#### RECEIVED



2:45 pm, Nov 28, 2007 Alameda County

Environmental Health

November 27, 2007

Ms. Donna Drogos Alameda County Health Agency 1131 Harbor Bay Parkway Alameda, California 94502

Re:

Quarterly Monitoring and Summary Report – Fourth Quarter 2007

76 Service Station #7124 10151 International Boulevard Oakland, CA

Dear Ms. Drogos:

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

If you have any questions or need additional information, please contact me at (916) 558-7612.

Sincerely,

Bill Bough

Bill Borgh

Site Manager - Risk Management and Remediation

Attachment

SECOR INTERNATIONAL INCORPORATED

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

November 27, 2007

Ms. Donna Drogos, P.E.
Alameda County Environmental Health Services
1131 Harbor Bay Parkway Suite 250
Alameda, CA 94502
(Sent Via Electronic Upload to Alameda ftp)

RE: Quarterly Monitoring and Summary Report – Fourth Quarter 2007

SECOR Project No.: 77CP.01634.41.0303

Dear Ms. Drogos:

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

### **Service Station**

#### Location

Former 76 Service Station No. 7124

10151 International Boulevard Oakland, California

If there are questions or comments regarding this quarterly summary report, please contact me at (916) 861-0400 extension 289.

Sincerely,

**SECOR International Incorporated** 

Ben Chevlen

CC:

Project Manager

2-5

Attachments: SECOR's Quarterly Monitoring and Summary Report - Fourth

Quarter 2007.

Mr. Bill Borgh, ConocoPhillips

## QUARTERLY SUMMARY REPORT Fourth Quarter 2007

Former 76 Service Station No. 7124 10151 International Boulevard Oakland, California

City/County ID #: Oakland/RO0002444

County: <u>Alameda</u>

#### SITE DESCRIPTION

The site is currently an active Royal Gasoline Station located on the northwestern corner of the intersection of International Boulevard and 102nd Avenue in Oakland, California. Site facilities include three underground storage tanks (USTs) and associated piping and fuel dispensers. A detailed site plan is included in TRC's *Quarterly Monitoring Report October through December 2007* dated November 2, 2007 (Attachment 1).

#### PREVIOUS ASSESSMENT

On March 22, 2000, SECOR supervised the removal and replacement of product lines and dispensers by Balch Petroleum 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), methyl tertiary butyl ether (MTBE) up to120 mg/kg, and benzene up to 7.4 mg/kg. Excavation and sampling activities were observed and approved by Inspector Gomez of the City of Oakland Fire Services Agency.

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 two of the three samples at a concentration of 108 mg/kg; benzene was detected in one of the three samples at 0.162 mg/kg; and MTBE was detected in all three samples at maximum concentrations of up to 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 monitoring 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), benzene, toluene, ethylbenzene, total xylenes (BTEX), and fuel oxygenates via EPA 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 the third quarter 2004, SECOR completed a ½-mile radius agency receptor survey and obtained an Environmental Data Resources Incorportated (EDR) radius map for the site. The agency survey identified two industrial supply wells, three cathodic protection wells, and two wells of unknown type within the search radius. The survey also identified twelve 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 the third quarter 2002. Currently, four wells are monitored quarterly (MW-1 through MW-4). Samples are analyzed for TPHg, BTEX, and the fuel oxygenates tert-butyl alcohol (TBA), MTBE, di-isopropyl ether (DIPE), ethyl tert-butyl ether (EtBE), tert-amyl methyl ether (TAME), and ethanol, as well as, ethylene di-bromide (EDB) by EPA Method 8260B.

#### DISCUSSION

During the fourth quarter 2007, depth to groundwater ranged between 17.13 and 18.89 feet below top of casing (toc), which is slightly lower than historical low levels. Historical groundwater depths have been reported between 15.11 and 18.02 feet below toc. The direction of groundwater flow is toward the northwest at a gradient of 0.01 foot/foot (Attachment 1).

The highest concentrations of petroleum hydrocarbons and MTBE continue to be detected in on-site well MW-3 (historical high of 10,000  $\mu$ g/L, observed on January 24, 2003). This quarter, the maximum concentrations of TPHg and MTBE were detected in well MW-3 at 1,700  $\mu$ g/L, and 87  $\mu$ g/L respectively (Attachment 1); however, some of the reported TPPH concentrations may be actually MTBE, as the BC Laboratories include MTBE in their TPPH concentrations. Lack of detectable levels of BTEX indicate that TPHg is probably highly degraded. The downgradient/crossgradient extent of the dissolved plume remains undefined by the existing monitoring well network.

On October 14, 2004, SECOR submitted a work plan for the installation of monitoring wells offsite to delineate the dissolved phase hydrocarbons in groundwater; however, in a letter dated April 12, 2005, the Alameda County Environmental Health Services (ACEHS) disapproved the work plan stating that it was premature to install more monitoring wells without additional groundwater sampling to determine the location of the plume for optimal well locations. Therefore, an addendum to the October 14, 2004 work plan was submitted on July 22, 2005. SECOR has yet to receive approval or disapproval from the ACEHS for SECOR's addendum to the October 14, 2004 work plan.

#### **CHARACTERIZATION STATUS**

None of the groundwater samples collected showed detectable levels of any BTEX components. The highest concentrations of residual MTBE contamination are localized in the northeastern area of the site in the vicinity of MW-3. The extent of dissolved contamination is undefined in the downgradient (northwest) direction, but MTBE concentrations continue declining, and variable TBA levels in MW-4 may indicate active degradation of MTBE.

#### **REMEDIATION STATUS**

Currently, there is no active remediation at this site.

#### RECENT SUBMITTALS/CORRESPONDENCE

Submitted: Quarterly Summary and Monitoring Report – Third Quarter 2007, dated October 23, 2007

#### **WASTE DISPOSAL SUMMARY**

The volume of purged groundwater generated and disposed of during the quarterly groundwater monitoring event is documented in TRC's *Quarterly Monitoring Report, October through December 2007*, dated November 2, 2007 (Attachment 1).

### THIS QUARTER ACTIVITIES (Fourth Quarter 2007)

- 1. TRC performed quarterly groundwater monitoring and sampling event.
- 2. SECOR prepared and submitted the third quarter 2007 summary report.

#### **NEXT QUARTER ACTIVITIES (First Quarter 2008)**

- 1. TRC to perform coordinated groundwater monitoring and sampling event.
- 2. SECOR to prepare and submit quarterly summary and monitoring report.

#### **LIMITATIONS**

This report has been prepared for the exclusive use of ConocoPhillips and its representatives as it pertains to the property located at 10151 International Boulevard, Oakland, California. The evaluation of subsurface conditions at the site for the purpose of this investigation is inherently limited due to the number of points of investigation. There are no representations, warranties, or guarantees that the results are representative of the entire site. Data from this report reflects the conditions at locations at a specified time. No other interpretation, representations, warranties, guarantees, express or implied, are included or intended in the report findings. SECOR makes no warranties or guarantees for the groundwater monitoring report (Attachment 1) prepared by TRC.

