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By loppjectop at 9:23 am, Feb 21, 2006



76 Broadway
Sacramento, California 95818

February 10, 2006

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

Re: **Report Transmittal**
Quarterly Report
Fourth Quarter – 2005
76 Service Station #6129
3420 35th Avenue
Oakland, CA

Dear Mr. Hwang:

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

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

Shelby S. Lathrop (Contractor)
ConocoPhillips
Risk Management & Remediation
76 Broadway
Sacramento, CA 95818
Phone: 916-558-7609
Fax: 916-558-7639

Sincerely,

A handwritten signature in black ink that reads "Thomas H. Kosei".

Thomas Kosei
Risk Management & Remediation

Attachment



RECEIVED

By loprojectop at 9:23 am, Feb 21, 2006

Solving environment-related business problems worldwide

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3164 Gold Camp Drive • Suite 200
Rancho Cordova, California 95670 USA

916.638.2085 800.477.7411
Fax 916.638.8385

February 15, 2006

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

Re: Quarterly Summary Report – Fourth Quarter 2005
Delta Project Number: C106129011

Dear Mr. Hwang:

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

Service Station

Location

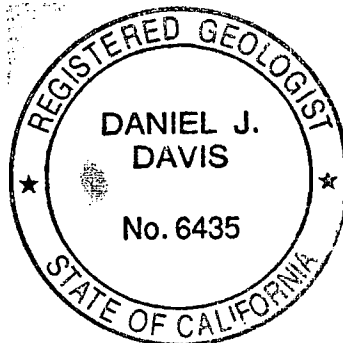
76 Service Station No. 6129

3420 35th Avenue
Oakland, California

Sincerely,
Delta Environmental Consultants, Inc.

Ben Wright
Staff Geologist

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



Forward: TRC - Quarterly Monitoring Report

cc: Ms. Shelby Lathrop, ConocoPhillips (electronic copy)

A member of:



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

PREVIOUS ASSESSMENT

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

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

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

SENSITIVE RECEPTORS

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

MONITORING AND SAMPLING

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

During the most recent groundwater monitoring event, conducted on December 6, 2005, depth to groundwater ranged from 28.78 feet (MW-3) to 29.59 feet (MW-1) below top of casing (TOC). The groundwater flow direction was west at a gradient of 0.03 foot per foot (ft/ft), consistent with historic events. During the December 2005 sampling event, maximum detectable hydrocarbon concentrations were as follows: total purgeable petroleum hydrocarbons (TPPH) (430 µg/l in MW-3), benzene (<0.50 µg/l in all samples), toluene (1.6 µg/l in MW-3), ethylbenzene (<0.50 µg/l in all samples), total xylenes (3.6 µg/l in MW-3) and MTBE (1,800 µg/l in MW-3).

WASTE DISPOSAL SUMMARY

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

REMEDIATION STATUS

Remediation is not currently being conducted at the site.

CHARACTERIZATION STATUS

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

RECENT CORRESPONDENCE

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

THIS QUARTER ACTIVITIES (Fourth Quarter 2005)

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

WASTE DISPOSAL SUMMARY

No waste was generated during the quarter.

NEXT QUARTER ACTIVITIES (First Quarter 2006)

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

CONSULTANT: Delta Environmental Consultants, Inc.

TRC

January 7, 2006

ConocoPhillips Company
76 Broadway
Sacramento, CA 94563

JAN 17 2006

ATTN: MR. THOMAS KOSEL

SITE: 76 STATION 6129
3420 35TH AVENUE
OAKLAND, CALIFORNIA

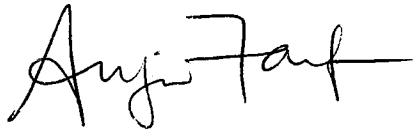
RE: QUARTERLY MONITORING REPORT
OCTOBER THROUGH DECEMBER 2005

Dear Mr. Kosel:

Please find enclosed our Quarterly Monitoring Report for 76 Station 6129, located at 3420 35th Avenue, Oakland, California. If you have any questions regarding this report, please call us at (949) 753-0101.

Sincerely,

TRC



Anju Farfan
QMS Operations Manager

CC: Mr. Eric Hetrick, Delta Environmental Consultants, Inc. (2 copies)

Enclosures:
20-0400/6129R07.QMS





**QUARTERLY MONITORING REPORT
OCTOBER THROUGH DECEMBER 2005**

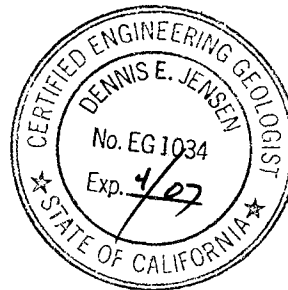
76 Station 6129
3420 35th Avenue
Oakland, California

Prepared For:

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

By:

A handwritten signature in black ink that reads "Dennis E. Jensen".



Senior Project Geologist, Irvine Operations
January 5, 2006



LIST OF ATTACHMENTS

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

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

Project Coordinator: **Thomas Kosel**
Telephone: **916-558-7666**

Water Sampling Contractor: **TRC**
Compiled by: **Jeremiah Hurn**

Date(s) of Gauging/Sampling Event: **12/6/2005**

Sample Points

Groundwater wells: **3** onsite, **0** offsite Wells gauged: **3** Wells sampled: **3**
Purging method: **Diaphragm pump**
Purge water disposal: **Onyx/Rodeo Unit 100**
Other Sample Points: **0** Type: **n/a**

Liquid Phase Hydrocarbons (LPH)

Wells with LPH: **0** Maximum thickness (feet): **n/a**
LPH removal frequency: **n/a** Method: **n/a**
Treatment or disposal of water/LPH: **n/a**

Hydrogeologic Parameters

Depth to groundwater (below TOC): Minimum: **28.78 feet** Maximum: **29.59 feet**
Average groundwater elevation (relative to available local datum): **72.30 feet**
Average change in groundwater elevation since previous event: **-1.77 feet**
Interpreted groundwater gradient and flow direction:
 Current event: **0.02 ft/ft, southwest**
 Previous event: **0.025 ft/ft, southwest (7/27/2005)**

Selected Laboratory Results

Wells with detected **Benzene**: **0** Wells above MCL (1.0 µg/l): **n/a**
 Maximum reported benzene concentration: **n/a**
Wells with **TPPH 8260B** **2** Maximum: **430 µg/l (MW-3)**
Wells with **MTBE** **2** Maximum: **1,800 µg/l (MW-3)**

Notes:

TABLES

TABLE KEY

STANDARD ABBREVIATIONS

--	=	not analyzed, measured, or collected
LPH	=	liquid-phase hydrocarbons
Trace	=	less than 0.01 foot of LPH in well
µg/l	=	micrograms per liter (approx. equivalent to parts per billion, ppb)
mg/l	=	milligrams per liter (approx. equivalent to parts per million, ppm)
ND <	=	not detected at or above laboratory detection limit
TOC	=	top of casing (surveyed reference elevation)

ANALYTES

BTEX	=	benzene, toluene, ethylbenzene, and (total) xylenes
DIPE	=	di-isopropyl ether
ETBE	=	ethyl tertiary butyl ether
MTBE	=	methyl tertiary butyl ether
PCB	=	polychlorinated biphenyls
PCE	=	tetrachloroethene
TBA	=	tertiary butyl alcohol
TCA	=	trichloroethane
TCE	=	trichloroethene
TPH-G	=	total petroleum hydrocarbons with gasoline distinction
TPH-D	=	total petroleum hydrocarbons with diesel distinction
TPPH	=	total purgeable petroleum hydrocarbons
TRPH	=	total recoverable petroleum hydrocarbons
TAME	=	tertiary amyl methyl ether
1,1-DCA	=	1,1-dichloroethane
1,2-DCA	=	1,2-dichloroethane (same as EDC, ethylene dichloride)
1,1-DCE	=	1,1-dichloroethene
1,2-DCE	=	1,2-dichloroethene (cis- and trans-)

NOTES

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

REFERENCE

TRC began groundwater monitoring and sampling 76 Station 6129 in August 2004.

