



ORIGINAL

RO 58

76 Broadway  
Sacramento, CA 95818  
phone 916.558.7676  
fax 916.558.7639

September 30, 2005

Mr. Don Hwang  
Alameda County Health Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

Alameda County  
OCT 05 2005  
Environmental Health

Re: **Document Transmittal**  
Fuel Leak Case No. RO0000058  
76 Station 6129  
3420 35th Avenue  
Oakland, California

Dear Mr. Hwang:

Please find attached ATC's *Quarterly Summary Report - Third Quarter 2005*, dated 9/30/05, and TRC's *Quarterly Monitoring Report (July through September 2005)*, dated 9/2/05 for the above referenced site. I declare, under penalty of perjury, that to the best of my knowledge the information and/or recommendations contained in the attached proposal or report are true and correct.

If you have any questions or need additional information, please call me at (916) 558-7666.

Sincerely,

Thomas H. Kosel  
Site Manger, Risk Management and Remediation  
ConocoPhillips  
76 Broadway, Sacramento, CA 95818

Attachment

cc: Dave Evans, ATC



6602 Owens Dr. Suite 100  
Pleasanton, California 94588  
[www.atc-enviro.com](http://www.atc-enviro.com)  
925.460.5300  
Fax 925.463.2559

September 30, 2005

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

Re: **Quarterly Summary Report – Third Quarter 2005**  
76 Service Station No. 6129 / WNO 4583  
3420 35<sup>th</sup> Avenue  
Oakland, CA

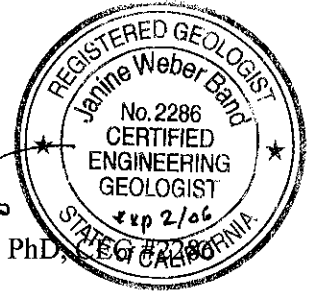
Dear Mr. Hwang:

On behalf of ConocoPhillips Company, ATC Associates Inc. is forwarding the quarterly summary report for the above referenced facility.

Sincerely,  
ATC ASSOCIATES INC.

David A. Evans  
Senior Project Manager

Janine Weber-Band, PhD,  
Senior Geologist



Alameda County  
OCT 05 2005  
Environmental Health

Alameda County  
OCT 05 2005  
Environmental Health

Attachment: Site Plan  
Groundwater Monitoring Report, prepared by TRC (9-2-05)

Cc: Mr. Thomas Kosel – ConocoPhillips (electronic copy only)

**QUARTERLY SUMMARY REPORT  
Third Quarter 2005**

76 Service Station No. 6129 / WNO 4583  
3420 35<sup>th</sup> Avenue  
Oakland, CA

City/County ID#            Case No. RO# 000058  
County:                      Alameda

Alameda County  
OCT 05 2005  
Environmental Health

**BACKGROUND & ACTIVITY**

According to Kaprealian Engineering, Inc. (KEI), in 1989, two 10,000-gallon gasoline 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 installed 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, and the analytical results indicated the presence of MtBE at concentrations between 240 and 3,700 micrograms per liter (ug/l), with the most elevated concentrations occurring in wells MW-2 (2,100 ug/l) and MW-3 (3,700 ug/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 indicated a 6-inch diameter irrigation well located at 3397 Arkansas St, 800 feet west-northwest of the site drilled in August 1977 to a total depth of 62 feet (water level at 18 feet) owned by Arthur Smith as reported by the Alameda County Health Care Services updated July 30, 1984.

## 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 July 27, 2005, depth to groundwater ranged from 27.33 feet (MW-1) to 27.51 feet (MW-2) below top of casing (TOC). The groundwater flow direction was toward the west at a gradient of 0.03 ft/ft, consistent with historic events. During the July 2005 sampling event, maximum detectable hydrocarbon concentrations were as follows: TPH (<1,000 ug/l in MW-3), benzene (<10 ug/L in MW-3), and MtBE (1,400 ug/l in MW-3).

## REMEDIATION STATUS

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 pumps islands around MW-3.

Remediation is not currently being conducted at the site.

## CHARACTERIZATION STATUS

Hydrocarbon concentrations in the soil and groundwater have not been delineated. MtBE in soil and groundwater are above ESL's. Additional assessment activity has been proposed to delineate both the vertical and horizontal extent (up and down gradient) of the MtBE plumes.

## RECENT CORRESPONDENCE

1. ATC prepared a Work Plan titled *Work Plan Addendum – Site Assessment Activity*, dated June 13, 2005, to the Alameda County Department of Public Health recommending four monitor wells be installed in addition to three soil borings.

## THIS QUARTER ACTIVITIES (Third Quarter 2005)

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

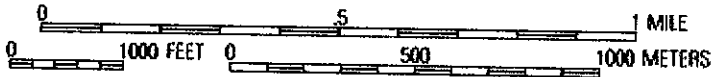
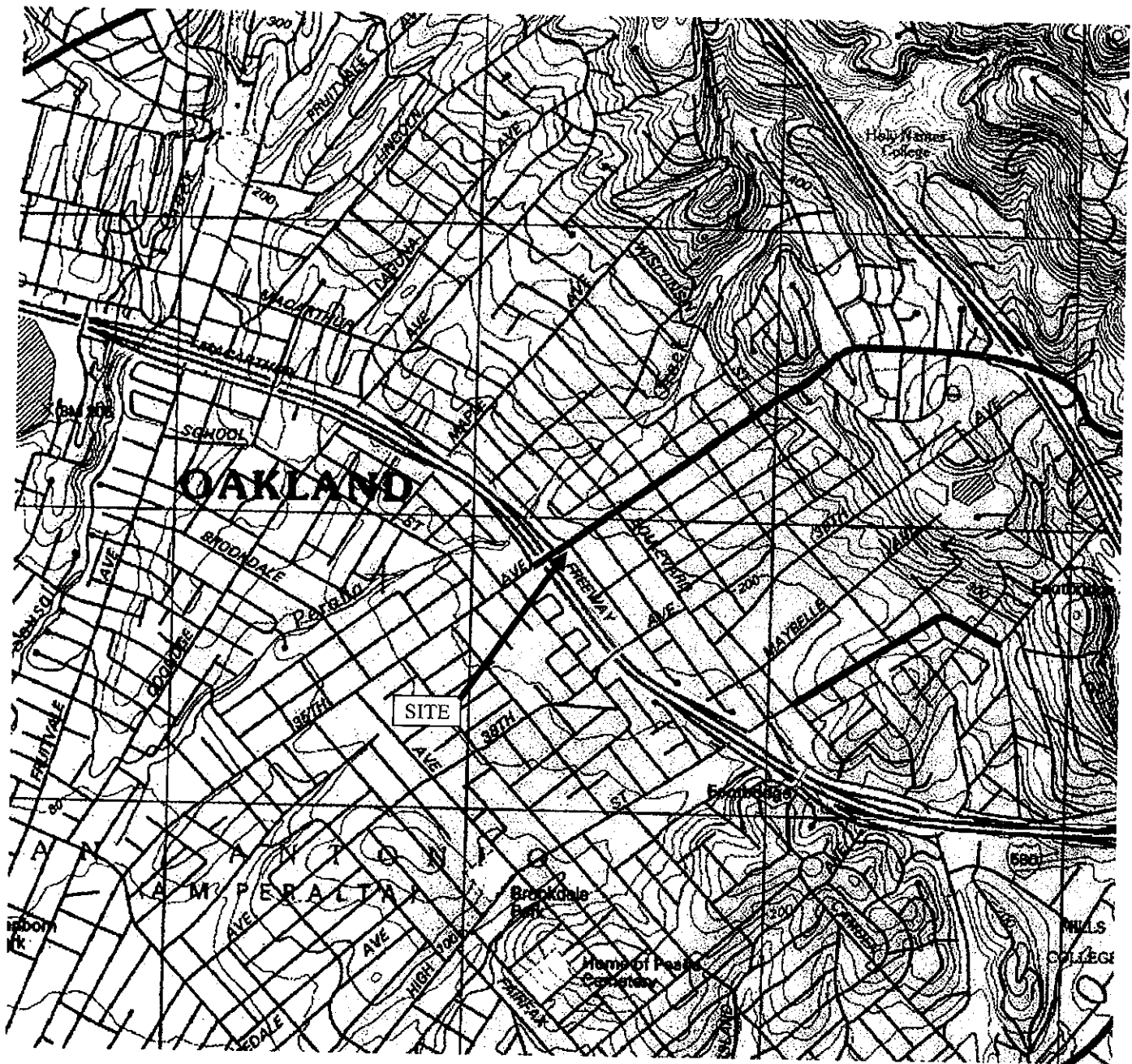
## WASTE DISPOSAL SUMMARY

No waste was generated during the quarter.

## NEXT QUARTER ACTIVITIES (Fourth Quarter 2005)

1. TRC will conduct the quarterly groundwater monitoring and sampling event at the site.
2. Upon approval of the Work Plan dated June 13, 2005, ATC will complete four monitor wells and three soil borings.

**CONSULTANT:** ATC Associates Inc.



SOURCE: USGS OAKLAND WEST QUADRANGLE, CALIFORNIA (7.5 MINUTE SERIES) TOPOGRAPHIC MAP. OBTAINED FROM THE 2000 NATIONAL GEOGRAPHIC TOPOI SOFTWARE.



