

RO 2444



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Sacramento, CA 95818  
phone 916.558.7676  
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January 28, 2005

Alameda County  
FEB 09 2005  
Environmental Health

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

Re: **Document Transmittal**  
Fuel Leak Case  
76 Station #7124  
10151 International Blvd.  
Oakland, CA

Dear Mr. Hwang:

Please find attached Secor's *Quarterly Summary Report, dated 1/28/05*, and TRC's *Quarterly Monitoring Report, dated 1/10/05* 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 is 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: Gavan Heinrich, Secor



SECOR  
INTERNATIONAL  
INCORPORATED

www.secor.com

3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670  
916-861-0400 TEL  
916-861-0430 FAX

January 28, 2005

Mr. Donald Hwang  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway Suite 250  
Alameda, CA 94502

RE: **Quarterly Summary Report-Fourth Quarter 2004**  
SECOR Project No.: 77CP.60008.01.7124

Dear Mr. Hwang:

On behalf of ConocoPhillips, SECOR International Incorporated (SECOR) is forwarding the quarterly summary report for the following location:

**Service Station**

76 Service Station No. 7124

**Location**

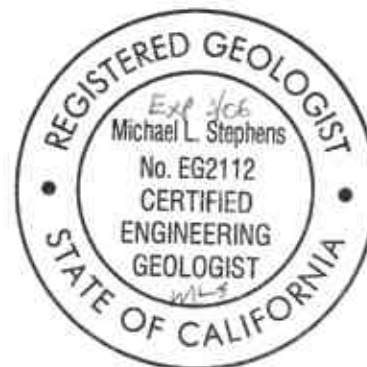
10151 International Blvd  
Oakland, California

Sincerely,  
**SECOR International Incorporated**

Michael L. Stephens, CEG, C.HG, REA II  
Senior Geologist

Attachment 1 - Quarterly Monitoring Report October Through December 2004, (TRC 2004)

cc: Mr. Thomas Kosel, ConocoPhillips



**QUARTERLY SUMMARY REPORT  
Fourth Quarter 2004**

76 Service Station No. 7124  
10151 East 14th Street  
Oakland, California

City/County ID #: Oakland

County: Alameda

**PREVIOUS ASSESSMENT**

The Site is currently an active 76 Service Station located on the northwestern corner of the intersection of 14th Street and 102nd Avenue in Oakland, California. Site facilities include three underground storage tanks (USTs), and associated piping and fuel dispensers.

On March 22, 2000, SECOR supervised the removal and replacement of product lines and dispensers by Balch Petroleum (Balch) of Milpitas, California. Soil samples collected from beneath the dispensers and product lines revealed the presence of total petroleum hydrocarbons as gasoline (TPHg) at a maximum concentration of 6,200 milligrams per kilogram (mg/kg), MtBE at a maximum concentration of 120 mg/kg, and benzene at a maximum concentration of 7.4 mg/kg. Excavation and sampling activities were observed and approved by Inspector Gomez of the City of Oakland Fire Services Agency (COFSA).

On March 27, 2000, SECOR observed the over-excavation of approximately 60 cubic yards of soil from the beneath those portions of the dispensers and product lines where soil samples with elevated concentrations of petroleum hydrocarbons were located. Areas measuring approximately 8-10 feet long by 8-10 feet wide were over-excavated to an approximate depth of 8 feet below ground surface (bgs) in each of these areas. Additional over-excavation in these areas was not possible due to their proximity to the footings of the service station canopy. TPHg was detected in 2 of the 3 samples at a maximum concentration of 108 mg/kg; benzene was detected in 1 of the 3 samples at a maximum concentration of 0.162 mg/kg; and MtBE was detected in all 3 samples at a maximum concentration of 43.8 mg/kg. Lead was not detected at or above laboratory reporting limits in any samples.

During February, 2002, SECOR supervised the installation of four on-Site groundwater monitor wells. Prior to well installation, all borings were advanced to 26.5 feet bgs, and subsurface soil samples were collected every five feet. Soil samples were analyzed for gasoline range organics (GRO), BTEX, and fuel oxygenates via Method 8260B. The maximum reported concentrations were 42 mg/kg GRO, 0.36 mg/kg ethylbenzene, 0.26 mg/kg xylenes, and 1.2 mg/kg MtBE.

## **SENSITIVE RECEPTORS**

During third quarter, 2004 SECOR completed a ½-mile radius agency receptor survey and obtained an EDR radius map for the site from Environmental Data Resources, Incorporated. The agency survey identified 2 industrial supply well, 3 cathodic protection wells, and 2 wells of unknown type within the search radius. The survey also identified 12 wells of unknown type that could not be located precisely because the records on file with DWR did not include this information. These wells may or may not be located within the search radius. The EDR radius map did not identify any water supply wells within the search radius but did identify two water supply wells within one mile of the site.

## **MONITORING AND SAMPLING**

The Site has been monitored and sampled since 3<sup>rd</sup> quarter, 2002. Currently, 4 wells are monitored quarterly (MW-1 through MW-4). Samples are analyzed for TPHg, BTEX, and fuel oxygenates.

The fourth quarter monitoring report (Attachment 1) indicates that MW-2 is covered with asphalt and could not be accessed. The well will be restored or repaired, as necessary during first quarter 2005.

## **REMEDIAL STATUS**

No active remediation

## **CHARACTERIZATION STATUS**

Contamination in soil is adequately delineated. The highest concentrations of residual TPHg and MtBE contamination are localized in the area of the northern dispenser island. The extent of dissolved contamination is undefined in the downgradient (northwest) direction. MW-2 and MW-3, and MW-4 all contained elevated concentrations of TPHg and MtBE.

## **RECENT SUBMITTALS/CORRESPONDENCE**

Submitted – October 14, 2004 Work Plan for Additional Off-Site Monitoring Well Installation.

## **THIS QUARTER ACTIVITIES (Fourth Quarter 2004)**

1. TRC performed groundwater monitoring and sampling event.
2. Prepared and submitted Work Plan for additional Off-Site Monitoring Well Installation dated October 14, 2004.

## **NEXT QUARTER ACTIVITIES (First Quarter 2005)**

1. TRC to perform groundwater monitoring and sampling event.

# SECOR

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2. Implement October 14, 2004 Work Plan pending agency approval.
3. Waiting on property access agreements for off-site monitoring wells
4. Inspect and restore or repair MW-2.

**CONSULTANT:** SECOR International Incorporated

**ATTACHMENT**  
**QUARTERLY MONITORING REPORT**  
**OCTOBER THROUGH DECEMBER 2004 (TRC)**  
76 Service Station No. 7124  
10151 East 14th Street  
San Francisco, California  
SECOR Project No.: 77CP.60008.01.7124  
January 28, 2005



Customer-Focused Solutions

January 10, 2005

ConocoPhillips Company  
76 Broadway  
Sacramento, CA 95818

ATTN: MR. THOMAS KOSEL

SITE: 76 STATION 7124  
10151 INTERNATIONAL BLVD.  
OAKLAND, CALIFORNIA

RE: QUARTERLY MONITORING REPORT  
OCTOBER THROUGH DECEMBER 2004

Dear Mr. Kosel:

Please find enclosed our Quarterly Monitoring Report for 76 Station 7124, located at 10151 International Blvd., 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: Gavan Heinrich, SECOR International Inc. (2 copies)

Enclosures  
200400/7124R05.QMS.doc

JAN 11 2005





Customer-Focused Solutions

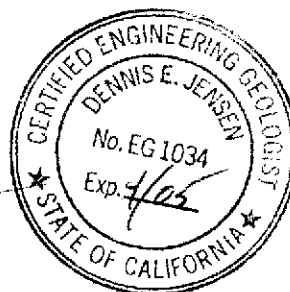
**QUARTERLY MONITORING REPORT  
OCTOBER THROUGH DECEMBER 2004**

76 STATION 7124  
10151 International Blvd.  
Oakland, California

Prepared For:

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

By:



Senior Project Geologist, Irvine Operations  
December 20, 2004



**LIST OF ATTACHMENTS**

<b>Summary Sheet</b>	Summary of Gauging and Sampling Activities
<b>Tables</b>	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
<b>Figures</b>	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
<b>Graphs</b>	Groundwater Elevations vs. Time MTBE 8260B Concentrations vs. Time
<b>Field Activities</b>	General Field Procedures Groundwater Sampling Field Notes
<b>Laboratory Reports</b>	Official Laboratory Reports Quality Control Reports Chain of Custody Records
<b>Statements</b>	Purge Water Disposal Limitations

**Summary of Gauging and Sampling Activities**  
**October 2004 through December 2004**  
**76 Station 7124**  
**10151 International Blvd.**  
**Oakland, CA**

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

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

Date(s) of Gauging/Sampling Event: **10/29/04**

**Sample Points**

Groundwater wells: **4** 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: **16.14 feet**      Maximum: **18.13 feet**  
Average groundwater elevation (relative to available local datum): **20.63 feet**  
Average change in groundwater elevation since previous event: **0.28 feet**  
Interpreted groundwater gradient and flow direction:  
    Current event: **0.009 ft/ft, west**  
    Previous event: **0.003 ft/ft to 0.008 ft/ft, west (07/22/04)**

**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: **4,600 µg/l (MW-3)**  
Wells with **MTBE**      **2**      Maximum: **640 µg/l (MW-3)**

**Notes:**

MW-2=Well is paved over.,

# 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 resurvey.
9. Historical data has been validated for this report. Values presented in the following tables supercede those from previous reports.