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

Date Sampled	TOC Elevation (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 8260B (µg/l)	Comments
MW-1													
12/6/2005	102.24	29.59	0.00	72.65	-2.26	--	ND<50	ND<0.50	0.93	ND<0.50	1.8	ND<0.50	
MW-2													
12/6/2005	102.16	29.13	0.00	73.03	-1.62	--	340	ND<0.50	ND<0.50	ND<0.50	ND<1.0	780	
MW-3													
12/6/2005	100.00	28.78	0.00	71.22	-1.43	--	430	ND<0.50	1.6	ND<0.50	3.6	1800	

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

Date Sampled	TOC Elevation (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 8260B (µg/l)	Comments
MW-1													
1/5/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
5/11/1990	--	--	--	--	--	ND	--	ND	7.1	ND	ND	--	
8/9/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
11/14/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
2/12/1991	--	--	--	--	--	ND	--	0.32	ND	ND	ND	--	
5/9/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
11/13/2003	--	--	--	--	--	--	180	ND<1.0	ND<1.0	ND<1.0	ND<2.0	240	
8/27/2004	102.24	30.65	0.00	71.59	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	
11/23/2004	102.24	29.35	0.00	72.89	1.30	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	
2/9/2005	102.24	26.89	0.00	75.35	2.46	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	9.3	
5/17/2005	102.24	26.56	0.00	75.68	0.33	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	1.9	
7/27/2005	102.24	27.33	0.00	74.91	-0.77	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	
12/6/2005	102.24	29.59	0.00	72.65	-2.26	--	ND<50	ND<0.50	0.93	ND<0.50	1.8	ND<0.50	
MW-2													
1/5/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
5/11/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
8/9/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
11/14/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
2/12/1991	--	--	--	--	--	ND	--	ND	0.42	ND	0.51	--	
5/9/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
11/13/2003	--	--	--	--	--	--	ND<2000	ND<20	ND<20	ND<20	ND<40	2100	
8/27/2004	102.16	30.28	0.00	71.88	--	--	950	ND<5.0	ND<5.0	ND<5.0	ND<10	1400	
11/23/2004	102.16	28.75	0.00	73.41	1.53	--	53	ND<0.50	ND<0.50	ND<0.50	ND<1.0	4.2	
2/9/2005	102.16	26.08	0.00	76.08	2.67	--	ND<500	ND<0.50	ND<0.50	ND<0.50	ND<1.0	400	

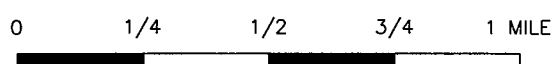
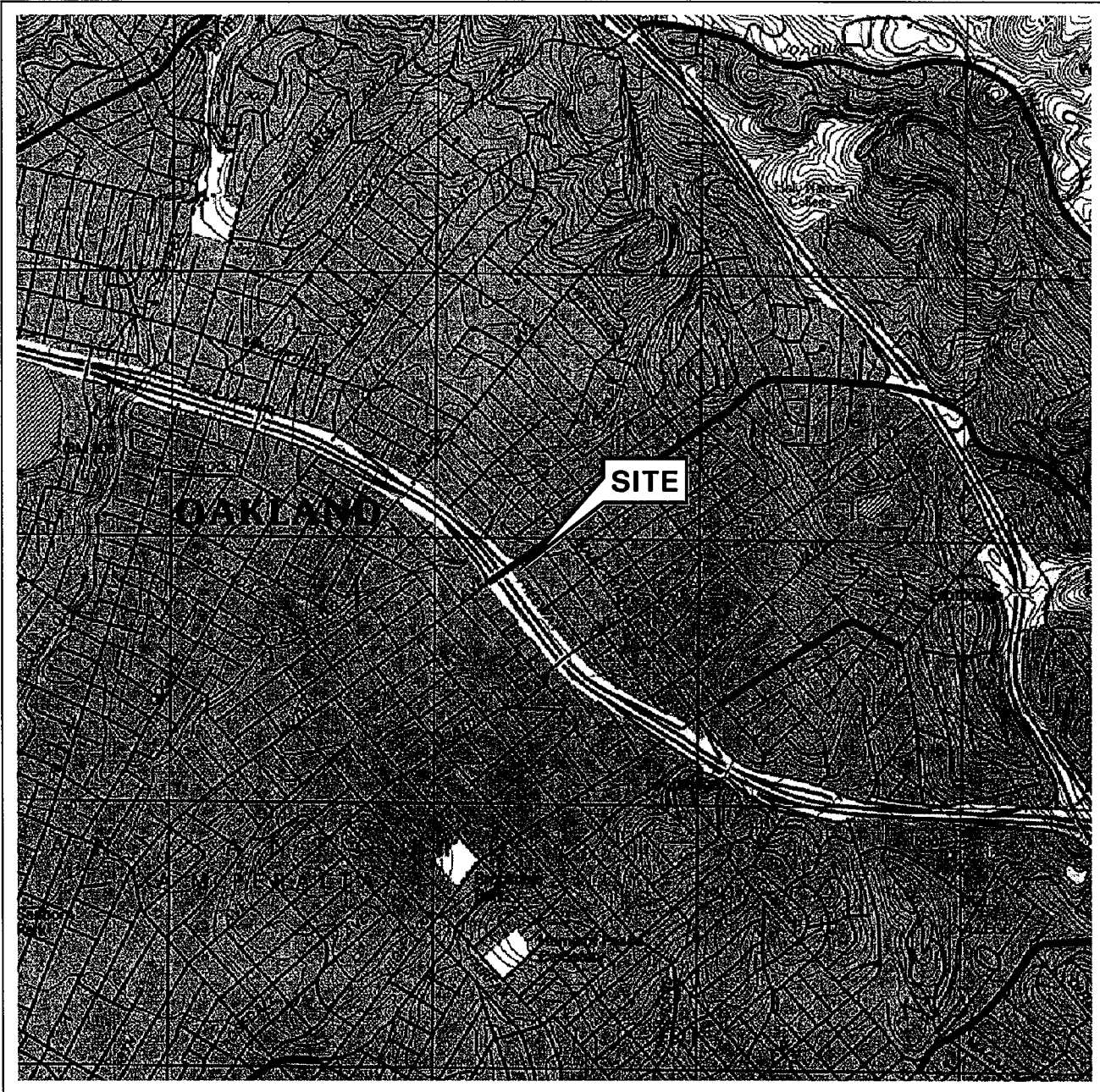
Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
January 1990 Through December 2005
76 Station 6129