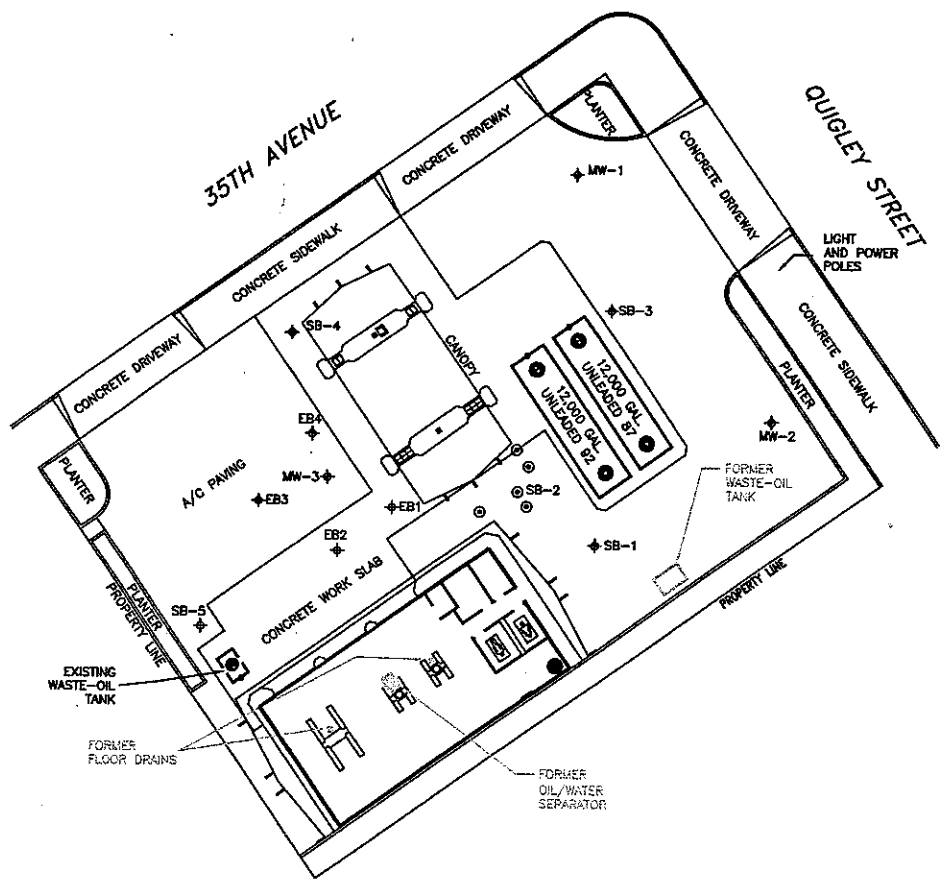
6602 Owens Drive, Suite 100  
 Pleasanton, CA 94588  
 (925) 460-5300

PROJECT NO: 75.75118.4583

DESIGNED BY: DE	SCALE: N/A	REVIEWED BY: DE
DRAWN BY: EC	DATE: 03/05	FILE: 6129 SITE VIC

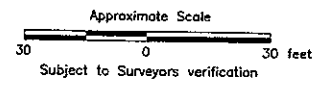
FIGURE 1  
**SITE VICINITY MAP**

76 STATION 6129  
 3420 35<sup>th</sup> AVENUE  
 OAKLAND, CALIFORNIA



### LEGEND

- MW-3 GROUNDWATER MONITORING WELL
- SB-5 SOIL BORING LOCATIONS (2003)
- SB-2 ATTEMPTED SOIL BORING
- EB1 SOIL BORING LOCATIONS (1990)
- GASOLINE UNDERGROUND STORAGE TANK
- DISPENSER ISLAND
- HOIST



BASE MAP REFERENCE:  
 MODIFIED FROM SITE PLAN SUPPLIED BY  
 MILLER BROOKS, ENVIRONMENTAL, INC.



6502 Owens Drive, Suite 100  
 Pleasanton, CA 94568  
 (925) 480-5300

SCALE AS SHOWN	DRAWING DATE 03/25/05	ACAD FILE 6129-site plan
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### SITE MAP

CLIENT	CONOCOPHILLIPS		PM	DAE
LOCATION	76 STATION 6129 3420 35th AVENUE OAKLAND, CALIFORNIA		PE	DA
DESIGNED	DRAWN BY: EC	PROJECT NO. 75.75118.4583	FIGURE	2



Customer-Focused Solutions

September 2, 2005

ConocoPhillips Company  
76 Broadway  
Sacramento, CA 94563

ATTN: MR. THOMAS KOSEL

SITE: 76 STATION 6129  
3420 35<sup>TH</sup> AVENUE  
OAKLAND, CALIFORNIA

RE: QUARTERLY MONITORING REPORT  
JULY THROUGH SEPTEMBER 2005

Dear Mr. Kosel:

Please find enclosed our Quarterly Monitoring Report for 76 Station 6129, located at 3420 35<sup>th</sup> 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. Dave Evans, ATC Associates Inc. (2 copies)

Enclosures:  
20-0400/6129R05.QMS



Customer-Focused Solutions

**QUARTERLY MONITORING REPORT  
JULY THROUGH SEPTEMBER 2005**

76 Station 6129  
3420 35<sup>th</sup> Avenue  
Oakland, California

Prepared For:

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

By:



Senior Project Geologist, Irvine Operations  
September 2, 2005



## LIST OF ATTACHMENTS

Summary Sheet	Summary of Gauging and Sampling Activities
Tables	Table Key Table 1: Current Fluid Levels and Selected Analytical Results Table 2: Historic Fluid Levels and Selected Analytical Results Table 3: Additional Analytical Results
Figures	Figure 1: Vicinity Map Figure 2: Groundwater Elevation Contour Map Figure 3: Dissolved-Phase TPPH Concentration Map Figure 4: Dissolved-Phase Benzene Concentration Map Figure 5: Dissolved-Phase MTBE Concentration Map
Graphs	Groundwater Elevations vs. Time Benzene Concentrations vs. Time 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**  
**July 2005 through September 2005**  
**76 Station 6129**  
**3420 35th Ave.**  
**Oakland, CA**

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

Water Sampling Contractor: **TRC**  
Compiled by: **Valentina Tobon**

Date(s) of Gauging/Sampling Event: **07/27/05**

**Sample Points**

Groundwater wells: **3** onsite, **0** offsite      Wells gauged: **3**      Wells sampled: **3**  
Purging method: **Bailer**  
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: **27.33 feet**      Maximum: **27.51 feet**  
Average groundwater elevation (relative to available local datum): **74.07 feet**  
Average change in groundwater elevation since previous event: **-1.83 feet**  
Interpreted groundwater gradient and flow direction:  
    Current event: **0.025 ft/ft, southwest**  
    Previous event: **0.03 ft/ft, west (05/17/05)**

**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**      **0**  
Wells with **MTBE**      **2**      Maximum: **1,400 µg/l (MW-3)**

**Notes:**

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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.

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

### REFERENCE

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

**Table 1**  
**CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**July 27, 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
<b>MW-1</b>													
07/27/05	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	
<b>MW-2</b>													
07/27/05	102.16	27.51	0.00	74.65	-2.98	--	ND<500	ND<5.0	ND<5.0	ND<5.0	ND<10	580	
<b>MW-3</b>													
07/27/05	100.00	27.35	0.00	72.65	-1.74	--	ND<1000	ND<10	ND<10	ND<10	ND<20	1400	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**January 1990 Through July 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
<b>MW-1</b>													
01/05/90	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
05/11/90	--	--	--	--	--	ND	--	ND	7.1	ND	ND	--	
08/09/90	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
11/14/90	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
02/12/91	--	--	--	--	--	ND	--	0.32	ND	ND	ND	--	
05/09/91	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
11/13/03	--	--	--	--	--	--	180	ND<1.0	ND<1.0	ND<1.0	ND<2.0	240	
08/27/04	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	
11/23/04	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	
02/09/05	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	
05/17/05	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	
07/27/05	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	
<b>MW-2</b>													
01/05/90	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
05/11/90	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
08/09/90	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
11/14/90	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
02/12/91	--	--	--	--	--	ND	--	ND	0.42	ND	0.51	--	
05/09/91	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
11/13/03	--	--	--	--	--	--	ND<2000	ND<20	ND<20	ND<20	ND<40	2100	
08/27/04	102.16	30.28	0.00	71.88	--	--	950	ND<5.0	ND<5.0	ND<5.0	ND<10	1400	
11/23/04	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	
02/09/05	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	
05/17/05	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	