### REFERENCE

TRC began groundwater monitoring and sampling for 76 Station 7124 in October 2003. Historical data compiled prior to that time were provided by Gettler-Ryan Inc.

**Table 1**  
**CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**October 29, 2004**  
**76 Station 7124**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-1</b>														
10/29/04	37.37	16.14	0.00	21.23	0.29	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>MW-2</b>														
10/29/04	37.87	--	0.00	--	--	--	--	--	--	--	--	--	--	Well is paved over.
<b>MW-3</b>														
10/29/04	37.72	17.29	0.00	20.43	0.33	--	4600	ND<5.0	ND<5.0	13	ND<10	--	640	
<b>MW-4</b>														
10/29/04	38.36	18.13	0.00	20.23	0.21	--	2700	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	76	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**April 2002 Through October 2004**  
**76 Station 7124**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-1</b>														
04/08/02	37.37	14.27	0.00	23.10	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<2.0	
07/28/02	37.37	15.88	0.00	21.49	-1.61	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
11/03/02	37.37	16.75	0.00	20.62	-0.87	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
01/24/03	37.37	13.94	0.00	23.43	2.81	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
04/02/03	37.37	14.99	0.00	22.38	-1.05	--	460	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
07/01/03	37.37	15.48	0.00	21.89	-0.49	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
10/02/03	37.37	16.68	0.00	20.69	-1.20	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
01/09/04	37.37	13.79	0.00	23.58	2.89	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1	--	ND<2	
04/26/04	37.37	15.21	0.00	22.16	-1.42	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
07/22/04	37.37	16.43	0.00	20.94	-1.22	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
10/29/04	37.37	16.14	0.00	21.23	0.29	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>MW-2</b>														
04/08/02	37.87	15.86	0.00	22.01	--	4,400	--	ND<2.5	ND<2.5	6.4	ND<2.5	380	490	
07/28/02	37.87	17.28	0.00	20.59	-1.42	--	3,200	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	170	
11/03/02	37.87	18.03	0.00	19.84	-0.75	--	3,800	ND<5.0	ND<5.0	ND<5.0	ND<10	--	72	
01/24/03	37.87	15.59	0.00	22.28	2.44	--	410	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	490	
04/02/03	37.87	16.50	0.00	21.37	-0.91	--	1,000	ND<5.0	ND<5.0	ND<5.0	ND<10	--	180	
07/01/03	37.87	16.94	0.00	20.93	-0.44	--	1,900	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	120	
10/02/03	37.87	17.93	0.00	19.94	-0.99	--	6900	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	32	
01/09/04	37.87	15.42	0.00	22.45	2.51	--	1000	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	300	
04/26/04	37.87	--	--	--	--	--	--	--	--	--	--	--	--	Covered with asphalt
07/22/04	37.87	--	--	--	--	--	--	--	--	--	--	--	--	Covered with asphalt
10/29/04	37.87	--	0.00	--	--	--	--	--	--	--	--	--	--	Well is paved over.

MW-3

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**April 2002 Through October 2004**  
**76 Station 7124**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-3 continued</b>														
04/08/02	37.72	15.86	0.00	21.86	--	8,700	--	65	ND<25	400	ND<25	6,500	8,300	
07/28/02	37.72	17.22	0.00	20.50	-1.36	--	4,500	ND<25	ND<25	ND<25	ND<50	--	1,100	
11/03/02	37.72	17.90	0.00	19.82	-0.68	--	25,000	ND<5.0	ND<5.0	25	ND<10	--	470	
01/24/03	37.72	15.57	0.00	22.15	2.33	--	6,000	ND<25	ND<25	94	ND<50	--	10,000	
04/02/03	37.72	16.45	0.00	21.27	-0.88	--	130,000	ND<100	ND<100	ND<100	ND<200	--	4,400	
07/01/03	37.72	16.88	0.00	20.84	-0.43	--	9,400	ND<10	ND<10	ND<10	ND<20	--	2,200	
10/02/03	37.72	17.85	0.00	19.87	-0.97	--	73000	ND<50	ND<50	ND<50	ND<100	--	460	
01/09/04	37.72	15.31	0.00	22.41	2.54	--	8700	ND<25	ND<25	98	ND<50	--	3800	
04/26/04	37.72	16.62	0.00	21.10	-1.31	--	6700	ND<25	ND<25	ND<25	ND<50	--	3900	
07/22/04	37.72	17.62	0.00	20.10	-1.00	--	13000	ND<25	ND<25	ND<25	ND<50	--	980	
10/29/04	37.72	17.29	0.00	20.43	0.33	--	4600	ND<5.0	ND<5.0	13	ND<10	--	640	
<b>MW-4</b>														
04/08/02	38.36	16.59	0.00	21.77	--	13,000	--	ND<5.0	ND<5.0	28	ND<5.0	790	980	
07/28/02	38.36	17.93	0.00	20.43	-1.34	--	18,000	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	170	
11/03/02	38.36	18.66	0.00	19.70	-0.73	--	220	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.7	
01/24/03	38.36	16.27	0.00	22.09	2.39	--	ND<1,000	ND<10	ND<10	ND<10	ND<20	--	1,000	
04/02/03	38.36	17.19	0.00	21.17	-0.92	--	130,000	ND<100	ND<100	ND<100	ND<200	--	ND<400	
07/01/03	38.36	17.61	0.00	20.75	-0.42	--	15,000	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	170	
10/02/03	38.36	18.58	0.00	19.78	-0.97	--	7100	ND<10	ND<10	ND<10	ND<20	--	70	
01/09/04	38.36	16.15	0.00	22.21	2.43	--	18000	ND<10	ND<10	ND<10	ND<20	--	530	
04/26/04	38.36	17.20	0.00	21.16	-1.05	--	6500	ND<10	ND<10	ND<10	ND<20	--	240	
07/22/04	38.36	18.34	0.00	20.02	-1.14	--	18000	ND<10	ND<10	ND<10	ND<20	--	48	
10/29/04	38.36	18.13	0.00	20.23	0.21	--	2700	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	76	