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 8260B (µg/l)	Comments
MW-2 continued													
5/17/2005	102.16	24.53	0.00	77.63	1.55	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	330	
7/27/2005	102.16	27.51	0.00	74.65	-2.98	--	ND<500	ND<5.0	ND<5.0	ND<5.0	ND<10	580	
12/6/2005	102.16	29.13	0.00	73.03	-1.62	--	340	ND<0.50	ND<0.50	ND<0.50	ND<1.0	780	
MW-3													
1/5/1990	--	--	0.00	--	--	ND	--	ND	ND	ND	ND	--	
5/11/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
8/9/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
11/14/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
2/12/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
5/9/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
11/13/2003	--	--	--	--	--	--	2600	ND<20	ND<20	ND<20	ND<40	3700	
8/27/2004	100.00	29.61	0.00	70.39	--	--	1700	ND<10	ND<10	ND<10	ND<20	2600	
11/23/2004	100.00	28.48	0.00	71.52	1.13	--	1500	ND<10	ND<10	ND<10	ND<20	1800	
2/9/2005	100.00	26.45	0.00	73.55	2.03	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<1.0	2100	
5/17/2005	100.00	25.61	0.00	74.39	0.84	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<1.0	1200	
7/27/2005	100.00	27.35	0.00	72.65	-1.74	--	ND<1000	ND<10	ND<10	ND<10	ND<20	1400	
12/6/2005	100.00	28.78	0.00	71.22	-1.43	--	430	ND<0.50	1.6	ND<0.50	3.6	1800	

Table 3
ADDITIONAL ANALYTICAL RESULTS
76 Station 6129

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

FIGURES



SCALE 1:24,000

SOURCE:

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



VICINITY MAP

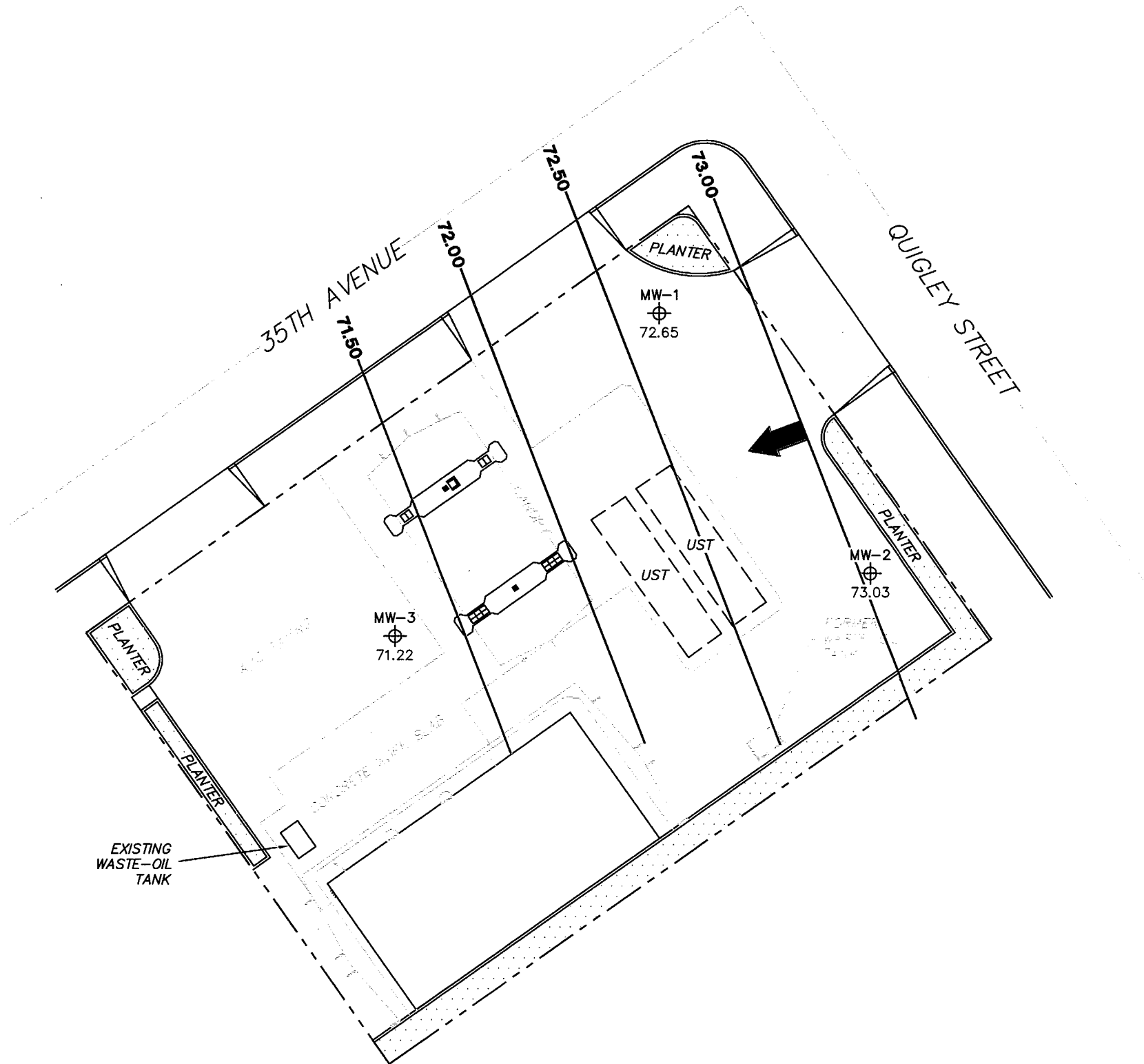
76 Station 6129
3420 35th Avenue
Oakland, California

FIGURE 1

TRC

P.S = 1:1

6129-003



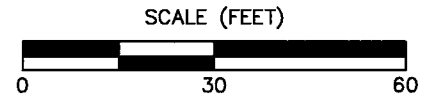
LEGEND

- MW-3 ⊕ Monitoring Well with Groundwater Elevation (feet)
- 73.00 — Groundwater Elevation Contour
- ➔ General Direction of Groundwater Flow

