Ro 229

TRC
Customer-Focused Solutions

June 22, 2004 TRC Project No. 42013701

Don Hwang
Alameda County Health Services
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

RE: Quarterly Status Report - Fourth Quarter 2003
76 Service Station #5325, 3220 Lakeshore Avenue, Oakland, California
Alameda County

Dear Mr. Hwang:

On behalf of ConocoPhillips Company (ConocoPhillips), TRC is submitting the Fourth Quarter 2003 Quarterly Status Report for the subject site, shown on the attached Figure 3.

PREVIOUS ASSESSMENTS

The subject site is an operating 76 Service Station situated on the southeast corner of the intersection of Lakeshore Avenue and Lake Park Avenue in Oakland, California. Current site facilities consist of the service station building with three service bays, three product dispenser islands, and two 12,000-gallon double-wall fiberglass gasoline underground storage tanks (USTs).

October 1994: The waste oil UST was replaced along with the fuel product piping and dispenser islands. Holes were noted in the waste oil UST upon removal. Hydrocarbon odors and staining were noted in the soil beneath the waste oil UST. Overexcavation to remove the contaminated soil was limited to the area immediately surrounding the waste oil UST due to the proximity of structures. Confirmation soil samples indicated that low to moderate levels of petroleum hydrocarbons remained after the overexcavation. Soil sampling results from the product line/dispenser islands did not contain detectable concentrations of total petroleum hydrocarbons as gasoline (TPH-g), total petroleum hydrocarbons as diesel (TPH-d) or benzene.

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

SENSITIVE RECEPTORS

Lake Merritt is located approximately 0.3 miles down gradient. No domestic wells are located within 1 mile of the site.

MONITORING AND SAMPLING

Currently, four onsite and two offsite wells are monitored quarterly. All wells were sampled this quarter. The groundwater gradient and flow direction were 0.02 foot/foot to the north.

CHARACTERIZATION STATUS

Total purgeable petroleum hydrocarbons (TPPH) were detected in one of the six wells, at a maximum concentration of 1,300 micrograms per liter (µg/l) in offsite monitoring well U-6. However, the lower limit of detection was elevated to 10,000 µg/l in two wells. These levels were consistent with recent historical data.

Benzene was not detected in any of the six wells. However, the lower limit of detection was above the maximum contaminant level (MCL) in three wells. These levels were consistent with recent historical data.

Methyl tertiary butyl ether (MTBE) was detected was detected in four of the six wells, at a maximum concentration of 11,000 µg/l in onsite monitoring well U-1. These levels were consistent with recent historical data.

REMEDIATION STATUS

October 1994: A total of 388.7 tons of impacted soil associated with the waste oil UST has been removed from the site. In addition, approximately 6,500 gallons of hydrocarbon impacted groundwater was pumped from the waste oil UST excavation to remediate hydrocarbon impacted soil and groundwater in the immediate area.

Remediation is not currently being conducted at the site.

RECENT CORRESPONDENCE

No correspondence this quarter.

CURRENT QUARTER ACTIVITIES

December 2, 2003: TRC performed groundwater monitoring and sampling. Wastewater generated from well purging and equipment cleaning was stored at TRC's groundwater monitoring facility in Concord, California, and transported by Onyx to the ConocoPhillips Refinery in Rodeo, California, for treatment and disposal.

NEXT QUARTER ACTIVITIES

Await agency directives for additional assessment work, if any.

Continue quarterly monitoring and sampling to assess plume stability and concentration trends at key wells.

If you have any questions regarding this report, please call Roger Batra at (925) 688-2466.

Sincerely,

TRC

Roger Batra
Senior Project Manager

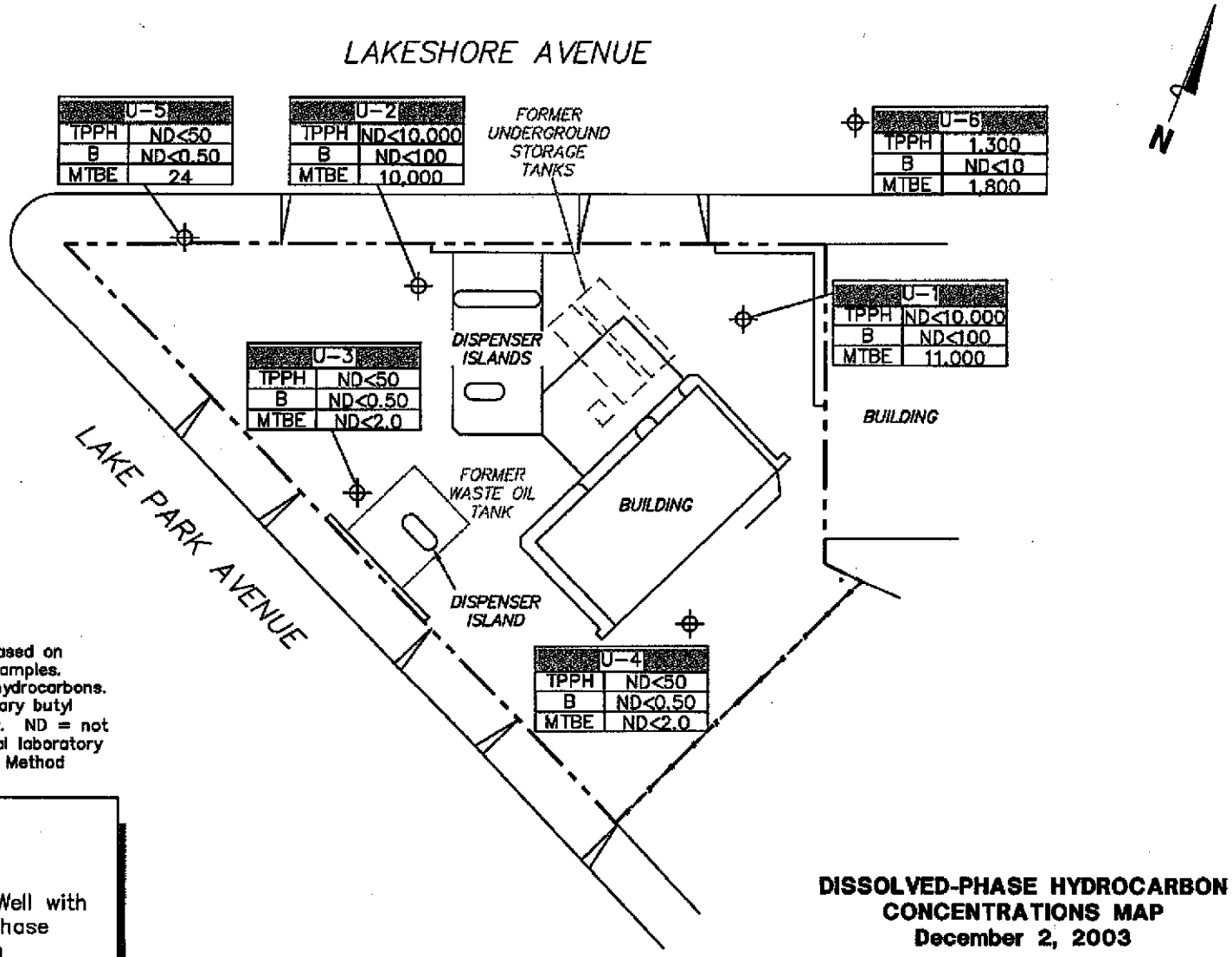
Barbara Moed, R.G.
Senior Project Geologist

REGISTERED GEOLOGIST
BARBARA A. MOED
No. 7529
Exp. 7/31/05
STATE OF CALIFORNIA

Attachment:

Figure 3 – Dissolved-Phase Hydrocarbon Concentrations Map, December 2, 2003, from Fourth Quarter 2003 Fluid Level Monitoring and Groundwater Sampling Report, dated January 9, 2004 by TRC.

cc: Thomas Kosel, ConocoPhillips (hard copy and electronic upload)



NOTES:

Contour lines are interpretive and based on laboratory analysis of groundwater samples. TPPH = total purgeable petroleum hydrocarbons. B = benzene. MTBE = methyl tertiary butyl ether. µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. Results obtained using EPA Method 8260B.

LEGEND

Well No.	
TPPH	µg/l
B	µg/l
MTBE	µg/l

⊕ Monitoring Well with Dissolved-Phase Hydrocarbon Concentrations (µg/l)

SCALE (FEET)

0 40

DISSOLVED-PHASE HYDROCARBON CONCENTRATIONS MAP
December 2, 2003

76 Station 5325
3220 Lakeshore Avenue
Oakland, California

FIGURE 3

TRC

PS=1:1

Graphics on Ir1(I:)\GRAPHICS\Projects By...\20-xxxx\20-0400\5325+\5325qms.dwg 12/31/03 jw

R0229

TRC

Customer-Focused Solutions

January 9, 2004

ConocoPhillips Company
76 Broadway
Sacramento, CA 95818

ATTN: MR. THOMAS H. KOSEL

SITE: 76 STATION 5325
3220 LAKESHORE AVENUE
OAKLAND, CALIFORNIA 94610

RE: QUARTERLY MONITORING REPORT
OCTOBER THROUGH DECEMBER 2003

Dear Mr. Kosel:

Please find enclosed our Quarterly Monitoring Report for 76 Station 5325, located at 3220 Lakeshore Avenue, Oakland, California. If you have any questions regarding this report, please call us at (949) 753-0101.

Sincerely,

TRC

Anju Farfan

Anju Farfan
QMS Operations Manager

CC: Alameda County Health Care Services
Barbara Moed, TRC

Enclosures
20-0400/5325R01.QMS

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

TRC

Customer-Focused Solutions

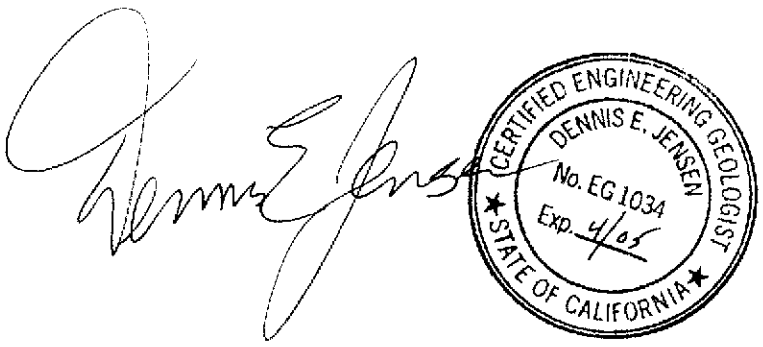
FOURTH QUARTER 2003
FLUID LEVEL MONITORING AND
GROUNDWATER SAMPLING REPORT
January 9, 2004

76 Station 5325
3200 Lakeshore Avenue
Oakland, California

Prepared For:

Mr. Thomas H. Kosel
CONOCOPHILLIPS COMPANY
76 Broadway
Sacramento, California 95818

By:



Senior Project Geologist, Irvine Operations

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

GROUNDWATER MONITORING REPORT

LIST OF ATTACHMENTS	
Summary Sheet	Summary of Gauging and Sampling Activities
Tables	Table Key Table 1: Summary of Groundwater Levels and Chemical Analysis Results Table 2: Historic Groundwater Levels and Chemical Analysis Results Table 3: Summary of Additional Chemical Analysis Results
Gettler-Ryan Inc. Historical Tables	Table 1: Groundwater Monitoring Data and Analytical Results Table 2: Groundwater Analytical Results - Oxygenate Compounds Table 3: Field Measurements and Groundwater Analytical Results
Figures	Figure 1: Vicinity Map Figure 2: Groundwater Elevation Contour Map Figure 3: Dissolved-Phase Hydrocarbon Concentration Map
Graphs	Benzene Concentrations vs. Time Hydrographs
Field Activities	General Field Procedures Groundwater Sampling Field Notes
Laboratory Reports	Official Laboratory Reports Quality Control Reports Chain of Custody Records
Disposal Documents	Statement of Authorized Transportation and Disposal
Statement	Limitations

Summary of Gauging and Sampling Activities
October 2003 through December 2003
76 Station 5325
3220 Lakeshore Avenue
Oakland, CA

Site Information:

Site:	76 Station 3220 Lakeshore Avenue Oakland, CA
Project Coordinator/Phone Number:	Thomas H. Kosel/916-558-7666
Groundwater wells onsite:	5
Groundwater wells offsite:	1

Field Activity:

Sampling consultant:	TRC
Date(s) sampled:	12/2/03
Groundwater wells gauged:	6
Groundwater wells sampled:	6
Purging method:	diaphragm pump
Treatment/disposal method during sampling event:	Onyx/Rodeo Unit 100
Free product pumpouts other than sampling event:	No
Treatment/Disposal method during free product pumpouts:	N/A

Site Hydrogeology:

Minimum depth to groundwater (feet bgs):	7.12
Maximum depth to groundwater (feet bgs):	11
Average groundwater elevation (feet relative to mean sea level):	0.07
Average change in groundwater elevations since previous event (feet):	-0.46
Groundwater gradient and flow direction:	0.02 ft/ft, north

Groundwater Condition (Benzene Maximum Contaminant Level [MCL] = 1.0 µg/l)

Wells with benzene concentrations below MCL:	6
Wells with benzene concentrations at or above MCL:	0
Minimum benzene concentration (µg/l):	ND
Maximum benzene concentration (µg/l):	ND
Minimum MTBE concentration (µg/l):	ND
Maximum MTBE concentration (µg/l):	11000
Minimum TPPH concentration (µg/l):	ND
Maximum TPPH concentration (µg/l):	1300 (U-6)
Groundwater wells with free product:	0
Minimum free product thickness (feet):	0
Maximum free product thickness (feet):	0

Additional Information:

This report presents the results of groundwater monitoring and sampling activities performed by TRC. Please contact the primary consultant for other specific information on this site.

TABLE KEY

ABBREVIATIONS / SYMBOLS

LPH	=	liquid-phase hydrocarbons
µg/l	=	micrograms per liter
mg/l	=	milligrams per liter
ND	=	not detected at or above laboratory detection limit
DTSC	=	Department of Toxic Substances Control
N/A	=	not applicable
Trace	=	less than 0.01 foot of LPH in well
USTs	=	underground storage tanks
--	=	not analyzed, measured, or collected
TPH-G	=	total petroleum hydrocarbons with gasoline distinction
BTEX	=	benzene, toluene, ethylbenzene, and total xylenes
TPH-D	=	total petroleum hydrocarbons with diesel distinction
TRPH	=	total recoverable petroleum hydrocarbons
MTBE	=	methyl tertiary butyl ether
TAME	=	tertiary amyl methyl ether
ETBE	=	ethyl tertiary butyl ether
DIPE	=	di-isopropyl ether
TBA	=	tertiary butyl alcohol
1,1-DCA	=	1,1-Dichloroethane
1,2-DCA	=	1,2-Dichloroethane
1,1-DCE	=	1,1-Dichloroethene
1,2-DCE	=	cis- and trans-1,2-Dichloroethene
PCE	=	tetrachloroethene
TCA	=	trichloroethane
TCE	=	trichloroethene
PCB	=	polychlorinated biphenyls
TPPH	=	total purgeable petroleum hydrocarbons

NOTES

Elevations are in feet above mean sea level.

Groundwater elevation for wells with LPH is calculated as follows:

Surface elevation - depth to water + (0.75 x LPH thickness).

Concentration Graphs have been modified to plot non-detect results at the reporting limit stated in the official laboratory report. All non-detect results prior to the Second Quarter 2000 were plotted at 0.1 µg/l for graphical display.

J = estimated concentration, value is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL)

REFERENCE

TRC began groundwater monitoring and sampling activities in October 2003. Historical data for 76 Station 5325 was provided by Gettler-Ryan Inc., Dublin, California, in an excel table received in September 2003.