Sincerely,

**SECOR International Incorporated** 

Ben Chevlen

Project Geologist

Ed Simonis P.G. Senior Geologist

Attachment 1: TRC's Quarterly Monitoring Report – October through December 2007, dated October 31, 2007

# ATTACHMENT 1 TRC'S QUARTERLY MONITORING REPORT OCTOBER THROUGH DECEMBER 2007

Quarterly Monitoring and Summary Report 76 Service Station No. 7124 10151 International Boulevard Oakland, California





21 Technology Drive Irvine, CA 92618

949.727.9336 PHONE 949.727.7399 FAX

www.TRCsolutions.com

DATE:

November 2, 2007

TO:

SECOR International Inc.

3017 Kilgore Road, Suite 100 Rancho Cordova, CA 95670

ATTN:

MR. BEN CHEVLEN

SITE:

**76 STATION 7124** 

Janiel Cal

10151 INTERNATIONAL BOULEVARD

OAKLAND, CALIFORNIA

RE:

QUARTERLY MONITORING REPORT

OCTOBER THROUGH DECEMBER 2007

This Quarterly Monitoring Report for 76 Station 7124 is being sent to you for your review and comment. If no comments are received by **November 9, 2007**, copies of this report will be sent to you for distribution.

Please send all comments to me at <u>dlee@trcsolutions.com</u>. If you have any questions regarding this report, please call me at (949) 727-7382.

Sincerely,

**TRC** 

Daniel Lee

**Technical Writer** 





21 Technology Drive Irvine, CA 92618

949.727.9336 PHONE 949.727.7399 FAX

www.TRCsolutions.com

DATE:

November 2, 2007

TO:

ConocoPhillips Company

76 Broadway

Sacramento, CA 95818

ATTN:

MR. BILL BORGH

SITE:

**76 STATION 7124** 

10151 INTERNATIONAL BOULEVARD

OAKLAND, CALIFORNIA

RE:

QUARTERLY MONITORING REPORT

OCTOBER THROUGH DECEMBER 2007

Dear Mr. Borgh:

Please find enclosed our Quarterly Monitoring Report for 76 Station 7124, located at 10151 International Bouelvard, Oakland, California. If you have any questions regarding this report, please call us at (949) 727-9336.

Sincerely,

TRC

Anju Farfan

Groundwater Program Operations Manager

CC: Mr. Ben Chevlen, SECOR International, Inc (2 copies)

Enclosures

200400/7124R017.QMS.doc

### QUARTERLY MONITORING REPORT OCTOBER THROUGH DECEMBER 2007

76 STATION 7124 10151 International Boulevard Oakland, California

Prepared For:

Mr. Bill Borgh CONOCOPHILLIPS COMPANY 76 Broadway Sacramento, California 95818

By:

Senior Project Geologist, Irvine Operations

Date: 10/31/07



	LIST OF ATTACHMENTS
Summary Sheet	Summary of Gauging and Sampling Activities
Tables	Table Key
	Contents of Tables
	Table 1: Current Fluid Levels and Selected Analytical Results
	Table 1a: Additional Current Analytical Results
	Table 2: Historic Fluid Levels and Selected Analytical Results
	Table 2a: Additional Historic Analytical Results
Figures	Figure 1: Vicinity Map
	Figure 2: Groundwater Elevation Contour Map
	Figure 3: Dissolved-Phase TPH-G (GC/MS) Concentration Map
	Figure 4: Dissolved-Phase Benzene Concentration Map
	Figure 5: Dissolved-Phase MTBE Concentration Map
Graphs	Groundwater Elevations vs. Time
	MTBE 8260B Concentrations vs. Time
Field Activities	General Field Procedures
	Field Monitoring Data Sheet – 10/1/07
	Groundwater Sampling Field Notes – 10/1/07
Laboratory	Official Laboratory Reports
Reports	Quality Control Reports
	Chain of Custody Records
Statements	Purge Water Disposal
	Limitations

# Summary of Gauging and Sampling Activities October 2007 through December 2007 76 Station 7124

# 10151 International Boulevard Oakland, CA

Project Coordinator: <b>Bill Borgh</b> Telephone: <b>916-558-7612</b>	Water Sampling Contractor: <i>TRC</i> Compiled by: <b>Daniel Lee</b>
Date(s) of Gauging/Sampling Event: <b>10/1/07</b>	complica by: Dailer Ecc
Sample Points	
Groundwater wells: <b>4</b> onsite, <b>0</b> offsite Purging method: <b>Diaphragm pump</b>	Wells gauged: 4 Wells sampled: 4
Purge water disposal: Onyx/Rodeo Unit 100	
Other Sample Points: <b>0</b> Type: <b>n/a</b>	
Liquid Phase Hydrocarbons (LPH)	
Wells with LPH: <b>0</b> Maximum thickness (feet)	: n/a
LPH removal frequency: <b>n/a</b>	Method: <b>n/a</b>
Treatment or disposal of water/LPH: <b>n/a</b>	
Hydrogeologic Parameters	
Depth to groundwater (below TOC): Minimum	n: <b>17.13 feet</b> Maximum: <b>18.89 feet</b>
Average groundwater elevation (relative to available	•
Average change in groundwater elevation since pr	
Interpreted groundwater gradient and flow directi	on:
Current event: <b>0.01 ft/ft, northwest</b> Previous event: <b>0.02 ft/ft, west (7/5/07)</b>	
Selected Laboratory Results	7707400
Wells with detected <b>Benzene</b> : <b>0</b>	Wells above MCL (1.0 μg/l): <b>n/a</b>
Maximum reported benzene concentration: <b>n</b>	ı/a
Wells with TPH-G by GC/MS 3	Maximum: <b>1,700 μg/l (MW-3)</b>
Wells with MTBE 8260B 3	Maximum: <b>87 μg/l (MW-3)</b>
Makası	
Notes:	

# **TABLES**

#### TABLE KEY

#### STANDARD ABBREVIATIONS

-- e not analyzed, measured, or collected

LPH = liquid-phase hydrocarbons Trace = less than 0.01 foot of LPH in well

ug/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-G (GC/MS) = total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B

TPH-D = total petroleum hydrocarbons with diesel distinction

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: <u>Surface Elevation Measured Depth to Water + (Dp x LPH Thickness)</u>, 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

#### **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.

## Contents of Tables 1 and 2 Site: 76 Station 7124

Cu	rre	nt	Eve	nt

Table 1	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
Table 1a	Well/ Date	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME						
Historic D	ata													
Table 2	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
Table 2a	Well/ Date	TBA	Ethanol (8015B)	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME					

Table 1
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
October 1, 2007
76 Station 7124

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation		TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(μg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(μg/l)	
MW-1														
10/1/07	7 37.37	17.13	0.00	20.24	-0.92		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
MW-2														
10/1/07	7 37.87	18.25	0.00	19.62	-0.74		160	ND<0.50	ND<0.50	ND<0.50	ND<0.50		2.0	
MW-3														
10/1/07	7 37.72	18.16	0.00	19.56	-0.74		1700	ND<1.0	ND<1.0	ND<1.0	ND<1.0		87	
MW-4														
10/1/07	7 38.36	18.89	0.00	19.47	-0.87		560	ND<0.50	ND<0.50	ND<0.50	ND<0.50		3.0	