**Table 3**  
**ADDITIONAL ANALYTICAL RESULTS**  
**76 Station 7124**

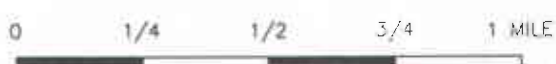
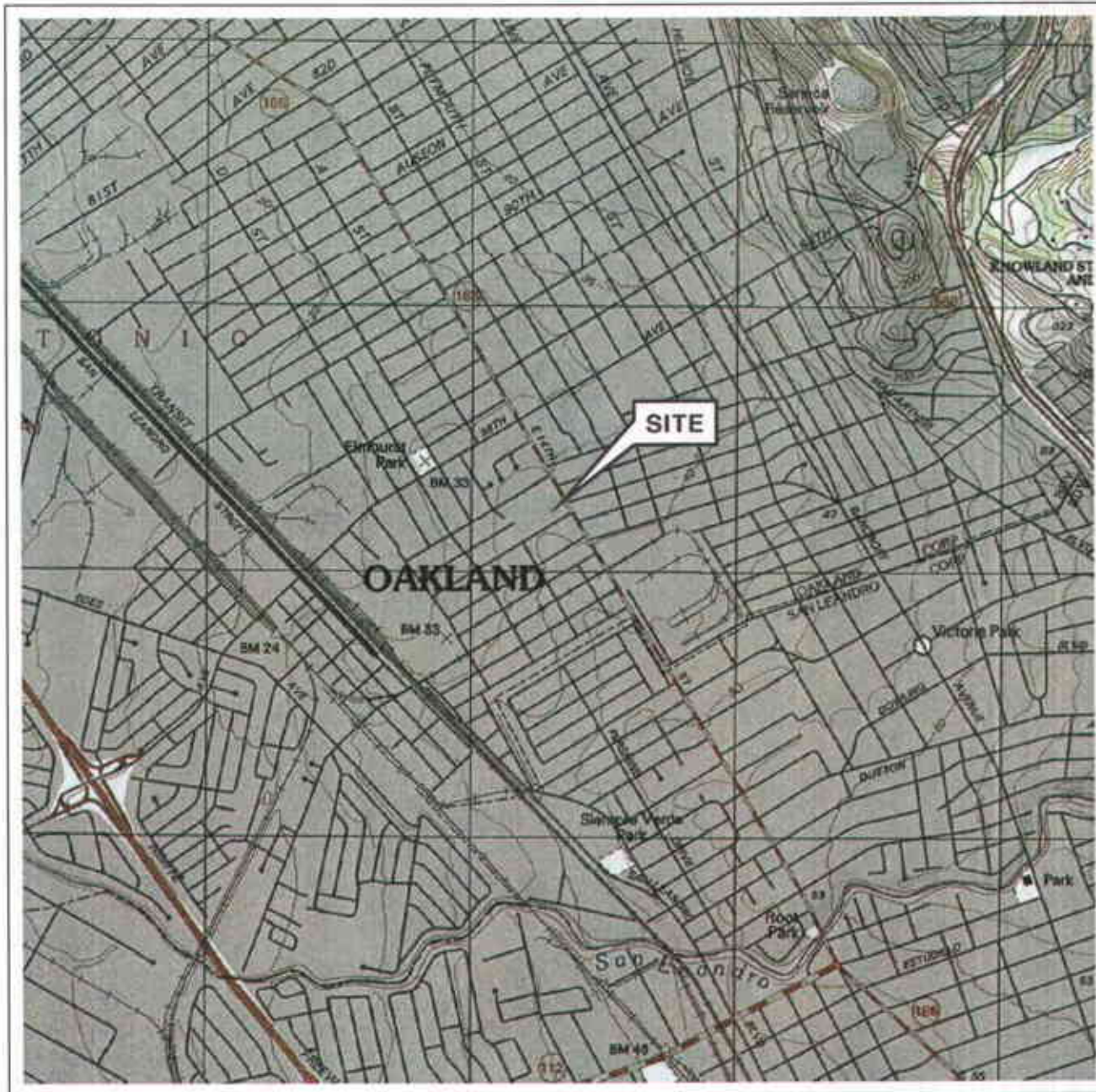
Date Sampled	EDC (µg/l)	EDB (µg/l)	TAME 8260B (µg/l)	TBA 8260B (µg/l)	DIPE 8260B (µg/l)	ETBE 8260B (µg/l)	Ethanol 8015B (mg/l)	Ethanol 8260B (µg/l)	1,2 DCE (µg/l)
<b>MW-1</b>									
07/28/02	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500	--	--
11/03/02	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500	--	--
01/24/03	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500	--	--
04/02/03	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500	--	--
07/01/03	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500	--	--
10/02/03	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	--	ND<500	--
01/09/04	ND<2.0	ND<2	ND<2	ND<100	ND<2	ND<2	--	ND<500	ND<2
04/26/04	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<1.0	ND<0.50	--	ND<50	--
07/22/04	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<1.0	ND<0.50	--	ND<50	ND<0.50
10/29/04	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<1.0	ND<0.50	--	ND<50	--
<b>MW-2</b>									
04/08/02	ND<40	ND<40	ND<40	ND<2,000	ND<40	ND<40	ND<10,000	--	--
07/28/02	ND<10	ND<10	ND<10	ND<500	ND<10	ND<10	ND<2,500	--	--
11/03/02	ND<20	ND<20	ND<20	ND<1,000	ND<20	ND<20	ND<5,000	--	--
01/24/03	ND<10	ND<10	ND<10	ND<500	ND<10	ND<10	ND<2,500	--	--
04/02/03	ND<20	ND<20	ND<20	ND<1,000	ND<20	ND<20	ND<5,000	--	--
07/01/03	ND<10	ND<10	ND<10	ND<500	ND<10	ND<10	ND<2,500	--	--
10/02/03	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	--	ND<500	--
01/09/04	ND<10	ND<10	ND<10	ND<500	ND<10	ND<10	--	ND<2500	ND<10
<b>MW-3</b>									
10/02/03	ND<200	ND<200	ND<200	ND<10000	ND<200	ND<200	--	ND<50000	--
01/09/04	ND<100	ND<100	ND<100	ND<5000	ND<100	ND<100	--	ND<25000	ND<100
04/26/04	ND<25	ND<25	ND<25	ND<250	ND<50	ND<25	--	ND<2500	--
07/22/04	ND<25	ND<25	ND<25	ND<250	ND<50	ND<25	--	ND<2500	ND<25
10/29/04	ND<5.0	ND<5.0	ND<5.0	ND<50	ND<10	ND<5.0	--	ND<500	--



**Table 3**  
**ADDITIONAL ANALYTICAL RESULTS**  
**76 Station 7124**

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 8015B (mg/l)	Ethanol 8260B (µg/l)	1,2 DCE (µg/l)
<b>MW-4</b>									
04/08/02	ND<100	ND<100	ND<100	ND<5,000	ND<100	ND<100	ND<25,000	--	--
07/28/02	ND<10	ND<10	ND<10	ND<500	ND<10	ND<10	ND<2,500	--	--
11/03/02	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500	--	--
01/24/03	ND<40	ND<40	ND<40	ND<2,000	ND<40	ND<40	ND<10,000	--	--
04/02/03	ND<400	ND<400	ND<400	ND<20,000	ND<400	ND<400	ND<100,000	--	--
07/01/03	ND<10	ND<10	ND<10	ND<500	ND<10	ND<10	ND<2,500	--	--
10/02/03	ND<40	ND<40	ND<40	ND<2000	ND<40	ND<40	--	ND<10000	--
01/09/04	ND<40	ND<40	ND<40	ND<2000	ND<40	ND<40	--	ND<10000	ND<40
04/26/04	ND<10	ND<10	ND<10	430	ND<20	ND<10	--	ND<1000	--
07/22/04	ND<10	ND<10	ND<10	ND<100	ND<20	ND<10	--	ND<1000	ND<10
10/29/04	ND<2.5	ND<2.5	ND<2.5	63	ND<5.0	ND<2.5	--	ND<250	--