Table 1

SUMMARY OF GROUNDWATER LEVELS AND CHEMICAL ANALYSIS RESULTS

December 2, 2003

76 Station 5325

Date Sampled	TOC Elevation (feet)	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 8260B (µg/l)	Comments
U-1		**(Screen Interval in feet: 5.0-20.0)**												
12/2/03	8.46	8.90	0.00	-0.44	--	--	ND<10000	ND<100	ND<100	ND<100	ND<200	--	11000	
U-2		**(Screen Interval in feet: 5.0-20.0)**												
12/2/03	7.62	7.95	0.00	-0.33	-0.46	--	ND<10000	ND<100	ND<100	ND<100	ND<200	--	10000	
U-3		**(Screen Interval in feet: 5.0-20.0)**												
12/2/03	10.98	11.00	0.00	-0.02	-0.12	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
U-4		**(Screen Interval in feet: 5.0-20.0)**												
12/2/03	11.15	9.16	0.00	1.99	-0.90	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
U-5		**(Screen Interval in feet: 5.0-20.0)**												
12/2/03	6.98	7.12	0.00	-0.14	-0.26	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	24	
U-6		**(Screen Interval in feet: 5.0-24.0)**												
12/2/03	7.14	7.80	0.00	-0.66	-0.56	--	1300	ND<10	ND<10	ND<10	ND<20	--	1800	

Table 2
HISTORIC GROUNDWATER LEVELS AND CHEMICAL ANALYSIS RESULTS
September 2003 Through December 2003
76 Station 5325

Date Sampled	TOC Elevation (feet)	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 8260B (µg/l)	Comments
U-1	**(Screen Interval in feet: 5.0-20.0)**													
9/24/03	8.46	8.18	0.00	--	--	--	ND<10000	ND<100	ND<100	ND<100	ND<200	--	11000	
12/2/03	8.46	8.90	0.00	-0.44	--	--	ND<10000	ND<100	ND<100	ND<100	ND<200	--	11000	
U-2	**(Screen Interval in feet: 5.0-20.0)**													
9/24/03	7.62	7.49	0.00	0.13	--	--	ND<10000	ND<100	ND<100	ND<100	ND<200	--	10000	
12/2/03	7.62	7.95	0.00	-0.33	-0.46	--	ND<10000	ND<100	ND<100	ND<100	ND<200	--	10000	
U-3	**(Screen Interval in feet: 5.0-20.0)**													
9/24/03	10.98	10.88	0.00	0.10	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
12/2/03	10.98	11.00	0.00	-0.02	-0.12	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
U-4	**(Screen Interval in feet: 5.0-20.0)**													
9/24/03	11.15	8.26	0.00	2.89	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
12/2/03	11.15	9.16	0.00	1.99	-0.90	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
U-5	**(Screen Interval in feet: 5.0-20.0)**													
9/24/03	6.98	6.86	0.00	0.12	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
12/2/03	6.98	7.12	0.00	-0.14	-0.26	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	24	
U-6	**(Screen Interval in feet: 5.0-24.0)**													
9/24/03	7.14	7.24	0.00	-0.10	--	--	ND<10000	ND<100	ND<100	ND<100	ND<200	--	1500	
12/2/03	7.14	7.80	0.00	-0.66	-0.56	--	1300	ND<10	ND<10	ND<10	ND<20	--	1800	

Table 3
SUMMARY OF ADDITIONAL CHEMICAL ANALYSIS RESULTS
76 Station 5325

Date Sampled	EDB	NO3	TAME 8260B	TBA 8260B	DIPE 8260B	ETBE 8260B	Fe+2	ORP	Phosphate	Ethanol 8260B	1,2 DCE
	(µg/l)	(mg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(mg/l)	(mV)	(mg/l)	(µg/l)	(µg/l)
U-1											
9/24/03	ND<400	18	ND<400	ND<20000	ND<400	ND<400	15	-36	ND<1.0	ND<100000	ND<400
12/2/03	--	--	--	--	--	--	4.0	--	--	ND<100000	--
U-2											
9/24/03	ND<400	ND<1.0	ND<400	ND<20000	ND<400	ND<400	14	-10	ND<1.0	ND<100000	ND<400
12/2/03	--	--	--	--	--	--	2.7	--	--	ND<100000	--
U-3											
9/24/03	--	18	--	--	--	--	ND<0.20	-50	1.4	ND<500	--
12/2/03	--	--	--	--	--	--	ND<0.20	--	--	ND<500	--
U-4											
9/24/03	--	17	--	--	--	--	ND<0.20	-24	1.5	--	--
12/2/03	--	--	--	--	--	--	ND<0.20	--	--	ND<500	--
U-5											
9/24/03	--	18	--	--	--	--	ND<0.20	-28	1.8	--	--
12/2/03	--	--	--	--	--	--	9.4	--	--	ND<500	--
U-6											
9/24/03	ND<400	ND<1.0	ND<400	ND<20000	ND<400	ND<400	1.4	-12	4.6	ND<100000	ND<400
12/2/03	--	--	--	--	--	--	1.4	--	--	ND<10000	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

WELL ID/ TOC* (ft.)	DATE	DTW (ft.)	S.I (ft. bgs)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-1	08/10/90	--	5.0-20.0	--	--	690	38	75	8.6	130	--
	01/07/91	--		--	--	250	22	16	4.2	17	--
	04/01/91	--		--	--	160	13	8.6	1.0	15	--
	07/03/91	--		--	--	140	21	4.3	0.36	17	--
	10/09/91	--		--	--	ND	ND	ND	ND	ND	--
	02/12/92	--		--	--	250	ND	ND	ND	ND	--
	05/05/92	--		--	--	230	1.2	ND	ND	ND	--
	06/11/92	--		--	--	1,000	80	1.4	6.7	41	--
	08/20/92	--		--	--	400[1]	1.0	ND	ND	0.6	--
	02/22/93	--		--	--	34,000	1,400	5,500	910	7,300	--
	05/07/93	--		--	--	8,700	600	240	650	3,300	--
	08/08/93	--		--	--	4,900[2]	79	ND	832	270	--
5.32	11/16/93	8.61		-3.29	0.00	690[3]	ND	ND	ND	ND	--
	02/16/94	8.54		-3.22	0.00	6,800[4]	ND	ND	ND	ND	--
8.46	06/22/94	8.39		0.07	0.00	200	ND	ND	5.9	21	--
	09/22/94	8.66		-0.20	0.00	6,100[3]	ND	ND	ND	ND	--
	12/24/94	8.04		0.42	0.00	50,000	2,500	9,700	2,400	17,000	--
	03/25/95	7.72		1.02**	0.37	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	06/21/95	9.30		-0.69**	0.20	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	09/19/95	9.29		-0.53**	0.40	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	12/19/95	8.98		-0.50**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	03/18/96	8.25		0.21	0.00	27,000	ND	2,300	1,400	11,000	4,900
	06/27/96	7.92		0.54	<0.01	120,000	540	4,300	2,600	26,000	ND
	09/26/96	9.10		-0.62**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	12/09/96	6.88		1.60**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	03/14/97	9.02		-0.15**	0.55	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	06/30/97	8.41		0.07**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	09/19/97	8.56		-0.08**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	12/12/97	8.58		-0.11**	0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	03/03/98[17]	8.23		0.26**	0.04	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	06/15/98[17]	8.37		0.09	Sheen	52,000	ND[7]	900	1,800	13,000	ND[7]
	09/30/98[17]	8.94		-0.48	Sheen	1,000,000[8]	ND[7]	2,600	13,000	83,000	4,800
	12/28/98[17]	8.57		-0.11	<0.01	1,100,000[9]	ND[7]	1,600	8,600	71,000	5,700

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

WELL ID/ TOC* (ft.)	DATE	DTW (ft.)	S.I (ft. bgs)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-1	03/22/99[17]	8.18	5.0-20.0	0.28	Sheen	130,000	470	1,100	2,000	28,000	5,700
(cont)	06/09/99	9.37		-0.91	0.00	40,000	230	640	590	13,000	3,500/2,100[10]
	09/08/99[17]	9.53		-1.07	0.00	55,000[11]	217	202	745	14,300	6,890/6,690[10]
	12/07/99[17]	9.67		-1.21	0.00	41,200[13]	89.3	ND[7]	385	6,930	15,800/14,700[12]
	03/13/00[17]	8.44		0.02	0.00	48,000[11]	490	610	2,400	10,000	22,000/23,000[10]
	06/21/00[17]	9.45		-0.99	0.00	37,000[11]	200	ND[7]	1,200	7,200	15,000/20,000[10]
	09/27/00[17]	9.29		-0.83	0.00	15,000[11]	92	ND[7]	540	2,800	74,000/83,000[15]
	12/12/00[17]	9.37		-0.91	0.00	50,000[16]	ND[7]	ND[7]	250	1,900	12,000/15,000[12]
	03/07/01[17]	8.45		0.01	0.00	6,220[13]	29.8	10.4	96.3	638	11,200/11,800[10]
	06/06/01[17]	9.29		-0.83	0.00	5,200[13]	17	ND[7]	69	420	6,500/8,700[12]
	09/24/01[17]	9.39		-0.93	0.00	4,300[18]	36	<25	65	590	4,400/4,400[10]
	12/10/01[20]	9.17		-0.71	0.00	11,000[18]	220	<100	380	1,500	5,100/5,100[10]
	03/11/02[20]	9.44		-0.98	0.00	5,500[13]	28	<20	360	690	6,400/6,300[10]
	06/04/02[20]	8.32		0.14	0.00	4,600[18]	31	<10	240	180	6,500
	09/03/02[20]	9.36		-0.90	0.00	2,300[21]	<12	<12	<12	68	3,500/4,700[10]
	12/03/02[20,22]	8.18		0.28	0.00	<5,000	<50	<50	<50	<100	4,700
	03/04/03[22]	8.29		0.17	0.00	8,900	26	<25	400	130	5,500
	06/18/03[22]	**7.58**		**0.88**	**0.00**	**8,300**	**<25**	**<25**	**<25**	**<50**	**10,000**
U-2	08/10/90	--	5.0-20.0	--	--	780	27	46	15	130	--
	01/07/91	--		--	--	1,900	67	5.8	58	69	--
	04/01/91	--		--	--	1,700	250	89	34	190	--
	07/03/91	--		--	--	2,100	150	25	3.1	290	--
	10/09/91	--		--	--	230	7.1	ND	ND	11	--
	02/12/92	--		--	--	410	1.9	ND	0.36	0.4	--
	05/05/92	--		--	--	1,600	120	52	6.2	290	--
	06/11/92	--		--	--	620	17	2.1	ND	37	--
	08/20/92	--		--	--	700	28	6.5	1.3	4.6	--
	02/22/93	--		--	--	3,400	2,400	2,100	1,200	5,800	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-2	05/07/93	--	5.0-20.0	--	--	17,000	1,800	660	1,700	4,000	--
(cont)	08/08/93	--		--	--	5,600[2]	420	ND	410	670	--
4.53	11/16/93	8.17		-3.64	0.00	510[3]	ND	ND	ND	ND	--
	02/16/94	7.73		-3.20	0.00	980[4]	49	13	2.7	40	--
7.62	06/22/94	7.60		0.02	0.00	31,000	2,200	62	1,500	3,500	--
	09/22/94	7.93		-0.31	0.00	8,500[3]	29	ND	ND	ND	--
	12/24/94	7.27		0.35	0.00	32,000	1,500	890	1,300	5,000	--
	03/25/95	7.01		0.61	0.00	170,000	1,900	21,000	4,800	33,000	--
	06/21/95	6.98		0.64	0.00	16,000	2,100	ND	1,800	1,700	--
	09/19/95	7.70		-0.08	0.00	3,000	610	ND	78	240	--[5]
	12/19/95	7.30		0.32	0.00	1,600	140	55	52	270	--[6]
	03/18/96	6.45		1.17	0.00	12,000	2,200	ND	1,200	2,200	22,000
	06/27/96	7.41		0.21	0.00	28,000	3,400	ND	2,800	3,100	3,000
	09/26/96	7.90		-0.28	0.00	5,900	750	ND	ND	ND	18,000
	12/09/96	6.76		0.86	0.00	13,000	5,100	290	980	370	2,700
	03/14/97	7.12		0.52**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	06/30/97	6.19		1.43	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	09/19/97	7.31		0.31	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	12/12/97	6.75		0.88**	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	03/03/98	6.36		1.26	Sheen	80,000	3,000	1,100	820	16,000	16,000
	06/15/98	6.51		1.11	Sheen	48,000	1,800	330	470	7,900	20,000
	09/30/98	7.17		0.45	Sheen	60,000	1,300	ND[7]	500	9,700	19,000
	12/28/98	7.06		0.56	0.00	63,000	590	160	320	5,600	16,000
	03/22/99	6.82		0.80	0.00	28,000	1,100	ND[7]	360	2,900	25,000
	06/09/99	7.51		0.11	0.00	21,000	110	190	310	2,600	7,900/7,800[10]
	09/08/99	8.16		-0.54	0.00	23,300[11]	477	138	286	4,110	16,400/15,300[10]
	12/07/99	8.31		-0.69	0.00	4,840[13]	17.2	ND[7]	ND[7]	157	14,900/15,600[12]
	03/13/00	6.69		0.93	0.00	11,000[11]	380	160	ND[7]	2,100	22,000/26,000[10]
	06/21/00	7.67		-0.05	0.00	9,100[11]	22	ND[7]	ND[7]	800	16,000/22,000[10]
	09/27/00	7.44		0.18	0.00	2,900[11]	43	ND[7]	ND[7]	39	20,000/26,000[15]
	12/12/00	7.51		0.11	0.00	3,600[11]	17	ND[7]	ND[7]	87	8,000/7,800[12]
	03/07/01	7.15		0.47	0.00	1,670[13]	51.0	ND[7]	7.20	19.5	5,930/7,900[10]
	06/06/01	7.57		0.05	0.00	1,100[11]	14	ND[7]	9.3	35	9,200/10,000[12]

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

WELL ID/ TOC* *(ft.)*	DATE	DTW *(ft.)*	S.I. *(ft. bgs)*	GWE *(ft.)*	Product Thickness *(ft.)*	TPH-G *(ppb)*	B *(ppb)*	T *(ppb)*	E *(ppb)*	X *(ppb)*	MTBE *(ppb)*
U-2	09/24/01	7.63	5.0-20.0	-0.01	0.00	1,000[18]	25	<2.5	12	100	9,800/11,000[10]
(cont)	12/10/01	6.78		0.84	0.00	83	14	0.55	3.4	6.8	2,500/2,500[10]
	03/11/02	7.12		0.50	0.00	<1,000	28	<10	40	31	11,000/11,000[10]
	06/04/02	7.18		0.44	0.00	7,700[18]	32	<25	33	48	14,000
	09/03/02	7.58		0.04	0.00	5,200[21]	<25	<25	<25	<25	11,000/15,000[10]
	12/03/02[22]	7.68		-0.06	0.00	<5,000	<50	<50	<50	<100	3,200
	03/04/03[22]	7.77		-0.15	0.00	8,100[21]	<50	<50	<50	<100	7,800
	06/18/03[22]	**6.87**		**0.75**	**0.00**	**11,000[21]**	**<50**	**<50**	**<50**	**<100**	**16,000**
U-3	08/10/90	--	5.0-20.0	--	--	ND	ND	ND	ND	ND	--
	01/07/91	--		--	--	ND	ND	ND	ND	1.8	--
	04/01/91	--		--	--	ND	1.0	2.9	0.53	5.4	--
	07/03/91	--		--	--	ND	ND	ND	ND	ND	--
	10/09/91	--		--	--	ND	ND	ND	ND	ND	--
	02/12/92	--		--	--	ND	ND	ND	ND	ND	--
	05/05/92	--		--	--	ND	ND	ND	ND	ND	--
	06/11/92	--		--	--	ND	ND	ND	ND	ND	--
	08/20/92	--		--	--	ND	ND	ND	ND	ND	--
	02/22/93	--		--	--	ND	ND	ND	ND	ND	--
	05/07/93	--		--	--	ND	ND	ND	ND	ND	--
	08/08/93	--		--	--	210	5.0	9.7	0.7	4.1	--
7.86	11/16/93	11.82		-3.96	0.00	ND	ND	ND	ND	ND	--
	02/16/94	11.62		-3.76	0.00	ND	ND	ND	ND	ND	--
10.98	06/22/94	11.64		-0.66	0.00	ND	ND	ND	ND	ND	--
	09/22/94	11.76		-0.78	0.00	ND	ND	ND	ND	ND	--
	12/24/94	11.28		-0.30	0.00	ND	ND	ND	ND	ND	--
	03/25/95	10.96		0.02	0.00	ND	ND	ND	ND	ND	--
	06/21/95	11.37		-0.39	0.00	ND	ND	ND	ND	ND	--
	09/19/95	11.55		-0.57	0.00	ND	ND	ND	ND	ND	--[5]
	12/19/95	11.45		-0.47	0.00	ND	ND	ND	ND	ND	--
	03/18/96	11.10		-0.12	0.00	ND	ND	ND	ND	ND	--
	06/27/96	11.16		-0.18	0.00	440	49	50	51	140	50