Table 1 a
ADDITIONAL CURRENT ANALYTICAL RESULTS
76 Station 7124

Date Sampled	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ЕТВЕ	TAME	
	(µg/l)	(µg/l)	(μg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
<b>MW-1</b> 10/1/07	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
<b>MW-2</b> 10/1/07	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
<b>MW-3</b> 10/1/07	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	
<b>MW-4</b> 10/1/07	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 2002 Through October 2007
76 Station 7124

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation		TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(μg/l)	(µg/l)	$(\mu g/l)$	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
MW-1														
4/8/02	2 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	
7/28/0	2 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	
11/3/0	2 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	
1/24/0	3 37.37	13.94	0.00	23.43	2.81	<del></del>	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
4/2/03	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	
7/1/03	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	
10/2/0	3 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	
1/9/04	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	
4/26/0	4 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	
7/22/0	4 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	
10/29/0	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	
1/12/0	5 37.37	12.83	0.00	24.54	3.31		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
6/20/0	5 37.37	14.38	0.00	22.99	-1.55		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
9/23/0	5 37.37	15.92	0.00	21.45	-1.54		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
12/13/0	)5 37.37	16.09	0.00	21.28	-0.17		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
3/24/0	6 37.37	11.85	0.00	25.52	4.24		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
5/30/0	6 37.37	13.30	0.00	24.07	-1.45		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
8/22/0	6 37.37	15.11	0.00	22.26	-1.81		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
10/31/0	06 37.37	16.11	0.00	21.26	-1.00		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
1/12/0	7 37.37	15.55	0.00	21.82	0.56		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
4/4/07	7 37.37	15.31	0.00	22.06	0.24		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
7/5/07	7 37.37	16.21	0.00	21.16	-0.90		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
10/1/0	7 37.37	17.13	0.00	20.24	-0.92		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	

Page 1 of 4

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 2002 Through October 2007
76 Station 7124

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation		TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	
MW-2														
4/8/02	37.87	15.86	0.00	22.01		4400		ND<2.5	ND<2.5	6.4	ND<2.5	380	490	
7/28/0	2 37.87	17.28	0.00	20.59	-1.42		3200	ND<2.5	ND<2.5	ND<2.5	ND<5.0		170	
11/3/0	2 37.87	18.03	0.00	19.84	-0.75		3800	ND<5.0	ND<5.0	ND<5.0	ND<10		72	
1/24/0	3 37.87	15.59	0.00	22.28	2.44		410	ND<2.5	ND<2.5	ND<2.5	ND<5.0		490	
4/2/03	37.87	16.50	0.00	21.37	-0.91		1000	ND<5.0	ND<5.0	ND<5.0	ND<10		180	
7/1/03	37.87	16.94	0.00	20.93	-0.44		1900	ND<2.5	ND<2.5	ND<2.5	ND<5.0		120	
10/2/0	3 37.87	17.93	0.00	19.94	-0.99		6900	ND<0.50	ND<0.50	ND<0.50	ND<1.0		32	
1/9/04	37.87	15.42	0.00	22.45	2.51		1000	ND<2.5	ND<2.5	ND<2.5	ND<5.0		300	
4/26/0	4 37.87													Covered with asphalt
7/22/0	4 37.87													Covered with asphalt
10/29/0	37.87		0.00	=4										Well is paved over.
1/12/0	5 37.87													Well was paved over.
6/20/0	5 37.87	15.94	0.00	21.93			120	ND<0.50	ND<0.50	ND<0.50	ND<1.0		46	
9/23/0	5 37.87	17.29	0.00	20.58	-1.35		120	ND<0.50	ND<0.50	ND<0.50	ND<1.0		10	
12/13/0	37.87	17.41	0.00	20.46	-0.12		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		11	
3/24/0	6 37.87	13.77	0.00	24.10	3.64		190	ND<0.50	ND<0.50	ND<0.50	ND<1.0		15	
5/30/0	6 37.87	15.16	0.00	22.71	-1.39		120	ND<0.50	ND<0.50	ND<0.50	ND<1.0		6.6	
8/22/0	6 37.87	16.49	0.00	21.38	-1.33		81	ND<0.50	ND<0.50	ND<0.50	ND<0.50		3.0	
10/31/0	37.87	17.15	0.00	20.72	-0.66		93	ND<0.50	ND<0.50	ND<0.50	ND<0.50		2.0	
1/12/0	7 37.87	17.07	0.00	20.80	0.08		230	ND<0.50	ND<0.50	ND<0.50	ND<0.50		4.3	
4/4/07	37.87	17.84	0.00	20.03	-0.77		110	ND<0.50	ND<0.50	ND<0.50	ND<0.50		2.5	
7/5/07	37.87	17.51	0.00	20.36	0.33		150	ND<0.50	ND<0.50	ND<0.50	ND<0.50		2.6	
10/1/0	7 37.87	18.25	0.00	19.62	-0.74		160	ND<0.50	ND<0.50	ND<0.50	ND<0.50		2.0	

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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 2002 Through October 2007
76 Station 7124

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation		TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(μg/l)	$(\mu g/l)$	(µg/l)	(µg/l)	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	
MW-3														
4/8/02	2 37.72	15.86	0.00	21.86		8700		65	ND<25	400	ND<25	6500	8300	
7/28/0	2 37.72	17.22	0.00	20.50	-1.36		4500	ND<25	ND<25	ND<25	ND<50		1100	
11/3/0	2 37.72	17.90	0.00	19.82	-0.68		25000	ND<5.0	ND<5.0	25	ND<10		470	
1/24/0	3 37.72	15.57	0.00	22.15	2.33		6000	ND<25	ND<25	94	ND<50		10000	
4/2/03	37.72	16.45	0.00	21.27	-0.88		130000	ND<100	ND<100	ND<100	ND<200		4400	
7/1/03	37.72	16.88	0.00	20.84	-0.43		9400	ND<10	ND<10	ND<10	ND<20	~~	2200	
10/2/0	3 37.72	17.85	0.00	19.87	-0.97		73000	ND<50	ND<50	ND<50	ND<100		460	
1/9/04	37.72	15.31	0.00	22.41	2.54		8700	ND<25	ND<25	98	ND<50		3800	
4/26/0	4 37.72	16.62	0.00	21.10	-1.31		6700	ND<25	ND<25	ND<25	ND<50		3900	
7/22/0	4 37.72	17.62	0.00	20.10	-1.00		13000	ND<25	ND<25	ND<25	ND<50		980	
10/29/0	37.72	17.29	0.00	20.43	0.33	,	4600	ND<5.0	ND<5.0	13	ND<10		640	
1/12/0	5 37.72	14.64	0.00	23.08	2.65		6100	0.88	0.99	30	2.2		6900	
6/20/0	5 37.72	15.91	0.00	21.81	-1.27		1900	ND<0.50	0.21J	0.52	0.46J		960	
9/23/0	5 37.72	17.20	0.00	20.52	-1.29		2400	ND<0.50	ND<0.50	ND<0.50	ND<1.0		160	
12/13/0	37.72	17.32	0.00	20.40	-0.12		2100	ND<2.5	ND<2.5	ND<2.5	ND<5.0		340	
3/24/0	6 37.72	13.86	0.00	23.86	3.46		2200	ND<5.0	ND<5.0	ND<5.0	ND<10		970	
5/30/0	6 37.72	15.69	0.00	22.03	-1.83		1500	ND<12	ND<12	ND<12	ND<25		760	
8/22/0	6 37.72	16.51	0.00	21.21	-0.82		1900	ND<0.50	ND<0.50	ND<0.50	ND<0.50		160	
10/31/0	6 37.72	17.36	0.00	20.36	-0.85		2200	ND<0.50	ND<0.50	ND<0.50	ND<0.50		58	
1/12/0	7 37.72	16.85	0.00	20.87	0.51		2600	ND<0.50	ND<0.50	ND<0.50	ND<0.50		680	
4/4/07	37.72	16.62	0.00	21.10	0.23		1700	ND<0.50	ND<0.50	ND<0.50	ND<0.50		650	
7/5/07	37.72	17.42	0.00	20.30	-0.80		2400	ND<0.50	ND<0.50	ND<0.50	ND<0.50		160	
10/1/0	7 37.72	18.16	0.00	19.56	-0.74		1700	ND<1.0	ND<1.0	ND<1.0	ND<1.0		87	

