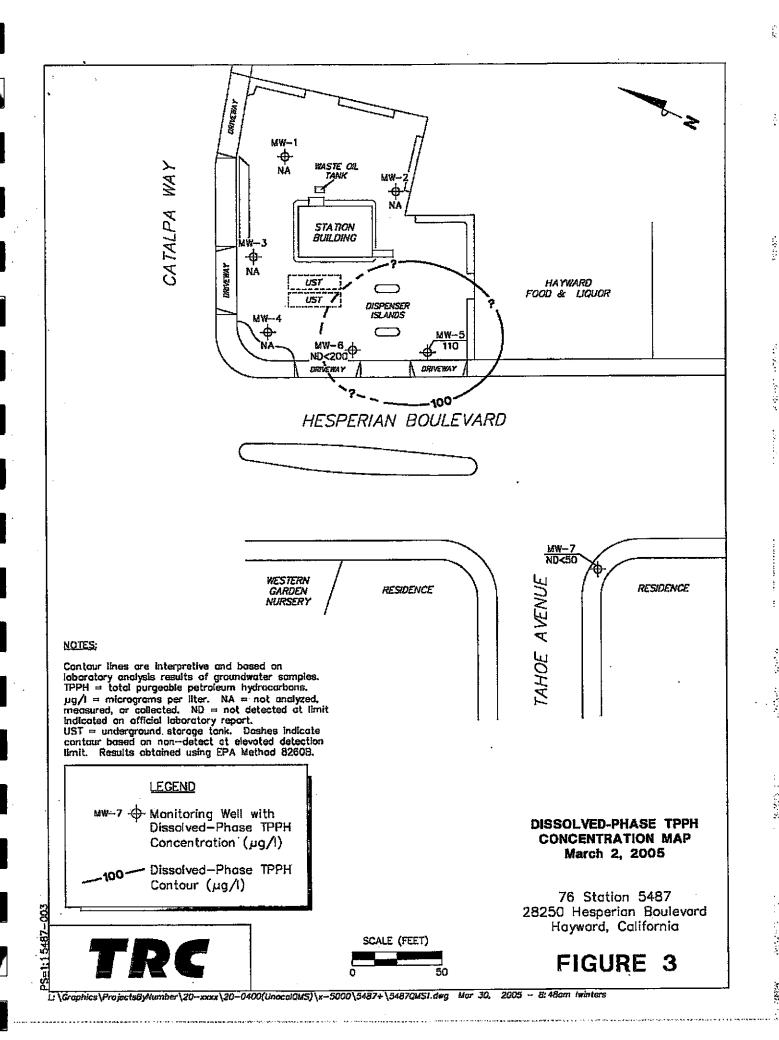


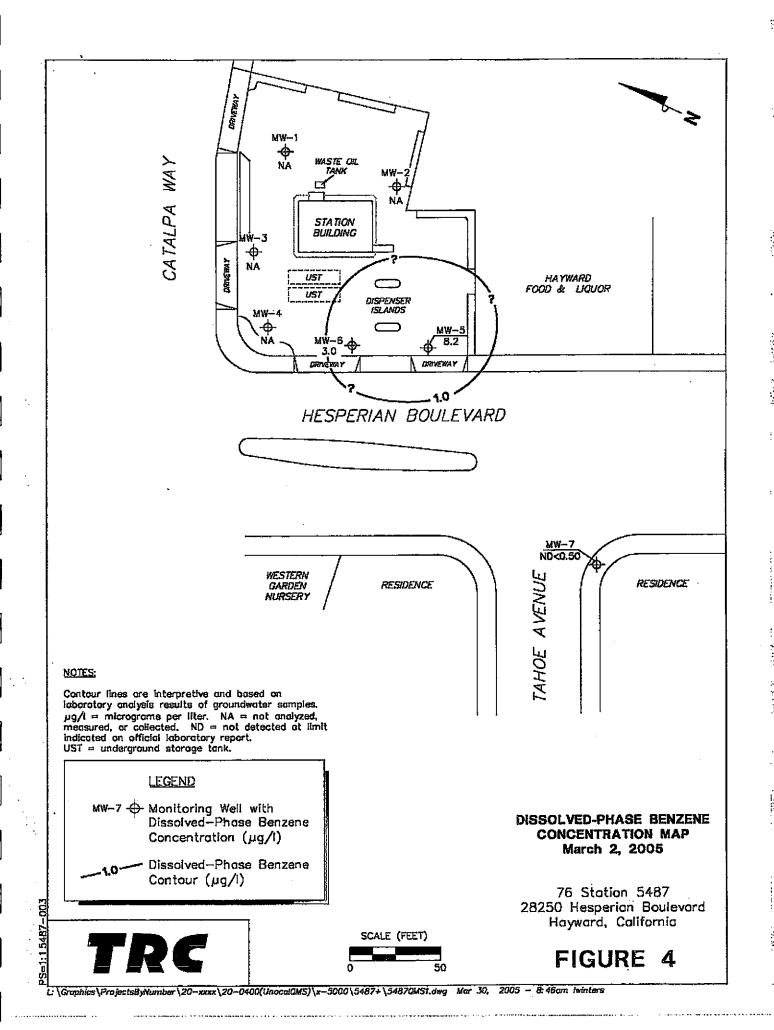
VICINITY MAP