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

WELL ID/ TOC* (ft.)	DATE	DTW (ft.)	S.I (ft. bgs)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-3	09/26/96	11.55	5.0-20.0	-0.57	0.00	ND	ND	ND	ND	ND	ND
(cont)	12/09/96	10.12		0.86	0.00	ND	ND	ND	ND	ND	29
	03/14/97	10.87		0.11	0.00	ND	ND	ND	ND	ND	ND
	06/30/97	11.08		-0.10	0.00	ND	ND	ND	ND	ND	ND
	09/19/97	11.05		-0.07	0.00	ND	ND	ND	ND	ND	ND
	12/12/97	10.58		0.40	0.00	ND	ND	ND	ND	ND	ND
	03/03/98	9.84		1.14	0.00	ND	ND	ND	ND	ND	ND
	06/15/98	10.56		0.42	0.00	ND	ND	ND	ND	ND	ND
	09/30/98	11.12		-0.14	0.00	ND	ND	ND	ND	ND	ND
	12/28/98	10.96		0.02	0.00	ND	ND	ND	ND	ND	ND
	03/22/99	9.46		1.52	0.00	ND	ND	ND	ND	ND	ND
	06/09/99	11.01		-0.03	0.00	ND	ND	ND	ND	ND	ND
	09/08/99	11.31		-0.33	0.00	ND	ND	ND	ND	ND	ND
	12/07/99	11.26		-0.28	0.00	ND	ND	ND	ND	ND	ND
	03/13/00	8.28		2.70	0.00	ND	ND	ND	ND	ND	ND
	06/21/00	11.12		-0.14	0.00	ND	ND	ND	ND	ND	ND
	09/27/00	11.07		-0.09	0.00	ND	ND	ND	ND	ND	ND
	12/12/00	10.94		0.04	0.00	ND	ND	ND	ND	ND	ND
	03/07/01	8.32		2.66	0.00	ND	ND	ND	ND	ND	ND
	06/06/01	10.94		0.04	0.00	ND	ND	ND	ND	ND	ND
	09/24/01	11.03		-0.05	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	12/10/01	8.16		2.82	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	03/11/02	7.82		3.16	0.00	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	06/04/02	10.58		0.40	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	09/03/02	10.94		0.04	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	12/03/02[22]	10.66		0.32	0.00	<50	<0.50	<0.50	<0.50	<1.0	<2.0
	03/04/03[22]	10.76		0.22	0.00	<50	<0.50	<0.50	<0.50	<1.0	<2.0
	06/18/03[22]	**10.26**		**0.72**	**0.00**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**<2.0**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

WELL ID/ TOC* *(ft.)*	DATE	DTW *(ft.)*	S.I. *(ft. bgs)*	GWE *(ft.)*	Product Thickness *(ft.)*	TPH-G *(ppb)*	B *(ppb)*	T *(ppb)*	E *(ppb)*	X *(ppb)*	MTBE *(ppb)*
U-4											
11.15	06/22/94	10.16	5.0-20.0	0.99	0.00	ND	ND	ND	ND	ND	--
	09/22/94	10.79		0.36	0.00	ND	0.78	1.3	ND	1.4	--
	12/24/94	9.81		1.34	0.00	ND	ND	ND	ND	ND	--
	03/25/95	9.51		1.64	0.00	ND	ND	ND	ND	ND	--
	06/21/95	9.54		1.61	0.00	ND	ND	ND	ND	ND	--
	09/19/95	10.17		0.98	0.00	ND	ND	ND	ND	ND	--
	12/19/95	9.98		1.17	0.00	ND	ND	ND	ND	ND	--
	03/18/96	9.66		1.49	0.00	ND	ND	ND	ND	ND	--
	06/27/96	9.74		1.41	0.00	ND	ND	ND	ND	ND	ND
	09/26/96	10.14		1.01	0.00	ND	ND	ND	ND	ND	ND
	12/09/96	8.67		2.48	0.00	ND	ND	ND	ND	ND	33
	03/14/97	9.35		1.80	0.00	ND	ND	ND	ND	ND	ND
	06/30/97	9.89		1.26	0.00	ND	ND	ND	ND	ND	ND
	09/19/97	9.96		1.19	0.00	ND	ND	ND	ND	ND	ND
	12/12/97	8.56		2.59	0.00	ND	ND	ND	ND	ND	ND
	03/03/98	7.85		3.30	0.00	ND	ND	ND	ND	ND	ND
	06/15/98	9.08		2.07	0.00	ND	ND	ND	ND	ND	ND
	09/30/98	9.75		1.40	0.00	ND	ND	ND	ND	ND	ND
	12/28/98	9.59		1.56	0.00	ND	ND	ND	ND	ND	ND
	03/22/99	8.34		2.81	0.00	ND	ND	ND	ND	ND	ND
	06/09/99	9.39		1.76	0.00	ND	ND	ND	ND	ND	ND
	09/08/99	9.90		1.25	0.00	ND	ND	ND	ND	ND	ND
	12/07/99	10.05		1.10	0.00	ND	ND	ND	ND	ND	ND
	03/13/00	7.24		3.91	0.00	ND	ND	ND	ND	ND	ND
	06/21/00	9.48		1.67	0.00	ND	ND	ND	ND	ND	ND
	09/27/00	9.42		1.73	0.00	ND	ND	ND	ND	ND	ND
	12/12/00	9.50		1.65	0.00	ND	ND	ND	ND	ND	ND
	03/07/01	6.88		4.27	0.00	ND	ND	ND	ND	ND	ND
	06/06/01	9.18		1.97	0.00	ND	ND	ND	ND	ND	ND
	09/24/01	9.21		1.94	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	12/10/01	7.32		3.83	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	03/11/02	6.92		4.23	0.00	<50	<0.50	<0.50	<0.50	<0.50	<5.0

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

WELL ID/ TOC* (ft.)	DATE	DTW (ft.)	S.I (ft. bgs)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-4	06/04/02	7.58	5.0-20.0	3.57	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
(cont)	09/03/02	9.17		1.98	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	12/03/02[22]	9.20		1.95	0.00	<50	<0.50	<0.50	<0.50	<1.0	<2.0
	03/04/03[22]	9.32		1.83	0.00	<50	<0.50	<0.50	<0.50	<1.0	<2.0
	06/18/03[22]	**7.65**		**3.50**	**0.00**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**<2.0**
U-5											
6.98	06/22/94	6.83	5.0-20.0	0.15	0.00	210	7.1	13	4.5	26	--
	09/22/94	6.90		0.08	0.00	170	8.4	10	8.5	18	--
	12/24/94	6.43		0.55	0.00	8,700	560	70	670	430	--
	03/25/95	6.35		0.63	0.00	44,000	390	960	1,500	7,600	--
	06/21/95	7.11		-0.13	0.00	400	2.3	ND	9.1	3.5	--
	09/19/95	6.99		-0.01	0.00	850	14	7.1	13	66	--[5]
	12/19/95	7.17		-0.19	0.00	ND	ND	ND	ND	ND	--
	03/18/96	6.65		0.33	0.00	100	0.67	0.5	0.51	5.4	--
	06/27/96	6.49		0.49	0.00	16,000	280	150	1,400	4,600	530
	09/26/96	7.13		-0.15	0.00	ND	ND	0.57	ND	0.96	ND
	12/09/96	5.90		1.08	0.00	1,300	29	46	ND	140	97
	03/14/97	6.99		-0.01	0.00	ND	ND	ND	ND	ND	14
	06/30/97	7.08		-0.10	0.00	4,200	74	51	180	980	270
	09/19/97	6.78		0.20	0.00	6,300	160	13	370	1000	480
	12/12/97	6.94		0.04	0.00	60	1.3	ND	1.6	2.1	47
	03/03/98	6.50		0.48	0.00	1,700	29	ND[7]	150	190	330
	06/15/98	6.85		0.13	0.00	1,500	32	ND[7]	91	83	330
	09/30/98	7.31		-0.33	0.00	1,700	44	ND[7]	39	150	60
	12/28/98	7.25		-0.27	0.00	1,400	59	ND[7]	13	27	150
	03/22/99	6.86		0.12	0.00	780	8.9	ND	0.76	4.5	350
	06/09/99	7.28		-0.30	0.00	1,000	ND[7]	ND[7]	10	35	280/350[10]
	09/08/99	7.52		-0.54	0.00	2,620[11]	26.2	ND[7]	32.2	157	280/239[12]
	12/07/99	7.67		-0.69	0.00	949[11]	9.26	ND[7]	11.2	22.7	235/301[12]
	03/13/00	6.73		0.25	0.00	880[14]	12	1.0	5.6	8.7	46/37[10]
	06/21/00	7.39		-0.41	0.00	700[11]	4.0	ND	0.99	4.0	120/140[10]

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

WELL ID/ TOC* (ft.)	DATE	DTW (ft.)	S.I (ft. bgs)	GWE (ft.)	Product Thickness (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-5	09/27/00	7.45	5.0-20.0	-0.47	0.00	400[11]	1.9	ND	ND	1.5	160/250[15]
(cont)	12/12/00	7.68		-0.70	0.00	770[11]	3.2	ND[7]	ND[7]	ND[7]	27/13[12]
	03/07/01	6.83		0.15	0.00	623[13]	5.15	ND	ND	0.669	35.7/43.4[10]
	06/06/01	7.42		-0.44	0.00	110[13]	ND	ND	ND	ND	ND
	09/24/01	7.50		-0.52	0.00	270[19]	<0.50	<0.50	<0.50	<0.50	40/42[10]
	12/10/01	6.65		0.33	0.00	420[18]	13	0.60	0.66	<0.50	<2.5
	03/11/02	7.00		-0.02	0.00	260[13]	<0.50	<0.50	<0.50	<0.50	42/47[10]
	06/04/02	6.71		0.27	0.00	170[19]	<0.50	0.77	0.87	0.69	29
	09/03/02	7.47		-0.49	0.00	<50	<0.50	<0.50	<0.50	<0.50	37/53[10]
	12/03/02[22]	6.64		0.34	0.00	320	<0.50	<0.50	5.7	<1.0	11
	03/04/03[22]	6.75		0.23	0.00	100[21]	<0.50	<0.50	<0.50	<1.0	44
	06/18/03[22]	**6.25**		**0.73**	**0.00**	**51[21]**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**36**
U-6											
7.14	06/22/94	7.14	5.0-24.0	0.00	0.00	ND	ND	ND	ND	ND	--
	09/22/94	7.34		-0.20	0.00	130	1.3	0.8	ND	0.73	--
	12/24/94	6.67		0.47	0.00	6,900	500	59	600	380	--
	03/25/95	6.29		0.85	0.00	47,000	450	1,300	1,700	8,200	--
	06/21/95	7.60		-0.46	0.00	ND	ND	ND	ND	ND	--
	09/19/95	7.70		-0.56	0.00	ND	ND	ND	ND	ND	--[5]
	12/19/95	7.75		-0.61	0.00	210	2.5	1.0	2.9	17	--
	03/18/96	6.86		0.28	0.00	ND	ND	ND	ND	ND	--
	06/27/96	6.52		0.62	0.00	ND	ND	ND	ND	ND	510
	09/26/96	7.62		-0.48	0.00	ND	ND	ND	ND	ND	1,400
	12/09/96	5.88		1.26	0.00	1,200	29	48	6.4	140	58
	03/14/97	7.30		-0.16	0.00	ND	ND	ND	ND	ND	1,500
	06/30/97	7.35		-0.21	0.00	ND	ND	ND	ND	ND	990
	09/19/97	7.25		-0.11	0.00	ND	ND	ND	ND	ND	1,400
	12/12/97	7.29		-0.15	0.00	ND	ND	ND	ND	ND	680
	03/03/98	7.00		0.14	0.00	ND	ND	ND	ND	ND	1,600
	06/15/98	7.18		-0.04	0.00	ND[7]	ND[7]	ND[7]	ND[7]	ND[7]	1,000
	09/30/98	7.90		-0.76	0.00	ND	ND	ND	ND	ND	1,200

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

WELL ID/ TOC* *(ft.)*	DATE	DTW *(ft.)*	S.I. *(ft. bgs)*	GWE *(ft.)*	Product Thickness *(ft.)*	TPH-G *(ppb)*	B *(ppb)*	T *(ppb)*	E *(ppb)*	X *(ppb)*	MTBE *(ppb)*
U-6	12/28/98	7.79	5.0-24.0	-0.65	0.00	ND[7]	ND[7]	ND[7]	ND[7]	ND[7]	730
(cont)	03/22/99	7.47		-0.33	0.00	ND	ND	ND	ND	ND	1,800
	06/09/99	7.73		-0.59	0.00	ND[7]	ND[7]	ND[7]	ND[7]	ND[7]	1,000/850[10]
	09/08/99	7.95		-0.81	0.00	ND	ND	ND	ND	ND	851/1,040[10]
	12/07/99	8.10		-0.96	0.00	ND	ND	ND	ND	ND	1,140/1,150[12]
	03/13/00	6.95		0.19	0.00	ND	ND	ND	ND	ND	560/670[10]
	06/21/00	7.84		-0.70	0.00	ND	ND	ND	ND	ND	400/590[10]
	09/27/00	7.68		-0.54	0.00	ND	ND	ND	ND	ND	2,500/2,800[15]
	12/12/00	7.74		-0.60	0.00	ND	ND	ND	ND	ND	590/580[12]
	03/0701	7.27		-0.13	0.00	ND	ND	ND	ND	ND	310/321[12]
	06/06/01	7.80		-0.66	0.00	ND	ND	ND	ND	ND	250/330[12]
	09/24/01	7.82		-0.68	0.00	<50	<0.50	<0.50	<0.50	<0.50	530/660[10]
	12/10/01	7.15		-0.01	0.00	<50	<0.50	<0.50	<0.50	<0.50	220/220[10]
	03/11/02	7.32		-0.18	0.00	<50	<0.50	<0.50	<0.50	<0.50	720/760[10]
	06/04/02	7.18		-0.04	0.00	250[19]	<1.0	<1.0	<1.0	<1.0	470
	09/03/02	7.72		-0.58	0.00	420[21]	<2.5	<2.5	<2.5	4.7	860/1,200[10]
	12/03/02[22]	6.92		0.22	0.00	<500	<5.0	<5.0	<5.0	<10	870
	03/04/03[22]	7.01		0.13	0.00	2,300[21]	<10	<10	<10	<20	2,700
	06/18/03[22]	**6.60**		**0.54**	**0.00**	**1,300[21]**	**<10**	**<10**	**<10**	**<20**	**1,700**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to March 3, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing
(ft.) = Feet
DTW = Depth to Water
S.I. = Screen Interval
(ft. bgs) = Feet Below Ground Surface
GWE = Groundwater Elevation

TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary butyl ether

(ppb) = Parts per billion
ND = Not Detected
-- = Not Measured/Not Analyzed
QA = Quality Assurance/Trip Blank

* TOC elevations are surveyed relative to City of Oakland Benchmark, at the northeasterly corner of Weller and Cheney Avenue (Elevation = 9.055 feet, city datum; add 3.00' to U.S.G.S. datum). Prior to November 16, 1993, the DTW measurements were taken from the well cover.