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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 2002 Through October 2007
76 Station 7124

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation		TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(μg/l)	(µg/l)	(µg/l)	$(\mu g/l)$	(µg/l)	(µg/l)	$(\mu g/l)$	
MW-4														
4/8/02	38.36	16.59	0.00	21.77		13000		ND<5.0	ND<5.0	28	ND<5.0	790	980	
7/28/0	2 38.36	17.93	0.00	20.43	-1.34		18000	ND<2.5	ND<2.5	ND<2.5	ND<5.0		170	
11/3/0	2 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	
1/24/0	3 38.36	16.27	0.00	22.09	2.39		ND<1000	ND<10	ND<10	ND<10	ND<20		1000	
4/2/03	38.36	17.19	0.00	21.17	-0.92		130000	ND<100	ND<100	ND<100	ND<200		ND<400	
7/1/03	38.36	17.61	0.00	20.75	-0.42		15000	ND<2.5	ND<2.5	ND<2.5	ND<5.0		170	
10/2/0	3 38.36	18.58	0.00	19.78	-0.97		7100	ND<10	ND<10	ND<10	ND<20		70	
1/9/04	38.36	16.15	0.00	22.21	2.43		18000	ND<10	ND<10	ND<10	ND<20		530	
4/26/0	4 38.36	17.20	0.00	21.16	-1.05		6500	ND<10	ND<10	ND<10	ND<20		240	
7/22/0		18.34	0.00	20.02	-1.14		18000	ND<10	ND<10	ND<10	ND<20		48	
10/29/0	38.36	18.13	0.00	20.23	0.21		2700	ND<2.5	ND<2.5	ND<2.5	ND<5.0		76	
1/12/0		15.22	0.00	23.14	2.91	~-	1300	ND<0.50	ND<0.50	ND<0.50	ND<1.0		620	
6/20/0	5 38.36	16.63	0.00	21.73	-1.41		980	ND<0.50	ND<0.50	ND<0.50	ND<1.0		110	
9/23/0		17.93	0.00	20.43	-1.30		1500	ND<0.50	ND<0.50	ND<0.50	ND<1.0		34	
12/13/0	38.36	18.04	0.00	20.32	-0.11		3900	ND<0.50	ND<0.50	ND<0.50	ND<1.0		36	
3/24/0		14.48	0.00	23.88	3.56		1500	ND<12	ND<12	ND<12	ND<25		200	
5/30/0		15.79	0.00	22.57	-1.31		1200	ND<2.5	ND<2.5	ND<2.5	ND<5.0		130	
8/22/0		17.26	0.00	21.10	-1.47		980	ND<0.50	ND<0.50	ND<0.50	ND<0.50		33	
10/31/0		18.08	0.00	20.28	-0.82		1300	ND<0.50	ND<0.50	ND<0.50	ND<0.50		10	
1/12/0		17.57	0.00	20.79	0.51		820	ND<0.50	ND<0.50	ND<0.50	ND<0.50		28	
4/4/07		17.40	0.00	20.96	0.17		460	ND<0.50	ND<0.50	ND<0.50	ND<0.50		41	
7/5/07		18.02	0.00	20.34	-0.62		920	ND<0.50	ND<0.50	ND<0.50	ND<0.50		7.0	
10/1/0	7 38.36	18.89	0.00	19.47	-0.87		560	ND<0.50	ND<0.50	ND<0.50	ND<0.50		3.0	

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Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 7124

Date Sampled	TBA	Ethanol (8015B)	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME
	(µg/l)	(mg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
MW-1								
7/28/02	ND<100	ND<500		ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
11/3/02	ND<100	ND<500		ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
1/24/03	ND<100	ND<500		ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
4/2/03	ND<100	ND<500		ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
7/1/03	ND<100	ND<500		ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
10/2/03	ND<100		ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
1/9/04	ND<100		ND<500	ND<2	ND<2.0	ND<2	ND<2	ND<2
4/26/04	ND<5.0		ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
7/22/04	ND<5.0		ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
10/29/04	ND<5.0		ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
1/12/05	ND<5.0		ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
6/20/05	ND<10		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
9/23/05	ND<10		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
12/13/05	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
3/24/06	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
5/30/06	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
8/22/06	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
10/31/06	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
1/12/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
4/4/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
7/5/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
10/1/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-2								
4/8/02	ND<2000	ND<10000		ND<40	ND<40	ND<40	ND<40	ND<40
7/28/02	ND<500	ND<2500		ND<10	ND<10	ND<10	ND<10	ND<10
11/3/02	ND<1000	ND<5000		ND<20	ND<20	ND<20	ND<20	ND<20
7124							Page 1	of 4

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 7124

Date Sampled	TBA	Ethanol (8015B)	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME
	(μg/l)	(mg/l)	(µg/l)	(µg/l)	(µg/l)	(μg/l)	$(\mu g/l)$	(µg/l)
MW-2	continued							
1/24/03	ND<500	ND<2500		ND<10	ND<10	ND<10	ND<10	ND<10
4/2/03	ND<1000	ND<5000		ND<20	ND<20	ND<20	ND<20	ND<20
7/1/03	ND<500	ND<2500		ND<10	ND<10	ND<10	ND<10	ND<10
10/2/03	ND<100		ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
1/9/04	ND<500		ND<2500	ND<10	ND<10	ND<10	ND<10	ND<10
6/20/05	25		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
9/23/05	ND<10		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
12/13/05	5 ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
3/24/06	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
5/30/06	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
8/22/06	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
10/31/06	6 ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
1/12/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
4/4/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
7/5/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
10/1/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
NAXW 2								
<b>MW-3</b> 10/2/03	ND<10000		ND<50000	ND<200	ND<200	ND<200	ND<200	ND<200
1/9/04	ND<5000		ND<25000		ND<100	ND<100	ND<100	ND<100
4/26/04	ND<250		ND<2500	ND<25	ND<25	ND<50	ND<25	ND<25
7/22/04			ND<2500	ND<25	ND<25	ND<50	ND<25	ND<25
10/29/04			ND<500	ND<5.0	ND<5.0	ND<10	ND<5.0	ND<5.0
1/12/05			ND<2500	ND<25	ND<25	ND<50	ND<25	ND<25
6/20/05			ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.31J
9/23/05	ND<10		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
12/13/05			ND<1200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	20				1.10 -2.0	110 2.0	110 -2.5	1111-4.3