# FIGURES



SCALE 1:24,000



QUADRANGLE LOCATION

**VICINITY MAP**

76 Station 7124  
 10151 International Boulevard  
 Oakland, California

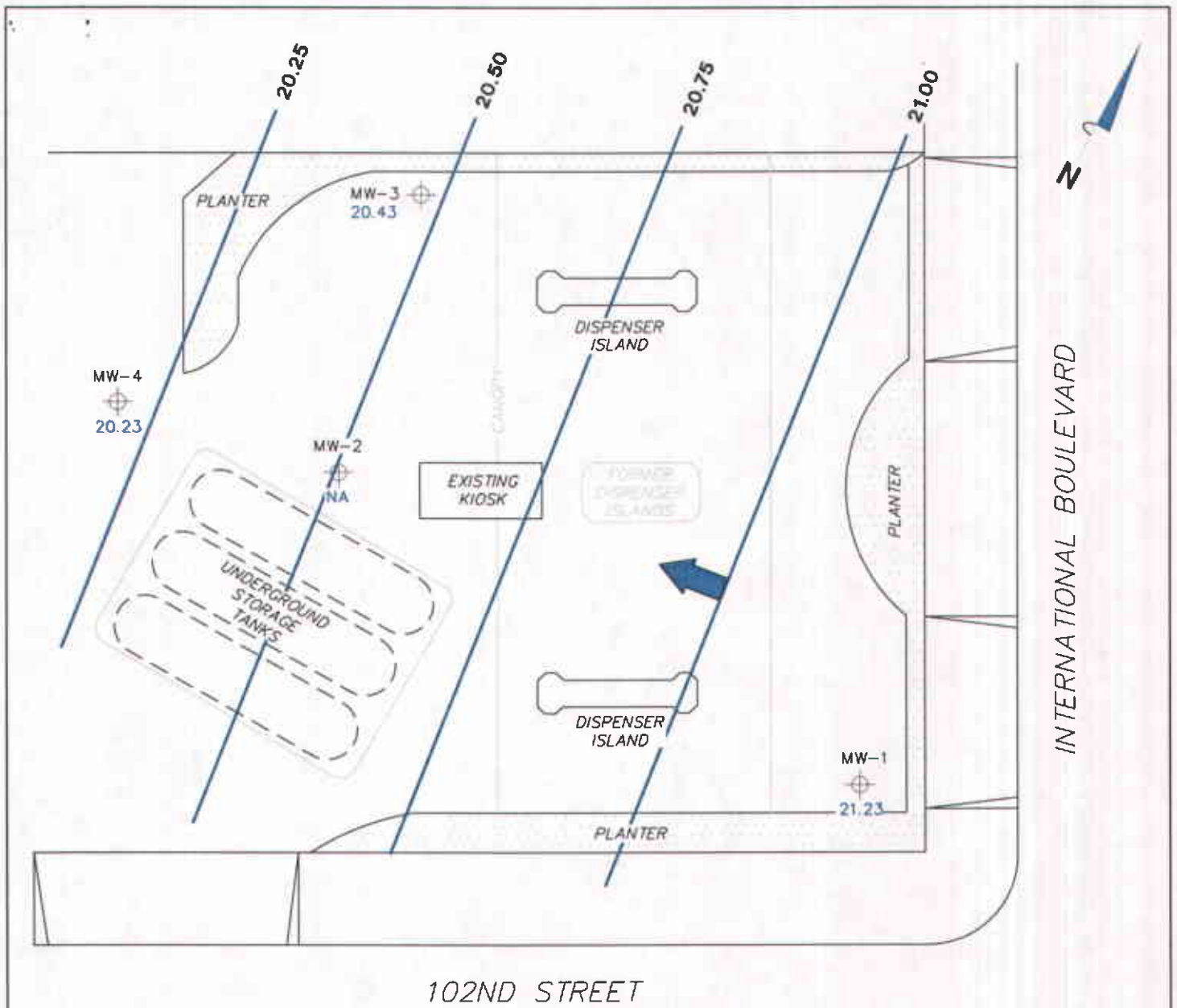
**SOURCE:**

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

**FIGURE 1**



PS = 1:1






102ND STREET

**NOTES:**

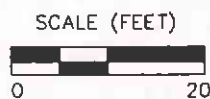
Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. NA = not analyzed, measured, or collected.

**LEGEND**

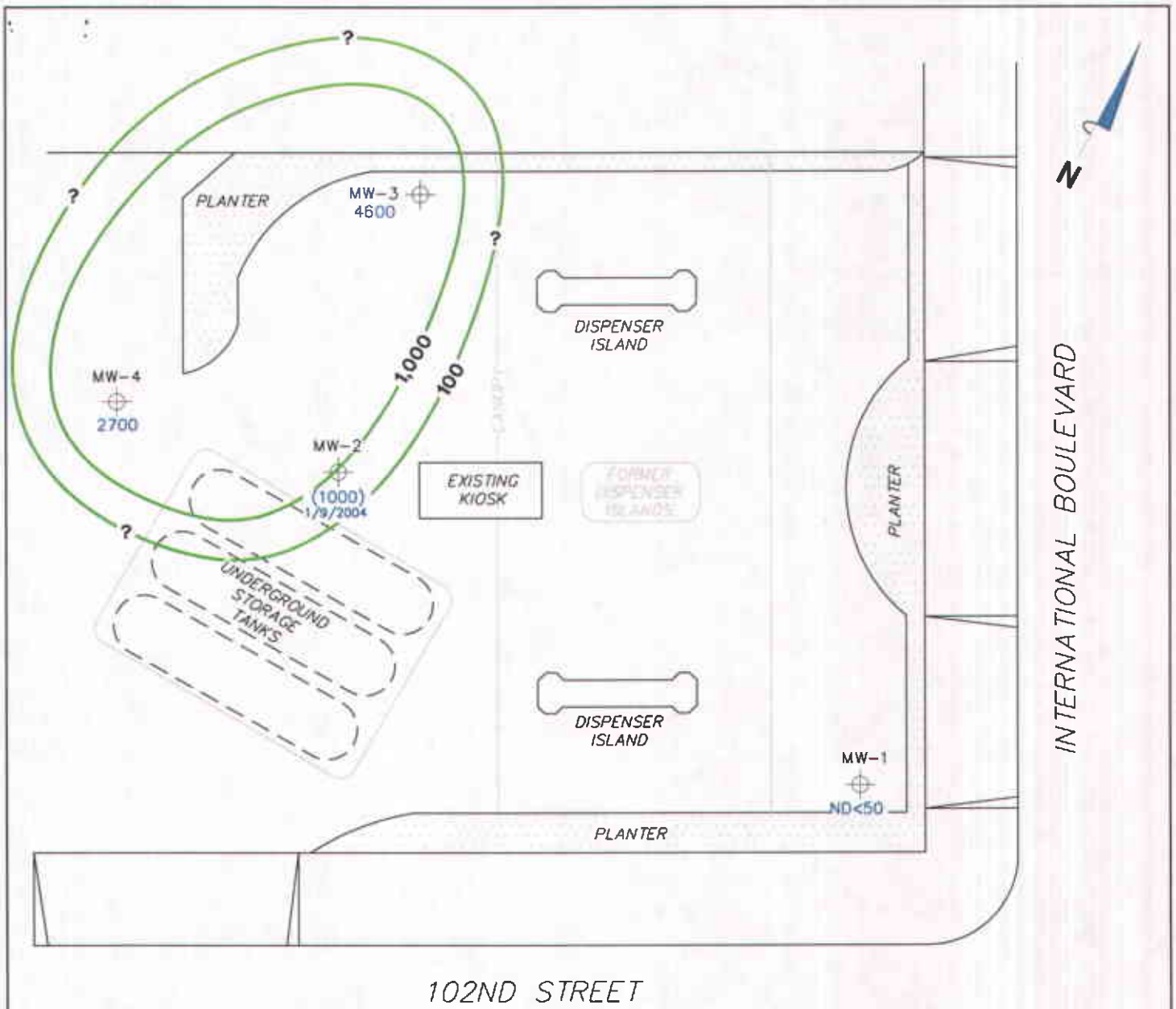
- MW-4  Monitoring Well with Groundwater Elevation (feet)
- 21.00  Groundwater Elevation Contour
-  General Direction of Groundwater Flow

**GROUNDWATER ELEVATION  
CONTOUR MAP  
October 29, 2004**

76 Station 7124  
10151 International Boulevard  
Oakland, California



**FIGURE 2**



**NOTES:**

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

**LEGEND**

MW-4 ⊕ Monitoring Well with Dissolved-Phase TPPH Concentration (µg/l)

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

**DISSOLVED-PHASE TPPH  
 CONCENTRATION MAP  
 October 29, 2004**

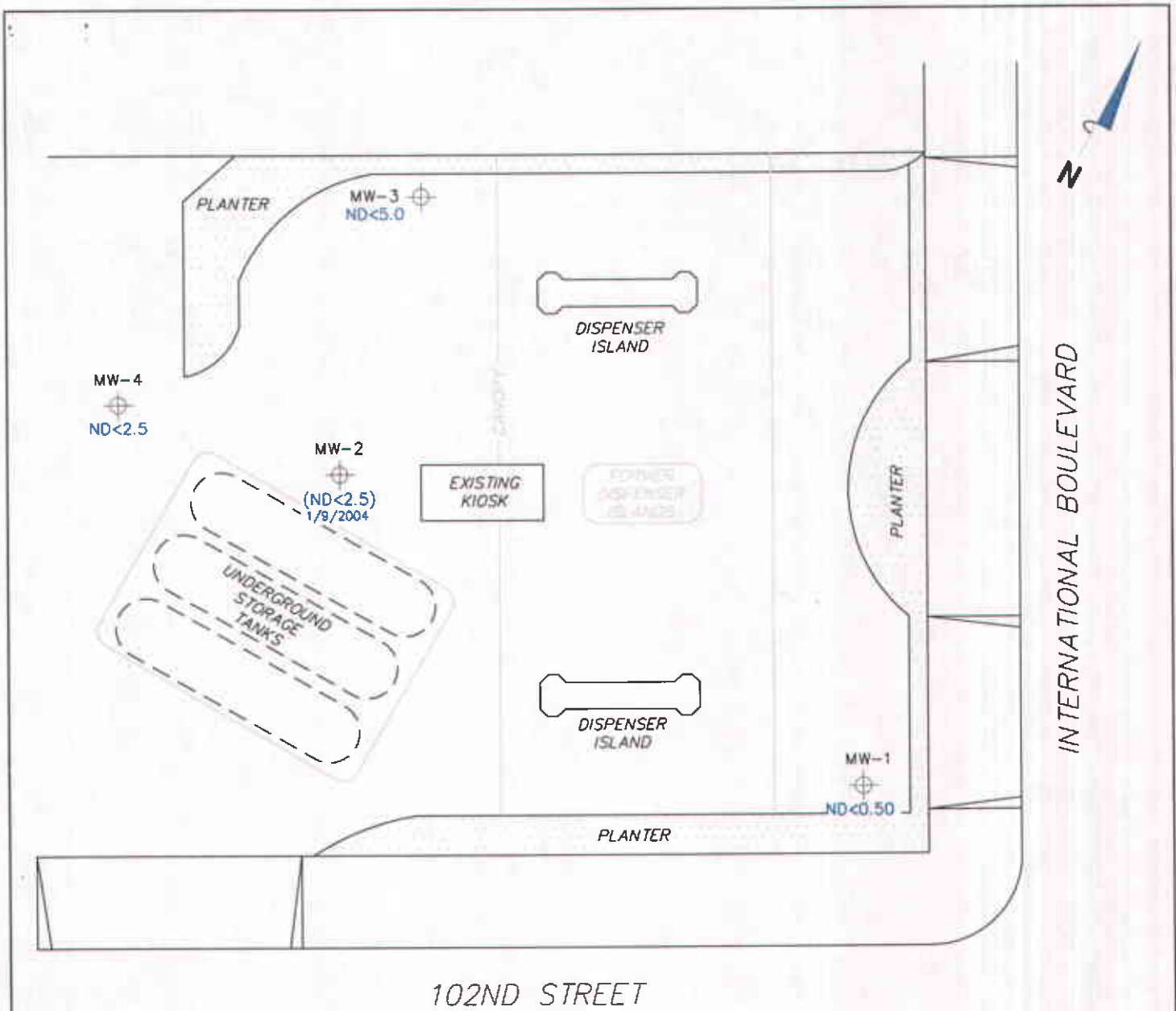
76 Station 7124  
 10151 International Boulevard  
 Oakland, California