** Groundwater elevation corrected due to the presence of free product; correction factor = [(TOC-DTW)+(Product Thickness x 0.75)].

1 The positive result for gasoline does not appear to have a typical gasoline pattern.

2 The concentration reported as gasoline is primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.

3 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline

4 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

5 Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.

6 Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppb in the sample collected from this well.

7 Detection limit raised. Refer to analytical reports.

8 Laboratory report indicates unidentified hydrocarbons C6-C12.

9 Laboratory report indicates gasoline and unidentified hydrocarbons >C8.

10 MTBE by EPA Method 8260.

11 Laboratory report indicates gasoline C6-C12.

12 MTBE by EPA Method 8260 analyzed past the recommended holding time.

13 Laboratory report indicates weathered gasoline C6-C12.

14 Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons <C6.

15 Laboratory report indicates sample was originally analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommended holding time.

16 Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons >C10.

17 Skimmer present in well.

18 Laboratory report indicates gasoline C6-C10.

19 Laboratory report indicates unidentified hydrocarbons C6-C10.

20 Skimmer not present in well.

21 Laboratory report indicates hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.

22 TPH-G, BTEX and MTBE by EPA Methoed 8260.

Table 2

Groundwater Analytical Results - Oxygenate Compounds

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
U-1	09/27/00[1]	--	ND[2]	83,000	ND[2]	ND[2]	ND[2]	ND[2]	ND[2]
	12/12/00	--	--	15,000[3]	--	--	--	--	--
	03/07/01	ND[2]	ND[2]	11,800	ND[2]	ND[2]	ND[2]	ND[2]	ND[2]
	06/06/01[3]	ND[2]	ND[2]	8,700	ND[2]	ND[2]	ND[2]	ND[2]	ND[2]
	09/24/01	<400,000	<20,000	4,400	<1,000	<1,000	<1,000	<1,000	<1,000
	12/10/01	<8,000	<4,000	5,100	<100	<100	<100	<100	<100
	03/11/02	<25,000	<5,000	6,300	<100	<100	<100	<100	<100
	06/04/02[4]	--	--	--	--	--	--	--	--
	09/03/02	<50,000	<10,000	4,700	<200	<200	<200	<200	<200
	12/03/02	<50,000	<10,000	4,700	<200	<200	<200	<200	<200
	03/04/03	<25,000	<5,000	5,500	<100	<100	<100	<100	<100
	06/18/03	**<25,000**	**<5,000**	**10,000**	**<100**	**<100**	**<100**	**<100**	**<100**
U-2	09/27/00	--	--	26,000[1]	--	--	--	--	--
	12/12/00	--	--	7,800[3]	--	--	--	--	--
	03/07/01	ND[2]	ND[2]	7,900	ND[2]	ND[2]	ND[3]	ND[2]	ND[2]
	06/06/01[3]	ND[2]	ND[2]	10,000	ND[2]	ND[2]	ND[2]	ND[2]	ND[2]
	09/24/01	<400,000	<20,000	11,000	<1,000	<1,000	<1,000	<1,000	<1,000
	12/10/01	<4,000	<2,000	2,500	<50	<50	<50	<50	<50
	03/11/02	<50,000	<10,000	11,000	<200	<200	<200	<200	<200
	06/04/02[4]	--	--	--	--	--	--	--	--
	09/03/02	<250,000	<50,000	15,000	<1,000	<1,000	<1,000	<1,000	<1,000
	12/03/02	<50,000	<10,000	3,200	<200	<200	<200	<200	<200
	03/04/03	<50,000	<10,000	7,800	<200	<200	<200	<200	<200
	06/18/03	**<50,000**	**<10,000**	**16,000**	**<200**	**<200**	**<200**	**<200**	**<200**
U-3	12/03/02	--	--	<2.0	--	--	--	--	--
	03/04/03	--	--	<2.0	--	--	--	--	--
	06/18/03	**--**	**--**	**<2.0**	**--**	**--**	**--**	**--**	**--**

Table 2

Groundwater Analytical Results - Oxygenate Compounds

Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
U-4	12/03/02	--	--	<2.0	--	--	--	--	--
	03/04/03	--	--	<2.0	--	--	--	--	--
	06/18/03	**--**	**--**	**<2.0**	**--**	**--**	**--**	**--**	**--**
U-5	09/27/00	--	--	250[1]	--	--	--	--	--
	12/12/00	--	--	13[3]	--	--	--	--	--
	03/07/01	ND	ND	43.4	ND	ND	ND	ND	ND
	09/24/01	<4,000	<200	42	<10	<10	<10	<10	<10
	03/11/02	<500	<100	47	<2.0	<2.0	<2.0	<2.0	<2.0
	06/04/02[4]	--	--	--	--	--	--	--	--
	09/03/02	<500	<100	53	<2.0	<2.0	<2.0	<2.0	<2.0
	12/03/02	<500	<100	11	<2.0	<2.0	<2.0	<2.0	<2.0
	03/04/03	<500	<100	44	<2.0	<2.0	<2.0	<2.0	<2.0
	06/18/03	**<500**	**<100**	**36**	**<2.0**	**<2.0**	**<2.0**	**<2.0**	**<2.0**
U-6	09/27/00	--	--	2,800[1]	--	--	--	--	--
	12/12/00	--	--	580[3]	--	--	--	--	--
	03/07/01[3]	ND[2]	ND[2]	321	ND[2]	ND[2]	ND[2]	ND[2]	ND[2]
	06/06/01[3]	ND[2]	ND[2]	330	ND[2]	ND[2]	ND[2]	ND[2]	ND[2]
	09/24/01	<40,000	<2,000	660	<100	<100	<100	<100	<100
	12/10/01	<400	<200	220	<5.0	<5.0	<5.0	<5.0	<5.0
	03/11/02	<2,000	<400	760	<8.0	<8.0	<8.0	<8.0	<8.0
	06/04/02[4]	--	--	--	--	--	--	--	--
	09/03/02	<10,000	<2,000	1,200	<40	<40	<40	<40	<40
	12/03/02	<5,000	<1,000	870	<20	<20	<20	<20	<20
	03/04/03	<10,000	<2,000	2,700	<40	<40	<40	<40	<40
	06/18/03	**<10,000**	**<2,000**	**1,700**	**<40**	**<40**	**<40**	**<40**	**<40**

Table 2

Groundwater Analytical Results - Oxygenate Compounds

Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

EXPLANATIONS:

TBA = Tertiary butyl alcohol
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
(ppb) = Parts per billion
ND = Not Detected
-- = Not Analyzed

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

[1] Laboratory report indicates sample was originally analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommended holding time.
[2] Detection limit raised. Refer to analytical reports.
[3] Laboratory report indicates sample was analyzed outside the EPA recommended holding time.
[4] Due to Laboratory error, samples for oxygenate (8260) analyses was not performed.

Table 3

Field Measurements and Groundwater Analytical Results

Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

WELL ID	DATE	Ferrous Iron (ppm)	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	ORP (mV)	D.O. Before Purge (mg/L)	D.O. After Purge (mg/L)
U-1	06/15/98	39	ND	ND	382[2]	--	--
	09/30/98	17	ND	ND	366[2]	--	--
	12/28/98	4.3	6.3	28	298[2]	--	--
	03/22/99	4.9	ND	3.5	320[3]	--	--
	06/09/99	1.2	ND	ND	260[3]	--	--
	09/08/99	1.80	ND[1]	ND[1]	85[3]	--	--
	12/07/99	5.70	ND[1]	17.0	404[3]	1.36	--
	03/13/00	8.0	0.18	ND	[2]117/262[3]	--	--
	06/21/00	9.3	ND[1]	ND[1]	148[2]	1.53	--
	09/27/00	2.8	ND[1]	18.4	119[2]	1.63	--
	12/12/00	0.49	ND[1]	16.0	131[2]	1.48	--
	03/07/01	0.483	2.64	6.89	125[2]	1.91	--
	06/06/01	1.0[4]	ND	2.7	141[2]	1.77	--
	09/24/01	<0.10	0.45[5]	--	125[2]	1.64	--
	12/10/01	14	<0.50	2.2	141[2]	1.82	--
	03/11/02	15	<0.50	0.11	132[2]	2.21	--
	06/04/02	<0.50	<0.50	<0.10	117[2]	1.88	--
	09/03/02	<0.50	<0.50	<0.10	94[2]	1.62	--
	12/03/02	9.6	<1.0	<1.0	72[2]	1.71	--
	03/04/03	36	<1.0	<1.0	-125[2]	0.30	--
	06/18/03	**16**	**<1.0**	**<1.0**	**-48[2]**	**--**	**1.7**
U-2	03/03/98	25	ND	ND	369[2]	--	--
	06/15/98	42	ND	ND	341[2]	--	--
	09/30/98	25	ND	ND	354[2]	--	--
	12/28/98	28	ND	ND	276[2]	--	--
	03/22/99	0.68	ND	2.3	320[3]	--	--
	06/09/99	0.50	ND	ND	290[3]	--	--
	09/08/99	1.90	ND[1]	ND[1]	235[3]	--	--
	12/07/99	0.250	ND[1]	ND[1]	389[3]	2.28	--
	03/13/00	4.3	0.31	ND	[2]121/184[3]	--	--
	06/21/00	0.26	ND[1]	ND[1]	136[2]	1.96	--
	09/27/00	0.64	ND[1]	10.5	142[2]	2.12	--
	12/12/00	2.7	ND[1]	ND[1]	155[2]	2.35	--
	03/07/01	0.677	2.24	3.02	148[2]	2.21	--
	06/06/01	0.80[4]	ND	2.8	163[2]	2.67	--
	09/24/01	<0.10	0.49[5]	--	151[2]	2.10	--
	12/10/01	<0.10	<0.50	0.20	171[2]	2.81	--
	03/11/02	<0.10	<0.50	0.65	156[2]	2.77	--
	06/04/02	<0.10	<0.50	<0.10	144[2]	3.14	--
	09/03/02	<0.25	<0.50	0.26	151[2]	2.85	--
	12/03/02	9.9	<1.0	<1.0	94[2]	1.97	--
	03/04/03	8.6	<1.0	<1.0	-147[2]	0.40	--
	06/18/03	**5.5**	**<1.0**	**3.1**	**-8[2]**	**--**	**3.2**

Table 3

Field Measurements and Groundwater Analytical Results

Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

WELL ID	DATE	Ferrous Iron (ppm)	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	ORP (mV)	D.O. Before Purge (mg/L)	D.O. After Purge (mg/L)
U-3	06/30/97	1.4	21	0.86	190[3]	4.10	--
	09/19/97	0.57	19	ND	75[3]	4.20	--
	12/12/97	1.9	23	0.85	390[3]	2.97	--
	03/03/98	0.013	36	ND	358[2]	2.63	--
	06/15/98	0.16	33	ND	318[2]	2.93	--
	09/30/98	0.040	31	ND	295[2]	3.11	--
	12/28/98	ND	29	ND	281[2]	3.59	--
	03/22/99	0.015	30	0.14	310[3]	4.02	--
	06/09/99	ND	26	1.2	350[3]	3.70	--
	09/08/99	ND	32.9	ND[1]	417[3]	3.96	--
	12/07/99	0.0520	27.9	ND[1]	437[3]	4.21	--
	03/13/00	0.15	33	ND	[2]226/307[3]	--	--
	06/21/00	0.20	32	ND[1]	225[2]	4.27	--
	09/27/00	ND	34	15.7	211[2]	4.67	--
	12/12/00	ND	31	ND[1]	246[2]	4.79	--
	03/07/01	ND	36.5	0.443	251[2]	5.16	--
	06/06/01	ND[4]	8.0	0.18	214[2]	4.79	--
	09/24/01	<0.10	23[5]	--	198[2]	4.27	--
	12/10/01	<0.10	21	0.11	188[2]	4.66	--
	03/11/02	<0.10	30	0.14	166[2]	5.06	--
	06/04/02	<0.10	18	<0.10	151[2]	5.79	--
	09/03/02	<0.10[5]	28	<0.10	143[2]	6.04	--
	12/03/02	<0.20	20	<1.0	154[2]	5.58	--
	03/04/03	<0.20	18	<1.0	-136[2]	0.20	--
	06/18/03	**<0.20**	**17**	**<1.0**	**333[2]**	--	**3.5**
U-4	06/30/97	0.13	35	0.52	200[3]	5.40	--
	09/19/97	0.35	30	ND	45[3]	5.10	--
	12/12/97	0.68	31	0.73	380[3]	3.11	--
	03/03/98	0.018	3.2	ND	284[2]	2.94	--
	06/15/98	0.14	33	ND	256[2]	3.08	--
	09/30/98	0.049	31	ND	276[2]	4.05	--
	12/28/98	0.36	31	ND	280[2]	4.57	--
	03/22/99	ND	30	0.14	320[3]	4.26	--
	06/09/99	ND	35	0.91	340[3]	3.61	--
	09/08/99	ND	24	ND[1]	391[3]	3.75	--
	12/07/99	ND	27.7	ND[1]	478[3]	4.03	--
	03/13/00	ND	33	ND	[2]219/244[3]	--	--
	06/21/00	0.034	32	ND[1]	248[2]	4.89	--
	09/27/00	ND	28	ND[1]	198[2]	5.09	--
	12/12/00	ND	30	ND[1]	210[2]	4.86	--
	03/07/01	ND	33.9	0.226	233[2]	4.97	--
	06/06/01	ND[4]	7.4	0.21	248[2]	5.12	--
	09/24/01	<0.10	24[5]	--	262[2]	4.86	--

Table 3
Field Measurements and Groundwater Analytical Results
Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

WELL ID	DATE	Ferrous Iron (ppm)	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	ORP (mV)	D.O. Before Purge (mg/L)	D.O. After Purge (mg/L)
U-4	12/10/01	<0.10	19	0.10	242[2]	5.05	--
(cont)	03/11/02	<0.10	31	0.14	195[2]	4.83	--
	06/04/02	<0.10	27	<0.10	169[2]	5.58	--
	09/03/02	<0.10[5]	28	0.27	126[2]	5.94	--
	12/03/02	<0.20	20	<1.0	133[2]	5.82	--
	03/04/03	<0.20	26	<1.0	-148[2]	0.30	--
	06/18/03	**<0.20**	**31**	**<1.0**	**250[2]**	**--**	**3.6**
U-5	06/30/97	16	ND	ND	160[3]	3.40	--
	09/19/97	0.22	ND	ND	63[3]	0.60	--
	12/12/97	6.7	ND	ND	400[3]	1.75	--
	03/03/98	18	3.1	ND	345[2]	2.36	--
	06/15/98	17	ND	ND	333[2]	2.55	--
	09/30/98	17	ND	ND	318[2]	1.93	--
	12/28/98	17	6.6	ND	305[2]	1.64	--
	03/22/99	0.12	ND	2.4	340[3]	1.99	--
	06/09/99	0.23	ND	ND	320[3]	2.10	--
	09/08/99	2.10	ND[1]	ND[1]	335[3]	2.21	--
	12/07/99	0.310	ND[1]	ND[1]	408[3]	2.66	--
	03/13/00	0.33	0.16	ND	[2]111/264[3]	--	--
	06/21/00	0.15	ND[1]	ND[1]	159[2]	3.42	--
	09/27/00	0.33	ND[1]	ND[1]	136[2]	3.85	--
	12/12/00	0.086	ND[1]	ND[1]	122[2]	3.53	--
	03/07/01	1.07	3.02	4.00	141[2]	2.98	--
	06/06/01	ND[4]	ND	1.2	112[2]	2.67	--
	09/24/01	<0.10	0.77[5]	--	146[2]	3.15	--
	12/10/01	3.7	<0.50	2.6	96[2]	2.85	--
	03/11/02	0.10	<0.50	0.52	108[2]	3.15	--
	06/04/02	<0.25	<0.50	<0.10	118[2]	3.46	--
	09/03/02	<0.25	<0.50	<0.10	87[2]	2.85	--
	12/03/02	22	<1.0	<1.0	104[2]	2.71	--
	03/04/03	19	<1.0	<1.0	-166[2]	0.20	--
	06/18/03	**11**	**<1.0**	**<1.0**	**-10[2]**	**--**	**2.4**
U-6	06/30/97	88	0.80	ND	190[3]	0.30	--
	09/19/97	2.9	1.80	ND	ND[3]	0.60	--
	12/12/97	51	ND	ND	380[3]	2.70	--
	03/03/98	60	3.5	ND	327[2]	2.18	--
	06/15/98	590	4.8	ND	315[2]	2.48	--
	09/30/98	33	ND	ND	345[2]	3.06	--
	12/28/98	83	7.2	ND	297[2]	3.42	--
	03/22/99	2.1	ND	0.98	330[3]	3.88	--
	06/09/99	0.47	0.20	ND	320[3]	3.29	--