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

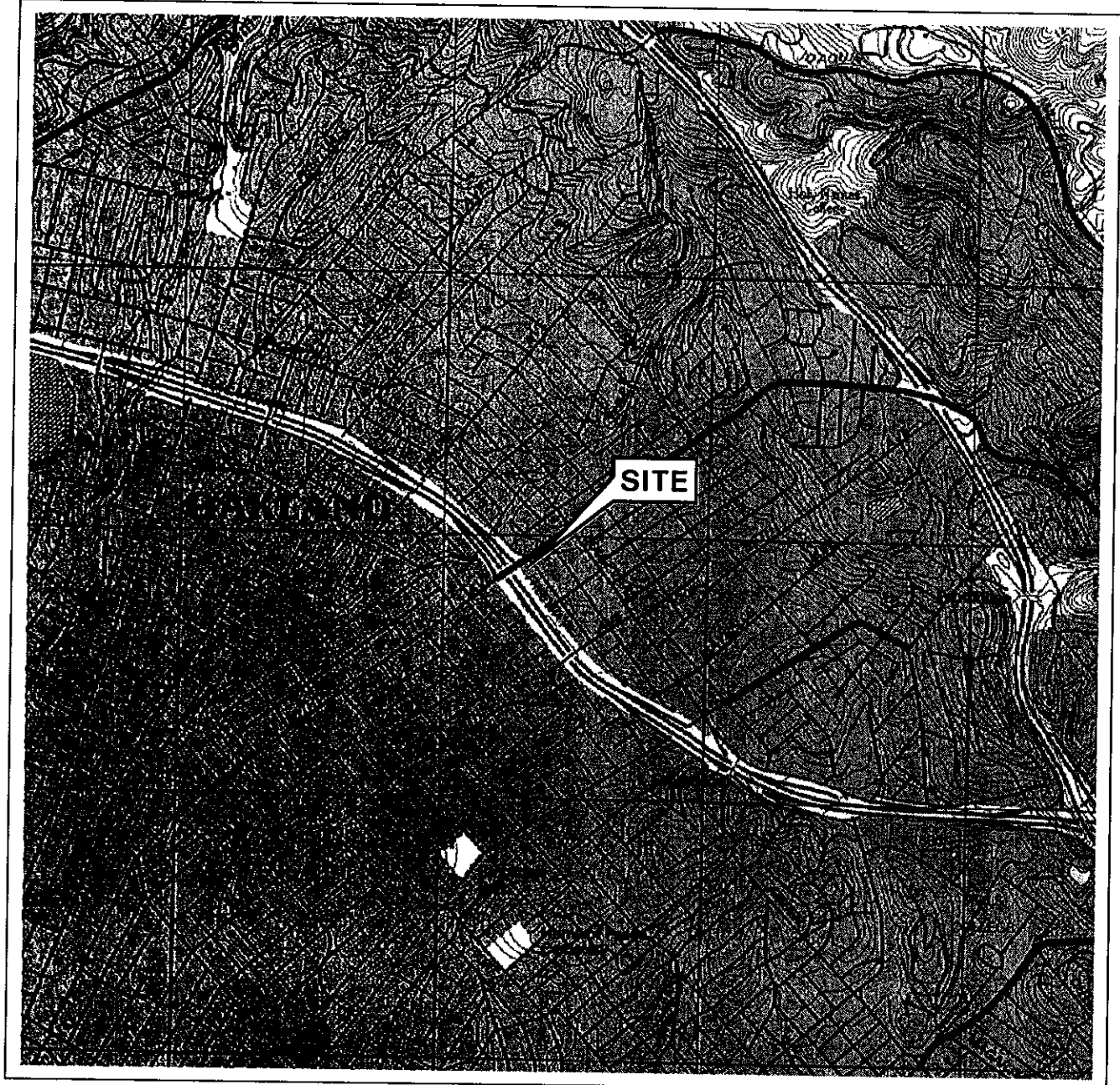
Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-2 continued</b>													
07/27/05	102.16	27.51	0.00	74.65	-2.98	--	ND<500	ND<5.0	ND<5.0	ND<5.0	ND<10	580	
<b>MW-3</b>													
01/05/90	--	--	0.00	--	--	ND	--	ND	ND	ND	ND	--	
05/11/90	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
08/09/90	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
11/14/90	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
02/12/91	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
05/09/91	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	
11/13/03	--	--	--	--	--	--	2600	ND<20	ND<20	ND<20	ND<40	3700	
08/27/04	100.00	29.61	0.00	70.39	--	--	1700	ND<10	ND<10	ND<10	ND<20	2600	
11/23/04	100.00	28.48	0.00	71.52	1.13	--	1500	ND<10	ND<10	ND<10	ND<20	1800	
02/09/05	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	
05/17/05	100.00	25.61	0.00	74.39	0.84	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<1.0	1200	
07/27/05	100.00	27.35	0.00	72.65	-1.74	--	ND<1000	ND<10	ND<10	ND<10	ND<20	1400	

**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)
<b>MW-1</b>							
11/13/03	ND<4.0	ND<4.0	ND<4.0	ND<200	ND<4.0	ND<4.0	ND<1000
08/27/04	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<1.0	ND<0.50	ND<50
11/23/04	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<1.0	ND<0.50	ND<50
02/09/05	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
05/17/05	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
07/27/05	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
<b>MW-2</b>							
11/13/03	ND<80	ND<80	ND<80	ND<4000	ND<80	ND<80	ND<20000
08/27/04	ND<5.0	ND<5.0	ND<5.0	ND<50	24	ND<5.0	ND<500
11/23/04	ND<0.50	ND<0.50	ND<0.50	ND<5.0	18	ND<0.50	ND<50
02/09/05	ND<5.0	ND<5.0	ND<5.0	ND<50	19	ND<5.0	ND<500
05/17/05	ND<0.50	ND<0.50	ND<0.50	ND<5.0	12	ND<0.50	ND<50
07/27/05	ND<5.0	ND<5.0	ND<5.0	140	16	ND<5.0	ND<500
<b>MW-3</b>							
11/13/03	ND<80	ND<80	ND<80	ND<4000	ND<80	ND<80	ND<20000
08/27/04	ND<10	ND<10	ND<10	ND<100	ND<20	ND<10	ND<1000
11/23/04	ND<10	ND<10	ND<10	ND<100	ND<20	ND<10	ND<1000
02/09/05	ND<10	ND<10	ND<10	130	ND<10	ND<10	ND<1000
05/17/05	ND<10	ND<10	ND<10	ND<100	ND<10	ND<10	ND<1000
07/27/05	ND<10	ND<10	ND<10	360	ND<10	ND<10	ND<1000



# FIGURES



N

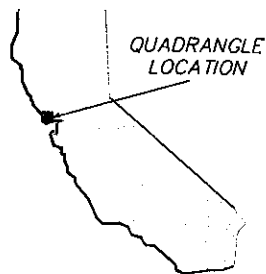
0 1/4 1/2 3/4 1 MILE



SCALE 1:24,000

**SOURCE:**

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



QUADRANGLE  
LOCATION

**VICINITY MAP**

76 Station 6129  
3420 35th Avenue  
Oakland, California

**TRC**

**FIGURE 1**

FIGURE 2



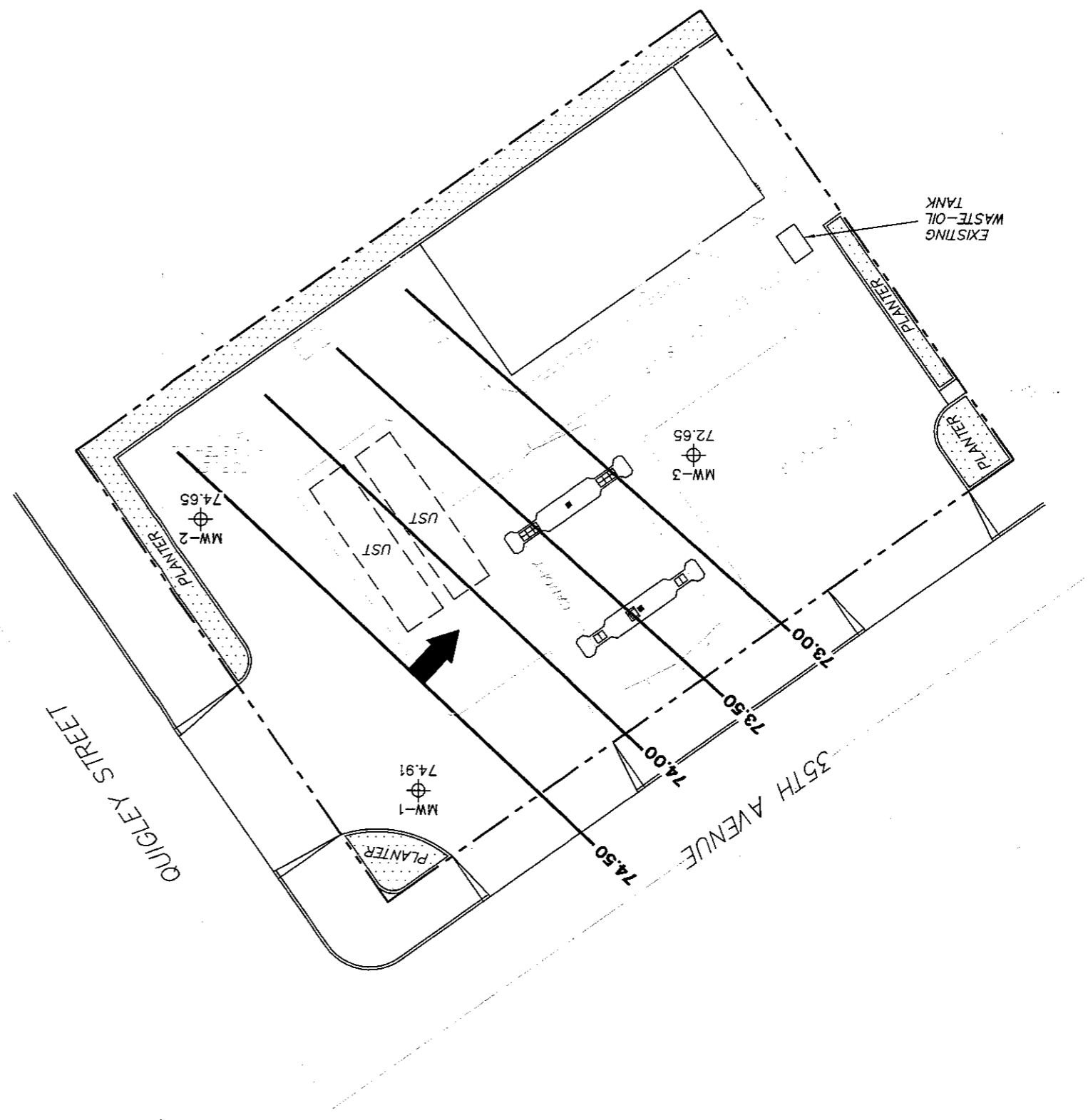
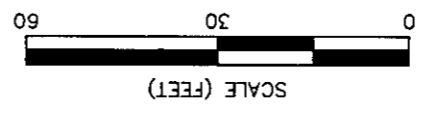
76 Station 6129  
3420 35th Avenue  
Oakland, California