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Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 7124

Date Sampled	TBA	Ethanol (8015B)	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME
	(µg/l)	(mg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
	continued							
3/24/06	ND<100		ND<2500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
5/30/06	ND<250		ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12
8/22/06	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
10/31/06	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
1/12/07	43		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
4/4/07	130		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
7/5/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
10/1/07	ND<20		ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
AW-4								
4/8/02	ND<5000	ND<25000		ND<100	ND<100	ND<100	ND<100	ND<100
7/28/02	ND<500	ND<2500		ND<10	ND<10	ND<10	ND<10	ND<10
11/3/02	ND<100	ND<500		ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
1/24/03	ND<2000	ND<10000		ND<40	ND<40	ND<40	ND<40	ND<40
4/2/03	ND<20000	ND<100000		ND<400	ND<400	ND<400	ND<400	ND<400
7/1/03	ND<500	ND<2500		ND<10	ND<10	ND<10	ND<10	ND<10
10/2/03	ND<2000		ND<10000	ND<40	ND<40	ND<40	ND<40	ND<40
1/9/04	ND<2000		ND<10000	ND<40	ND<40	ND<40	ND<40	ND<40
4/26/04	430		ND<1000	ND<10	ND<10	ND<20	ND<10	ND<10
7/22/04	ND<100		ND<1000	ND<10	ND<10	ND<20	ND<10	ND<10
10/29/04	63		ND<250	ND<2.5	ND<2.5	ND<5.0	ND<2.5	ND<2.5
1/12/05	1300		ND<250	ND<10	ND<2.5	ND<5.0	ND<2.5	ND<2.5
6/20/05	580		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
9/23/05	92		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
12/13/05	50		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
3/24/06	1900		ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12
5/30/06	ND<50		ND<1200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5

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Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 7124

Date Sampled	TBA	Ethanol (8015B)	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME				
	(µg/l)	(mg/l)	(µg/l)	(µg/l)	(μg/l)	(µg/l)	(µg/l)	$(\mu g/l)$				
MW-4	continued											
8/22/06	150		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
10/31/06	43		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
1/12/07	72		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
4/4/07	260		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
7/5/07	18		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
10/1/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				