Table 3

Field Measurements and Groundwater Analytical Results

Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

WELL ID	DATE	Ferrous Iron (ppm)	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	ORP (mV)	D.O. Before Purge (mg/L)	D.O. After Purge (mg/L)
U-6	09/08/99	0.140	5.59	ND[1]	305[3]	3.12	--
(cont)	12/07/99	0.260	ND[1]	ND[1]	443[3]	3.44	--
	03/13/00	0.79	0.26	ND	[2]68/222[3]	--	--
	06/21/00	1.9	ND[1]	ND[1]	159[2]	3.27	--
	09/27/00	2.6	ND[1]	ND[1]	170[2]	3.49	--
	12/12/00	ND	2.7	ND[1]	128[2]	3.06	--
	03/07/01	2.52	3.11	37.0	117[2]	2.85	--
	06/06/01	0.47[4]	0.15	0.70	97[2]	2.46	--
	09/24/01	<0.10	0.58[5]	--	123[2]	3.10	--
	12/10/01	0.99	0.50	2.0	112[2]	2.57	--
	03/11/02	1.2	<0.50	0.089	128[2]	3.03	--
	06/04/02	<0.10	<0.50	<1.0	97[2]	2.84	--
	09/03/02	<0.10	0.58	1.1	110[2]	3.12	--
	12/03/02	1.2	<1.0	2.6	95[2]	2.96	--
	03/04/03	20	<1.0	<1.0	-112[2]	0.30	--
	06/18/03	**3.2**	**<1.0**	**2.0**	**-15[2]**	**--**	**3.2**

Table 3

Field Measurements and Groundwater Analytical Results

Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

EXPLANATIONS:

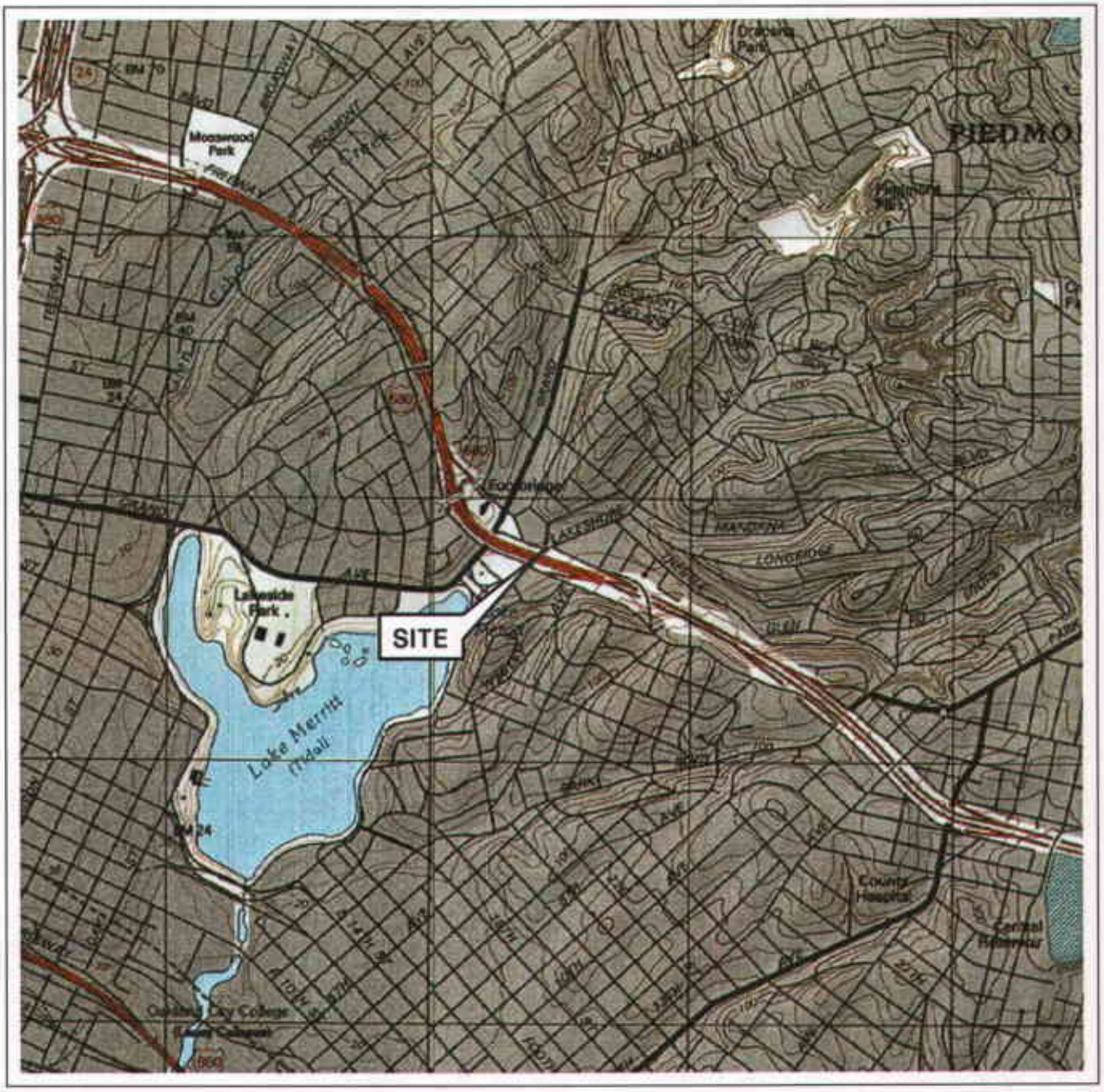
Groundwater analytical results prior to March 3, 1998, were compiled from reports prepared by MPDS Services, Inc.

ORP = Oxidation Reduction Potential
(mV) = millivolts
D.O. = Dissolved Oxygen
(mg/L) = milligrams per liter
(ppm) = Parts per million
ND = Not Detected
-- = Not Measured/Not Analyzed

1 Detection limit raised. Refer to analytical reports.
2 Field measurement.
3 Analyzed by laboratory.
4 Due to the transfer of samples from one laboratory to another laboratory; the sample was received beyond the EPA recommended holding time.
5 Laboratory report indicates the sample was analyzed beyond the EPA recommended holding time.

ANALYTICAL METHODS:

Ferrous Iron by Hach method 8146/1;10 Phenanthroline Method
Nitrate as NO3 by EPA Method 300.0
Phosphate as PO4 by EPA Method 300.0



0 1/4 1/2 3/4 1 MILE

SCALE 1:24,000

N

SOURCE:

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

VICINITY MAP

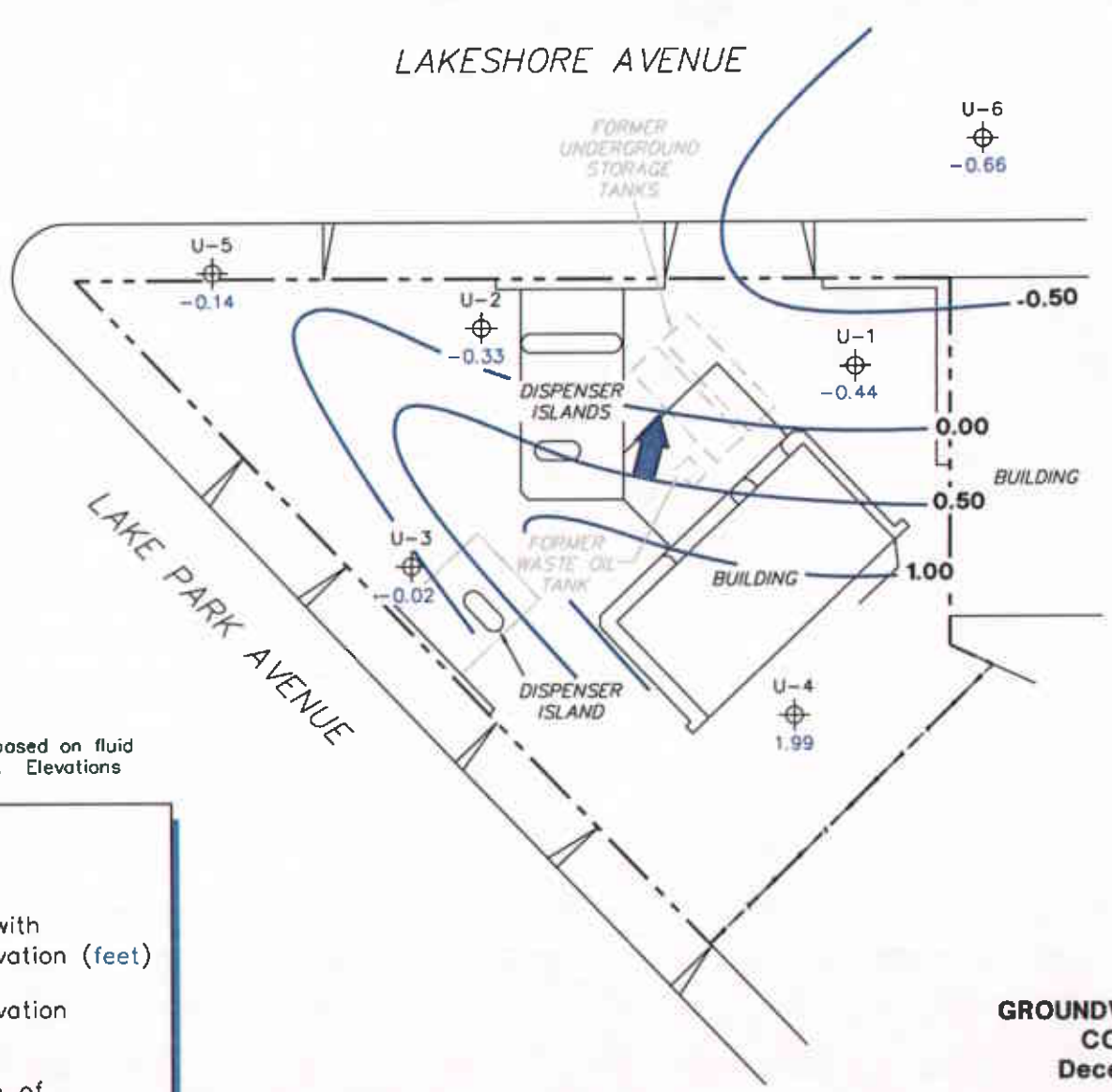
76 Station 5325
3220 Lakeshore Avenue
Oakland, California

FIGURE 1

TRC

PS = 1:1

Graphics on Irt1(i:)\VICINITY MAPS\1234vm.dwg 11/21/03 blw



NOTES:

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

LEGEND

U-6 ⊕ Monitoring Well with Groundwater Elevation (feet)

1.00 — Groundwater Elevation Contour

General Direction of Groundwater Flow

SCALE (FEET)

0 40

GROUNDWATER ELEVATION CONTOUR MAP
December 2, 2003

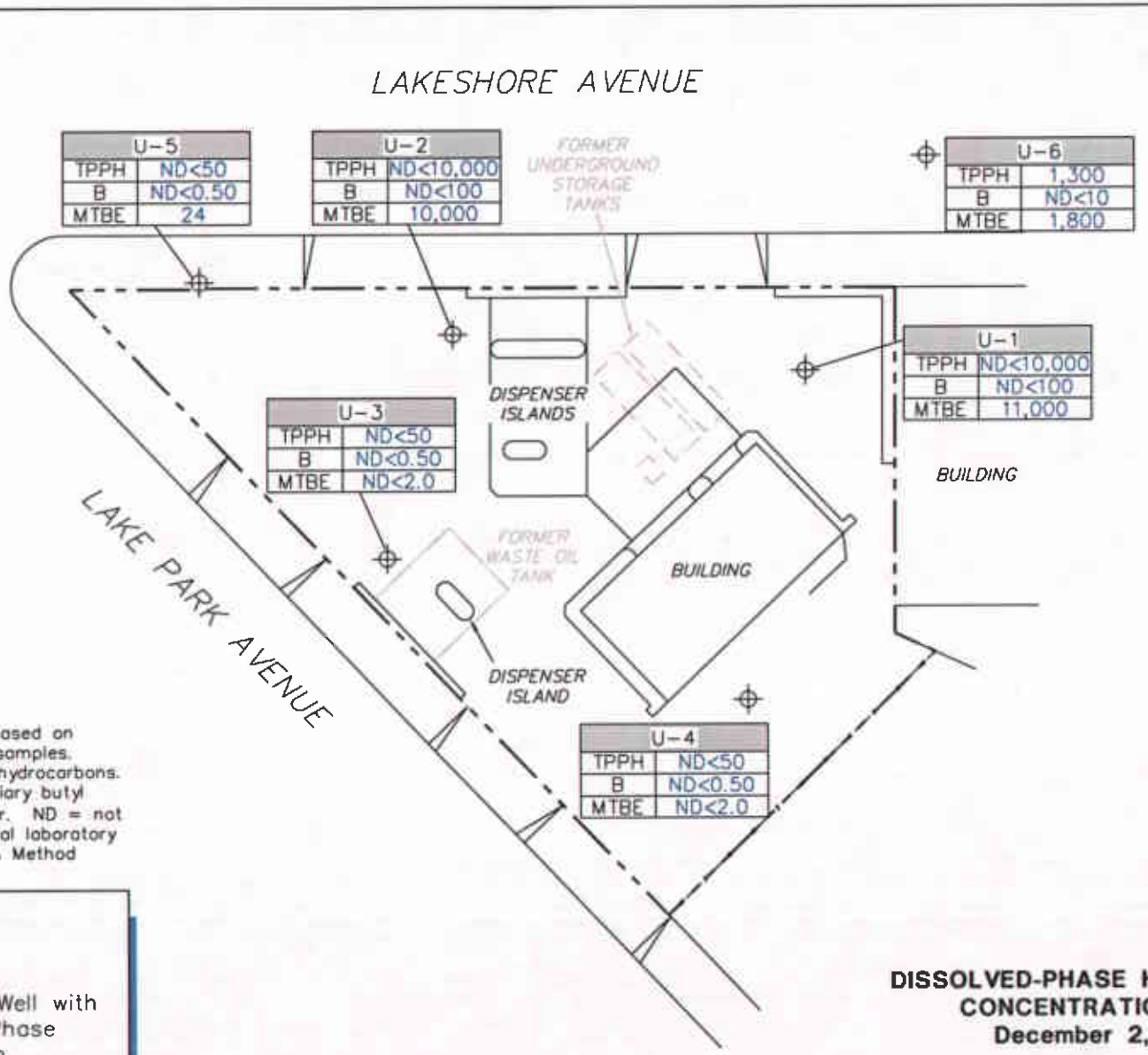
76 Station 5325
3220 Lakeshore Avenue
Oakland, California

FIGURE 2

TRC

PS=1:1

Graphics on Ir1(I:)\GRAPHICS\Projects By..\20-xxxx\20-0400\5325+\5325qms.dwg 12/31/03 jw



NOTES:

Contour lines are interpretive and based on laboratory analysis of groundwater samples. TPPH = total purgeable petroleum hydrocarbons. B = benzene. MTBE = methyl tertiary butyl ether. µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. Results obtained using EPA Method 8260B.