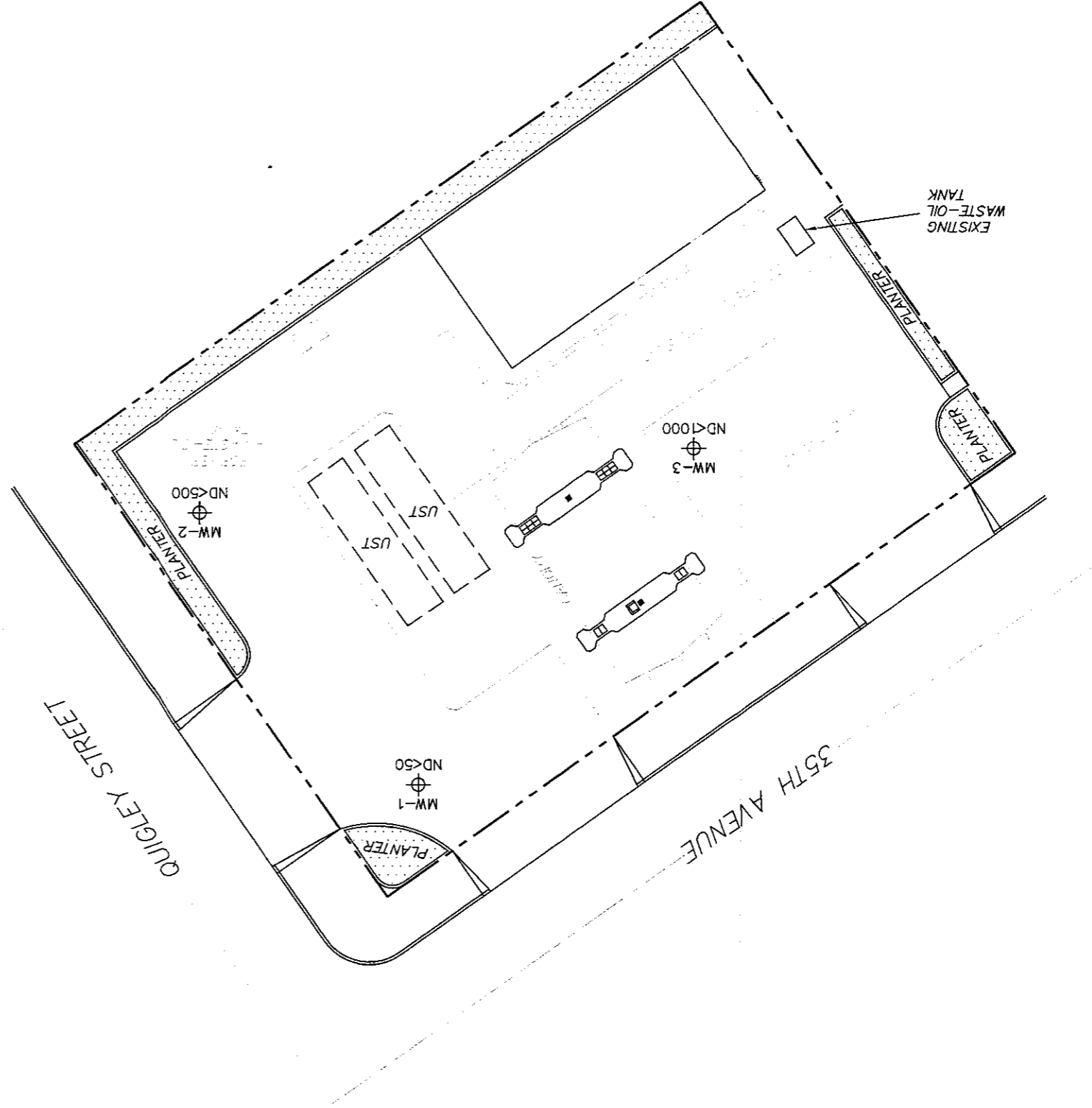
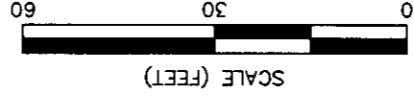
**GROUNDWATER ELEVATION  
CONTOUR MAP**  
July 27, 2005

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.

**LEGEND**

- MW-3  $\oplus$  Monitoring Well with Groundwater Elevation (feet)
- 74.50 — Groundwater Elevation Contour
- ← General Direction of Groundwater Flow





**LEGEND**

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

**NOTES:**

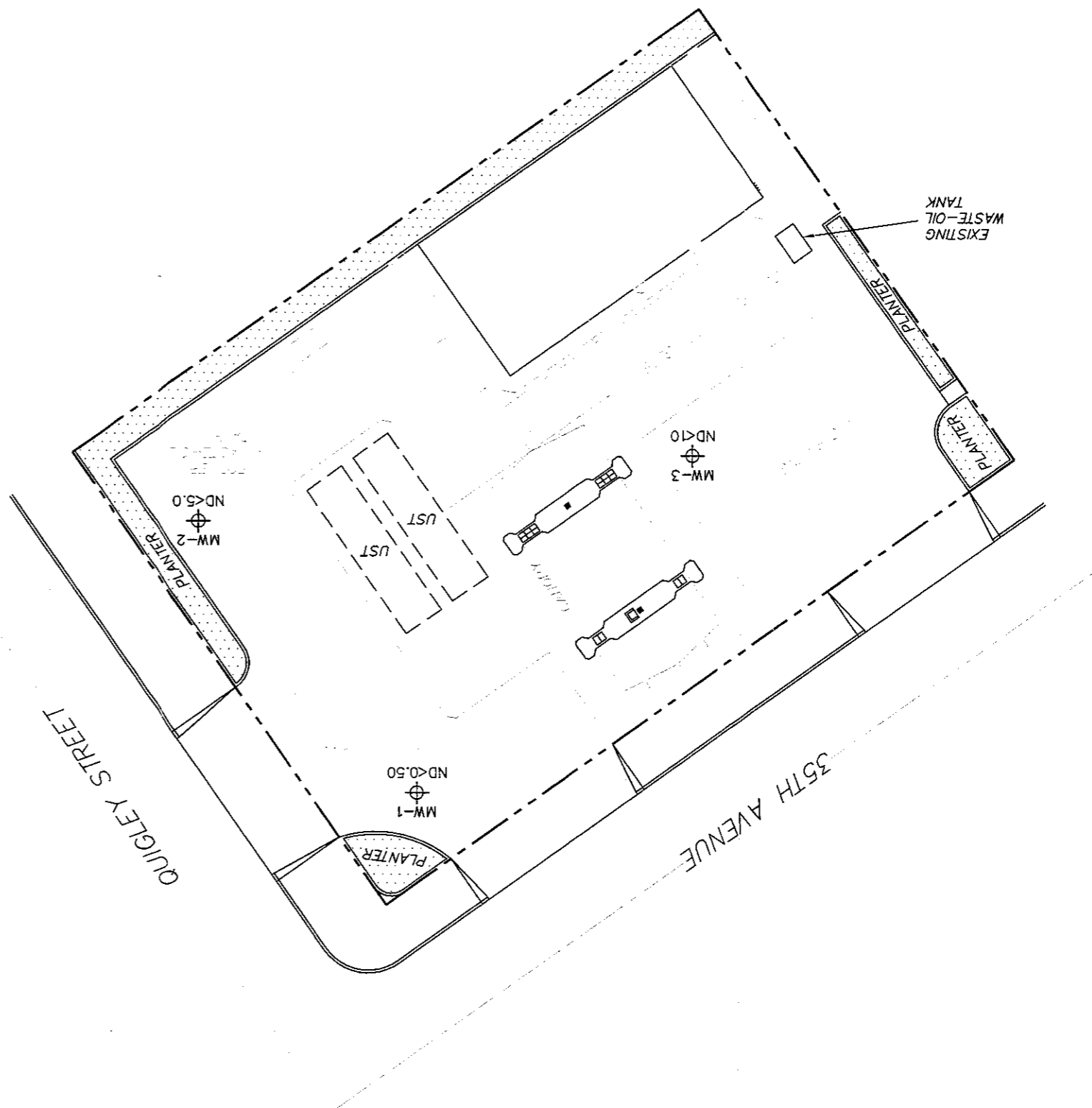
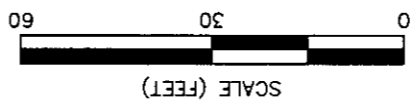
TPPH = total purgeable petroleum hydrocarbons.  
 µg/l = micrograms per liter. ND = not detected  
 at limit indicated on official laboratory report.  
 UST = underground storage tank. Results obtained  
 using EPA Method 8260B.