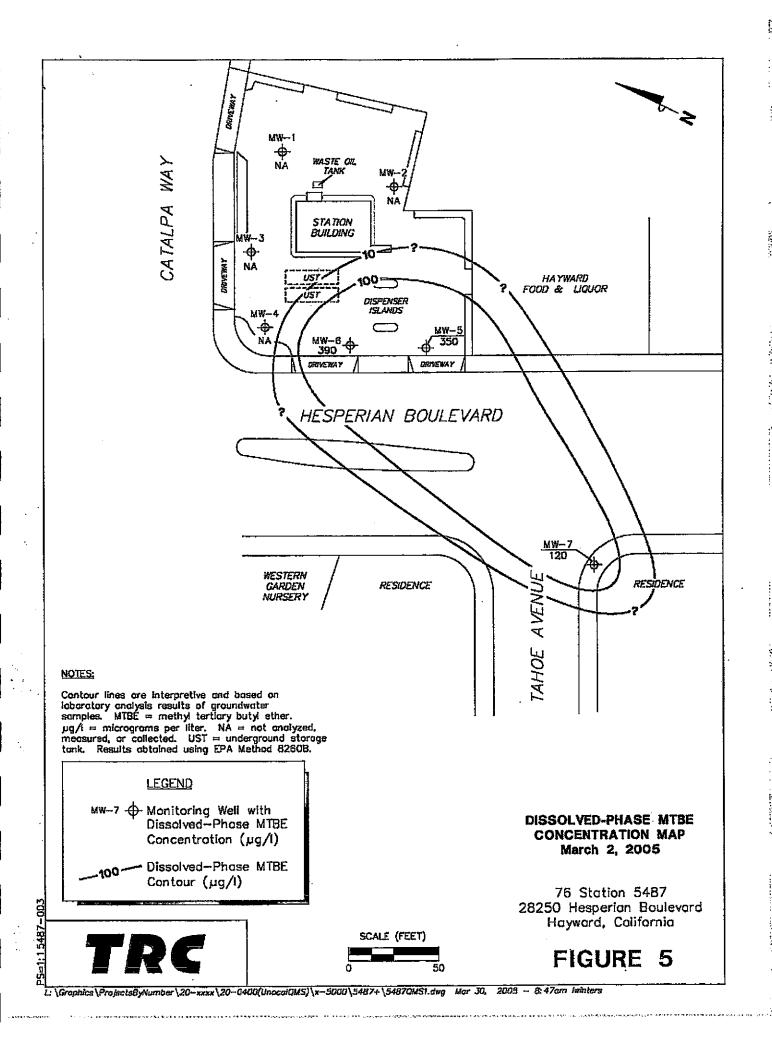
76 Station 5487 28250 Hesperian Boulevard Hayward, California