# FIGURES

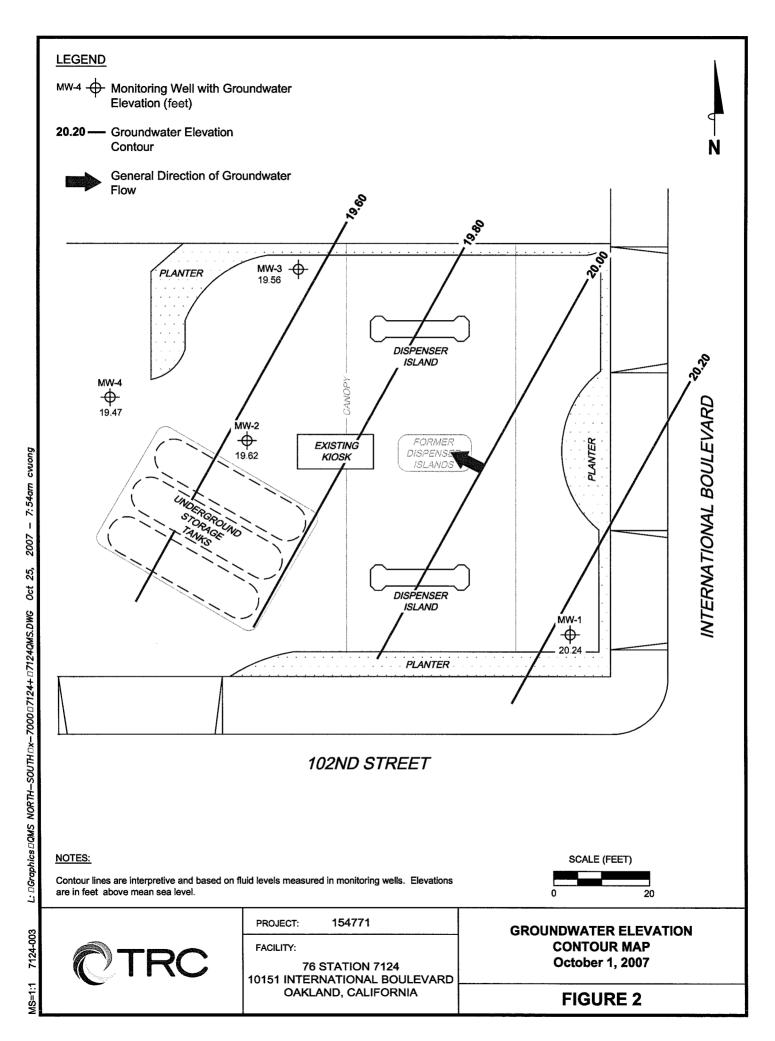
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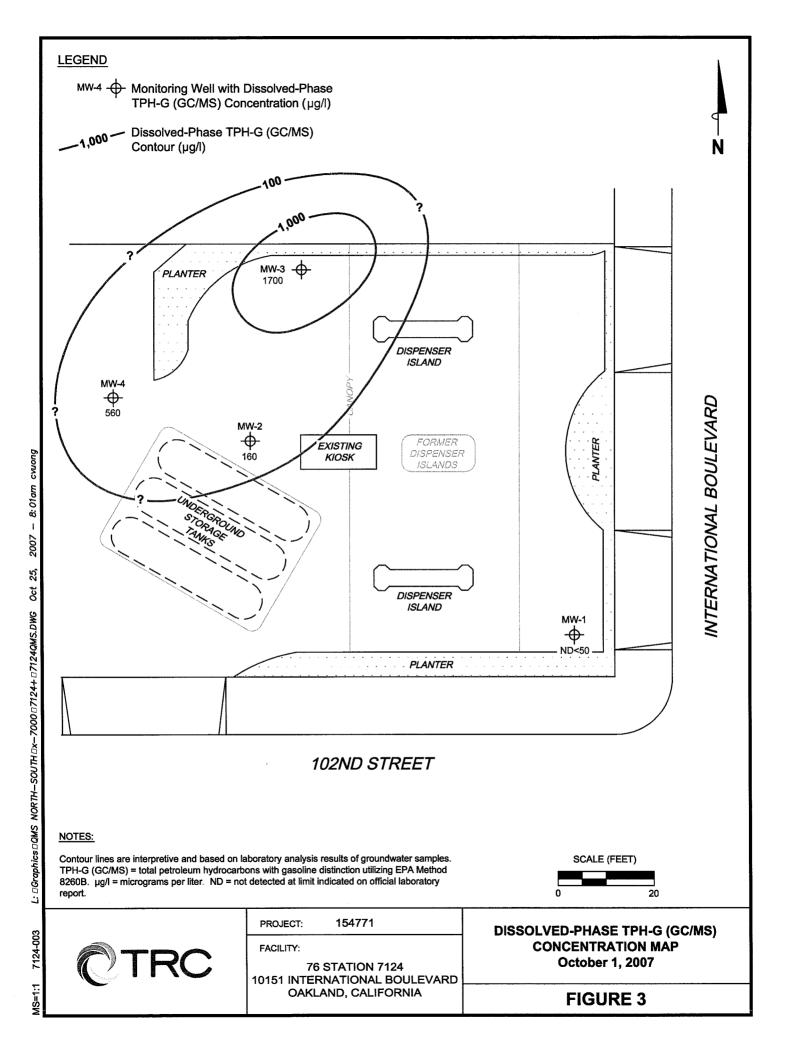
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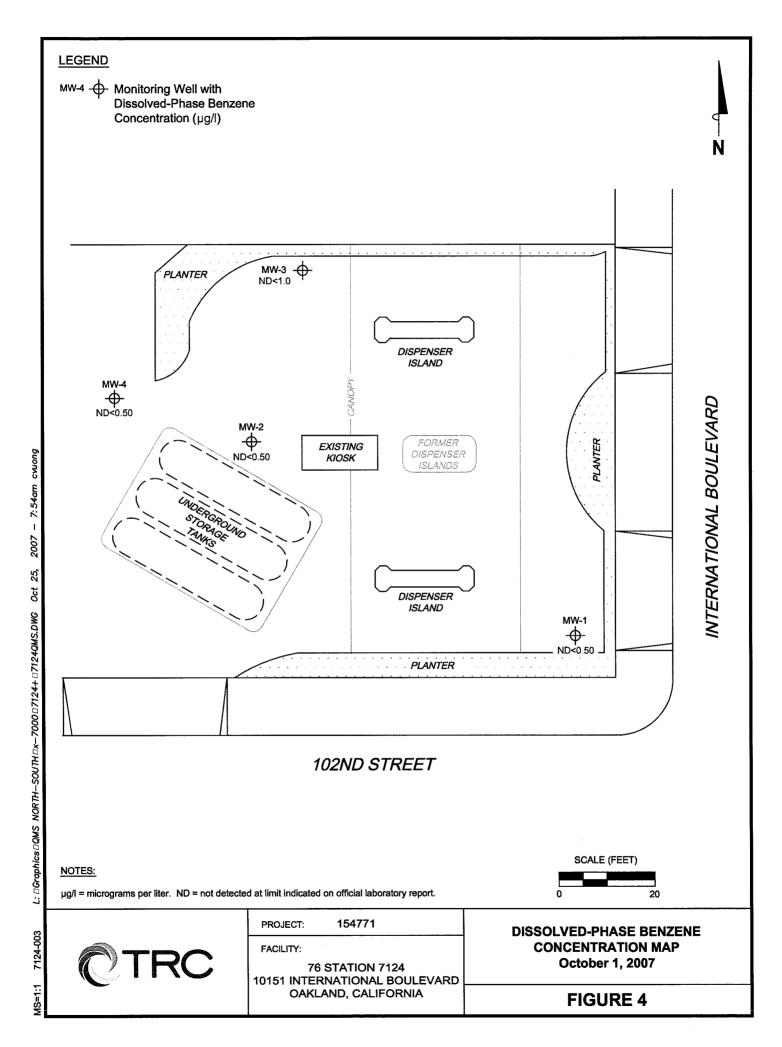
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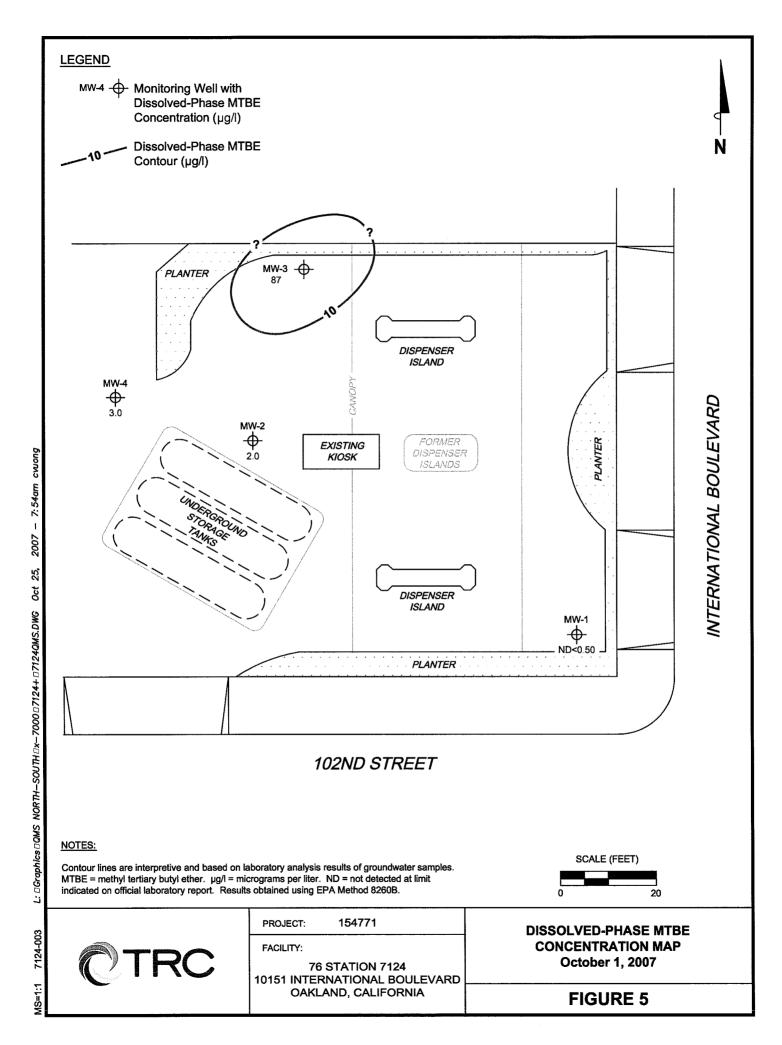
S07124vm.dwg