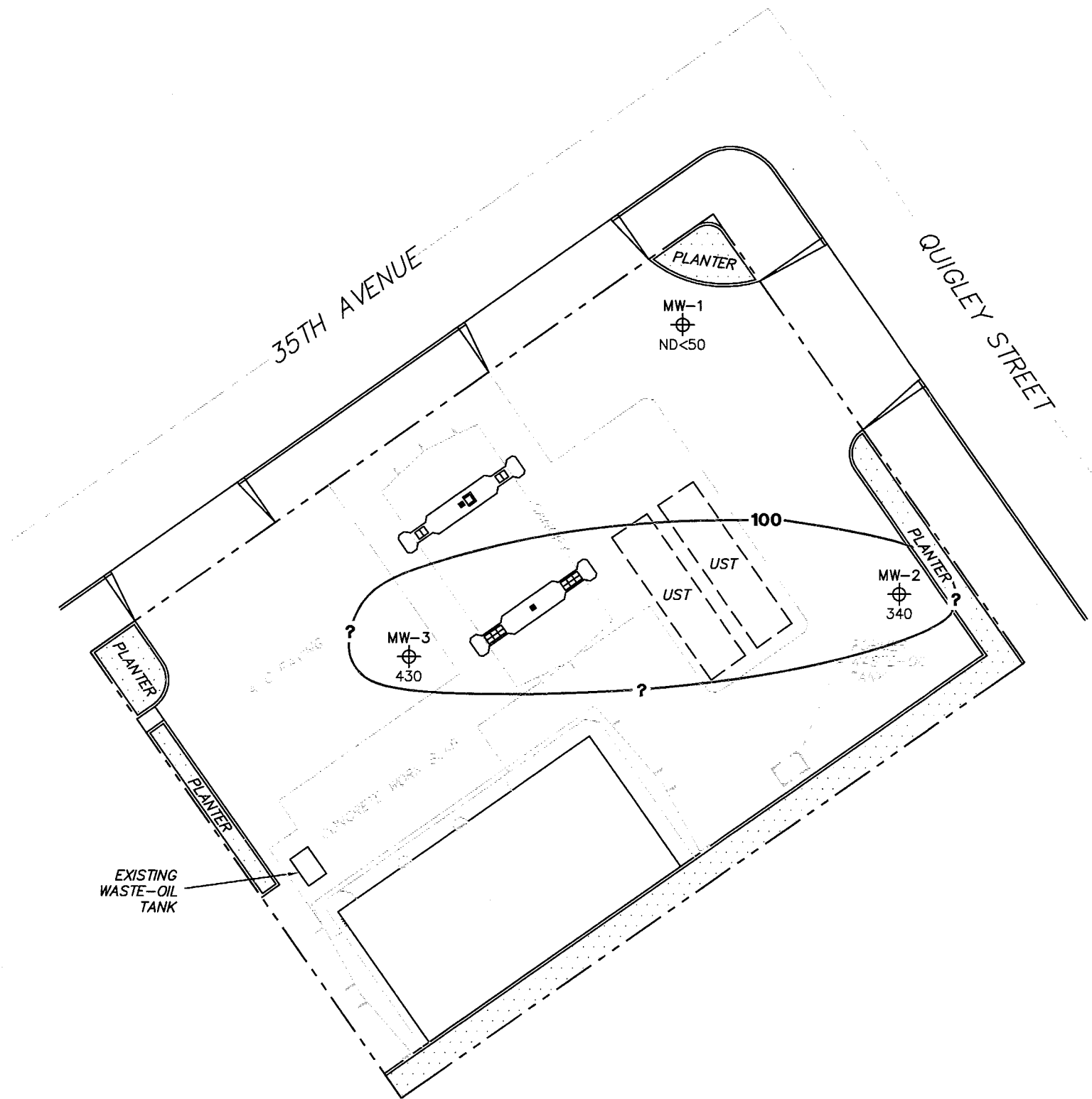
NOTES:
 Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. UST = underground storage tank.

**GROUNDWATER ELEVATION
 CONTOUR MAP
 December 6, 2005**

76 Station 6129
 3420 35th Avenue
 Oakland, California



6129-003
PS=1:1



LEGEND

MW-3 ⊕ Monitoring Well with Dissolved-Phase TPPH Concentration (µg/l)

—100— Dissolved-Phase TPPH Contour (µg/l)

NOTES:

Contour lines are interpretive and based on laboratory analysis results of groundwater samples. TPPH = total purgeable petroleum hydrocarbons. UST = underground storage tank. µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. Results obtained using EPA Method 8260B.

**DISSOLVED-PHASE TPPH
CONCENTRATION MAP
December 6, 2005**

76 Station 6129
3420 35th Avenue
Oakland, California

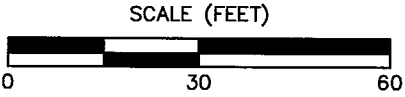
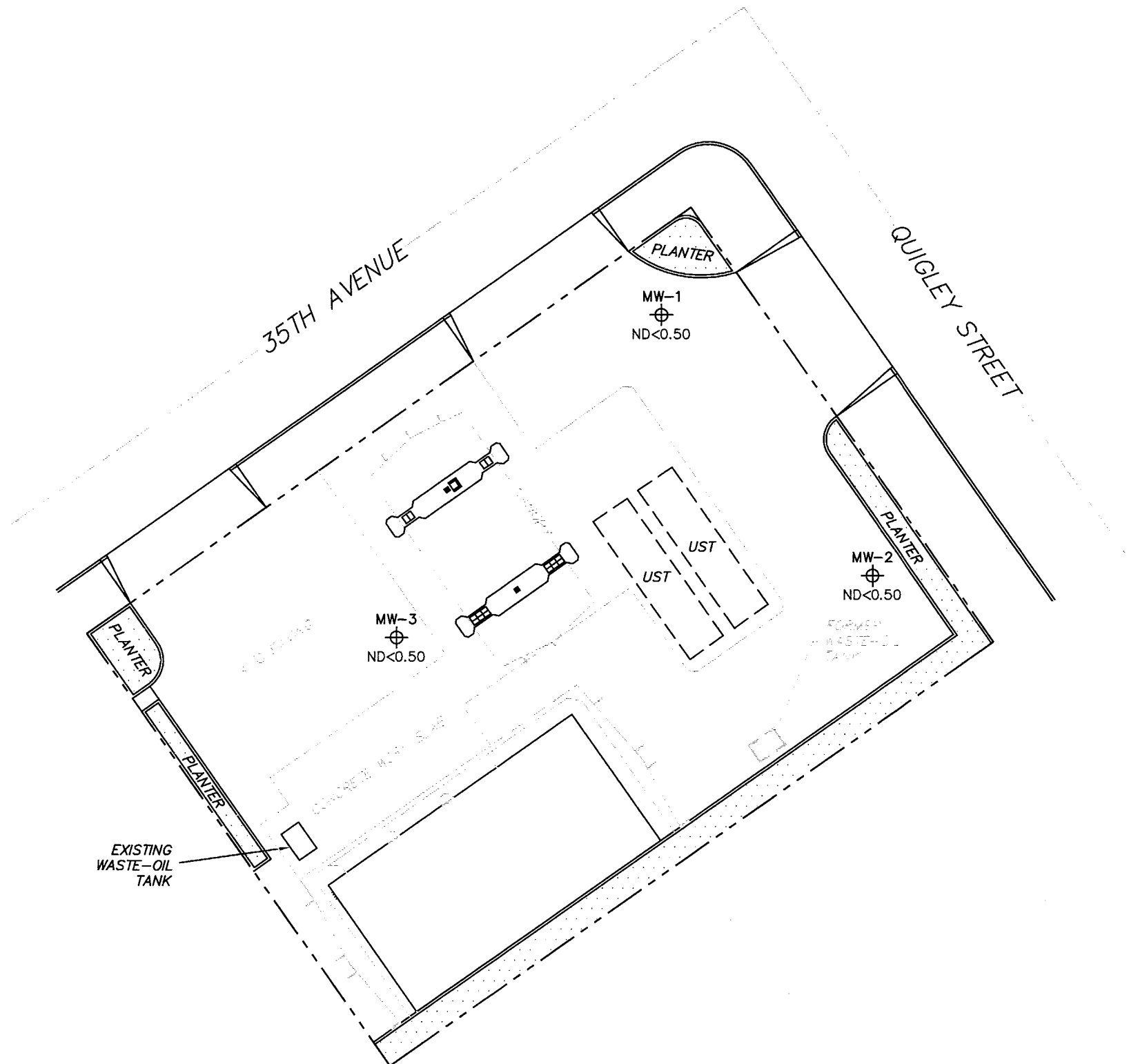