**FIGURE 3**



SCALE (FEET)





102ND STREET

INTERNATIONAL BOULEVARD

**NOTES:**

$\mu\text{g/l}$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report.  
 ( ) = representative of historical value.

**LEGEND**

MW-4  $\oplus$  Monitoring Well with Dissolved-Phase Benzene Concentration ( $\mu\text{g/l}$ )

**DISSOLVED-PHASE BENZENE CONCENTRATION MAP**  
**October 29, 2004**

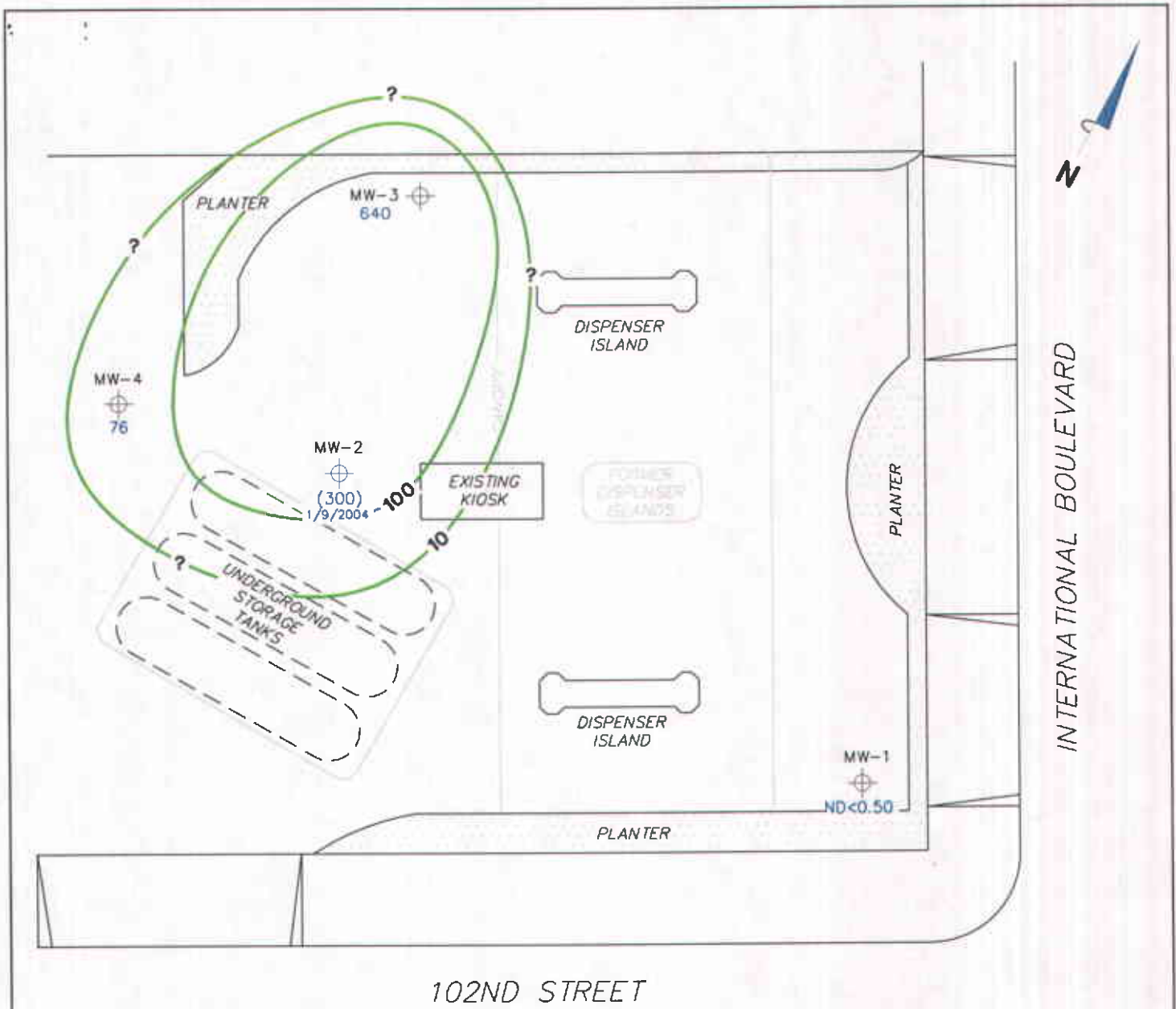
76 Station 7124  
 10151 International Boulevard  
 Oakland, California

**TRC**

SCALE (FEET)



**FIGURE 4**



**NOTES:**

Contour lines are interpretive and based on laboratory analysis results of groundwater samples. MTBE = methyl tertiary butyl ether.  $\mu\text{g/l}$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report. ( ) = representative of historical value. Results obtained using EPA Method 8260B.

**LEGEND**

MW-4 Monitoring Well with Dissolved-Phase MTBE Concentration ( $\mu\text{g/l}$ )

Dissolved-Phase MTBE Contour ( $\mu\text{g/l}$ )

**DISSOLVED-PHASE MTBE CONCENTRATION MAP**  
**October 29, 2004**

76 Station 7124  
 10151 International Boulevard  
 Oakland, California



SCALE (FEET)