FIGURE 1



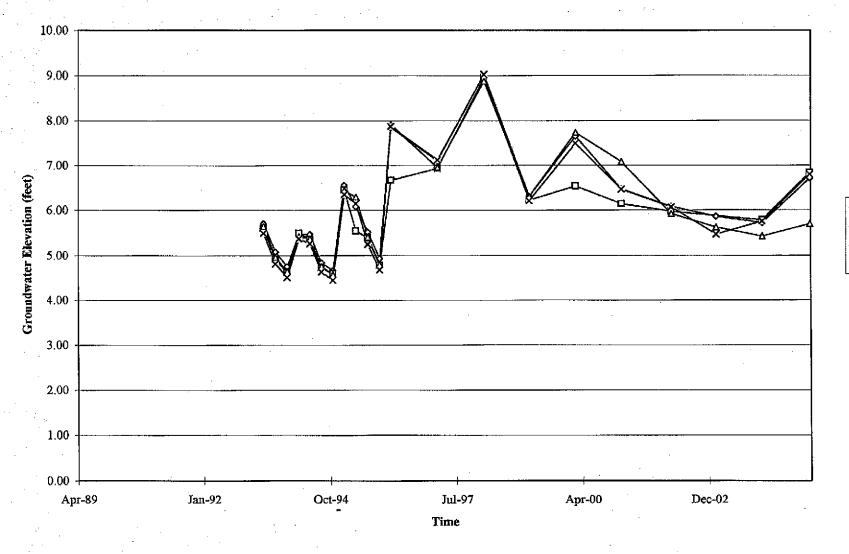






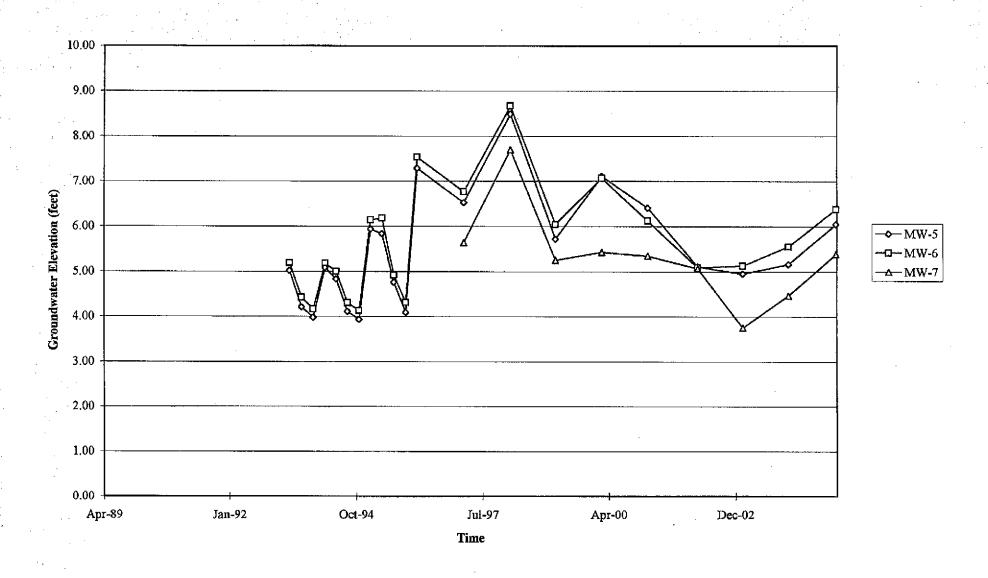
# **GRAPHS**

Groundwater Elevations vs. Time 76 Station 5487

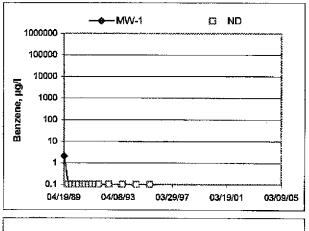


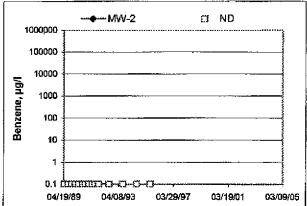


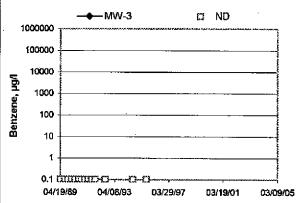
Groundwater Elevations vs. Time 76 Station 5487

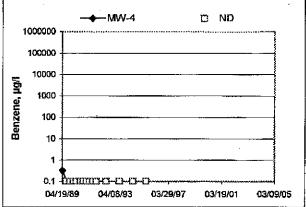


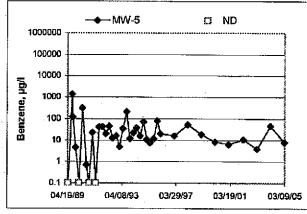
### Benzene Concentrations vs Time 76 Station 5487

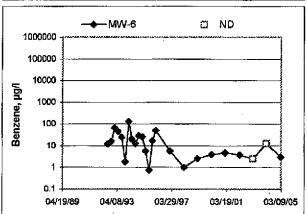


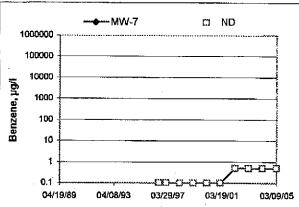












# GENERAL FIELD PROCEDURES

# Groundwater Monitoring and Sampling Assignments

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

### Fluid Level Measurements

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

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

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

# Purging and Groundwater Parameter Measurement

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

During conventional purging, three groundwater parameters (temperature, pH, and conductivity) are measured after removal of each casing volume. Stabilization of these parameters, to within 10 percent, confirm that sufficient purging has been completed. In some cases, the TSR indicates that other parameters are also to be measured during purging. TRC commonly measures dissolved oxygen (DO), oxidation-reduction potential (ORP), and/or turbidity. Instruments used for groundwater parameter measurement 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, and the samplers 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 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 well 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 well, decontaminated prior to each use, or discarded after a single use. Decontamination consists of washing in a solution of Liqui-nox and water and rinsing twice. The final rinse is in deionized water.