FIGURE 3

6129-003



LEGEND

MW-3 ⊕ Monitoring Well with Dissolved-Phase Benzene Concentration (µg/l)

NOTES:

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

**DISSOLVED-PHASE BENZENE
 CONCENTRATION MAP
 December 6, 2005**

76 Station 6129
 3420 35th Avenue
 Oakland, California

TRC **FIGURE 4**



LEGEND

MW-3 ⊕ Monitoring Well with Dissolved-Phase MTBE Concentration (µg/l)

—1,000— Dissolved-Phase MTBE Contour (µg/l)

NOTES:

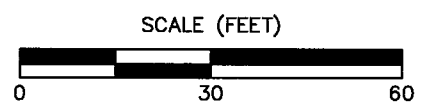
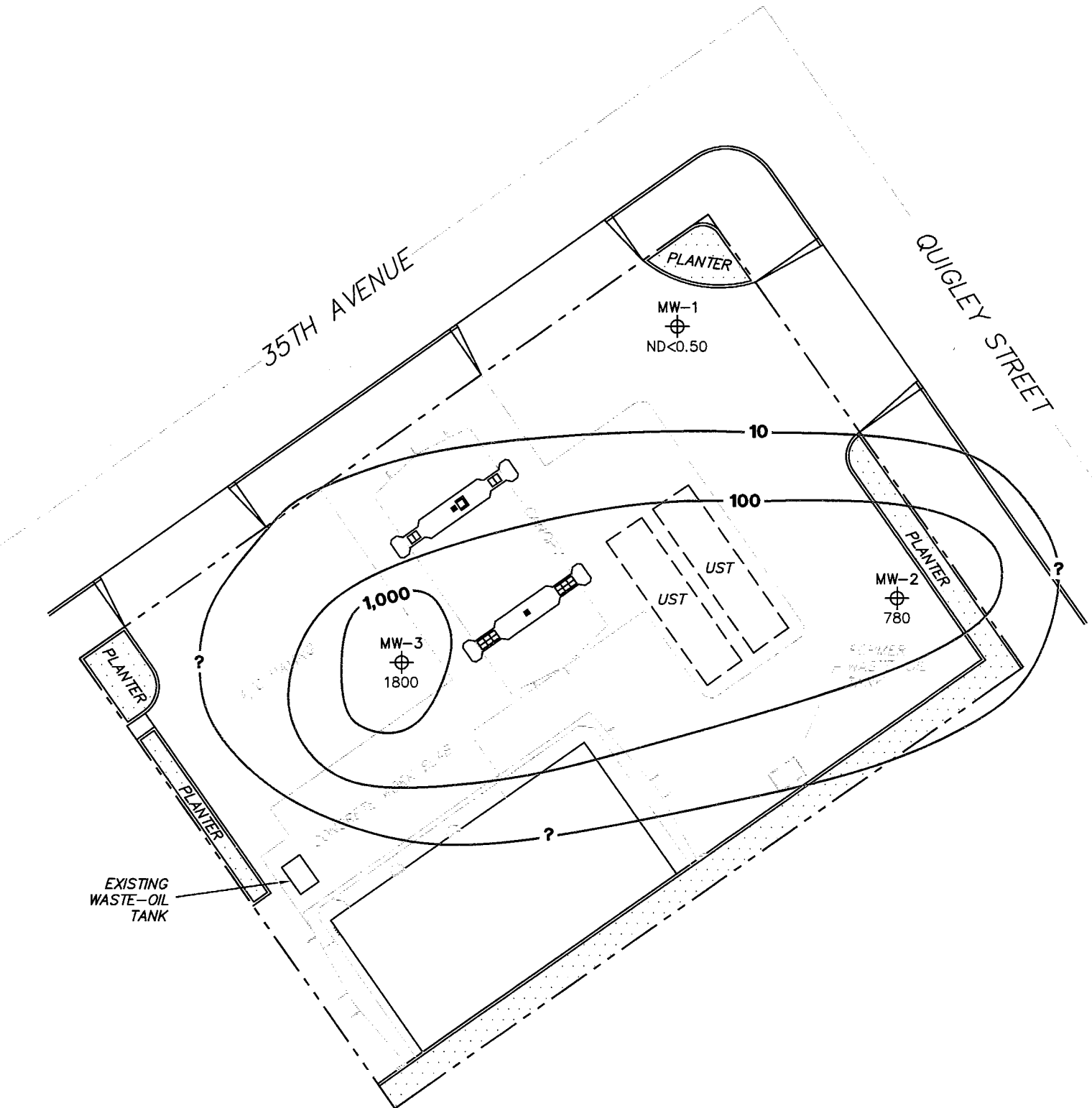
Contour lines are interpretive and based on laboratory analysis results of groundwater samples. MTBE = methyl tertiary butyl ether. µg/l = micrograms per liter. UST = underground storage tank. Results obtained using EPA Method 8260B.