**DISSOLVED-PHASE TPPH  
 CONCENTRATION MAP  
 July 27, 2005**

76 Station 6129  
 3420 35th Avenue  
 Oakland, California



**FIGURE 3**



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

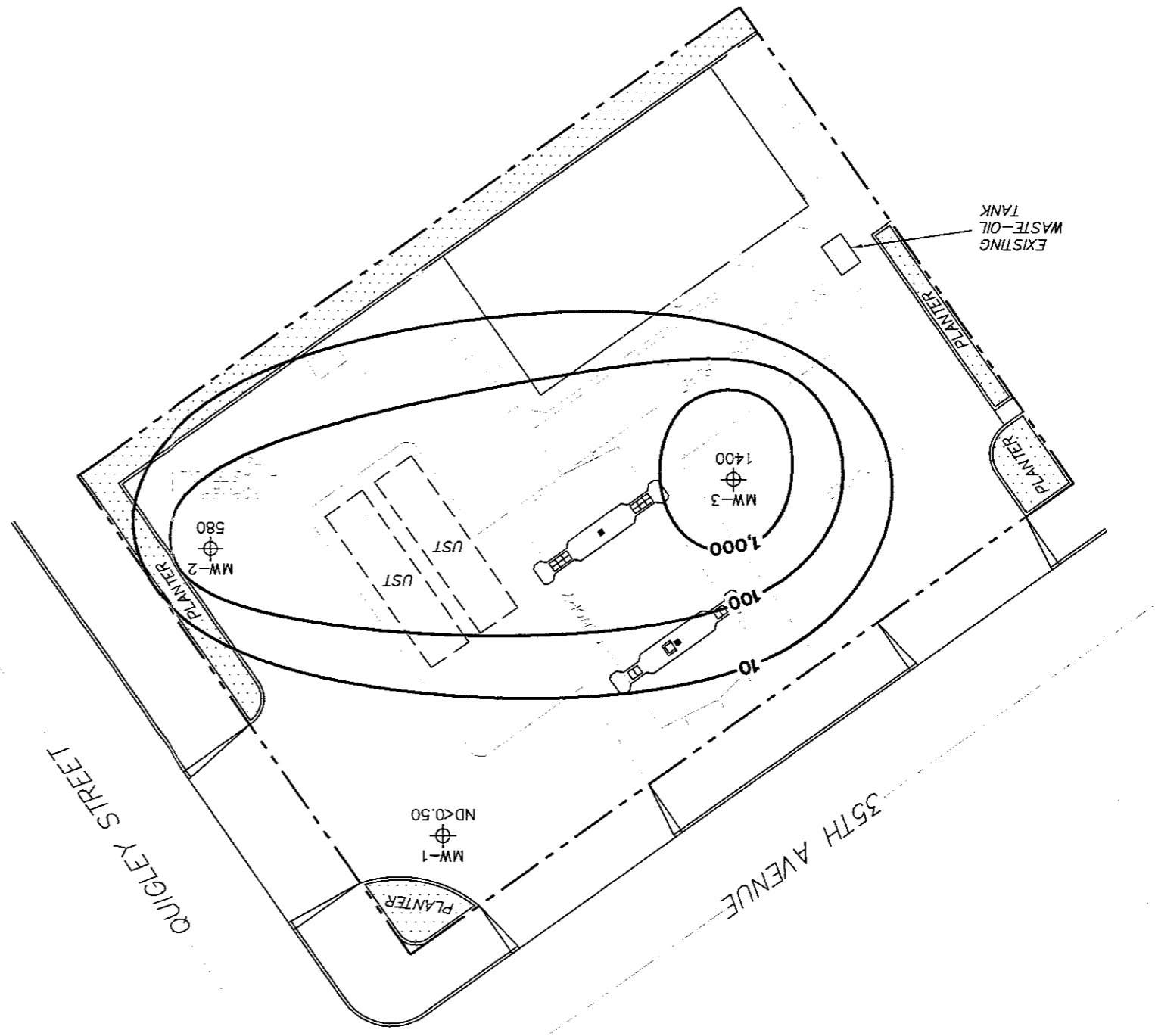
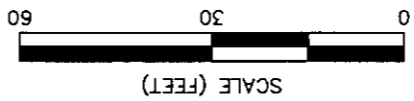
NOTES:  
µg/l = micrograms per liter. ND = not detected  
at limit indicated on official laboratory report.  
UST = underground storage tank.

**DISSOLVED-PHASE BENZENE  
CONCENTRATION MAP  
July 27, 2005**

76 Station 6129  
3420 35th Avenue  
Oakland, California



**FIGURE 4**



EXISTING  
WASTE-OIL  
TANK

35TH AVENUE

QUIGLEY STREET



LEGEND	
	MW-3 Monitoring Well with
	Dissolved-Phase MTBE
	Concentration (µg/l)
	Dissolved-Phase MTBE
	Contour (µg/l)
	1,000

NOTES:

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

DISSOLVED-PHASE MTBE  
CONCENTRATION MAP  
July 27, 2005

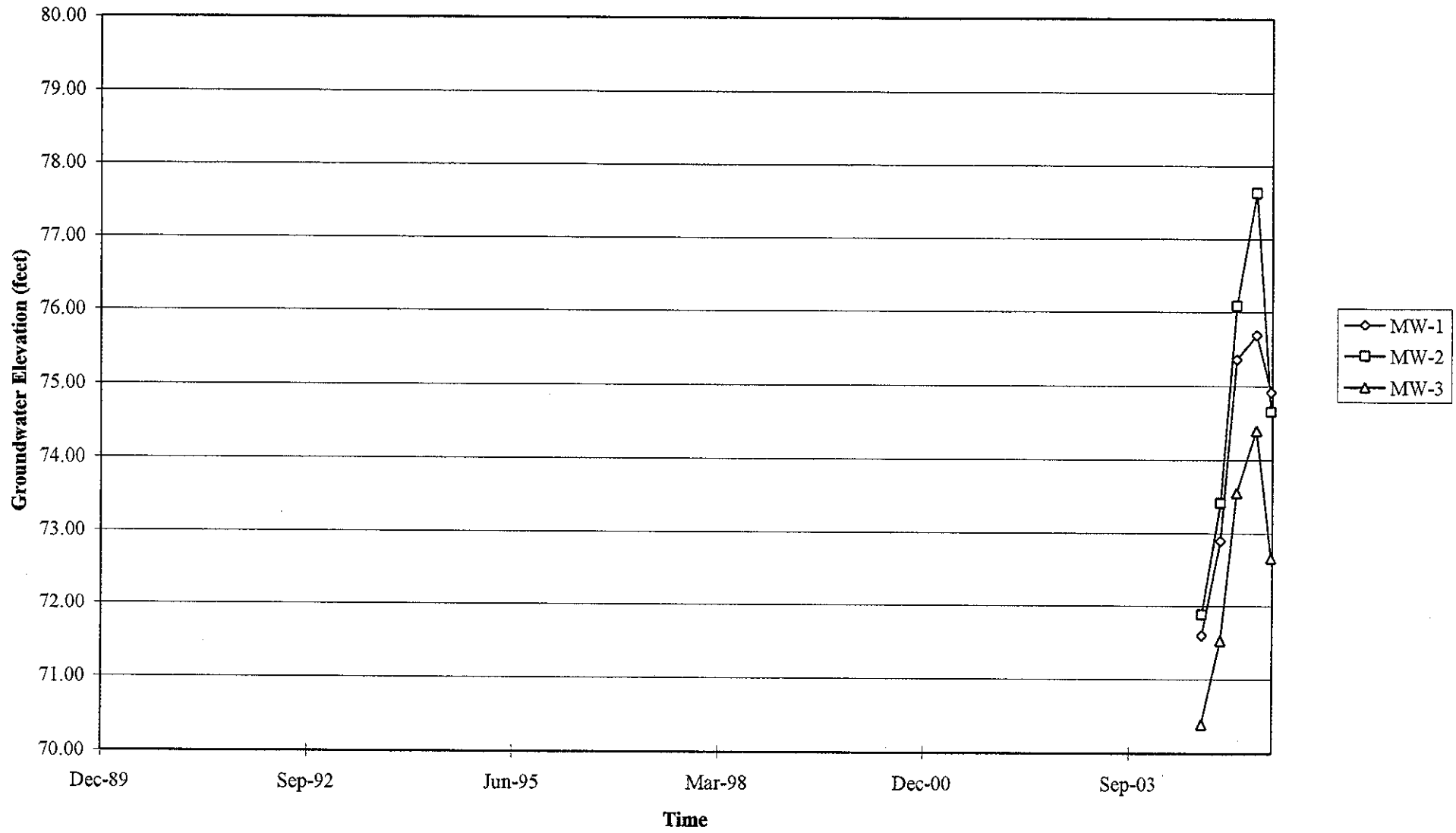
76 Station 6129  
3420 35th Avenue  
Oakland, California