#### Exceptions

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

1/5/04 version

# FIELD MONITORING DATA SHEET

Technician:	AVEX	Job #/Task #:	4105	0001 F420		Date:	030	265
			4	COLLINS	•		•	-
Site #	5487	Project Manager	,4.	COL LINCO		Page	<u> </u>	1

Well#	тос	Time Gauged	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
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MW-2	U	0639	23.5/	5.75	. 6	6-	n/s	20 /
mv-3	V	0643	24.32	4.30	•	ع	NS	211
mr-4		8647	<i>14</i> 54	4.78	đ	£	ν/«	24 \$
MU-7	ئ	0658	19.02	\$ ·61	6		6749	2"
MW-6	*	0707	17.47	4.80	e	<i>a</i>	0809	2#
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# GROUNDWATER SAMPLING FIELD NOTES

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**GROUNDWATER SAMPLING FIELD NOTES** 

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#### TRC Alton Geoscience-Irvine

March 21, 2005

21 Technology Drive Irvine, CA 92718

Attn.:

Anju Farfan

Project#: 41050001FA20

Project:

Conoco Phillips # 5487

Site:

28250 Hesperian Blvd. Hayward

Attached is our report for your samples received on 03/02/2005 16:00 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 04/16/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: dsharma@stl-inc.com

Sincerely,

Dimple Sharma Project Manager

haema



#### Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

Site: 28250 Hesperian Blvd. Hayward

#### Samples Reported

Sample Name	Poto Sampled	Matrix	ab #
MW-5	03/02/2005 08:38	Water	1
MW-7	03/02/2005 07:49	Water	2
MW-6	03/02/2005 08:09	Water	3



# Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

Site: 28250 Hesperian Blvd. Hayward

Prep(s); Test(s): 8260B 5030B Sample ID: MW-5 Lab ID: 2005-03-0106 - 1 Sampled: 03/02/2005 08:38 Extracted: 3/15/2005 08:25 3/16/2005 20:45 3/16/2005 16:33 2005/03/15-1A:65 Matrix: Water QC Batch#: 2005/03/16-01.07 2005/03/16-1A.65

Analysis Flag: L2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	110	100	ug/L	2.00	03/15/2005 08:25	
Benzene	8.2	0.50	ug/L	1.00	03/16/2005 20:45	
Toluene	1.2	0.50	ug/L	1.00	03/16/2005 20:45	
Ethylbenzene	0.88	0.50	ug/L	1.00	03/16/2005 20:45	
Total xylenes	2.1	1.0	ug/L	1.00	03/16/2005 20:45	
Methyl tert-butyl ether (MTBE)	350	1.0	ug/L	2.00	03/16/2005 16:33	
Ethanol	ND	100	ug/L	2.00	03/16/2005 16:33	
Surrogate(s)						
1,2-Dichloroethane-d4	127.4	73-130	%	2.00	03/16/2005 16:33	
1,2-Dichloroethane-d4	100.3	73-130	%	2.00	03/15/2005 08:25	
1,2-Dichloroethane-d4	117.5	73-130	%	1.00	03/16/2005 20:45	
Toluene-d8	102.5	81-114	%	1.00	03/16/2005 20:45	
Toluene-d8	94.6	81-114	%	2.00	03/15/2005 08:25	
Toluene-d8	107.5	81-114	%	2.00	03/16/2005 16:33	



# Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience-Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

Site: 28250 Hesperian Blvd. Hayward

 Prep(s):
 5030B
 Test(s):
 8260B

 Sample ID:
 MW-7
 Eab ID:
 2005-03-0106 - 2

 Sampled:
 03/02/2005 07:49
 Extracted:
 3/15/2005 08:51

 Matrix:
 Water
 QC Batch#:
 2005/03/15-1A-65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	1.00	03/15/2005 08:51	Q6
Benzene	ND	0.50	ug/L	1.00	03/15/2005 08:51	
Toluene	ВÐ	0.50	ug/L	1.00	03/15/2005 08:51	
Ethylbenzene	ND	0.50	ug/L	1.00	03/15/2005 08:51	
Total xylenes	ND	1.0	ug/L	1.00	03/15/2005 08:51	
Methyl tert-butyl ether (MTBE)	120	0.50	ug/L	1.00	03/15/2005 08:51	
Ethanol	ND	50	ug/L	1.00	03/15/2005 08:51	
Surrogate(s)						
1,2-Dichloroethane-d4	113.6	73-130	%	1.00	03/15/2005 08:51	
Toluene-d8	93.1	81-114	%	1.00	03/15/2005 08:51	



#### Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

Site: 28250 Hesperian Blvd. Hayward

Prep(s): 5030B

Sample ID: MW-6

Sampled: 03/02/2005 08:09

Matrix: Water

Test(s): 8260B

Lab ID: 2005-03-0106 - 3

Extracted: 3/16/2005 21:16

3/16/2005 21:49

2005/03/16-01.07 QC Batch#:

2005/03/16-2D.65

Analysis Flag: L2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	200	ug/L	4.00	03/16/2005 21:49	
Benzene	3.0	0.50	ug/L	1.00	03/16/2005 21:16	
Toluene	0.58	0.50	ug/L	1.00	03/16/2005 21:16	
Ethylbenzene	0.68	0.50	ug/L	1.00	03/16/2005 21:16	
Total xylenes	ND	1.0	ug/L	1.00	03/16/2005 21:16	
tert-Butyl alcohol (TBA)	330	20	ug/L	4.00	03/16/2005 21:49	
Methyl tert-butyl ether (MTBE)	390	2.0	ug/L	4.00	03/16/2005 21:49	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	4.00	03/16/2005 21:49	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	4.00	03/16/2005 21:49	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	4.00	03/16/2005 21:49	
1,2-DCA	ND	2.0	ug/L	4.00	03/16/2005 21:49	
EDB	ND	2.0	ug/L	4.00	03/16/2005 21:49	
Ethanol	ND	200	ug/L	4,00	03/16/2005 21:49	
Surrogate(s)						
1,2-Dichloroethane-d4	128.3	73-130	%	4.00	03/16/2005 21:49	
1,2-Dichloroethane-d4	120.6	73-130	%	1.00	03/16/2005 21:16	
Toluene-d8	106.5	81-114	%	4.00	03/16/2005 21:49	
Toluene-d8	101.9	81-114	%	1.00	03/16/2005 21:16	



#### Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience-Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project; 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

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Prep(s): 5030B	A CHARLES OF THE PARTY OF THE P	A transfer of the Contract of		PSTICLENDING
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	Committee of the second			NNC N 2 (4 C
Method Blank	The state of the s	at my tank and a manufacture of the committee of the comm		
to be a first of the first of t	Control and Control Control of the C	the state of the s		005/03/15-1A.65
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	and the state of t	and the second state of the contract of the co		and the grant of the contract
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**************************************	Martin and Control of the Control of	the same of the sa	EDATE EXIDACIENT	13/13/21 NIO 11/13 1
	The second secon			3/15/2005 07:51
William to the control of the contro	Control of the commencer and the control of the con	gereichte geren werter met bei met eine er bei ber bei	Ger er men ubumpu biet amer in bei bereite eine be-	the state of the s
the state of the s	The mark of the second of the	Control of the Contro		Make the second of the second
the state of the s	The state of the s	and the state of t	al a fact attention of the control o	

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	03/15/2005 07:51	
Benzene	ND	0.5	ug/L	03/15/2005 07:51	
Toluene	ND	0.5	ug/L	03/15/2005 07:51	
Ethylbenzene	ND	0.5	ug/L	03/15/2005 07:51	
Total xylenes	ND	1.0	ug/L	03/15/2005 07:51	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	03/15/2005 07:51	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	03/15/2005 07:51	
Di-isopropyl Ether (DIPE)	ND	0.5	ug/L	03/15/2005 07:51	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	03/15/2005 07:51	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	03/15/2005 07:51	
1,2-DCA	ND	0.5	ug/L	03/15/2005 07:51	
EDB	ND	0.5	ug/L	03/15/2005 07:51	•
Ethanol	ND	50	ug/L	03/15/2005 07:51	
Surrogates(s)					
1,2-Dichloroethane-d4	122.6	73-130	%	03/15/2005 07:51	
Toluene-d8	113.6	81-114	%	03/15/2005 07:51	



### Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

	Batch QC Report
Prep(s): 5030B	Test(s): 8260B
Method Blank	Water QC Batch # 2005/03/16-01.07
MB: 2005/03/16-01.07-003	Date Extracted: 03/16/2005.16:55