**DISSOLVED-PHASE MTBE
CONCENTRATION MAP
December 6, 2005**

76 Station 6129
3420 35th Avenue
Oakland, California



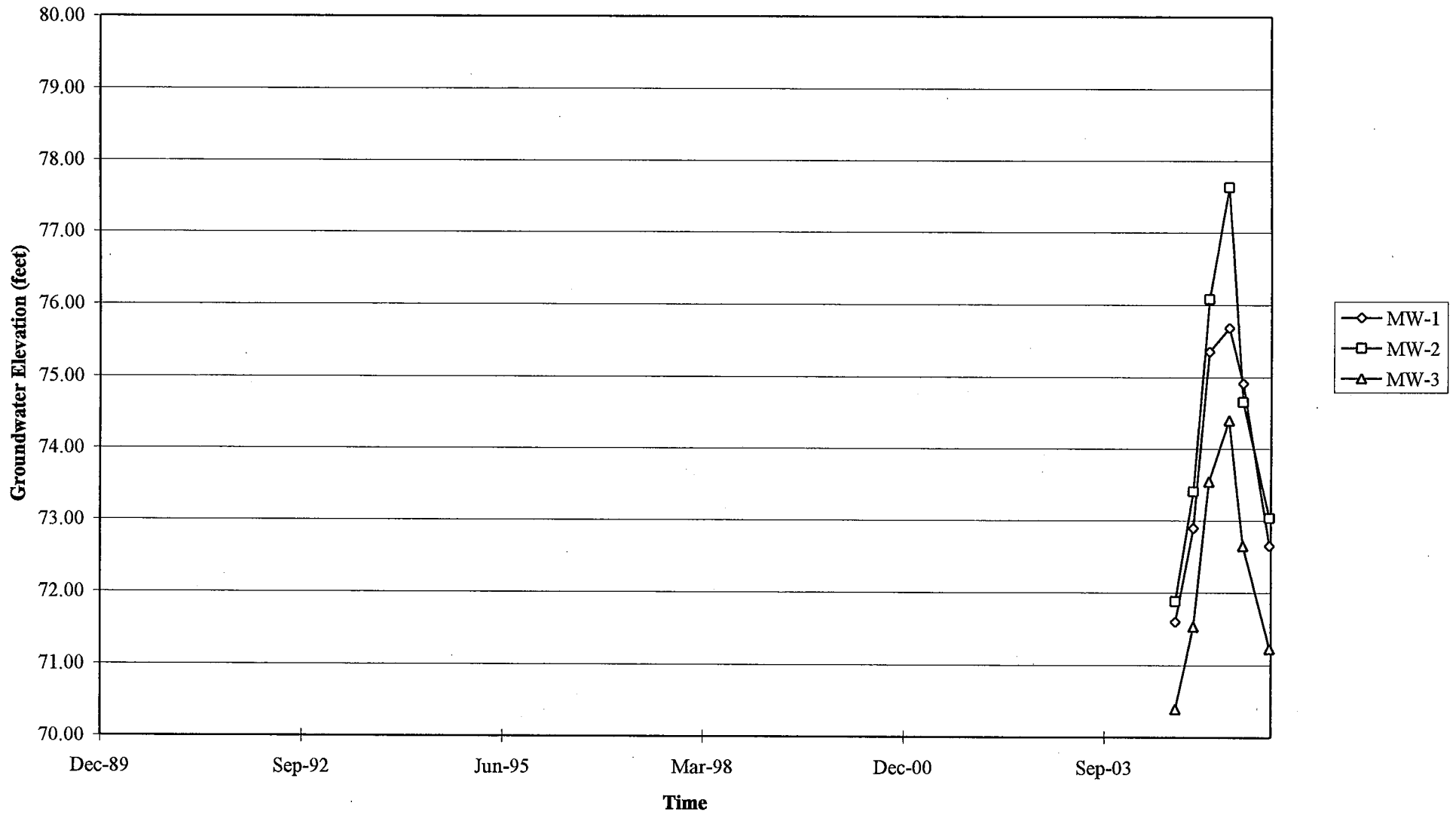
FIGURE 5



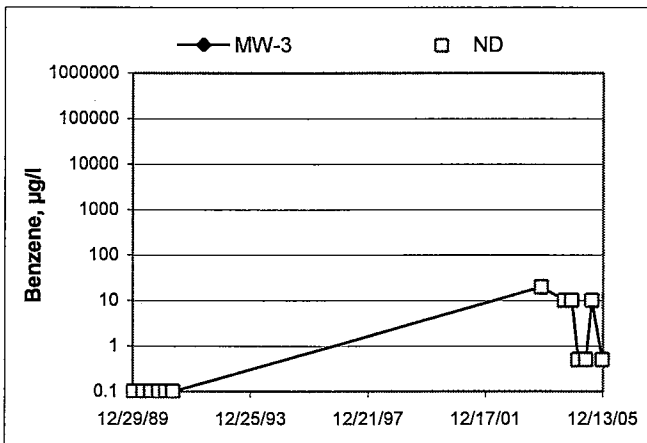
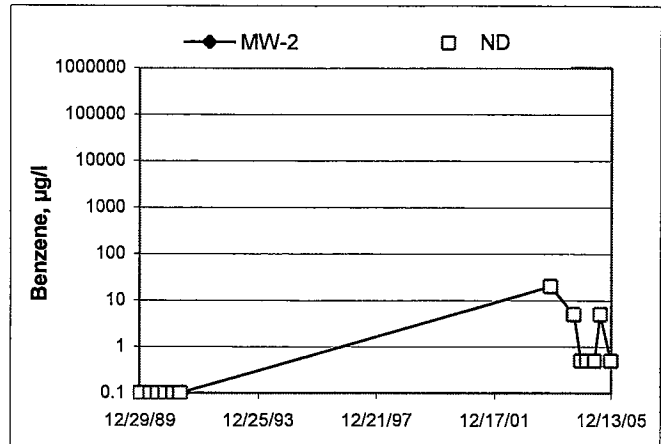
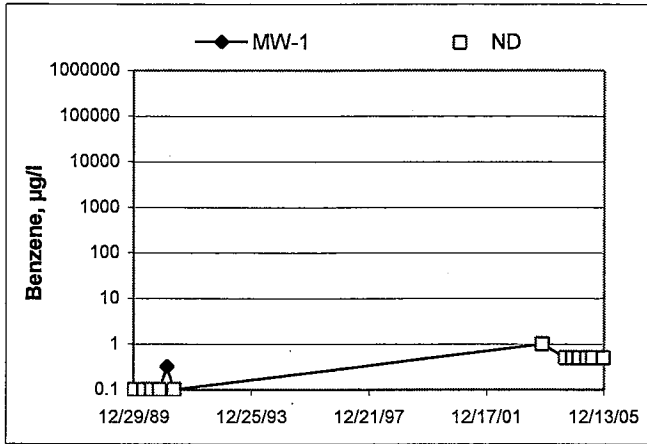
6129-003
PS=1:1

GRAPHS

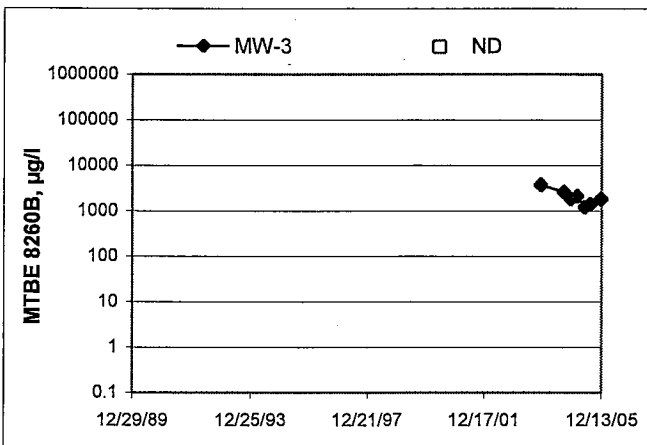
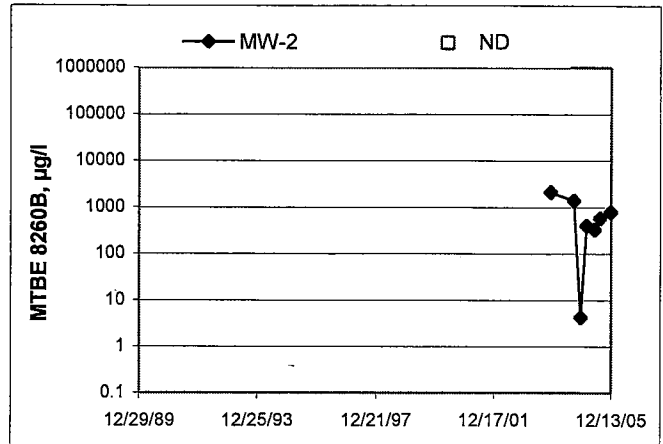
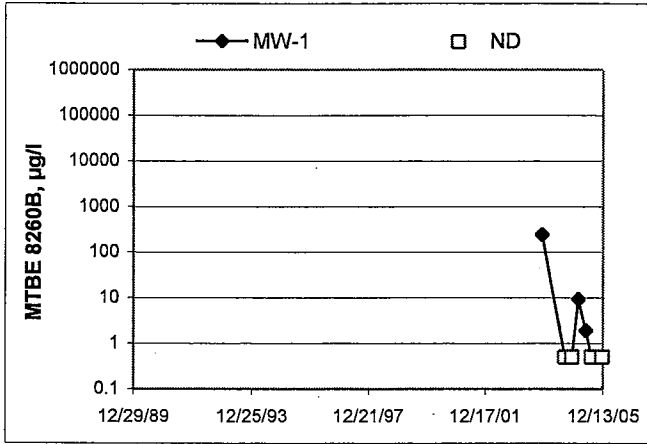
Groundwater Elevations vs. Time
76 Station 6129



Benzene Concentrations vs Time 76 Station 6129



MTBE 8260B Concentrations vs Time
76 Station 6129



GENERAL FIELD PROCEDURES

Groundwater Monitoring and Sampling Assignments

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

Fluid Level Measurements

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

Fluid levels in each well are measured using a coated cloth tape equipped with an electronic interface probe, which distinguishes between liquid phase hydrocarbon (LPH) and water. The depth to LPH (if it is present), to water, and to the bottom of the well are measured from the top of the well casing (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 measurements are calibrated daily according to manufacturer's instructions.