FIGURE 5

# GRAPHS

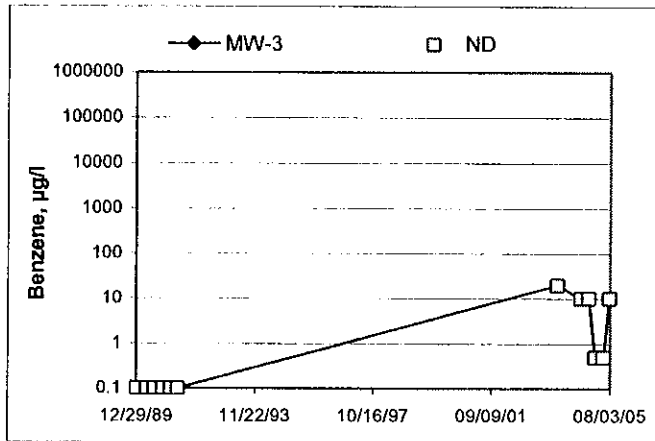
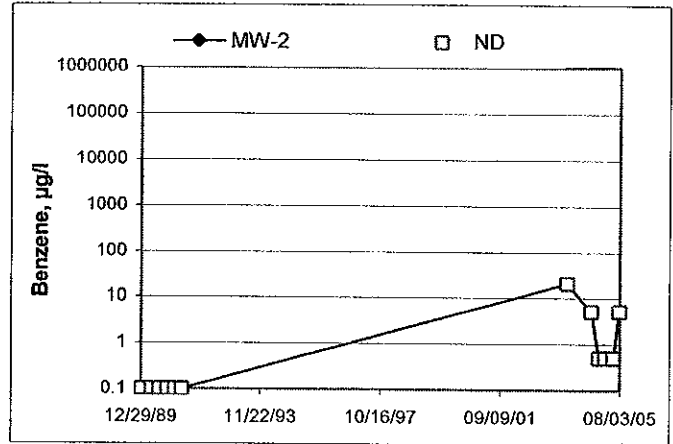
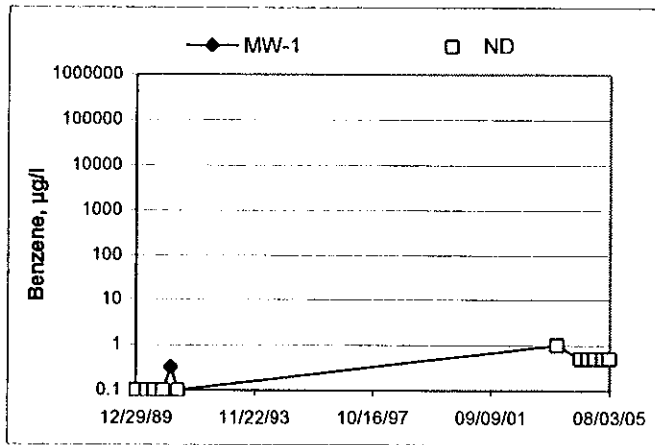
Groundwater Elevations vs. Time  
76 Station 6129



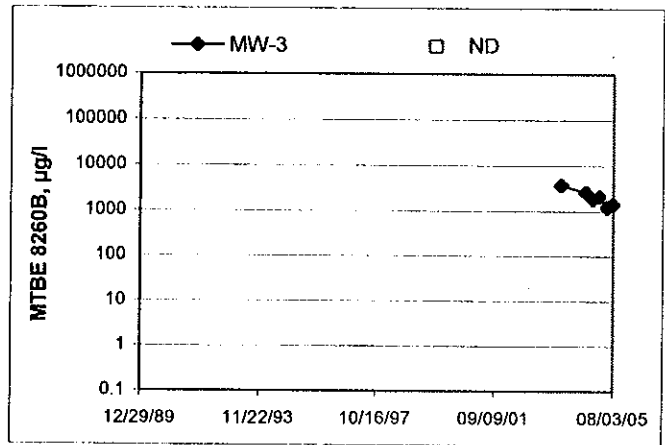
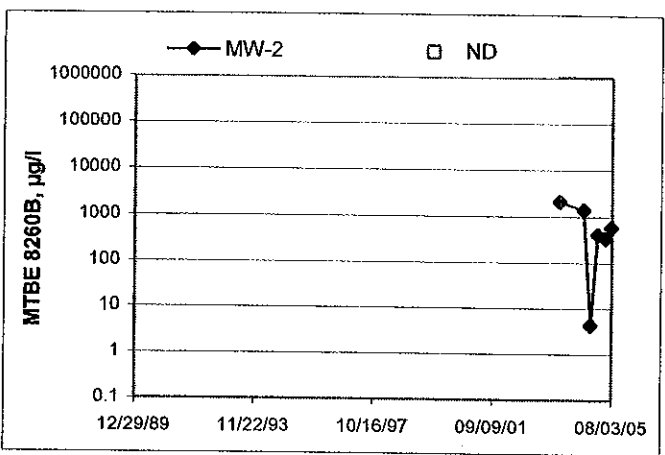
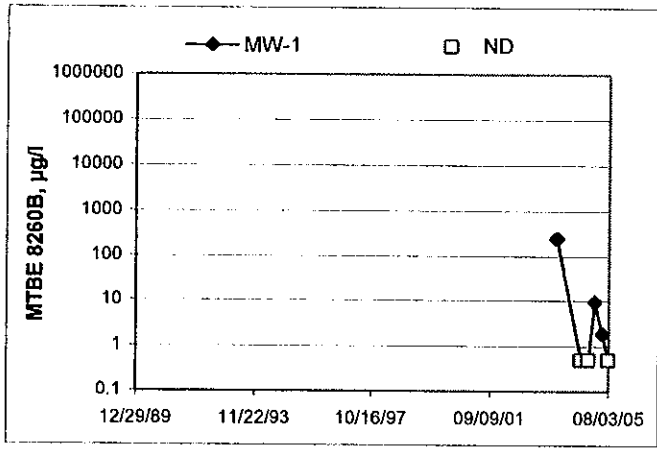


# Benzene Concentrations vs Time

## 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.

# FIELD MONITORING DATA SHEET



Technician: Daniel/Nick Job #/Task #: 410S0001/FA20

Date: 7-27-03

Site # 6129 Project Manager A. Collins

Page 1 of 1

Well #	Time Gauged	TOC	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
mw-1	0836	—	43.44	27:33	—	—	1004	2"
mw-2	0845	—	44.18	27:51	—	—	0954	2"
mw-3	0852	—	43.18	27:35	—	✓	1020	2"

FIELD DATA ~~COMPLETE~~      ~~Q/QC~~      ~~C/C~~      WELL BOX ~~CONDITION SHEETS~~

---

WTT CERTIFICATE      MANIFEST      ~~DRUM INVENTORY~~      ~~TRAFFIC CONTROL~~

Revised by GFR/2/01

GROUNDWATER SAMPLING FIELD NOTES

Technician: Daniel / Nick

Site: 6129

Project No.: 41050001

Date: 7-27-05

Well No.: MW-1

Purge Method: HB

Depth to Water (feet): 27.33

Depth to Product (feet): ∅

Total Depth (feet): 43.44

LPH & Water Recovered (gallons): ∅

Water Column (feet): 16.11

Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 30.55

1 Well Volume (gallons): 3

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F. @)	pH	Turbidity	D.O.
0902			3	606	20.1	6.95		
			6	598	20.6	6.89		
	0949		9	594	20.4	7.02		
Static at Time Sampled			Total Gallons Purged		Time Sampled			
28.46			9		1004			
Comments:								

Well No.: MW-2

Purge Method: HB

Depth to Water (feet): 27.51

Depth to Product (feet): ∅

Total Depth (feet): 44.18

LPH & Water Recovered (gallons): ∅

Water Column (feet): 16.67

Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 30.84

1 Well Volume (gallons): 3

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F. @)	pH	Turbidity	D.O.
0930			3	503	19.8	7.10		
			6	591	19.9	6.89		
	0946		9	575	19.9	6.83		
Static at Time Sampled			Total Gallons Purged		Time Sampled			
27.99			9		0954			
Comments:								

**GROUNDWATER SAMPLING FIELD NOTES**

Technician: Daniel/Nick

Site: 6129

Project No.: 41050001

Date: 7-27-05

Well No.: MW-3

Purge Method: HB

Depth to Water (feet): 27.35

Depth to Product (feet): 0

Total Depth (feet): 43.18

LPH & Water Recovered (gallons): 0

Water Column (feet): 15.83

Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 30.51

1 Well Volume (gallons): 3

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temperature (F/C)	pH	Turbidity	D.O.
0954			3	499	20.6	7.12		
			6	505	21.2	6.97		
	1015		9	514	20.3	7.17		
Static at Time Sampled			Total Gallons Purged			Time Sampled		
30.00			9			1020		
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:								

**TRC Alton Geoscience- Irvine**

August 15, 2005

21 Technology Drive  
Irvine, CA 92718

Attn.: Anju Farfan

Project#: 41050001FA20

Project: Conoco Phillips # 6129

Site: 3420 35th Ave., Oakland

Attached is our report for your samples received on 07/27/2005 16:45

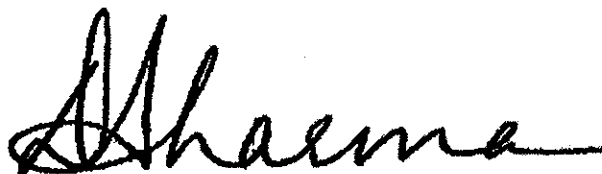
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 09/10/2005 unless you have requested otherwise.