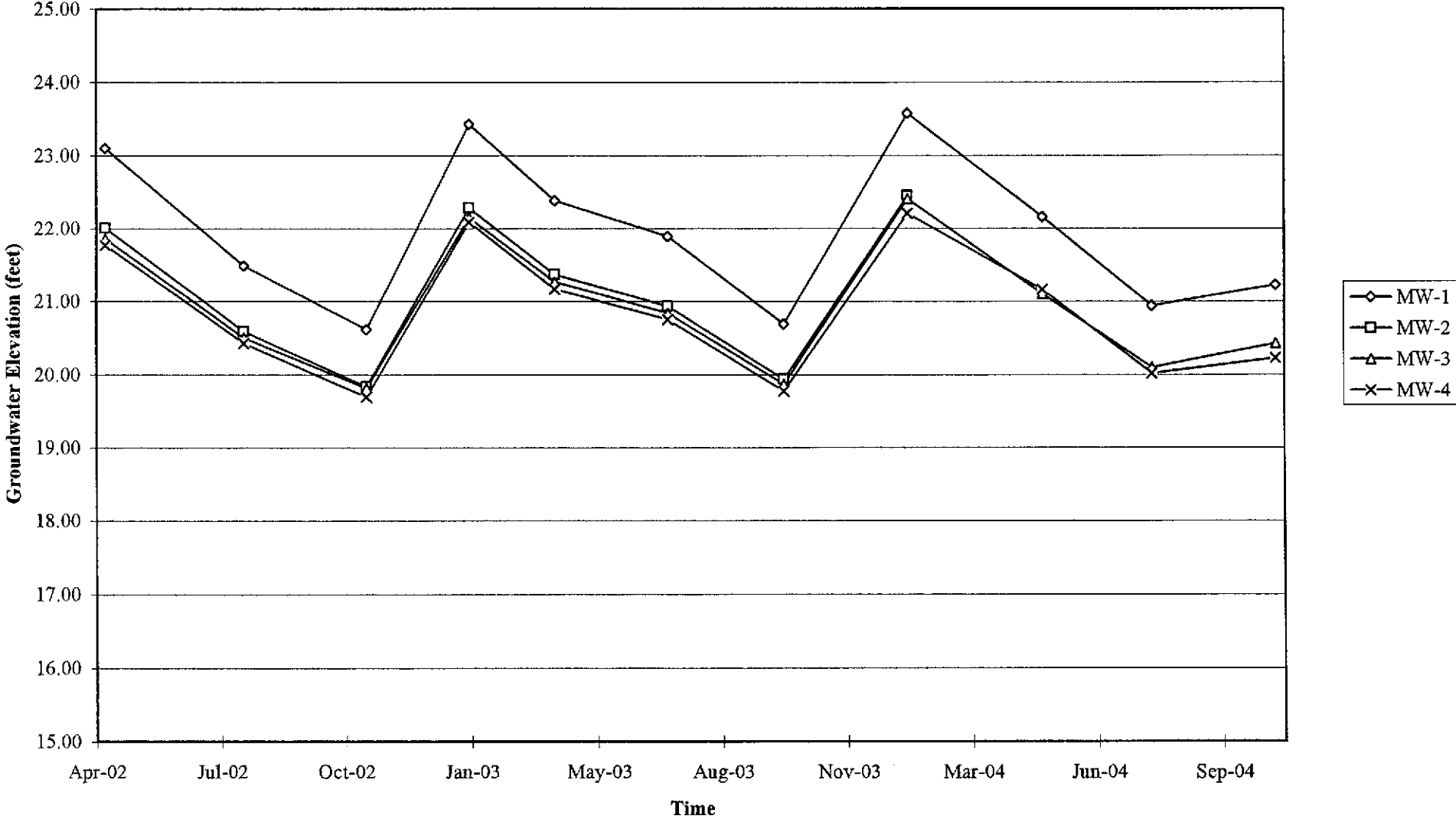


**FIGURE 5**

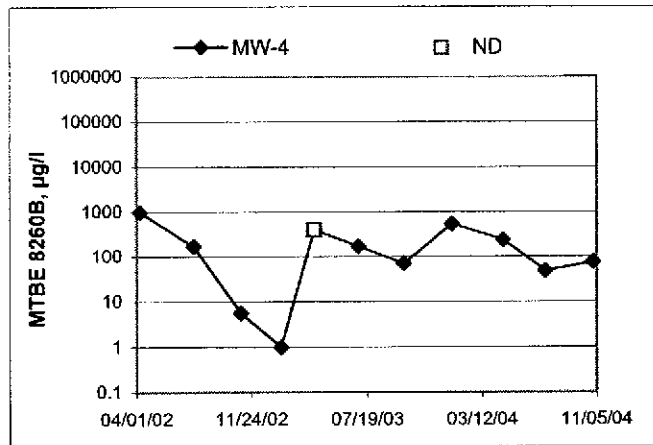
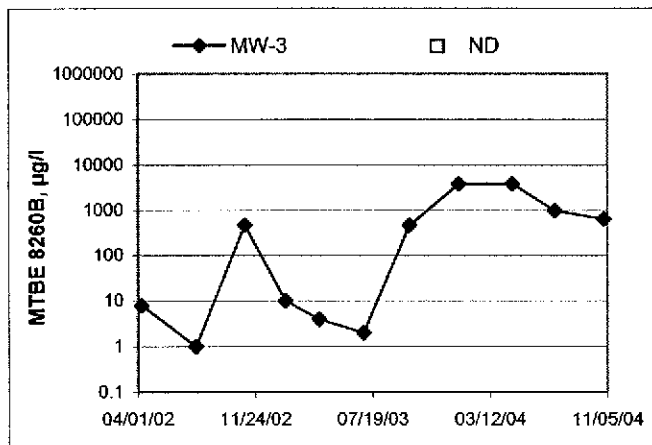
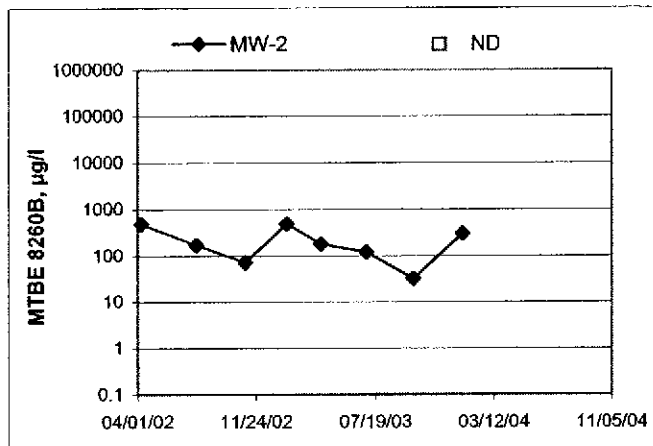
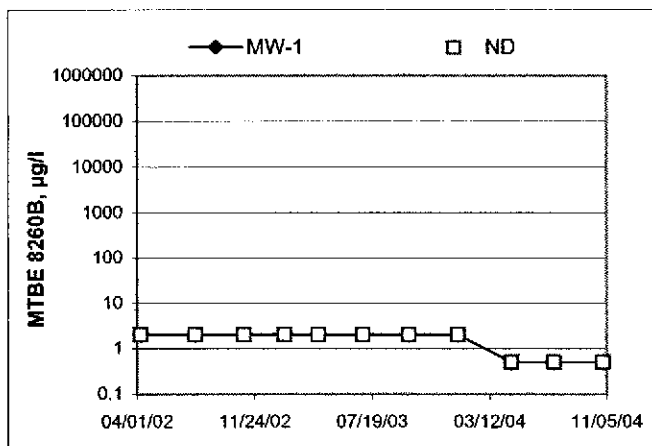
# GRAPHS



Groundwater Elevations vs. Time  
76 Station 7124



**MTBE 8260B Concentrations vs Time**  
76 Station 7124



## GENERAL FIELD PROCEDURES

### **Groundwater Monitoring and Sampling Assignments**

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

### **Fluid Level Measurements**

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

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

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

### **Purging and Groundwater Parameter Measurement**

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

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

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

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

### **Groundwater Sample Collection**

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

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

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

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

### **Sequence of Gauging, Purging, and Sampling**

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

### **Decontamination**

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

### **Exceptions**

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

# FIELD MONITORING DATA SHEET

Technician: David Tenney

Job #/Task #: 410500-A/FA20

Date: 10-29-04

Site # 7124

Project Manager Adrienne Collins

Page 1 of 1

Well #	TOC	Time Gauged	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
MW-4	X	0428	24.84	18.13	Ø	Ø	0500	4"
MW-3	X	0432	25.01	17.29	Ø	Ø	0518	4"
MW-1	X	0436	24.76	16.14	Ø	Ø	0534	4"
MW-2							NS	Paved over

FIELD DATA COMPLETE	<input checked="" type="checkbox"/> QAC	<input checked="" type="checkbox"/> CQC	WELL BOX CONDITION SHEETS
WTT CERTIFICATE	MANIFEST	DRUM INVENTORY	TRAFFIC CONTROL



**GROUNDWATER SAMPLING FIELD NOTES**

Technician: David Tenney

Site: 7124

Project No.: 410500-01/FA20

Date: 10-29-04

Well No.: MW-1

Purge Method: Diaphragm 0969

Depth to Water (feet): 16.14

Depth to Product (feet): 0

Total Depth (feet): 24.76

LPH & Water Recovered (gallons): 0

Water Column (feet): 8.62

Casing Diameter (Inches): 4

80% Recharge Depth (feet): 17.86

1 Well Volume (gallons): 6

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH	Turbidity	D.O
0523			6	159.9	16.2	6.95		
			12	145.4	18.1	6.90		
	0530		18	138.5	18.7	6.60		
Static at Time Sampled		Total Gallons Purged			Time Sampled			
1755		18			0534			
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)	Conductivity (uS/cm)	Temperature (F, C)	pH	Turbidity	D.O
Static at Time Sampled		Total Gallons Purged			Time Sampled			
Comments:								

GROUNDWATER SAMPLING FIELD NOTES

Technician: David Tenney

Site: 7124

Project No.: 410500-01/FA20

Date: 10-29-04

Well No.: MW-4

Purge Method: diaphragm 0969

Depth to Water (feet): 18.13

Depth to Product (feet): 0

Total Depth (feet): 24.84

LPH & Water Recovered (gallons): 0

Water Column (feet): 6.71

Casing Diameter (Inches): 4

80% Recharge Depth (feet): 19.47

1 Well Volume (gallons): 4

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temperature (F. @)	pH	Turbidity	D.O.
0450			4	149.6	16.8	6.54		
			8	146.1	18.1	6.61		
	0458		12	140.2	18.7	6.48		
Static at Time Sampled			Total Gallons Purged			Time Sampled		
18:44			12			0500		
Comments:								

Well No.: MW-3

Purge Method: diaphragm 0969

Depth to Water (feet): 17.29

Depth to Product (feet): 0

Total Depth (feet): 25.01

LPH & Water Recovered (gallons): 0

Water Column (feet): 7.72

Casing Diameter (Inches): 4

80% Recharge Depth (feet): 18.83

1 Well Volume (gallons): 5

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temperature (F. @)	pH	Turbidity	D.O.
0507			5	144.0	15.3	6.98		
			10	148.3	17.8	6.56		
	0516		15	146.5	18.2	6.40		
Static at Time Sampled			Total Gallons Purged			Time Sampled		
17:55			15			0518		
Comments:								

STATEMENT OF NON-COMPLETION OF JOB

DATE OF EVENT: 10-29-04 STATION NUMBER: 7124

NAME OF TECH: David Tenney CALLED GORDON: \_\_\_\_\_

CALLED PM: \_\_\_\_\_ NAME OF PM CALLED: \_\_\_\_\_

WELL NUMBER: MW-2 STATEMENT FROM PM \_\_\_\_\_ OR TECH \_\_\_\_\_

well is paved over.