Compound	Conc.	RL	Unit	Analyzed	Flag
Benzene	ND	0.5	ug/L	03/16/2005 16:55	
Toluene	ND	0.5	ug/L	03/16/2005 16:55	
Ethylbenzene	ND	0.5	ug/L	03/16/2005 16:55	
Total xylenes	ND	1.0	ug/L	03/16/2005 16:55	
Surrogates(s)			1		
1,2-Dichloroethane-d4	122.8	73-130	%	03/16/2005 16:55	
Toluene-d8	117.6	81-114	%	03/16/2005 16:55	\$7



### Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience- Irvine

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Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

AND AND ADDRESS OF THE PARTY OF	
the control of the co	
A Company of the Comp	
The state of the s	
Prep(s): 5030B Test(s): 8260B	
Method Blank Water QC Batch # 2005/03/16-1A 65	
A STATE OF THE PARTY OF THE PAR	
The state of the s	
MR. 2006/02/46 4A 65 047	
MR-2/105/03/05/14/65/14/7	
	****

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	03/16/2005 08:47	
Benzene	ND	0.5	ug/L	03/16/2005 08:47	
Toluene	ND	0.5	ug/L	03/16/2005 08:47	
Ethylbenzene	ND	0.5	ug/L	03/16/2005 08:47	
Total xylenes	ND	1.0	ug/L	03/16/2005 08:47	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	03/16/2005 08:47	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	03/16/2005 08:47	
Di-isopropyl Ether (DIPE)	ND	0.5	ug/L	03/16/2005 08:47	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	03/16/2005 08:47	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	03/16/2005 08:47	
1,2-DCA	ND	0.5	ug/L	03/16/2005 08:47	
EDB	ND	0.5	ug/L	03/16/2005 08:47	
Ethanol	ND	50	ug/L	03/16/2005 08:47	
Surrogates(s)					
1,2-Dichloroethane-d4	120.4	73-130	%	03/16/2005 08:47	
Toluene-d8	105.6	81-114	%	03/16/2005 08:47	



# Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

Batch QC Report
Prep(s): 5030B Test(s): 8260B
The state of the s
Method Blank Water QC Batch # 2005/03/16-2D.65
MB 2005/03/46-2D 65-008

Compound	Conc.	RL.	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	03/16/2005 19:08	
Benzene	ND	0.5	ug/L	03/16/2005 19:08	
Toluene	ND	0.5	ug/L	03/16/2005 19:08	
Ethylbenzene	ND	0.5	ug/L	03/16/2005 19:08	
Total xylenes	ND	1.0	ug/L	03/16/2005 19:08	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	03/16/2005 19:08	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	03/16/2005 19:08	
Di-isopropyl Ether (DiPE)	ND	0.5	ug/L	03/16/2005 19:08	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	03/16/2005 19:08	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	03/16/2005 19:08	
1,2-DCA	ND	0.5	ug/L	03/16/2005 19:08	
EDB	ND	0.5	ug/L	03/16/2005 19:08	
Ethanol	ND	50	ug/L	03/16/2005 19:08	
Surrogates(s)					
1,2-Dichloroethane-d4	125.8	73-130	%	03/16/2005 19:08	
Toluene-d8	108.2	81-114	%	03/16/2005 19:08	



# Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience-Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

Batch	QC Report
Prep(s): 5030B	
Laboratory Control Spike	Annual Control of the
LCS 2005/03/15-1A.65-025 Extra	acted: 03/15/2005 Analyzed: 03/15/2005 07:25
(CSD)	

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE) Benzene Toluene	24.8 24.6 26.4		25 25 25	99,2 98.4 105.6			65-165 69-129 70-130	20 20 20	i	
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	496 547		500 500	99.2 109.4			73-130 81-114			



# Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience-Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

The state of the s	
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Batch QC Report	
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Prep(s): 5030B Test(s): 8260B	
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	44.5
Laboratory Control Spike Water QC Batch # 2005/03/16-01:07	40.04
Landratory Lontrol Noire	
LOD	
LCS 2005/03/16-01.07-002 Extracted: 03/16/2005 Analyzed: 03/16/2005 16:24	·**
	21.
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LOCA	
LCSD	F

Compound	Conc.	Conc. ug/L		Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Reç.	RPD	LCS	LCSD
Benzene Toluene	22.1 22.4		20.0 20.0	110.5 112.0			69-129 70-130	20 20	:	
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	609 587		500 500	121.8 117.4			73-130 81-114		<b>S</b> 7	



#### Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience-Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