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

You can also contact me via email. My email address is: [dsharma@stl-inc.com](mailto:dsharma@stl-inc.com)

Sincerely,



Dimple Sharma  
Project Manager

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* [www.stl-inc.com](http://www.stl-inc.com) \* CA DHS ELAP# 2496



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

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-1	07/27/2005 10:04	Water	1
MW-2	07/27/2005 09:54	Water	2
MW-3	07/27/2005 10:20	Water	3

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

08/11/2005 17:39

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

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-1	Lab ID: 2005-07-0742 - 1
Sampled: 07/27/2005 10:04	Extracted: 8/10/2005 14:56 8/10/2005 15:12
Matrix: Water	QC Batch#: 2005/08/10-1A.65 2005/08/10-1B.64
pH: <2	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	1.00	08/10/2005 14:56	
Benzene	ND	0.50	ug/L	1.00	08/10/2005 14:56	
Toluene	ND	0.50	ug/L	1.00	08/10/2005 14:56	
Ethylbenzene	ND	0.50	ug/L	1.00	08/10/2005 14:56	
Total xylenes	ND	1.0	ug/L	1.00	08/10/2005 14:56	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	08/10/2005 14:56	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	08/10/2005 14:56	
Di-isopropyl Ether (DIPE)	ND	0.50	ug/L	1.00	08/10/2005 15:12	
Ethyl tert-butyl ether (ETBE)	ND	0.50	ug/L	1.00	08/10/2005 14:56	
tert-Amyl methyl ether (TAME)	ND	0.50	ug/L	1.00	08/10/2005 14:56	
1,2-DCA	ND	0.50	ug/L	1.00	08/10/2005 14:56	
EDB	ND	0.50	ug/L	1.00	08/10/2005 14:56	
Ethanol	ND	50	ug/L	1.00	08/10/2005 14:56	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	102.0	73-130	%	1.00	08/10/2005 14:56	
1,2-Dichloroethane-d4	96.9	73-130	%	1.00	08/10/2005 15:12	
Toluene-d8	90.8	81-114	%	1.00	08/10/2005 15:12	
Toluene-d8	93.2	81-114	%	1.00	08/10/2005 14:56	

Severn Trent Laboratories, Inc.

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08/11/2005 17:39

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

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

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

Project: 41050001FA20  
Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-2	Lab ID: 2005-07-0742 - 2
Sampled: 07/27/2005 09:54	Extracted: 8/10/2005 15:22 8/10/2005 20:48
Matrix: Water	QC Batch#: 2005/08/10-1A.65 2005/08/10-2A.68
Analysis Flag: L2, pH: <2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	500	ug/L	10.00	08/10/2005 15:22	
Benzene	ND	5.0	ug/L	10.00	08/10/2005 15:22	
Toluene	ND	5.0	ug/L	10.00	08/10/2005 15:22	
Ethylbenzene	ND	5.0	ug/L	10.00	08/10/2005 15:22	
Total xylenes	ND	10	ug/L	10.00	08/10/2005 15:22	
tert-Butyl alcohol (TBA)	140	50	ug/L	10.00	08/10/2005 15:22	
Methyl tert-butyl ether (MTBE)	580	5.0	ug/L	10.00	08/10/2005 15:22	
Di-isopropyl Ether (DIPE)	16	5.0	ug/L	10.00	08/10/2005 20:48	
Ethyl tert-butyl ether (ETBE)	ND	5.0	ug/L	10.00	08/10/2005 15:22	
tert-Amyl methyl ether (TAME)	ND	5.0	ug/L	10.00	08/10/2005 15:22	
1,2-DCA	ND	5.0	ug/L	10.00	08/10/2005 15:22	
EDB	ND	5.0	ug/L	10.00	08/10/2005 15:22	
Ethanol	ND	500	ug/L	10.00	08/10/2005 15:22	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	109.9	73-130	%	10.00	08/10/2005 15:22	
1,2-Dichloroethane-d4	107.8	73-130	%	10.00	08/10/2005 20:48	
Toluene-d8	98.3	81-114	%	10.00	08/10/2005 20:48	
Toluene-d8	95.7	81-114	%	10.00	08/10/2005 15:22	

Severn Trent Laboratories, Inc.

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08/11/2005 17:39

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

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-3	Lab ID:	2005-07-0742 - 3
Sampled:	07/27/2005 10:20	Extracted:	8/10/2005 15:49 8/10/2005 16:02
Matrix:	Water	QC Batch#:	2005/08/10-1A.65 2005/08/10-1B.64
pH:	<2		

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	1000	ug/L	20.00	08/10/2005 15:49	
Benzene	ND	10	ug/L	20.00	08/10/2005 15:49	
Toluene	ND	10	ug/L	20.00	08/10/2005 15:49	
Ethylbenzene	ND	10	ug/L	20.00	08/10/2005 15:49	
Total xylenes	ND	20	ug/L	20.00	08/10/2005 15:49	
tert-Butyl alcohol (TBA)	360	100	ug/L	20.00	08/10/2005 15:49	
Methyl tert-butyl ether (MTBE)	1400	10	ug/L	20.00	08/10/2005 15:49	
Di-isopropyl Ether (DIPE)	ND	10	ug/L	20.00	08/10/2005 16:02	
Ethyl tert-butyl ether (ETBE)	ND	10	ug/L	20.00	08/10/2005 15:49	
tert-Amyl methyl ether (TAME)	ND	10	ug/L	20.00	08/10/2005 15:49	
1,2-DCA	ND	10	ug/L	20.00	08/10/2005 15:49	
EDB	ND	10	ug/L	20.00	08/10/2005 15:49	
Ethanol	ND	1000	ug/L	20.00	08/10/2005 15:49	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	104.9	73-130	%	20.00	08/10/2005 16:02	
1,2-Dichloroethane-d4	103.4	73-130	%	20.00	08/10/2005 15:49	
Toluene-d8	97.2	81-114	%	20.00	08/10/2005 15:49	
Toluene-d8	92.7	81-114	%	20.00	08/10/2005 16:02	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

08/11/2005 17:39

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

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

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

Project: 41050001FA20  
Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

Batch QC Report		
Prep(s): 5030B		Test(s): 8260B
Method Blank	Water	QC Batch # 2005/08/10-1A.65
MB: 2005/08/10-1A.65-043		Date Extracted: 08/10/2005 09:43

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	08/10/2005 09:43	
Benzene	ND	0.5	ug/L	08/10/2005 09:43	
Toluene	ND	0.5	ug/L	08/10/2005 09:43	
Ethylbenzene	ND	0.5	ug/L	08/10/2005 09:43	
Total xylenes	ND	1.0	ug/L	08/10/2005 09:43	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	08/10/2005 09:43	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	08/10/2005 09:43	
Di-isopropyl Ether (DIPE)	ND	0.5	ug/L	08/10/2005 09:43	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	08/10/2005 09:43	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	08/10/2005 09:43	
1,2-DCA	ND	0.5	ug/L	08/10/2005 09:43	
EDB	ND	0.5	ug/L	08/10/2005 09:43	
Ethanol	ND	50	ug/L	08/10/2005 09:43	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	100.8	73-130	%	08/10/2005 09:43	
Toluene-d8	94.8	81-114	%	08/10/2005 09:43	

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

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2005/08/10-1B.64-013

Water

Test(s): 8260B

QC Batch # 2005/08/10-1B.64

Date Extracted: 08/10/2005 09:13

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	08/10/2005 09:13	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	08/10/2005 09:13	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	08/10/2005 09:13	
Di-isopropyl Ether (DIPE)	ND	0.5	ug/L	08/10/2005 09:13	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	08/10/2005 09:13	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	08/10/2005 09:13	
1,2-DCA	ND	0.5	ug/L	08/10/2005 09:13	
EDB	ND	0.5	ug/L	08/10/2005 09:13	
Benzene	ND	0.5	ug/L	08/10/2005 09:13	
Toluene	ND	0.5	ug/L	08/10/2005 09:13	
Ethylbenzene	ND	0.5	ug/L	08/10/2005 09:13	
Total xylenes	ND	1.0	ug/L	08/10/2005 09:13	
Ethanol	ND	50	ug/L	08/10/2005 09:13	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	91.8	73-130	%	08/10/2005 09:13	
Toluene-d8	91.0	81-114	%	08/10/2005 09:13	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

08/11/2005 17:39

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

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

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

Project: 41050001FA20  
Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

Batch QC Report		
Prep(s): 5030B	Water	Test(s): 8260B
Method Blank		QC Batch # 2005/08/10-2A.68
MB: 2005/08/10-2A.68-017		Date Extracted: 08/10/2005 20:17

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	08/10/2005 20:17	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	08/10/2005 20:17	
Di-isopropyl Ether (DIPE)	ND	0.5	ug/L	08/10/2005 20:17	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	08/10/2005 20:17	
1,2-DCA	ND	0.5	ug/L	08/10/2005 20:17	
EDB	ND	0.5	ug/L	08/10/2005 20:17	
Benzene	ND	0.5	ug/L	08/10/2005 20:17	
Toluene	ND	0.5	ug/L	08/10/2005 20:17	
Ethylbenzene	ND	0.5	ug/L	08/10/2005 20:17	
Total xylenes	ND	1.0	ug/L	08/10/2005 20:17	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	98.4	73-130	%	08/10/2005 20:17	
Toluene-d8	105.0	81-114	%	08/10/2005 20:17	

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

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Project: 41050001FA20

Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2005/08/10-1A.65

LCS 2005/08/10-1A.65-011

Extracted: 08/10/2005

Analyzed: 08/10/2005 08:11

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	23.2		25	92.8			65-165	20		
Benzene	26.0		25	104.0			69-129	20		
Toluene	26.9		25	107.6			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	454		500	90.8			73-130			
Toluene-d8	488		500	97.6			81-114			

Sewern Trent Laboratories, Inc.