WELL NUMBER: \_\_\_\_\_ STATEMENT FROM PM \_\_\_\_\_ OR TECH \_\_\_\_\_

WELL NUMBER: \_\_\_\_\_ STATEMENT FROM PM \_\_\_\_\_ OR TECH \_\_\_\_\_

WELL NUMBER: \_\_\_\_\_ STATEMENT FROM PM \_\_\_\_\_ OR TECH \_\_\_\_\_



**TRC Alton Geoscience- Irvine**

November 15, 2004

21 Technology Drive  
Irvine, CA 92718

Attn.: Anju Farfan

Project#: 41050001FA20

Project: Conoco Phillips # 7124

Site: 10151 International Blvd., Oakland

Attached is our report for your samples received on 11/01/2004 12:25

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 12/16/2004 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

**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 # 7124

Received: 11/01/2004 12:25

Site: 10151 International Blvd., Oakland

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-4	10/29/2004 05:00	Water	1
MW-3	10/29/2004 05:18	Water	2
MW-1	10/29/2004 05:34	Water	3

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

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

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

Project: 41050001FA20  
Conoco Phillips # 7124

Received: 11/01/2004 12:25

Site: 10151 International Blvd., Oakland

Prep(s): 5030B Test(s): 8260FAB  
Sample ID: MW-4 Lab ID: 2004-11-0060 - 1  
Sampled: 10/29/2004 05:00 Extracted: 11/9/2004 10:44  
Matrix: Water QC Batch#: 2004/11/09-1B.66  
Analysis Flag: L2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	2700	250	ug/L	5.00	11/09/2004 10:44	
Benzene	ND	2.5	ug/L	5.00	11/09/2004 10:44	
Toluene	ND	2.5	ug/L	5.00	11/09/2004 10:44	
Ethylbenzene	ND	2.5	ug/L	5.00	11/09/2004 10:44	
Total xylenes	ND	5.0	ug/L	5.00	11/09/2004 10:44	
tert-Butyl alcohol (TBA)	63	25	ug/L	5.00	11/09/2004 10:44	
Methyl tert-butyl ether (MTBE)	76	2.5	ug/L	5.00	11/09/2004 10:44	
Di-isopropyl Ether (DIPE)	ND	5.0	ug/L	5.00	11/09/2004 10:44	
Ethyl tert-butyl ether (ETBE)	ND	2.5	ug/L	5.00	11/09/2004 10:44	
tert-Amyl methyl ether (TAME)	ND	2.5	ug/L	5.00	11/09/2004 10:44	
1,2-DCA	ND	2.5	ug/L	5.00	11/09/2004 10:44	
EDB	ND	2.5	ug/L	5.00	11/09/2004 10:44	
Ethanol	ND	250	ug/L	5.00	11/09/2004 10:44	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	94.3	73-130	%	5.00	11/09/2004 10:44	
Toluene-d8	95.2	81-114	%	5.00	11/09/2004 10:44	

**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 # 7124

Received: 11/01/2004 12:25

Site: 10151 International Blvd., Oakland

Prep(s): 5030B Test(s): 8260FAB  
Sample ID: MW-3 Lab ID: 2004-11-0060 - 2  
Sampled: 10/29/2004 05:18 Extracted: 11/9/2004 11:07  
Matrix: Water QC Batch#: 2004/11/09-1B.66  
Analysis Flag: L2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	4600	500	ug/L	10.00	11/09/2004 11:07	
Benzene	ND	5.0	ug/L	10.00	11/09/2004 11:07	
Toluene	ND	5.0	ug/L	10.00	11/09/2004 11:07	
Ethylbenzene	13	5.0	ug/L	10.00	11/09/2004 11:07	
Total xylenes	ND	10	ug/L	10.00	11/09/2004 11:07	
tert-Butyl alcohol (TBA)	ND	50	ug/L	10.00	11/09/2004 11:07	
Methyl tert-butyl ether (MTBE)	640	5.0	ug/L	10.00	11/09/2004 11:07	
Di-isopropyl Ether (DIPE)	ND	10	ug/L	10.00	11/09/2004 11:07	
Ethyl tert-butyl ether (ETBE)	ND	5.0	ug/L	10.00	11/09/2004 11:07	
tert-Amyl methyl ether (TAME)	ND	5.0	ug/L	10.00	11/09/2004 11:07	
1,2-DCA	ND	5.0	ug/L	10.00	11/09/2004 11:07	
EDB	ND	5.0	ug/L	10.00	11/09/2004 11:07	
Ethanol	ND	500	ug/L	10.00	11/09/2004 11:07	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	90.1	73-130	%	10.00	11/09/2004 11:07	
Toluene-d8	92.7	81-114	%	10.00	11/09/2004 11:07	

**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 # 7124

Received: 11/01/2004 12:25

Site: 10151 International Blvd., Oakland

Prep(s): 5030B	Test(s): 8260FAB
Sample ID: MW-1	Lab ID: 2004-11-0060 - 3
Sampled: 10/29/2004 05:34	Extracted: 11/8/2004 15:22
Matrix: Water	QC Batch#: 2004/11/08-2B.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	11/08/2004 15:22	
Benzene	ND	0.50	ug/L	1.00	11/08/2004 15:22	
Toluene	ND	0.50	ug/L	1.00	11/08/2004 15:22	
Ethylbenzene	ND	0.50	ug/L	1.00	11/08/2004 15:22	
Total xylenes	ND	1.0	ug/L	1.00	11/08/2004 15:22	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/08/2004 15:22	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	11/08/2004 15:22	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	1.00	11/08/2004 15:22	
Ethyl tert-butyl ether (ETBE)	ND	0.50	ug/L	1.00	11/08/2004 15:22	
tert-Amyl methyl ether (TAME)	ND	0.50	ug/L	1.00	11/08/2004 15:22	
1,2-DCA	ND	0.50	ug/L	1.00	11/08/2004 15:22	
EDB	ND	0.50	ug/L	1.00	11/08/2004 15:22	
Ethanol	ND	50	ug/L	1.00	11/08/2004 15:22	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	96.8	73-130	%	1.00	11/08/2004 15:22	
Toluene-d8	93.7	81-114	%	1.00	11/08/2004 15:22	

**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 # 7124

Received: 11/01/2004 12:25

Site: 10151 International Blvd., Oakland

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/11/08-2B.66-013

Water

Test(s): 8260FAB

QC Batch # 2004/11/08-2B.66

Date Extracted: 11/08/2004 09:13

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	11/08/2004 09:13	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/08/2004 09:13	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/08/2004 09:13	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	11/08/2004 09:13	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	11/08/2004 09:13	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	11/08/2004 09:13	
1,2-DCA	ND	0.5	ug/L	11/08/2004 09:13	
EDB	ND	0.5	ug/L	11/08/2004 09:13	
Benzene	ND	0.5	ug/L	11/08/2004 09:13	
Toluene	ND	0.5	ug/L	11/08/2004 09:13	
Ethylbenzene	ND	0.5	ug/L	11/08/2004 09:13	
Total xylenes	ND	1.0	ug/L	11/08/2004 09:13	
Ethanol	ND	50	ug/L	11/08/2004 09:13	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	88.8	73-130	%	11/08/2004 09:13	
Toluene-d8	94.0	81-114	%	11/08/2004 09:13	

**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 # 7124

Received: 11/01/2004 12:25

Site: 10151 International Blvd., Oakland

**Batch QC Report**

Prep(s): 5030B

**Method Blank**

MB: 2004/11/09-1B.66-012

**Water**

Test(s): 8260FAB

**QC Batch # 2004/11/09-1B.66**

Date Extracted: 11/09/2004 10:12

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	11/09/2004 10:12	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/09/2004 10:12	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/09/2004 10:12	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	11/09/2004 10:12	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	11/09/2004 10:12	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	11/09/2004 10:12	
1,2-DCA	ND	0.5	ug/L	11/09/2004 10:12	
EDB	ND	0.5	ug/L	11/09/2004 10:12	
Benzene	ND	0.5	ug/L	11/09/2004 10:12	
Toluene	ND	0.5	ug/L	11/09/2004 10:12	
Ethylbenzene	ND	0.5	ug/L	11/09/2004 10:12	
Total xylenes	ND	1.0	ug/L	11/09/2004 10:12	
Ethanol	ND	50	ug/L	11/09/2004 10:12	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	88.4	73-130	%	11/09/2004 10:12	
Toluene-d8	94.4	81-114	%	11/09/2004 10:12	