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Batch QC F	
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Prep(s): 5030B	Test(s): 8260B
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	er QC Batch # 2005/03/16-1A.65
Laboratory Control Spike Wate	and the second of the second o
	2F. UG BAICH # ZUU3/U3/10+1A.D3
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LCS 2005/03/16-1A 65-020 Extracted	03/16/2005 Analyzed: 03/16/2005 08:20
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and the state of t	

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD	
Methyl tert-butyl ether (MTBE) Benzene Toluene	24.2 26.5 27.9		25 25 25	96.8 106.0 111.6			65-165 69-129 70-130	20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	476 537		500 500	95.2 107.4			73-130 81-114		ļ	



### Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

Data A. P.
Batch QC Report
the state of the s
Prep(s): 5030B Test(s): 8260B
The state of the s
Laboratory Control Spike Water QC Batch # 2005/03/16-2D.65
The state of the s
The state of the s
LCS 2005/03/46-2D 65-04/4 Extracted: 03/46/2005 Analyzed: 03/46/2005 48.44
LCS 2005/03/16-2D.65-044 Extracted: 03/16/2005 Analyzed: 03/16/2005 18:44
TOO NOT TO TOO OUT TO TOO TO T

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LÇŞ	LCSD
Methyl tert-butyl ether (MTBE) Benzene Toluene	25.7 26.9 28.3		25 25 25	102.8 108.0 113.2			65-165 69-129 70-130		,	
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	496 545		500 500	99.2 109.0			73-130 81-114			



#### Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

	Acceptance of the control of the con	The state of the s
Batch QC Report		
		The state of the s
		The state of the s
Prep(s): 5030B		Test(s): 8260B
	ra Tribilianton d'Al	
Matrix Spike ( MS / MSD ) Water	QC Batch	# 2005/03/15-1A.65
MW-7 >> MS	Lab ID:	2005-03-0106 = 002
		2000-00-0100-002
	100 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1	And the second s
MS: -2005/03/15-1A.65-017 Extracted: 03/16/2005	Analyzed:	03/15/2005 09:17
	Dilution:	
MSD: 2005/03/15-1A-65-043 Extracted: 03/15/2005	Analyzed:	03/15/2005 09:43
	Dilution:	
The state of the s	, alignating of the second or an experience of the second	The state of the s

Compound	Conc.		· ug/L		R	ecovery	%	Limit	s %	FI	lags
<u>'</u>	MS	MSD	Sample	ug/L	мş	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	153	145	121	25	128.0	96.0	28.6	65-165	20		R1
Benzene	30.5	26.6	ND	25	122.0	106.4	13.7	69-129	20		
Toluene	31.0	27.8	ND	25	124.0	111.2	10.9	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	457	452		500	91.4	90.4		73-130			ļ
Toluene-d8	478	473	1	500	95.6	94.6		81-114			



# Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience-Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	The state of the s
Batch QC Report	The state of the s	
Prep(s): 5030B		Test(s): 8260B
Matrix Spike ( MS / MSD ) Water	QC Batch	# 2005/03/16-01.07
MS/MSD.	Lab ID:	2005-03-0143 - 009
MS: 2005/03/16-01.07-005 Extracted: 03/16/2005	Analyzed:	03/16/2005 18:41
	Dilution	1.00
		A CONTROL OF THE PARTY OF THE P
MSD: 2005/03/16-01:07-006 Extracted: 03/16/2005	Analyzed:	03/16/2005 19:12
	Dilution:	1.00
		denomination of the second of

Compound	Conc		ıg/L	Spk.Leve	R	ecovery	%	Limits	%	Flags		
	MS		Sample	ug/L	мѕ	MSD	RPD	Rec.	RPD	MS	MSD	
Benzene Toluene	24.1 23,2	25.2 24.4	ND ND	25.0 25.0	96.4 92.8	100.8 97.6	4.5 5.0					
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	630 590	630 587		500 500	126.0 118.0	125.9 117,4		73-130 81-114		<b>S7</b>	<b>S</b> 7	



### Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience-Irvine

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21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

State the particular and white the second and the second s	Batch QC Report		
	PAINITAS VEDVIC		minumetika (kunnskapinikasininks) Anarok (kunnskapinikasinin kannak
Prep(s): 5030B			Test(s): 8260B
Matrix Spike ( MS / MSD )	Water	QC Batch	# 2005/03/16-1A.65
MS/MSD		Lab ID:	2005-03-0189 - 001
MS: 2005/03/16-1A 65-008	Extracted: 03/16/2005	Analyzed:	03/16/2005 10:08
		Diluttion:	1,00
MSD: 2005/03/16-1A.65-035	Extracted: 03/16/2005	Analyzed:	03/16/2005 10:35
		Dilution:	1.00