LEGEND

Well No.	
TPPH	µg/l
B	µg/l
MTBE	µg/l

⊕ Monitoring Well with Dissolved-Phase Hydrocarbon Concentrations (µg/l)

TRC

SCALE (FEET)

0 40

PS=1:1

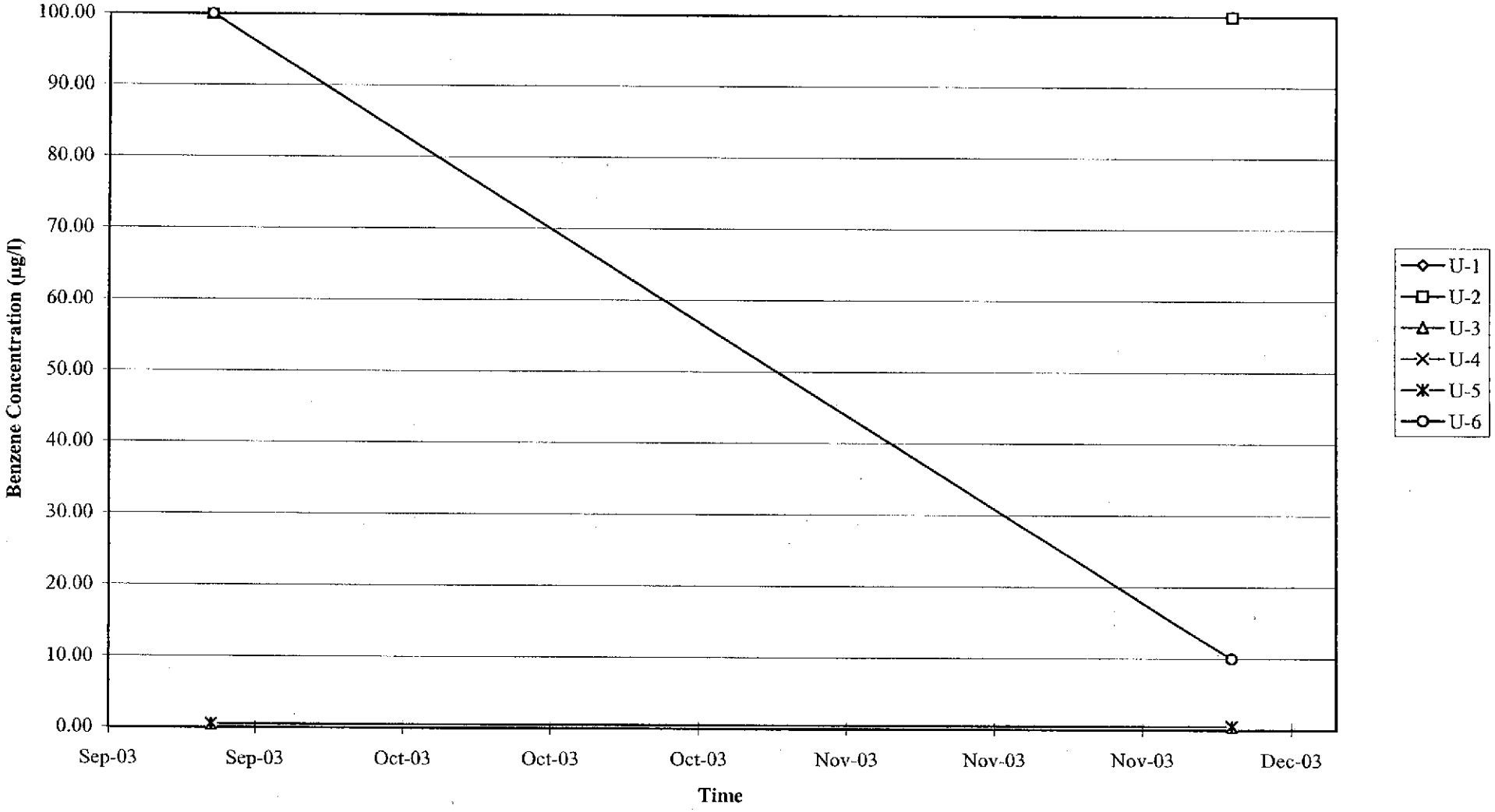
DISSOLVED-PHASE HYDROCARBON CONCENTRATIONS MAP
December 2, 2003

76 Station 5325
3220 Lakeshore Avenue
Oakland, California

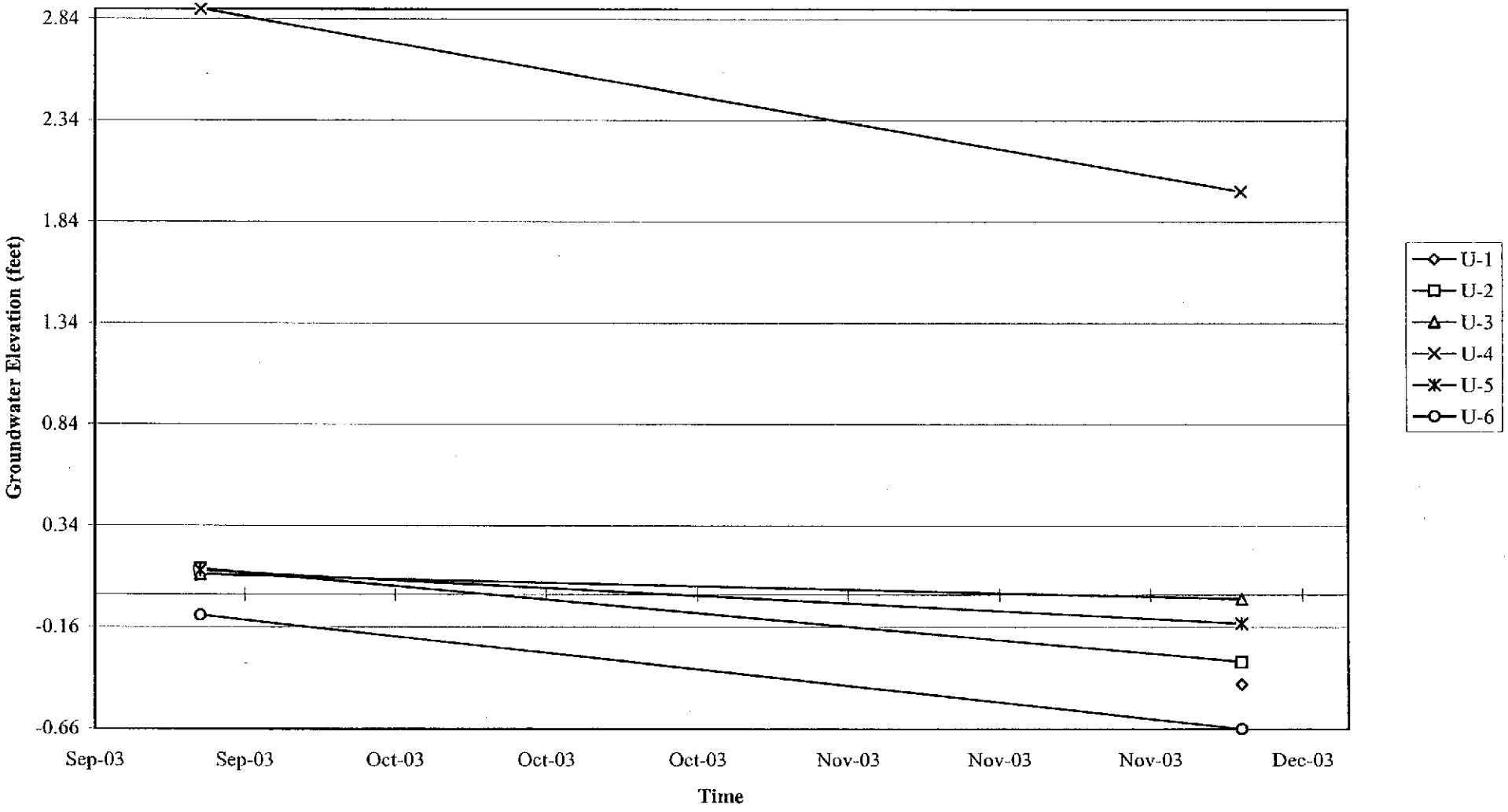
FIGURE 3

Graphics on Ir1(I:)\GRAPHICS\Projects By...\20-xxxx\20-0400\5325+\5325qms.dwg 12/31/03 jw

Graph 1
Benzene Concentrations vs. Time
76 Station 5325



Graph 2
Hydrograph
76 Station 5325



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.

FIELD MONITORING DATA SHEET

TRC

Technician: ALEX Job #/Task #: 405001 / FA20 Date: 12-2-03

Site # 5325 Project Manager KATHIE / KEVIN Page 1 of 1

Well #	Grade	TOC	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
U-1		✓	13.23	8.96	~~0~~	~~0~~	1435	3"
U-2		✓	19.80	7.95	~~0~~	~~0~~	1500	3"
U-3		✓	19.38	11.0	~~0~~	~~0~~	1320	3"
U-4		✓	20.69	9.16	~~0~~	~~0~~	1345	4"
U-5		✓	20.04	7.12	~~0~~	~~0~~	1410	4"
U-6		✓	22.20	7.80	~~0~~	~~0~~	1300	2"

FIELD DATA COMPLETE ✓	QA/QC	COC ✓	WELL BOX CONDITION SHEETS ✓
WTT CERTIFICATE	MANIFEST ✓	DRUM INVENTORY ✓	TRAFFIC CONTROL

GROUNDWATER SAMPLING FIELD NOTES

Technician: AMY

Site: 5325 Project No.: 41050001 Date: 12-2-03

Well No.: U-4 Purge Method: DA

Depth to Water (feet): 9.16 Depth to Product (feet): 0

Total Depth (feet): 20.09 LPH & Water Recovered (gallons): 0

Water Column (feet): 10.93 Casing Diameter (Inches): 4"

80% Recharge Depth (feet): 11.34 1 Well Volume (gallons): 7

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F.C)	pH	Turbidity	D.O.	ORP
1101			7	802	21.1	7.24		3.57	107
			14	790	21.4	7.36		3.54	105
	1110		21	801	21.5	7.36		3.45	102

Static at Time Sampled	Total Gallons Purged	Time Sampled
1310	21	1345

Comments: WELL NOT RECOVER IN 2HRS

Well No.: U-5 Purge Method: DA

Depth to Water (feet): 7.12 Depth to Product (feet): 0

Total Depth (feet): 20.04 LPH & Water Recovered (gallons): 0

Water Column (feet): 12.92 Casing Diameter (Inches): 4"

80% Recharge Depth (feet): 9.70 1 Well Volume (gallons): 8

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F.C)	pH	Turbidity	D.O.	ORP
1120			8	4.94 ms	20.8	6.59		2.15	-39
			16	502 ms	20.2	6.63		2.06	-45
	1132		24	4.98 ms	20.1	6.65		2.22	-39

Static at Time Sampled	Total Gallons Purged	Time Sampled
8.30	24	1410

Comments:

GROUNDWATER SAMPLING FIELD NOTES

Technician: ALEX

Site: 5325 Project No.: 4050001 Date: 12-2

Well No.: U-3 Purge Method: DIA

Depth to Water (feet): 11.0 Depth to Product (feet): 0

Total Depth (feet): 19.38 LPH & Water Recovered (gallons): 6

Water Column (feet): 8.38 Casing Diameter (Inches): 3"

80% Recharge Depth (feet): 12.67 1 Well Volume (gallons): 3

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F.C)	pH	Turbidity	D.O.	ORP
1036			3	1102	17.0	7.80		4.30	97
			6	769	18.0	7.32		4.75	96
	1046		9	801	18.7	7.30		4.28	105

Static at Time Sampled	Total Gallons Purged	Time Sampled
1110	9	1320

Comments:

Well No.: U-6 Purge Method: DIA

Depth to Water (feet): 7.80 Depth to Product (feet): 0

Total Depth (feet): 22.20 LPH & Water Recovered (gallons): 0

Water Column (feet): 14.40 Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 10.68 1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F.C)	pH	Turbidity	D.O.	ORP
1008			2	2.53 ms	16.9	7.24		2.53	-99
			4	2.64 ms	17.0	7.39		2.40	-80
	1016		6	2.64ms	17.6	7.47		3.10	-74

Static at Time Sampled	Total Gallons Purged	Time Sampled
0900	6	1300

Comments:

GROUNDWATER SAMPLING FIELD NOTES

Technician: ALEX

Site: 5325 Project No.: 4103001 Date: 12-2

Well No.: D-1 Purge Method: DIA

Depth to Water (feet): 8.90 Depth to Product (feet): 0

Total Depth (feet): 13.23 LPH & Water Recovered (gallons): 0

Water Column (feet): 4.33 Casing Diameter (Inches): 3"

80% Recharge Depth (feet): 9.76 1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temperature (F.C)	pH	Turbidity	D.O.	ORP
1148			2	1839	19.4	6.90		2.05	-42
			4	1758	20.1	7.10		4.80	-76
	1157		6	1850	20.0	7.40		6.96	-73

Static at Time Sampled	Total Gallons Purged	Time Sampled
905	6	1435

Comments:

Well No.: D-2 Purge Method: DIA

Depth to Water (feet): 7.95 Depth to Product (feet): 0

Total Depth (feet): 19.80 LPH & Water Recovered (gallons): 0

Water Column (feet): 11.85 Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 10.32 1 Well Volume (gallons): 4

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temperature (F.C)	pH	Turbidity	D.O.	ORP
1207			4	3.66 ms	20.0	6.94		1.70	-29
			8	3.10 ms	20.3	6.79		1.64	-65
	1217		12	3.25 m	20.1	6.88		1.81	-67

Static at Time Sampled	Total Gallons Purged	Time Sampled
1351	12	1500

Comments:

SEVERN TRENT STL

Submission#: 2003-12-0106

TRC Alton Geoscience

December 18, 2003

21 Technology Drive
Irvine, CA 92718

Attn.: Anju Farfan

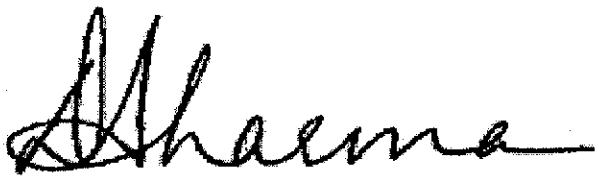
Project#: 41050001FA20
Project: Conoco Phillips #5325
Site: 3220 Lakeshore Ave., Oakland

Attached is our report for your samples received on 12/03/2003 17:05
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 01/17/2004 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions,

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

Sincerely,



Dimple Sharma
Project Manager

SEVERN TRENT STL

Submission #: 2003-12-0106

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
U-1	12/02/2003 14:35	Water	1
U-2	12/02/2003 15:00	Water	2
U-3	12/02/2003 13:20	Water	3
U-4	12/02/2003 13:45	Water	4
U-5	12/02/2003 14:10	Water	5
U-6	12/02/2003 13:00	Water	6

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

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

Sample ID: U-1
Lab ID: 2003-12-0106 - 1

Sampled: 12/02/2003 14:35
Extracted: 12/9/2003 10:41

Matrix: Water
QC Batch#: 2003/12/09-01.62

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10000	ug/L	200.00	12/09/2003 10:41	
Benzene	ND	100	ug/L	200.00	12/09/2003 10:41	
Toluene	ND	100	ug/L	200.00	12/09/2003 10:41	
Ethylbenzene	ND	100	ug/L	200.00	12/09/2003 10:41	
Total xylenes	ND	200	ug/L	200.00	12/09/2003 10:41	
Methyl tert-butyl ether (MTBE)	11000	400	ug/L	200.00	12/09/2003 10:41	
Ethanol	ND	100000	ug/L	200.00	12/09/2003 10:41	
Surrogate(s)						
1,2-Dichloroethane-d4	94.4	76-114	%	200.00	12/09/2003 10:41	
Toluene-d8	95.0	88-110	%	200.00	12/09/2003 10:41	