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

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

Groundwater Sample Collection

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

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

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

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

Sequence of Gauging, Purging and Sampling

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

Decontamination

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

Exceptions

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

GROUNDWATER SAMPLING FIELD NOTES

Site: 6129

Technician: NICK

Project No.: 4105001

Date: 12-06-05

Well No.: MW-1
 Depth to Water (feet): 29.59
 Total Depth (feet): 43.46
 Water Column (feet): 13.87
 80% Recharge Depth (feet): 32.36

Purge Method: HB
 Depth to Product (feet): —
 LPH & Water Recovered (gallons): —
 Casing Diameter (Inches): 2"
 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.
1007			2	635	18.4	7.21		
			4	655	19.0	7.33		
	1037		6	665	19.1	7.19		
Static at Time Sampled			Total Gallons Purged		Time Sampled			
29.84			6		1043			
Comments:								

Well No.: MW-2
 Depth to Water (feet): 29.13
 Total Depth (feet): 43.53
 Water Column (feet): 14.42
 80% Recharge Depth (feet): 32.01

Purge Method: HB
 Depth to Product (feet): —
 LPH & Water Recovered (gallons): —
 Casing Diameter (Inches): 2"
 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.
1052			2	608	18.3	7.28		
			4	637	18.7	7.19		
	1114		6	673	19.1	7.11		
Static at Time Sampled			Total Gallons Purged		Time Sampled			
29.78			6		1119			
Comments:								

GROUNDWATER SAMPLING FIELD NOTES

Technician: NICK

Site: 6129

Project No.: 41050001

Date: 12-06-05

Well No.: MW-3

Purge Method: 4B

Depth to Water (feet): 22.78

Depth to Product (feet):

Total Depth (feet): 42.62

LPH & Water Recovered (gallons):

Water Column (feet): 13.84

Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 31.55

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.
1126			2	575	19.1	7.16		
			4	570	19.3	7.28		
	1150		6	580	19.8	7.16		
Static at Time Sampled		Total Gallons Purged		Time Sampled				
30.40		6		11.56				
Comments:								

Well No.: _____

Purge Method: _____

Depth to Water (feet): _____

Depth to Product (feet): _____

Total Depth (feet): _____

LPH & Water Recovered (gallons): _____

Water Column (feet): _____

Casing Diameter (Inches): _____

80% Recharge Depth (feet): _____

1 Well Volume (gallons): _____

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temperature (F,C)	pH	Turbidity	D.O.
Static at Time Sampled		Total Gallons Purged		Time Sampled				
Comments:								



Laboratories, Inc

Date of Report: 12/19/2005

Anju Farfan

TRC Alton Geoscience

21 Technology Drive
Irvine, CA 92618-2302

RE: 6129

BC Lab Number: 0512078

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

Sincerely,

A handwritten signature in black ink, appearing to read "Vanessa Hooker", written over a horizontal line.

Contact Person: Vanessa Hooker

Client Service Rep

A handwritten signature in black ink, consisting of a stylized, cursive name, written over a horizontal line.

Authorized Signature

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

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

Reported: 12/19/05 11:23

Laboratory / Client Sample Cross Reference

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



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

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

Reported: 12/19/05 11:23

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0512078-01 | **Client Sample Name:** 6129, MW-1, MW-1, 12/6/2005 10:43:00AM, Nick

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
Toluene	0.93	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
Total Xylenes	1.8	ug/L	1.0		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
Ethanol	ND	ug/L	250		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	V11
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546	ND	
1,2-Dichloroethane-d4 (Surrogate)	108	%	76 - 114 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546		
Toluene-d8 (Surrogate)	103	%	88 - 110 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546		
4-Bromofluorobenzene (Surrogate)	98.7	%	86 - 115 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 13:51	MCF	MS-V10	1	BOL0546		

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

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

Reported: 12/19/05 11:23

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0512078-02		Client Sample Name: 6129, MW-2, MW-2, 12/6/2005 11:19:00AM, Nick												
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Benzene	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546	ND		
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546	ND		
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546	ND		
Ethylbenzene	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546	ND		
Methyl t-butyl ether	780	ug/L	25		EPA-8260	12/13/05	12/14/05 20:48	MCF	MS-V10	50	BOL0546	ND	A01	
Toluene	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546	ND		
Total Xylenes	ND	ug/L	1.0		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546	ND		
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546	ND		
t-Butyl alcohol	61	ug/L	10		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546	ND		
Diisopropyl ether	15	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546	ND		
Ethanol	ND	ug/L	250		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546	ND	V11	
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546	ND		
Total Purgeable Petroleum Hydrocarbons	340	ug/L	50		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546	ND	A53	
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 20:48	MCF	MS-V10	50	BOL0546			
1,2-Dichloroethane-d4 (Surrogate)	109	%	76 - 114 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546			
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546			
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 20:48	MCF	MS-V10	50	BOL0546			
4-Bromofluorobenzene (Surrogate)	99.9	%	86 - 115 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 20:48	MCF	MS-V10	50	BOL0546			
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 14:13	MCF	MS-V10	1	BOL0546			



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

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

Reported: 12/19/05 11:23

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0512078-03 **Client Sample Name:** 6129, MW-3, MW-3, 12/6/2005 11:56:00AM, Nick

Constituent	Result	Units	PQL	MDL	Method	Prep	Run	Analyst	Instru- ment ID	Dilution	QC	MB	Lab
						Date	Date/Time				Batch ID	Bias	Quals
Benzene	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	
Methyl t-butyl ether	1800	ug/L	25		EPA-8260	12/13/05	12/14/05 21:10	MCF	MS-V10	50	BOL0546	ND	A01
Toluene	1.6	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	
Total Xylenes	3.6	ug/L	1.0		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	
t-Butyl alcohol	160	ug/L	10		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	
Ethanol	ND	ug/L	250		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	V11
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	
Total Purgeable Petroleum Hydrocarbons	430	ug/L	50		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546	ND	A53
1,2-Dichloroethane-d4 (Surrogate)	101	%	76 - 114 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546		
1,2-Dichloroethane-d4 (Surrogate)	106	%	76 - 114 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 21:10	MCF	MS-V10	50	BOL0546		
Toluene-d8 (Surrogate)	103	%	88 - 110 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546		
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 21:10	MCF	MS-V10	50	BOL0546		
4-Bromofluorobenzene (Surrogate)	99.4	%	86 - 115 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 14:36	MCF	MS-V10	1	BOL0546		
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)		EPA-8260	12/13/05	12/14/05 21:10	MCF	MS-V10	50	BOL0546		