Compound	Conc.	u	ug/L		R	есочегу	%	Limit	5%	Flags		
1	MS	MSD	Sample	ug/L	MS	MŞD	RPD	Rec.	RPD	MS	MSD	
Methyl tert-butyl ether	22.1	25.5	ND	25	88.4	102.0	14.3	65-165	20			
Benzene	23.4	24.1	ND	25	93.6	96.4	2.9	69-129	20			
Toluene	24.8	25.7	ND	25	99.2	102.8	3.6	70-130	20			
Surrogate(s)					ļ			1				
1,2-Dichloroethane-d4	506	488		500	101.2	97.6	1	73-130	i I			
Toluene-d8	534	522		500	106.8	104.4		81-114				



# Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

	Batch QC Report		
Prep(s): 5030B			Test(s): 8260B
Matrix Spike (MS/MSD)	Water	OC Batch a	# 2005/03/16-2D.65
MS/MSD			2005-03-0239 - 003
MS: 2005/03/16-2D:65-040	Extracted: 03/16/2005	Analyzed:	-03/16/2005 22 40
MSD: 2005/03/16-2D.65-006	Extracted: 03/16/2005	Dilution: Analyzed:	1.00 03/16/2005 23:06
		Dilution:	1.00

Compound	Conc.	ţ	ug/L		R	ecovery	%	Limit	s %	Flags		
	MS	MSD	Sample	ug/L	MŞ	MSD	RPD	Rec.	RPD	MS	MSD	
Methyl tert-butyl ether Benzene Toluene	33.0 29.7 30.9	28.1 27.6 28.6	2.54 ND ND	25 25 25	121.8 118.8 123.6	102.2 110.4 114.4	17.5 7.3 7.7	65-165 69-129 70-130	20 20 20	·		
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	513 546	490 541		500 500	102.6 109.2	98.0 108.2		73-130 81-114				



### Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience-Irvine

Attn.: Anju Farfan

21 Technology Drive Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20

Conoco Phillips # 5487

Received: 03/02/2005 16:00

Site: 28250 Hesperian Blvd. Hayward

#### Legend and Notes

#### Sample Comment

Lab ID: 2005-03-0106 -2

Siloxane peaks were found in the sample, which are not believed to be gasoline related. If they were to be quantified as gasoline, the concentration would be 58 ug/L

#### Analysis Flag

L2

Reporting limits were raised due to high level of analyte present in the sample.

#### Result Flag

Q6

The concentration reported reflect(s) individual or discrete unidentified peaks not matching a typical fuel pattern.

R1

Analyte RPD was out of QC limits.

**S7** 

Surrogate recoveries higher than acceptance limits.

# ConocoPhillips Chain Of Custody Record

1220 Quarry Lone

 $(\mathbb{R}^n)^{(p,q)}$ 

STL-9an Francisco

Pleasanton, CA 9#568 (925) 484-1919 (925) 484-1096 fax

ConocoPhillips Site Manager:

INVOICE REMITTANCE ADDRESS:

CONODORHILLIPS Atta: Dies Higohingen 3511 South Hartier; Suite 200 Sarne Ann, CA, 92704

ConscoPhillips Work Order Number DATE CanocoPhillips,Cast Object

TRC	COMPANY		Varia Var	414 Hr			COM	CONCEONMALIFICATIONS						1000101462													
Abpetss 21 Tech	nalagy Drive, Ir						CESSES MOTTERINAN BLUE MATACASE										CONGROUNTIES WEEKENDOOR										
Anju Fe		ing and an and an		!			Edy DELVENAGLE to the exceptione).								EADE USE CIVLY												
16467110 1849-1861		949-752-0111	alarfo	n@tres	alistioris.	com		Peter Thomisour, TRC 949-341-7408 Hhomison@trosolutions.com					4														
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SPECIA	LESTRUCTERS	OR HOTES:	CHECKE	X if Ech	is il Effolip	Ø	tractative tractative	TPHUETEVINGE	BTEX 180	14 (BTEX / 2 cyxgenaues	1 (OC)	End News	TH-1/973	מצורכ חוטוף	81604	<b>A</b>	<b>"</b>	7									CaptainenPressivative or PID Resulings or Luboratory Notes
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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 groundwater sampling activities summarized in this report have been performed under the responsible charge of a California Registered Geologist or Registered Civil Engineer and have been conducted in accordance with current practice and the standard of care exercised by geologists and engineers performing similar tasks in this area. No warranty, express or implied, is made regarding the conclusions and professional opinions presented in this report. The conclusions are based solely upon an analysis of the observed conditions. If actual conditions differ from those described in this report, our office should be notified.