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Prep(s): 5030B
Test(s): 8260FAB
Sample ID: **U-2**
Lab ID: 2003-12-0106 - 2
Sampled: 12/02/2003 15:00
Extracted: 12/10/2003 12:00
Matrix: Water
QC Batch#: 2003/12/10-01.62
Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10000	ug/L	200.00	12/10/2003 12:00	
Benzene	ND	100	ug/L	200.00	12/10/2003 12:00	
Toluene	ND	100	ug/L	200.00	12/10/2003 12:00	
Ethylbenzene	ND	100	ug/L	200.00	12/10/2003 12:00	
Total xylenes	ND	200	ug/L	200.00	12/10/2003 12:00	
Methyl tert-butyl ether (MTBE)	10000	400	ug/L	200.00	12/10/2003 12:00	
Ethanol	ND	100000	ug/L	200.00	12/10/2003 12:00	
Surrogate(s)						
1,2-Dichloroethane-d4	100.5	76-114	%	200.00	12/10/2003 12:00	
Toluene-d8	103.4	88-110	%	200.00	12/10/2003 12:00	

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	U-3	Lab ID:	2003-12-0106 - 3
Sampled:	12/02/2003 13:20	Extracted:	12/10/2003 12:22
Matrix:	Water	QC Batch#:	2003/12/10-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/10/2003 12:22	
Benzene	ND	0.50	ug/L	1.00	12/10/2003 12:22	
Toluene	ND	0.50	ug/L	1.00	12/10/2003 12:22	
Ethylbenzene	ND	0.50	ug/L	1.00	12/10/2003 12:22	
Total xylenes	ND	1.0	ug/L	1.00	12/10/2003 12:22	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	1.00	12/10/2003 12:22	
Ethanol	ND	500	ug/L	1.00	12/10/2003 12:22	
Surrogate(s)						
1,2-Dichloroethane-d4	90.4	76-114	%	1.00	12/10/2003 12:22	
Toluene-d8	95.8	88-110	%	1.00	12/10/2003 12:22	

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Prep(s): 5030B
Test(s): 8260FAB
Sample ID: **U-4**
Lab ID: 2003-12-0106 - 4
Sampled: 12/02/2003 13:45
Extracted: 12/9/2003 11:47
Matrix: Water
QC Batch#: 2003/12/09-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/2003 11:47	
Benzene	ND	0.50	ug/L	1.00	12/09/2003 11:47	
Toluene	ND	0.50	ug/L	1.00	12/09/2003 11:47	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2003 11:47	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2003 11:47	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	1.00	12/09/2003 11:47	
Ethanol	ND	500	ug/L	1.00	12/09/2003 11:47	
Surrogate(s)						
1,2-Dichloroethane-d4	95.7	76-114	%	1.00	12/09/2003 11:47	
Toluene-d8	99.0	88-110	%	1.00	12/09/2003 11:47	

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Prep(s): 5030B
Test(s): 8260FAB
Sample ID: **U-5**
Lab ID: 2003-12-0106 - 5
Sampled: 12/02/2003 14:10
Extracted: 12/9/2003 12:09
Matrix: Water
QC Batch#: 2003/12/09-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/2003 12:09	
Benzene	ND	0.50	ug/L	1.00	12/09/2003 12:09	
Toluene	ND	0.50	ug/L	1.00	12/09/2003 12:09	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2003 12:09	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2003 12:09	
Methyl tert-butyl ether (MTBE)	24	2.0	ug/L	1.00	12/09/2003 12:09	
Ethanol	ND	500	ug/L	1.00	12/09/2003 12:09	
Surrogate(s)						
1,2-Dichloroethane-d4	91.8	76-114	%	1.00	12/09/2003 12:09	
Toluene-d8	105.9	88-110	%	1.00	12/09/2003 12:09	

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	**U-6**	Lab ID:	2003-12-0106 - 6
Sampled:	12/02/2003 13:00	Extracted:	12/11/2003 13:35
Matrix:	Water	QC Batch#:	2003/12/11-1B.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1300	1000	ug/L	20.00	12/11/2003 13:35	g
Benzene	ND	10	ug/L	20.00	12/11/2003 13:35	
Toluene	ND	10	ug/L	20.00	12/11/2003 13:35	
Ethylbenzene	ND	10	ug/L	20.00	12/11/2003 13:35	
Total xylenes	ND	20	ug/L	20.00	12/11/2003 13:35	
Methyl tert-butyl ether (MTBE)	1800	40	ug/L	20.00	12/11/2003 13:35	
Ethanol	ND	10000	ug/L	20.00	12/11/2003 13:35	
Surrogate(s)						
1,2-Dichloroethane-d4	104.4	76-114	%	20.00	12/11/2003 13:35	
Toluene-d8	96.0	88-110	%	20.00	12/11/2003 13:35	

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260FAB

Method Blank — **Water** — **QC Batch # 2003/12/09-01.62**

MB: 2003/12/09-01.62-019 — Date Extracted: 12/09/2003 10:19

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/09/2003 10:19	
Benzene	ND	0.5	ug/L	12/09/2003 10:19	
Toluene	ND	0.5	ug/L	12/09/2003 10:19	
Ethylbenzene	ND	0.5	ug/L	12/09/2003 10:19	
Total xylenes	ND	1.0	ug/L	12/09/2003 10:19	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	12/09/2003 10:19	
Ethanol	ND	500	ug/L	12/09/2003 10:19	
Surrogates(s)					
1,2-Dichloroethane-d4	93.3	76-114	%	12/09/2003 10:19	
Toluene-d8	100.6	88-110	%	12/09/2003 10:19	

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260FAB

Method Blank — **Water** — **QC Batch # 2003/12/10-01.62**

MB: 2003/12/10-01.62-047 — Date Extracted: 12/10/2003 09:47

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/10/2003 09:47	
Benzene	ND	0.5	ug/L	12/10/2003 09:47	
Toluene	ND	0.5	ug/L	12/10/2003 09:47	
Ethylbenzene	ND	0.5	ug/L	12/10/2003 09:47	
Total xylenes	ND	1.0	ug/L	12/10/2003 09:47	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	12/10/2003 09:47	
Ethanol	ND	500	ug/L	12/10/2003 09:47	
Surrogates(s)					
1,2-Dichloroethane-d4	88.5	76-114	%	12/10/2003 09:47	
Toluene-d8	89.2	88-110	%	12/10/2003 09:47	

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Method Blank

Water

QC Batch # 2003/12/11-1B.64

MB: 2003/12/11-1B.64-031

Date Extracted: 12/11/2003 10:31

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/11/2003 10:31	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	12/11/2003 10:31	
Benzene	ND	0.5	ug/L	12/11/2003 10:31	
Toluene	ND	0.5	ug/L	12/11/2003 10:31	
Ethylbenzene	ND	0.5	ug/L	12/11/2003 10:31	
Total xylenes	ND	1.0	ug/L	12/11/2003 10:31	
Ethanol	ND	500	ug/L	12/11/2003 10:31	
Surrogates(s)					
1,2-Dichloroethane-d4	89.8	76-114	%	12/11/2003 10:31	
Toluene-d8	93.6	88-110	%	12/11/2003 10:31	

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Water** **QC Batch # 2003/12/09-01.62**

LCS 2003/12/09-01.62-035 Extracted: 12/09/2003 Analyzed: 12/09/2003 09:35
LCSD 2003/12/09-01.62-057 Extracted: 12/09/2003 Analyzed: 12/09/2003 09:57

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	22.8	24.2	25.0	91.2	96.8	6.0	69-129	20		
Toluene	23.6	26.3	25.0	94.4	105.2	10.8	70-130	20		
Methyl tert-butyl ether (MTBE)	20.1	21.2	25.0	80.4	84.8	5.3	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	475	472	500	95.0	94.4		76-114			
Toluene-d8	523	530	500	104.6	106.0		88-110			

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Water** **QC Batch # 2003/12/10-01.62**

LCS 2003/12/10-01.62-003 Extracted: 12/10/2003 Analyzed: 12/10/2003 09:03
LCSD 2003/12/10-01.62-025 Extracted: 12/10/2003 Analyzed: 12/10/2003 09:25

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	21.2	22.1	25.0	84.8	88.4	4.2	69-129	20		
Toluene	23.0	23.9	25.0	92.0	95.6	3.8	70-130	20		
Methyl tert-butyl ether (MTBE)	20.3	21.8	25.0	81.2	87.2	7.1	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	453	483	500	90.6	96.6		76-114			
Toluene-d8	479	499	500	95.8	99.8		88-110			

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Water** **QC Batch # 2003/12/11-1B.64**

LCS 2003/12/11-1B.64-047 Extracted: 12/11/2003 Analyzed: 12/11/2003 09:47
LCSD 2003/12/11-1B.64-009 Extracted: 12/11/2003 Analyzed: 12/11/2003 10:09

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	23.0	23.2	25	92.0	92.8	0.9	65-165	20		
Benzene	21.4	22.4	25	85.6	89.6	4.6	69-129	20		
Toluene	21.8	23.4	25	87.2	93.6	7.1	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	494	463	500	98.8	92.6		76-114			
Toluene-d8	469	470	500	93.8	94.0		88-110			

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Matrix Spike (MS / MSD) **Water** **QC Batch # 2003/12/09-01.62**

U-5 >> MS

Lab ID: 2003-12-0106 - 005

MS: 2003/12/09-01.62-031 Extracted: 12/09/2003 Analyzed: 12/09/2003 12:31
Dilution: 1.00

MSD: 2003/12/09-01.62-053 Extracted: 12/09/2003 Analyzed: 12/09/2003 12:53
Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	27.3	26.7	ND	25.0	109.2	106.8	2.2	69-129	20		
Toluene	30.7	28.9	ND	25.0	122.8	115.6	6.0	70-130	20		
Methyl tert-butyl ether	55.3	54.1	23.6	25.0	126.8	122.0	3.9	65-165	20		
Surrogate(s)											
1,2-Dichloroethane-d4	539	524		500	107.8	104.8		76-114			
Toluene-d8	504	489		500	100.8	97.8		88-110			

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Legend and Notes

Analysis Flag

o

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

Result Flag

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

SEVERN TRENT STL

Submission #: 2003-12-0106

Dissolved Metals

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
U-1	12/02/2003 14:35	Water	1
U-2	12/02/2003 15:00	Water	2
U-3	12/02/2003 13:20	Water	3
U-4	12/02/2003 13:45	Water	4
U-5	12/02/2003 14:10	Water	5
U-6	12/02/2003 13:00	Water	6

Dissolved Metals

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Prep(s): 3005A
Sample ID: **U-1**
Sampled: 12/02/2003 14:35
Matrix: Water

Test(s): 6010B
Lab ID: 2003-12-0106 - 1
Extracted: 12/4/2003 12:51
QC Batch#: 2003/12/04-03.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Iron	4.0	0.20	mg/L	1.00	12/05/2003 17:32	

Dissolved Metals

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Prep(s): 3005A
Sample ID: U-2
Sampled: 12/02/2003 15:00
Matrix: Water

Test(s): 6010B
Lab ID: 2003-12-0106 - 2
Extracted: 12/4/2003 12:51
QC Batch#: 2003/12/04-03.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Iron	2.7	0.20	mg/L	1.00	12/05/2003 18:05	

Dissolved Metals

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Prep(s): 3005A
Test(s): 6010B
Sample ID: **U-3**
Lab ID: 2003-12-0106 - 3
Sampled: 12/02/2003 13:20
Extracted: 12/4/2003 12:51
Matrix: Water
QC Batch#: 2003/12/04-03.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Iron	ND	0.20	mg/L	1.00	12/05/2003 18:10	

Dissolved Metals

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Prep(s): 3005A
Test(s): 6010B

Sample ID: U-4
Lab ID: 2003-12-0106 - 4

Sampled: 12/02/2003 13:45
Extracted: 12/4/2003 12:51

Matrix: Water
QC Batch#: 2003/12/04-03.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Iron	ND	0.20	mg/L	1.00	12/05/2003 18:14	

Dissolved Metals

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Prep(s): 3005A
Sample ID: U-5
Sampled: 12/02/2003 14:10
Matrix: Water

Test(s): 6010B
Lab ID: 2003-12-0106 - 5
Extracted: 12/4/2003 12:51
QC Batch#: 2003/12/04-03.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Iron	9.4	0.20	mg/L	1.00	12/05/2003 18:19	

Dissolved Metals

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Prep(s): 3005A
Sample ID: **U-6**
Sampled: 12/02/2003 13:00
Matrix: Water

Test(s): 6010B
Lab ID: 2003-12-0106 - 6
Extracted: 12/4/2003 12:51
QC Batch#: 2003/12/04-03.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Iron	1.4	0.20	mg/L	1.00	12/05/2003 18:24	

Dissolved Metals

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Batch QC Report

Prep(s): 3005A
Test(s): 6010B

Method Blank **Water** **QC Batch # 2003/12/04-03.15**

MB: 2003/12/04-03.15-050
Date Extracted: 12/04/2003 12:51

Compound	Conc.	RL	Unit	Analyzed	Flag
Iron	ND	0.20	mg/L	12/05/2003 17:03	

Dissolved Metals

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Laboratory Control Spike **Water** **QC Batch # 2003/12/04-03.15**

LCS 2003/12/04-03.15-051 Extracted: 12/04/2003 Analyzed: 12/05/2003 17:08
LCSD 2003/12/04-03.15-052 Extracted: 12/04/2003 Analyzed: 12/05/2003 17:13

Compound	Conc. mg/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Iron	5.22	4.99	5.00	104.4	99.8	4.5	80-120	20		

Dissolved Metals

TRC Alton Geoscience
Attn.: Anju Farfan

21 Technology Drive
Irvine, CA 92718
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20
Conoco Phillips #5325

Received: 12/03/2003 17:05

Site: 3220 Lakeshore Ave., Oakland

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2003/12/04-03.15**

U-1 >> MS

Lab ID: 2003-12-0106 - 001

MS: 2003/12/04-03.15-057 Extracted: 12/04/2003

Analyzed: 12/05/2003 17:37

Dilution: 1.00

MSD: 2003/12/04-03.15-060 Extracted: 12/04/2003

Analyzed: 12/05/2003 18:00

Dilution: 1.00

Compound	Conc. mg/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	mg/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Iron	8.75	8.90	4.03	5.00	94.4	97.4	3.1	75-125	20		

California State Certified Laboratory No.2158

CERCO analytical, inc.