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08/11/2005 17:39



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

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

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Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

Batch QC Report			
Prep(s): 5030B		Test(s): 8260B	
Laboratory Control Spike		Water	
QC Batch # 2005/08/10-1B.64		QC Batch # 2005/08/10-1B.64	
LCS	2005/08/10-1B.64-049	Extracted: 08/10/2005	Analyzed: 08/10/2005 08:49
LCSD			

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	19.7		25	78.8			65-165	20		
Benzene	22.6		25	90.4			69-129	20		
Toluene	22.8		25	91.2			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	411		500	82.2			73-130			
Toluene-d8	446		500	89.2			81-114			

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08/11/2005 17:39

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

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

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

Project: 41050001FA20  
Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

Batch QC Report			
Prep(s): 5030B	Test(s): 8260B		
Laboratory Control Spike	Water	QC Batch # 2005/08/10-2A.68	
LCS 2005/08/10-2A.68-051	Extracted: 08/10/2005	Analyzed: 08/10/2005 19:51	
LCSD			

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	30.3		25	121.2			65-165	20		
Benzene	27.0		25	108.0			69-129	20		
Toluene	25.3		25	101.2			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	420		500	84.0			73-130			
Toluene-d8	509		500	101.8			81-114			

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08/11/2005 17:39

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

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

Batch QC Report			
Prep(s):	5030B	Test(s): 8260B	
<b>Matrix Spike ( MS / MSD )</b>		<b>Water</b>	<b>QC Batch # 2005/08/10-1A.65</b>
MS/MSD		Lab ID:	2005-08-0101 - 006
MS: 2005/08/10-1A.65-001		Extracted: 08/10/2005	Analyzed: 08/10/2005 11:01
			Dilution: 1.00
MSD: 2005/08/10-1A.65-027		Extracted: 08/10/2005	Analyzed: 08/10/2005 11:27
			Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Methyl tert-butyl ether	19.9	23.7	ND	25	79.6	94.8	17.4	65-165	20		
Benzene	21.4	23.4	ND	25	85.6	93.6	8.9	69-129	20		
Toluene	23.6	24.3	ND	25	94.4	97.2	2.9	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	473	503		500	94.6	100.6		73-130			
Toluene-d8	490	487		500	98.0	97.4		81-114			

Severn Trent Laboratories, Inc.

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08/11/2005 17:39

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience- Irvine  
Attn.: Anju Farfan

21 Technology Drive  
Irvine, CA 92718  
Phone: (949) 341-7440 Fax: (949) 753-0111  
Project: 41050001FA20  
Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

Batch QC Report			
Prep(s): 5030B			Test(s): 8260B
<b>Matrix Spike ( MS / MSD )</b>	<b>Water</b>	<b>QC Batch # 2005/08/10-1B.64</b>	
MS/MSD		Lab ID:	2005-08-0101 - 003
MS: 2005/08/10-1B.64-055	Extracted: 08/10/2005	Analyzed:	08/10/2005 11:55
		Dilution:	1.00
MSD: 2005/08/10-1B.64-019	Extracted: 08/10/2005	Analyzed:	08/10/2005 12:19
		Dilution:	1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Methyl tert-butyl ether	25.9	21.3	ND	25	103.6	85.2	19.5	65-165	20		
Benzene	30.0	23.7	ND	25	120.0	94.8	23.5	69-129	20		R4
Toluene	26.8	24.0	ND	25	107.2	96.0	11.0	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	505	505		500	101.0	101.1		73-130			
Toluene-d8	439	464		500	87.7	92.8		81-114			

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

TRC Alton Geoscience- Irvine  
Attn.: Anju Farfan

21 Technology Drive  
Irvine, CA 92718  
Phone: (949) 341-7440 Fax: (949) 753-0111  
Project: 41050001FA20  
Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

Batch QC Report			
Prep(s): 5030B			Test(s): 8260B
<b>Matrix Spike ( MS / MSD )</b>	<b>Water</b>	<b>QC Batch # 2005/08/10-2A.68</b>	
MW-2 >> MS		Lab ID:	2005-07-0742 - 002
MS: 2005/08/10-2A.68-013	Extracted: 08/10/2005	Analyzed:	08/10/2005 21:13
		Dilution:	10.00
MSD: 2005/08/10-2A.68-039	Extracted: 08/10/2005	Analyzed:	08/10/2005 21:39
		Dilution:	10.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	712	732	531	250	72.4	80.4	10.5	65-165	20		
Benzene	270	256	ND	250	108.0	102.4	5.3	69-129	20		
Toluene	246	231	ND	250	98.4	92.4	6.3	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	416	422		500	83.2	84.3		73-130			
Toluene-d8	520	479		500	104.0	95.7		81-114			

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

TRC Alton Geoscience- Irvine  
Attn.: Anju Farfan

21 Technology Drive  
Irvine, CA 92718  
Phone: (949) 341-7440 Fax: (949) 753-0111  
Project: 41050001FA20  
Conoco Phillips # 6129

Received: 07/27/2005 16:45

Site: 3420 35th Ave., Oakland

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**Legend and Notes**

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**Analysis Flag**

L2

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

**Result Flag**

R4

RPD exceeded method control limit; % recoveries within limits.

STL-San Francisco

# ConocoPhillips Chain Of Custody Record

116369

1220 Quarry Lane  
Pleasanton, CA 94566

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

ConocoPhillips Site Manager:

INVOICE REMITTANCE ADDRESS:

CONOCOPHILLIPS  
Attn: Dee Hutchinson  
511 South Harbor, Suite 200  
Santa Ana, CA 92704

2005-07-0742

ConocoPhillips Work Order Number

4583-TRC501

ConocoPhillips Cost Object

DATE: 7-27-05

PAGE: 1 of 1

SAMPLING COMPANY: TRC		Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: 6129	GLOBAL ID NO.: T0600101465
ADDRESS: 21 Technology Drive, Irvine CA 92618		SITE ADDRESS (Street and City): 3120 35 <sup>TH</sup> Ave. Oakland		CONOCOPHILLIPS SITE MANAGER: Thomas Kugel
PROJECT CONTACT (Name/Title of PCF Report to): Anju Farfan		EDF DELIVERABLE TO (IRP or Designer): Peter Thomson, TRC pthomson@trcsolutions.com		PHONE NO.: 949-341-7408
TELEPHONE: 949-341-7440	FAX: 949-753-0111	EMAIL: afarfan@trcsolutions.com	LAB USE ONLY:	
SAMPLER NAME(S) (Print): Daniel / Nick		CONSULTANT PROJECT NUMBER: 41050001/FA20		

### REQUESTED ANALYSES

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 EDF IS NEEDED

8015m - TPHd Extractable	8260B - TPHg/BTEX/MBE	8260B - TPHg/BTEX/MBE	8260B - TPHg/BTEX/MBE + methanol (8015M)	8260B - Full Scan VOCs (does not include oxygenates)	8270C - Semi-Volatiles	8015M/8021B - TPHg/BTEX/MBE	Lead <input type="checkbox"/> Total <input type="checkbox"/> TLCL <input type="checkbox"/>	TPH	BTEX	Box 5 by 8260B
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FIELD NOTES:  
Container/Preservative or PID Readings or Laboratory Notes

TEMPERATURE ON RECEIPT OF

LAD USE ONLY	Sample Identification/Field Point Name*	SAMPLING		MATRIX	NO. OF CONT.	8015m - TPHd Extractable	8260B - TPHg/BTEX/MBE	8260B - TPHg/BTEX/MBE	8260B - TPHg/BTEX/MBE + methanol (8015M)	8260B - Full Scan VOCs (does not include oxygenates)	8270C - Semi-Volatiles	8015M/8021B - TPHg/BTEX/MBE	Lead <input type="checkbox"/> Total <input type="checkbox"/> TLCL <input type="checkbox"/>	TPH	BTEX	Box 5 by 8260B	TEMPERATURE ON RECEIPT OF	
		DATE	TIME															
	MW-1	7-27	1004	GW	3													3 VOCs w/HCL
	MW-2		0954															
	MW-3		1020															

Received by (Signature): Daniel Christopher	Received by (Signature): Refrigerator	Date: 7-27-05	Time: 1110
Received by (Signature): Daniel Christopher	Received by (Signature): [Signature]	Date: 7/27/05	Time: 1141
Received by (Signature): [Signature]	Received by (Signature): [Signature]	Date: 7/27/05	Time: 1645

## **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.