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

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

Reported: 12/19/05 11:23

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

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



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

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

Reported: 12/19/05 11:23

Volatile Organic Analysis (EPA Method 8260) Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Control Limits			Lab Quals
								Percent Recovery	RPD	Percent Recovery RPD	
Benzene	BOL0546	BOL0546-BS1	LCS	23.390	25.000	0.50	ug/L	93.6		70 - 130	
Toluene	BOL0546	BOL0546-BS1	LCS	24.230	25.000	0.50	ug/L	96.9		70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BOL0546	BOL0546-BS1	LCS	10.140	10.000		ug/L	101		76 - 114	
Toluene-d8 (Surrogate)	BOL0546	BOL0546-BS1	LCS	10.240	10.000		ug/L	102		88 - 110	
4-Bromofluorobenzene (Surrogate)	BOL0546	BOL0546-BS1	LCS	10.060	10.000		ug/L	101		86 - 115	

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BOL0546	BOL0546-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	BOL0546	BOL0546-BLK1	ND	ug/L	0.50	0.14	
Methyl t-butyl ether	BOL0546	BOL0546-BLK1	ND	ug/L	0.50	0.15	
Toluene	BOL0546	BOL0546-BLK1	ND	ug/L	0.50	0.15	
Total Xylenes	BOL0546	BOL0546-BLK1	ND	ug/L	1.0	0.40	
t-Amyl Methyl ether	BOL0546	BOL0546-BLK1	ND	ug/L	0.50	0.31	
t-Butyl alcohol	BOL0546	BOL0546-BLK1	ND	ug/L	10	10	
Diisopropyl ether	BOL0546	BOL0546-BLK1	ND	ug/L	0.50	0.23	
Ethanol	BOL0546	BOL0546-BLK1	ND	ug/L	1000	110	
Ethyl t-butyl ether	BOL0546	BOL0546-BLK1	ND	ug/L	0.50	0.27	
Total Purgeable Petroleum Hydrocarbons	BOL0546	BOL0546-BLK1	ND	ug/L	50	23	
1,2-Dichloroethane-d4 (Surrogate)	BOL0546	BOL0546-BLK1	100	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BOL0546	BOL0546-BLK1	102	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BOL0546	BOL0546-BLK1	95.5	%	86 - 115 (LCL - UCL)		



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Notes and Definitions

- V11 The Continuing Calibration Verification (CCV) recovery is not within established control limits.
- J Estimated value
- A53 Chromatogram not typical of gasoline.
- A01 PQL's and MDL's are raised due to sample dilution.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Submission #: 05-12078 Project Code: TB Batch #

SHIPPING INFORMATION
 Federal Express UPS Hand Delivery
 C Lab Field Service Other (Specify)

SHIPPING CONTAINER
 Ice Chest None
 Box Other (Specify)

Refrigerant: Ice Blue Ice None Other Comments:

custody Seals: Ice Chest Containers None Comments:
 Intact? Yes No Intact? Yes No

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received YES NO
 Ice Chest ID R112 Emissivity 1.00 Date/Time 12/7/05
 Temperature: 3.6 °C Container OTA
 Thermometer ID: #42 Analyst Init OTD

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
GENERAL MINERAL/ GENERAL PHYSICAL										
PE UNPRESERVED										
INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS										
CYANIDE										
NITROGEN FORMS										
TOTAL SULFIDE										
NITRATE / NITRITE										
ml TOTAL ORGANIC CARBON										
TOX										
CHEMICAL OXYGEN DEMAND										
PHENOLICS										
ml VOA VIAL TRAVEL BLANK										
ml VOA VIAL	A B	A B	A B							
EPA 413.1, 413.2, 418.1										
ODOR										
BIOLOGICAL										
STERIOLOGICAL										
ml VOA VIAL- 504										
EPA 508/608/8080										
EPA 515.1/8150										
EPA 525										
EPA 525 TRAVEL BLANK										
ml EPA 547										
ml EPA 531.1										
EPA 548										
EPA 549										
EPA 632										
EPA 8015M										
QA/QC										
AMBER										
Z. JAR										
OZ. JAR										
IL SLEEVE										
B VIAL										
ASTIC BAG										
PROUS IRON										
CORE										

Comments:
 Sample Numbering Completed By: OTD Date/Time: 12/18/05 0100

BC LABORATORIES, INC.

4100 Atlas Court □ Bakersfield, CA 93303
(661) 327-4911 □ FAX (661) 327-1913

CHAIN OF CUSTODY

05-12078

Analysis Requested

Circle one: Phillips 66 / Unocal		Consultant Firm: TRC		MATRIX (GW) Ground water (S) Soil (VW) Waste-water (SL) Sludge	BTEX/MTBE by 8021B, Gas by 8015	TPH GAS by 8015M	TPH DIESEL by 8015	8260 full list w/ MTBE & oxygenates	BTEX/MTBE/OXYS BY 8260B	ETHANOL by 8260B	TPPH by 8260B	TPPH, BTEX & 8 OXYS by 8260B	3 VOCs w/ HCL	Turnaround Time Requested
Address: 3420 35th Ave		21 Techology Drive Irvine, CA 92618-2302 Attn: Anju Farfan												
City: OAKLAND		4-digit site#: 6129												
State: CA Zip:		Workorder # 4583 TRC 501												
Phillips 66 /Unocal Mgr: Thomas Kosek		Project #: 41050001												
Lab#		Sampler Name: NICK IVANOFF												

Lab#	Sample Description	Field Point Name	Date & Time Sampled	MATRIX	BTEX/MTBE by 8021B, Gas by 8015	TPH GAS by 8015M	TPH DIESEL by 8015	8260 full list w/ MTBE & oxygenates	BTEX/MTBE/OXYS BY 8260B	ETHANOL by 8260B	TPPH by 8260B	TPPH, BTEX & 8 OXYS by 8260B	3 VOCs w/ HCL	Turnaround Time Requested
-1	MW-1		12-06-05 1043	GW								X	X	
-2	MW-2		↓ 1119	↓								↓	↓	
-3	MW-3		↓ 1156	↓								↓	↓	

CHK BY: [Signature] DISTRIBUTION [] SUBMIT []

Comments: GLOBAL ID: T06 00101465	Relinquished by: (Signature) [Signature]	Received by: REFRIGERATOR	Date & Time 12-06-05 1322
	Relinquished by: (Signature) [Signature]	Received by: Kos Dunley	Date & Time 12-07-05 1100
	Relinquished by: (Signature) Kos Dunley	Received by: Cecilia M. Duffie	Date & Time 12-7-05 1450

(A) = ANALYSIS (C) = CONTAINER
Northern CA

(P) = PRESERVATIVE
Relinquished by: [Signature] 12/7/05 1730
12-7-05 2230

STATEMENTS

Purge Water Disposal

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

Limitations

The fluid level monitoring and groundwater sampling activities summarized in this report have been performed under the responsible charge of a California Registered Geologist or Registered Civil Engineer and have been conducted in accordance with current practice and the standard of care exercised by geologists and engineers performing similar tasks in this area. No warranty, express or implied, is made regarding the conclusions and professional opinions presented in this report. The conclusions are based solely upon an analysis of the observed conditions. If actual conditions differ from those described in this report, our office should be notified.