**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 # 7124

Received: 11/01/2004 12:25

Site: 10151 International Blvd., Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260FAB

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/11/08-2B.66**

LCS 2004/11/08-2B.66-050  
LCSD

Extracted: 11/08/2004

Analyzed: 11/08/2004 08:50

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	23.8		25	95.2			65-165	20		
Benzene	27.6		25	110.4			69-129	20		
Toluene	27.2		25	108.8			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	414		500	82.8			73-130			
Toluene-d8	462		500	92.4			81-114			



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

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 7124

Received: 11/01/2004 12:25

Site: 10151 International Blvd., Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260FAB

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/11/09-1B.66**

LCS 2004/11/09-1B.66-050

Extracted: 11/09/2004

Analyzed: 11/09/2004 09:50

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	26.5		25	106.0			65-165	20		
Benzene	27.7		25	110.8			69-129	20		
Toluene	27.1		25	108.4			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	420		500	84.0			73-130			
Toluene-d8	470		500	94.0			81-114			

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

11/11/2004 17:04

**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 # 7124

Received: 11/01/2004 12:25

Site: 10151 International Blvd., Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260FAB

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2004/11/08-2B.66**

MS/MSD

Lab ID: 2004-11-0054 - 002

MS: 2004/11/08-2B.66-029

Extracted: 11/08/2004

Analyzed: 11/08/2004 10:29

Dilution: 1.00

MSD: 2004/11/08-2B.66-052

Extracted: 11/08/2004

Analyzed: 11/08/2004 10:52

Dilution: 1.00

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	27.7	24.5	ND	25	110.8	98.0	12.3	65-165	20		
Benzene	28.6	27.0	ND	25	114.4	108.0	5.8	69-129	20		
Toluene	28.7	27.8	ND	25	114.8	111.2	3.2	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	428	425		500	85.6	85.0		73-130			
Toluene-d8	478	495		500	95.7	99.0		81-114			

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

11/11/2004 17:04

**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 # 7124

Received: 11/01/2004 12:25

Site: 10151 International Blvd., Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260FAB

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2004/11/09-1B.66**

MS/MSD

Lab ID: 2004-11-0101 - 004

MS: 2004/11/09-1B.66-037

Extracted: 11/09/2004

Analyzed: 11/09/2004 12:37

Dilution: 1.00

MSD: 2004/11/09-1B.66-059

Extracted: 11/09/2004

Analyzed: 11/09/2004 12:59

Dilution: 1.00

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	104	108	74.2	25	119.2	135.2	12.6	65-165	20		
Benzene	29.6	27.7	ND	25	118.4	110.8	6.6	69-129	20		
Toluene	26.6	26.5	ND	25	106.4	106.0	0.4	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	508	497		500	101.6	99.4		73-130			
Toluene-d8	478	483		500	95.6	96.6		81-114			

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

TRC Alton Geoscience- Irvine  
Attn.: Anju Farfan

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

Project: 41050001FA20  
Conoco Phillips # 7124

Received: 11/01/2004 12:25

Site: 10151 International Blvd., 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.

STL San Francisco

### Sample Receipt Checklist

Submission #: 2004- 11 - 0060

Checklist completed by: (initials) MV Date: 11, 02 /04

Courier name:  STL San Francisco  Client \_\_\_\_\_

Custody seals intact on shipping container/samples Yes \_\_\_ No \_\_\_ Not Present

Chain of custody present? Yes  No \_\_\_

Chain of custody signed when relinquished and received? Yes  No \_\_\_

Chain of custody agrees with sample labels? Yes  No \_\_\_

Samples in proper container/bottle? Yes  No \_\_\_

Sample containers intact? Yes  No \_\_\_

Sufficient sample volume for indicated test? Yes  No \_\_\_

All samples received within holding time? Yes  No \_\_\_

Container/Temp Blank temperature in compliance (4° C ± 2)? Temp: 2 °C Yes  No \_\_\_

Potential reason for > 6° C: Ice melted  Ice in bags  Not enough ice  Not enough blue ice  Samples in boxes

Sampled < 4hr ago?  Ice not required (e.g. air or bulk sample)  Ice Present: Yes  No \_\_\_

Water - VOA vials have zero headspace? No VOA vials submitted \_\_\_ Yes  No \_\_\_

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O))

Water - pH acceptable upon receipt?  Yes  No

pH adjusted- Preservative used:  HNO<sub>3</sub>  HCl  H<sub>2</sub>SO<sub>4</sub>  NaOH  ZnOAc -Lot #(s) \_\_\_\_\_

For any item check-listed "No", provided detail of discrepancy in comment section below:

**Comments:**  
\_\_\_\_\_  
\_\_\_\_\_

### Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/04 Client contacted:  Yes  No

Summary of discussion:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Corrective Action (per PM/Client):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

STL-San Francisco

# ConocoPhillips Chain Of Custody Record

95257

1220 Quarry Lane  
Pleasanton, CA 94566

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

ConocoPhillips Site Manager:

INVOICE REMITTANCE ADDRESS:

2004-11-0060

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

ConocoPhillips Work Order Number

1634 TRC 500

ConocoPhillips Cost Object

DATE: 10-29-04

PAGE: 1 of 1

SAMPLING COMPANY: <b>TRC</b>		Valid Value ID:	CONOCOPHILLIPS SITE NUMBER <b>7124 E 1444</b>		GLOBAL ID NO.: <b>1000</b>
ADDRESS: <b>21 Technology Drive, Irvine CA 92618</b>			SITE ADDRESS (Street and City): <b>10151 International Blvd. Oakland</b>		CONOCOPHILLIPS SITE MANAGER: <b>Thomas H. Kosei</b>
PROJECT CONTACT (Hardcopy or PDF Report to): <b>Anju Farfan</b>			EDF DELIVERABLE TO (RP or Designee): <b>Peter Thomson, TRC</b> <b>pthomson@trcsolutions.com</b>	PHONE NO.: <b>949-341-7408</b>	E-MAIL: <b>LAB USE ONLY</b>
TELEPHONE: <b>949-341-7440</b>	FAX: <b>949-753-0111</b>	E-MAIL: <b>afarfan@trcsolutions.com</b>	SAMPLER NAME(S) (Print): <b>David Tenney</b>		
CONSULTANT PROJECT NUMBER <b>41050001/FA20</b>		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 EDD IS NEEDED

\* Field Point name only required if different from Sample ID

8015m - TPHd Extractable	8260B - TPHg / BTEX / 8 Oxygenates	8260B - TPHg / BTEX / 8 oxygenates + methanol (9015M)	8260B - Full Scan VOCs (does not include oxygenates)	8270C - Semi-Volatiles	8015M / 8021B - TPHg/BTEX/MBE	Lead <input type="checkbox"/> Total <input type="checkbox"/> TLCLP	TPH by 8260 B	BTEX/MBE by 8260B	80XYS by 8260 B
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FIELD NOTES:  
Container/Preservative or PID Readings or Laboratory Notes

**20C**

TEMPERATURE ON RECEIPT C\*

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING		MATRIX	NO. OF CONT.	8015m - TPHd Extractable	8260B - TPHg / BTEX / 8 Oxygenates	8260B - TPHg / BTEX / 8 oxygenates + methanol (9015M)	8260B - Full Scan VOCs (does not include oxygenates)	8270C - Semi-Volatiles	8015M / 8021B - TPHg/BTEX/MBE	Lead <input type="checkbox"/> Total <input type="checkbox"/> TLCLP	TPH by 8260 B	BTEX/MBE by 8260B	80XYS by 8260 B	
		DATE	TIME													
	MW-4	10-29	0500	GW	3									X	X	X
	MW-3		0518											X	X	X
	MW-1		0534											X	X	X

Relinquished by (Signature): <b>Dohs TW</b>	Received by (Signature): <b>Refrigerator</b>	Date: <b>10-29-04</b>	Time: <b>1929</b>
Relinquished by (Signature): <b>Dee</b>	Received by (Signature): <b>[Signature]</b>	Date: <b>11104</b>	Time: <b>1138</b>
Relinquished by (Signature): <b>[Signature]</b>	Received by (Signature): <b>[Signature]</b>	Date: <b>11104</b>	Time: <b>1225</b>

## **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 suspected of containing potentially hazardous material, such as liquid-phase hydrocarbons, was accumulated separately in a drum 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.