3943-A Valley Avenue
Pleasanton, CA 94566-4715
Tel: 925.462.2771
Fax: 925.462.2775

Ms. Tina Totorica
STL San Francisco
1220 Quarry Lane, #C
Pleasanton, CA 94566-4756

Sample Source:
Project No.: 2003-12-0106
Project Name: Conoco Phillips #5325
Date Sampled: 12/02/03
Date Received: 12/04/03
Matrix: Water

12 December, 2003
Job No.0312049
Sample No.001-005
Cust. No.10176

Analyte	Results	Detection Limit	Method	Date Analyzed
Lab No.001				
Sample I.D.: U-1				
Nitrate as NO_3	N.D.	1 mg/L	EPA 300.0	12/04/03
Ortho-Phosphate as P	7.0	0.4 mg/L	EPA 300.0	12/04/03
Lab No.002				
Sample I.D.: U-2				
Nitrate as NO_3	N.D.	1 mg/L	EPA 300.0	12/04/03
Ortho-Phosphate as P	3.5	0.4 mg/L	EPA 300.0	12/04/03
Lab No.003				
Sample I.D.: U-3				
Nitrate as NO_3	18	1 mg/L	EPA 300.0	12/04/03
Ortho-Phosphate as P	0.6	0.4 mg/L	EPA 300.0	12/04/03
Lab No.004				
Sample I.D.: U-4				
Nitrate as NO_3	20	1 mg/L	EPA 300.0	12/04/03
Ortho-Phosphate as P	N.D.	0.4 mg/L	EPA 300.0	12/04/03
Lab No.005				
Sample I.D.: U-5				
Nitrate as NO_3	N.D.	1 mg/L	EPA 300.0	12/04/03
Ortho-Phosphate as P	N.D.	0.4 mg/L	EPA 300.0	12/04/03
Lab No.006				
Sample I.D.: U-6				
Nitrate as NO_3	N.D.	1 mg/L	EPA 300.0	12/04/03
Ortho-Phosphate as P	1.3	0.4 mg/L	EPA 300.0	12/04/03

Cheryl McMillen
Laboratory Director

QUALITY CONTROL DATA - Nitrate as NO_3
EPA Method No.: 300.0
Date Analyzed: December 04, 2003

Laboratory Control Sample Summary

	Blank Result	True Value	LCS Result	Percent Recovery
Nitrate as NO_3 (mg/L):	N.D.	11.08	11.53	104.1
Reporting Limit (mg/L):	0.5			
QC Limits (%):				85-115

QUALITY CONTROL DATA - Ortho-Phosphate as P
EPA Method No.: 300.0
Date Analyzed: December 04, 2003

Laboratory Control Sample Summary

	Blank Result	True Value	LCS Result	Percent Recovery
Ortho-Phosphate as P (mg/L):	N.D.	4.89	4.958	101.4
Reporting Limit (mg/L):	0.2			
QC Limits (%):				85-115

Chain of Custody 2003-12-0106-1

Date Shipped: 12/04/2003

From:

STL San Francisco (CL)
1220 Quarry Lane
Pleasanton, CA 94566-4756

Project Manager: Dimple Sharma
Phone: Ext:
Fax: (925) 484-1096
Email: dsharma@stl-inc.com

To:

Cerco Analytical - SUB CONTRACT ONLY
3942 Valley Avenue, Suite A
Pleasanton, CA 94566

Phone: (925) 462-2771
Fax: (925) 462-2775
Contact: Darlene Langford
Phone: (925) 462-2771

CL Submission #: **2003-12-0106**
CL PO #:

Project #: 41050001FA20
Project Name: Conoco Phillips #5325

Client Sample ID / Analysis	CL#	Sampled	Matrix / Method	TAT
U-1	001	12/02/2003 14:35	Water	
Subcontract - Nitrate			300/352.1	10 Day
Subcontract - Ortho-Phosphate			365.2	10 Day
U-2	002	12/02/2003 15:00	Water	
Subcontract - Nitrate			300/352.1	10 Day
Subcontract - Ortho-Phosphate			365.2	10 Day
U-3	003	12/02/2003 13:20	Water	
Subcontract - Nitrate			300/352.1	10 Day
Subcontract - Ortho-Phosphate			365.2	10 Day
U-4	004	12/02/2003 13:45	Water	
Subcontract - Nitrate			300/352.1	10 Day
Subcontract - Ortho-Phosphate			365.2	10 Day
U-5	005	12/02/2003 14:10	Water	
Subcontract - Nitrate			300/352.1	10 Day
Subcontract - Ortho-Phosphate			365.2	10 Day

1 2 3 4 5

CA 0312049

1. RELINQUISHED BY:	2. RELINQUISHED BY:	3. RELINQUISHED BY:
Signature: D. Harrington Time:	Signature: D. Sharma Time: 11:45	Signature: Time:
Printed Name: D Harrington Date: 12/4/03	Printed Name: Dimple Sharma Date: 12/4	Printed Name: Date:
Company: STL-SF	Company: STL-SF	Company:
1. RECEIVED BY:	**2. RECEIVED BY:**	**3. RECEIVED BY:**
Signature: D. Sharma Time: 11:45	Signature: [illegible] Time: 11:45	Signature: Time:
Printed Name: Dimple Sharma Date: 12/4/03	Printed Name: Date: 12/4/03	Printed Name: Date:
Company: STL-SF	Company:	Company:

Chain of Custody 2003-12-0106-1

Date Shipped: 12/04/2003

From:		To:	
STL San Francisco (CL)		Cerco Analytical - SUB CONTRACT ONLY	
1220 Quarry Lane		3942 Valley Avenue, Suite A	
Pleasanton, CA 94566-4756		Pleasanton, CA 94566	
Project Manager:	Dimple Sharma	Phone:	(925) 462-2771
Phone:	Ext:	Fax:	(925) 462-2775
Fax:	(925) 484-1096	Contact:	Darlene Langford
Email:	dsharma@stl-inc.com	Phone:	(925) 462-2771

CL Submission #: **2003-12-0106**

CL PO #:

Project #: 41050001FA20

Project Name: Conoco Phillips #5325

Client Sample ID / Analysis	CL#	Sampled	Matrix / Method	TAT
U-6	006	12/02/2003 13:00	Water	
Subcontract - Nitrate			300/352.1	10 Day
Subcontract - Ortho-Phosphate			365.2	10 Day

PLEASE INCLUDE QC WITH FAXED AND HARD-COPY RESULTS

CA03 12049

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature / Time: Denise Harrington 10	Signature / Time: 11:45	Signature / Time:
Printed Name / Date: DHarrington 12/4/03	Printed Name / Date: DIMPLE SHARMA 12/4	Printed Name / Date:
Company: STL-SF	Company: STL-SF	Company:
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY: 3.**
Signature / Time: 11:45	Signature / Time:	Signature / Time:
Printed Name / Date: DIMPLE SHARMA 12/4	Printed Name / Date: 12/4/03 11:45	Printed Name / Date:
Company: STL-SF	Company:	Company:

California State Certified Laboratory No.2153

C E R C O
analytical, inc.

3942-A Valley Avenue
Pleasanton, CA 94566-4715
Tel: 925.462.2771
Fax: 925.462.2775

Ms. Tina Totorica
STL San Francisco
1220 Quarry Lane, #C
Pleasanton, CA 94566-4756

12 December, 2003
Job No.0312049
Sample No.001-005
Cust. No.10176

Sample Source:
Project No.: 2003-12-0106
Project Name: Conoco Phillips #5325
Date Sampled: 12/02/03
Date Received: 12/04/03
Matrix: Water

Analyte	Results	Detection Limit	Method	Date Analyzed
Lab No.001				
Sample I.D.: U-1				
Nitrate as NO_3	N.D.	1 mg/L	EPA 300.0	12/04/03
Ortho-Phosphate as P	7.0	0.4 mg/L	EPA 300.0	12/04/03
Lab No.002				
Sample I.D.: U-2				
Nitrate as NO_3	N.D.	1 mg/L	EPA 300.0	12/04/03
Ortho-Phosphate as P	3.5	0.4 mg/L	EPA 300.0	12/04/03
Lab No.003				
Sample I.D.: U-3				
Nitrate as NO_3	18	1 mg/L	EPA 300.0	12/04/03
Ortho-Phosphate as P	0.6	0.4 mg/L	EPA 300.0	12/04/03
Lab No.004				
Sample I.D.: U-4				
Nitrate as NO_3	20	1 mg/L	EPA 300.0	12/04/03
Ortho-Phosphate as P	N.D.	0.4 mg/L	EPA 300.0	12/04/03
Lab No.005				
Sample I.D.: U-5				
Nitrate as NO_3	N.D.	1 mg/L	EPA 300.0	12/04/03
Ortho-Phosphate as P	N.D.	0.4 mg/L	EPA 300.0	12/04/03
Lab No.006				
Sample I.D.: U-6				
Nitrate as NO_3	N.D.	1 mg/L	EPA 300.0	12/04/03
Ortho-Phosphate as P	1.3	0.4 mg/L	EPA 300.0	12/04/03

Cheryl McMillen
Laboratory Director

Chain of Custody 2003-12-0106-1

Date Shipped: 12/04/2003

From:

STL San Francisco (CL)
1220 Quarry Lane
Pleasanton, CA 94566-4756

Project Manager: Dimple Sharma
Phone: Ext:
Fax: (925) 484-1096
Email: dsharma@stl-inc.com

To:

Cerco Analytical - SUB CONTRACT ONLY
3942 Valley Avenue, Suite A
Pleasanton, CA 94566

Phone: (925) 462-2771
Fax: (925) 462-2775
Contact: Darlene Langford
Phone: (925) 462-2771

CL Submission #: **2003-12-0106**
CL PO #:

Project #: 41050001FA20
Project Name: Conoco Phillips #5325

Client Sample ID / Analysis	CL#	Sampled	Matrix / Method	TAT
U-1	001	12/02/2003 14:35	Water	
Subcontract - Nitrate			300/352.1	10 Day
Subcontract - Ortho-Phosphate			365.2	10 Day
U-2	002	12/02/2003 15:00	Water	
Subcontract - Nitrate			300/352.1	10 Day
Subcontract - Ortho-Phosphate			365.2	10 Day
U-3	003	12/02/2003 13:20	Water	
Subcontract - Nitrate			300/352.1	10 Day
Subcontract - Ortho-Phosphate			365.2	10 Day
U-4	004	12/02/2003 13:45	Water	
Subcontract - Nitrate			300/352.1	10 Day
Subcontract - Ortho-Phosphate			365.2	10 Day
U-5	005	12/02/2003 14:10	Water	
Subcontract - Nitrate			300/352.1	10 Day
Subcontract - Ortho-Phosphate			365.2	10 Day

CA 03120049

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Denise Harrington Time:	Signature: Dsharma Time: 11:45	Signature: Time:
Printed Name: D Harrington Date:	Printed Name: DIMPLE SHARMA Date: 12/4	Printed Name: Date:
Company: STL-SF 12/4/03	Company: STL-SF	Company:
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY: 3.**
Signature: Dsharma Time: 11:45	Signature: Time:	Signature: Time:
Printed Name: DIMPLE SHARMA Date: 12/4/03	Printed Name: Date: 11:45	Printed Name: Date:
Company: STL-SF	Company: 12/4/03	Company:

Chain of Custody 2003-12-0106-1

Date Shipped: 12/04/2003

From:

STL San Francisco (CL)
1220 Quarry Lane
Pleasanton, CA 94566-4756

Project Manager: Dimple Sharma
Phone: Ext:
Fax: (925) 484-1096
Email: dsharma@stl-inc.com

To:

Cerco Analytical - SUB CONTRACT ONLY
3942 Valley Avenue, Suite A
Pleasanton, CA 94566

Phone: (925) 462-2771
Fax: (925) 462-2775
Contact: Darlene Langford
Phone: (925) 462-2771

CL Submission #: **2003-12-0106**
CL PO #:

Project #: 41050001FA20
Project Name: Conoco Phillips #5325

Client Sample ID / Analysis	CL#	Sampled	Matrix / Method	TAT
U-6	006	12/02/2003 13:00	Water	
Subcontract - Nitrate			300/352.1	10 Day
Subcontract - Ortho-Phosphate			365.2	10 Day

PLEASE INCLUDE QC WITH FAXED AND HARD-COPY RESULTS

CA03 18049

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Denise Harrington Time:	Signature: D Sharma Time: 11:45	Signature: Time:
Printed Name: D Harrington Date: 12/4/03	Printed Name: DIMPLE SHARMA Date: 12/4	Printed Name: Date:
Company: STL-SF	Company: STL-SF	Company:

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: 3.
Signature: D Sharma Time: 11:45	Signature: Time:	Signature: Time:
Printed Name: DIMPLE SHARMA Date: 12/4	Printed Name: Date: 12/4/03 1145	Printed Name: Date:
Company: STL-SF	Company:	Company:

2003-12-0106

ConocoPhillips Chain Of Custody Record

80808

STL-San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

(925) 484-1919 (925) 484-1096 fax

ConocoPhillips Site Manager:

INVOICE REMITTANCE ADDRESS: CONOCOPHILLIPS, Attn: Dee Hutchinson, 3611 South Harbor, Suite 200, Santa Ana, CA. 92704

ConocoPhillips Work Order Number:

ConocoPhillips Cost Object:

DATE: 12-2-03

PAGE: 1 of 1

SAMPLING COMPANY: TRC	Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: 5325	GLOBAL ID NO.: T0600101463
ADDRESS: 21 Technology Drive, Irvine CA 92618		SITE ADDRESS (Street and City): 3220 LAKESHORE AVE. OAKLAND	CONOCOPHILLIPS SITE MANAGER:
PROJECT CONTACT (Hardcopy or PDF Report to): Anju Farfan		EDF DELIVERABLE TO (RP or Designee): Peter Thomson, TRC pthomson@trcsolutions.com	PHONE NO.: 949-341-7408
TELEPHONE: 949-341-7440	FAX: 949-753-0111	E-MAIL: afarfan@trcsolutions.com	E-MAIL:
SAMPLER NAME(S) (Print): ALEX M.	CONSULTANT PROJECT NUMBER: 41050001/FA20		LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS): ☒ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑

- SAMPLES FOR FERROUS IRON ARE FIELD FILTERED
- "RUN 8 OXYS BY 8260 ON ALL 8260 MTBE HITS"

* Field Point name only required if different from Sample ID

REQUESTED ANALYSES

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	8015m - TPHd Extractable	8260B - TPHg/BTEX/MtBE	8260B - TPHg / BTEX / 8 Oxygenates	8260B - TPHg / BTEX / 8 oxygenates + methanol (8015M)	8260B - Full Scan VOCs (does not include oxygenates)	8270C - Semi-Volatiles	8015M / 8021B - TPHg/BTEX/MtBE	Lead ☐Total ☐STLC ☐TCLP	TPPH BY 8260B	MTBE / MTBE BY 8260B	ETHANOL BY 8260B	NITRATE, PHOSPHATE	FERROUS IRON		3 VOAs w/ HCL	1 HNO3 (250 mL)	1 500 UNPRESERVED				
	U-1 ✓	12-2	1435	GW	5									X	X	X	X	X		+	X	X				
	U-2 ✓		1500																							
	U-3 ✓		1320																							
	U-4 ✓		1345																							
	U-5 ✓		1410																							
	U-6 ✓		1300																							

FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes

2.0 TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature)	Received by: (Signature)	Date: 12/2/03	Time: 1055
Relinquished by: (Signature)	Received by: (Signature)	Date: 12/3/03	Time: 17:00
Relinquished by: (Signature)	Received by: (Signature)	Date: 12/03/03	Time: 17:05

9/19/03 Revision

TRC Customer Focused Solutions
5052 Commercial Circle
Concord, CA 94520-1248

Statement of Authorized Transportation and Disposal

This is to certify that non-hazardous groundwater produced during purging and sampling of monitoring wells at ConocoPhillips site number 5325 was accumulated at TRC's groundwater monitoring facility at Concord, California, for transportation by Onyx Transportation, Inc. to the ConocoPhillips Refinery at Rodeo California for disposal. TRC records indicate that approximately 63 gallons of purge water from the site were transferred to the purge water holding tank on 12/2/03. The contents of the holding tank were transported to the Unit 100 Water Treatment Facility at the Rodeo Refinery on pending.

Disposal at the facility was authorized by ConocoPhillips in accordance with "ESD Standard Operating Procedures - Water Quality and Compliance", as revised on February 7, 2003. The procedure requires that TRC dispose only of monitoring well purge water from sites for which TRC services are under contract by ConocoPhillips. The non-hazardous nature of the purge water is confirmed quarterly by analysis by an independent certified laboratory of a random sample from the TRC holding facility . The sample is analyzed for all analytes and parameters that might affect the ConocoPhillips NPDES permit for ultimate disposal of the water. Documentation of compliance with ConocoPhillips requirements is provided by an ESD Form R-149, which is on file with ConocoPhillips.

If any purge water collected at the site is suspected of containing potentially hazardous material such as liquid-phase hydrocarbons, that water was accumulated separately in a drum for transpportation and disposal by Filter Recycling, Inc.

In witness of this statement

Dennis E. Jensen
QMS Program Manager

1/6/04
date

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.