PS=1:1 L: DQMS VICINITY



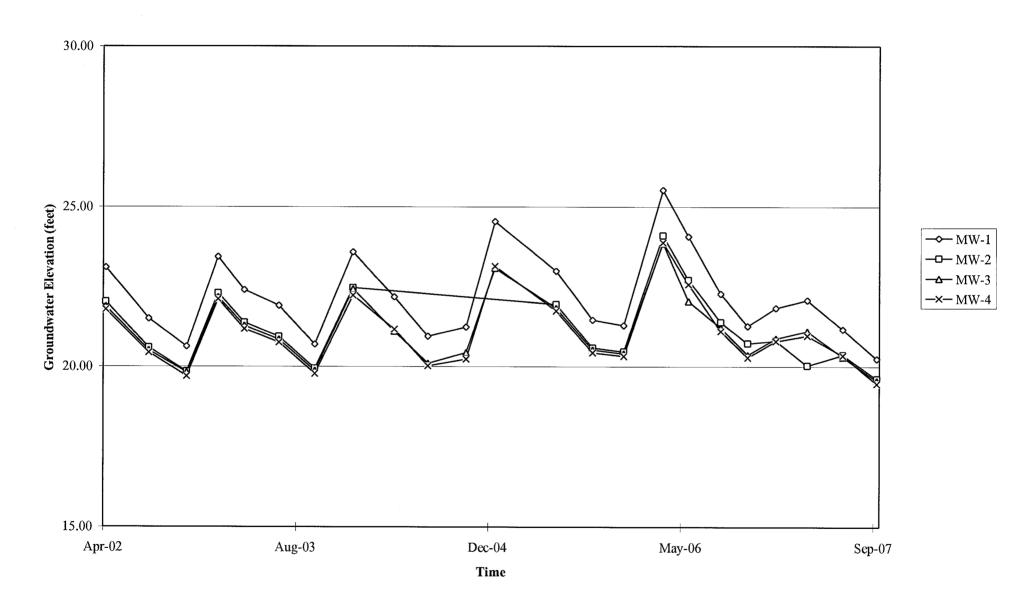






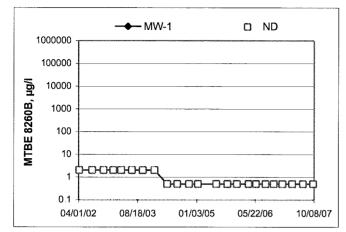
# GRAPHS

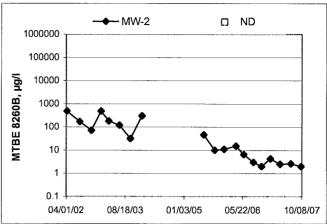
# Groundwater Elevations vs. Time 76 Station 7124

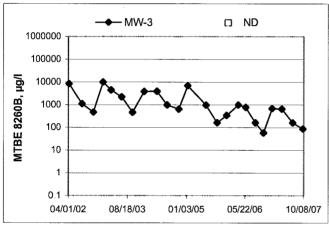


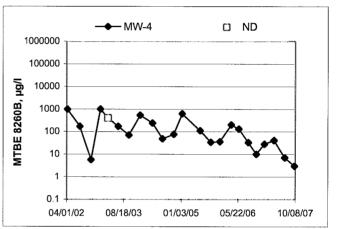
### MTBE 8260B Concentrations vs Time

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 (surveyo rs 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.

1/5/04 version

# FIELD MONITORING DATA SHEET

Technician: JOE	Job #Mask #: 125703/ 17472	Date! 0-01-07
	Project Manager A. Collins	Pageof(

	Time		Total	Depth to	Depth to	Product Thickness	Time	iş
Well#	Gauged	TOC	Depth	Water	Product	(feet)	Sampled	Misc. Well Notes
	0557	X	24.76	17,13		<del></del>	0 700	4"
	0606	X	25,24	18.25	1		0723	
NW-4:	0612		7	18.89			0741	411
14.4.	0618	X	1	18.16			0805	40
				,				
			1.2					
	<del>                                     </del>							
		-		T				
	<del> </del>			1				
<u></u>	1	1		1	1			
•		+	+	<del>                                     </del>				
	+	<del> </del>	<del>-  </del>					
	-	-		<del>                                     </del>				
FIELD DA	TA COMP	LETE	QAK	¢	CO		WELL BOX	CONDITION SHEETS
WTT CEF	TIFICATE		MANIF	EST	DRUM II	NYENTORY	TR	AFFIC CONTROL

#### **GROUNDWATER SAMPLING FIELD NOTES**

		Tech	nician: _	JOE		_		•	
Site: <u>"7/2</u>	24	Proje	ct No.: 12	5 703	)		Date:_	10-0	1-07
Well No	MW-1	,	······	Purge Method	1: <u>07</u>	<u>-</u> A			
Depth to Wa	ater (feet):/	17.13		Depth to Prod					
Total Depth	(feet) <u>Z</u>	14.76		LPH & Water	Recovered (	gallons):		_	
Water Colu	mn (feet):	7.63		Casing Diame	eter (Inches):	44			
		et): 18,65		1 Well Volume	e (gallons):	5		"	
Time Start	Time Stop	Depth to Water	Volume Purged	Conduc- tivity	Temperature	∍ pH	D.O.	ORP	Turbidity
	0.07	(feet)	(gallons)	(uS/cm)   51941	19.3	7.68			
0648			10	513.1	19.2	7.16		<del> </del>	
	0653		15	521.6	19.0	6.97			
	<u> </u>				<del></del>		0 1-	<u></u>	<u> </u>
Stat	tic at Time Sa		15	al Gallons Pur	ged		Sample フラク		
Comments	18.00	<u>/</u>	10				2,0	<u> </u>	
Comment	P						<del></del>		
L									
Well No	MW-2			Purge Metho	d: <i>i</i> D.	₽A_		,	
Depth to W	/ater (feet):	18,25		Depth to Pro	duct (feet):	.,,,,		<del></del>	
Total Dept	h (feet) Z	6.99		LPH & Water	r Recovered	(gallons):		<u></u>	
Water Colu	ımn (feet):	6.99		Casing Diam	eter (Inches):	: <u>4″</u>			
80% Rech	arge Depth(fe	et): 19,64			ne (gallons):_	· · · · · · · · · · · · · · · · · · ·		<del></del>	
•				•	, _				
Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperatur (F,C)	ерН	D.O.	ORP	Turbidity
0713			5	525.9	18.7	7,30			
			10	526.2	19.6	6,95	ļ		<b></b>
	0717		15	531.7	19.8	6.85	ļ		
Sta	atic at Time Sa	ampled	To	tal Gallons Pur	rged		Sample	e Time	1
		<del></del>	<del> </del>		~	· · · · · · · · · · · · · · · · · · ·	<b>—</b> · · ·		

Comments:

### **GROUNDWATER SAMPLING FIELD NOTES**

Technician: _	JOE	
Site: 7124 Project No.: 12	25703	Date: 10-01-07
Well No. MW-4	Purge Method: DIA	
Depth to Water (feet): 18,89  Total Depth (feet) 24,88  Water Column (feet): 5,99  80% Recharge Depth(feet): 20,08	Depth to Product (feet):  LPH & Water Recovered (gallons):  Casing Diameter (Inches):  1 Well Volume (gallons):	

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F,C)	рН	D.O.	ORP	Turbidity
0732			4	516.4	18.4	6,89			
			8	534.8	19.3	6.69			<u> </u>
	0736		12	5281	19.2	6.76			<u> </u>
Stat	ic at Time Sa	ampled	Tot	al Gallons Pu	rged	<u> </u>	Sample	Time	<del>. l </del>
	19.27		12			(	0741		
Comments	s:		-						

Well No. MW-3	Purge Method: DT4
Depth to Water (feet): 18.16  Total Depth (feet) 25.10  Water Column (feet): 6.94  80% Recharge Depth(feet): 19.54	Depth to Product (feet):

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (FC)	pН	D.O.	ORP	Turbidity
0754			5	5569	18.1	6.99			
			10	562.4	18.6	6.82			
	0758		15	561.7	18.8	6.77	·		
Stat	ic at Time Sa	ampled	Tota	al Gallons Pu	rged	<del></del>	Sample	Time	.I.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	18.46		15			01	305		
Comments	<del></del>								



Date of Report: 10/12/2007

Anju Farfan

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

RE: 7124

BC Work Order: 0711453

Enclosed are the results of analyses for samples received by the laboratory on 10/01/2007 20:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers

Client Service Rep

**Authorized Signature** 



Project: 7124

Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/12/2007 14:18

### **Laboratory / Client Sample Cross Reference**

Laboratory	Client Sample Informat	ion			
0711453-01	COC Number: Project Number:	 7124	Receive Date: Sampling Date:	10/01/2007 20:55 10/01/2007 07:00	Delivery Work Order: Global ID: T0600173591
	Sampling Location: Sampling Point: Sampled By:	MW-1 MW-1 TRCI	Sample Depth: Sample Matrix:	 Water	Matrix: W Samle QC Type (SACode): CS Cooler ID:
0711453-02	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 7124 MW-2 MW-2 TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	10/01/2007 20:55 10/01/2007 07:23  Water	Delivery Work Order: Global ID: T0600173591 Matrix: W Samle QC Type (SACode): CS Cooler ID:
0711453-03	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 7124 MW-4 MW-4 TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	10/01/2007 20:55 10/01/2007 07:41  Water	Delivery Work Order: Global ID: T0600173591 Matrix: W Samle QC Type (SACode): CS Cooler ID:
0711453-04	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 7124 MW-3 MW-3 TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	10/01/2007 20:55 10/01/2007 08:05  Water	Delivery Work Order: Global ID: T0600173591 Matrix: W Samle QC Type (SACode): CS Cooler ID:

Project: 7124

Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/12/2007 14:18

<b>BCL Sample ID:</b> 0711453-01	Client Sam	ple Name	e: 7124, MW-1, MW	/-1, 10/1/200	7 7:00:00	DAM						
				·	Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL MDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526	ND	
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526	ND	
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526	ND	
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526	ND	
Toluene	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526	ND	
Total Xylenes	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526	ND	
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526	ND	
t-Butyl alcohol	ND	ug/L	10	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526	ND	
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526	ND	
Ethanol	ND	ug/L	250	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526	ND	
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526	ND	
1,2-Dichloroethane-d4 (Surrogate)	101	%	76 - 114 (LCL - UCL)	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526		
Toluene-d8 (Surrogate)	98.3	%	88 - 110 (LCL - UCL)	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526		
4-Bromofluorobenzene (Surrogate)	99.2	%	86 - 115 (LCL - UCL)	EPA-8260	10/08/07	10/09/07 14:11	KEN	MS-V12	1	BQJ0526		

Project: 7124

Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/12/2007 14:18

BCL Sample ID: 0711453-02	Client Sam	ple Name	: 7124, MW-2, MV	v-2, 10/1/200	7 7:23:00	DAM						
					Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL MDL	<u>Method</u>	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526	ND	
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526	ND	
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526	ND	
Methyl t-butyl ether	2.0	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526	ND	
Toluene	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526	ND	
Total Xylenes	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526	ND	
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526	ND	
t-Butyl alcohol	ND	ug/L	10	EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526	ND	
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526	ND	
Ethanol	ND	ug/L	250	EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526	ND	
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526	ND	
Total Purgeable Petroleum Hydrocarbons	160	ug/L	50	EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526	ND	
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL	) EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526		
Toluene-d8 (Surrogate)	97.1	%	88 - 110 (LCL - UCL	) EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526		
4-Bromofluorobenzene (Surrogate)	106	%	86 - 115 (LCL - UCL	) EPA-8260	10/08/07	10/09/07 14:35	KEN	MS-V12	1	BQJ0526		



Project: 7124

Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/12/2007 14:18

BCL Sample ID: 0711453-03	Client Sam	,	e: 7124, MW-4, N	,	7:41:00 Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL MD	L Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene	ND	ug/L	0.50	EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526	ND	
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526	ND	
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526	ND	
Methyl t-butyl ether	3.0	ug/L	0.50	EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526	ND	
Toluene	ND	ug/L	0.50	EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526	ND	
Total Xylenes	ND	ug/L	0.50	EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526	ND	
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526	ND	
t-Butyl alcohol	ND	ug/L	10	EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526	ND	
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526	ND	
Ethanol	ND	ug/L	250	EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526	ND	
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526	ND	
Total Purgeable Petroleum Hydrocarbons	560	ug/L	50	EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526	ND	
1,2-Dichloroethane-d4 (Surrogate)	98.4	%	76 - 114 (LCL - UC	L) EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526		
Toluene-d8 (Surrogate)	95.3	%	88 - 110 (LCL - UC	L) EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526		
4-Bromofluorobenzene (Surrogate)	116	%	86 - 115 (LCL - UC	L) EPA-8260	10/08/07	10/10/07 10:28	KEN	MS-V12	1	BQJ0526		S09

Project: 7124

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/12/2007 14:18

<b>BCL Sample ID:</b> 0711453-0	4 Client San	ple Name	e: 7124, MW-3, MW	-3, 10/1/200	7 8:05:00	MAC						
					Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL MDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene	ND	ug/L	1.0	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526	ND	A01
1,2-Dibromoethane	ND	ug/L	1.0	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526	ND	A01
1,2-Dichloroethane	ND	ug/L	1.0	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526	ND	A01
Ethylbenzene	ND	ug/L	1.0	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526	ND	A01
Methyl t-butyl ether	87	ug/L	1.0	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526	ND	A01
Toluene	ND	ug/L	1.0	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526	ND	A01
Total Xylenes	ND	ug/L	1.0	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526	ND	A01
t-Amyl Methyl ether	ND	ug/L	1.0	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526	ND	A01
t-Butyl alcohol	ND	ug/L	20	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526	ND	A01
Diisopropyl ether	ND	ug/L	1.0	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526	ND	A01
Ethanol	ND	ug/L	500	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526	ND	A01
Ethyl t-butyl ether	ND	ug/L	1.0	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526	ND	A01
Total Purgeable Petroleum Hydrocarbons	1700	ug/L	100	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526	ND	A01
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526		
Toluene-d8 (Surrogate)	97.9	%	88 - 110 (LCL - UCL)	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526		
4-Bromofluorobenzene (Surrogate)	109	%	86 - 115 (LCL - UCL)	EPA-8260	10/08/07	10/10/07 04:33	KEN	MS-V12	2	BQJ0526		



Project: 7124

Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/12/2007 14:18

## **Volatile Organic Analysis (EPA Method 8260)**

### **Quality Control Report - Precision & Accuracy**

									•	Contr	ol Limits
Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	RPD	Percent Recovery Lab Quals
Benzene	BQJ0526	Matrix Spike	0711763-01	0	26.990	25.000	ug/L		108		70 - 130
		Matrix Spike Duplicat	e 0711763-01	0	26.130	25.000	ug/L	2.8	105	20	70 - 130
Toluene	BQJ0526	Matrix Spike	0711763-01	0	27.260	25.000	ug/L		109	and the second second	70 - 130
		Matrix Spike Duplicat	e 0711763-01	0	27.060	25.000	ug/L	0.9	108	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BQJ0526	Matrix Spike	0711763-01	ND	10.320	10.000	ug/L		103		76 - 114
		Matrix Spike Duplicat	e 0711763-01	ND	10.050	10.000	ug/L		100		76 - 114
Toluene-d8 (Surrogate)	BQJ0526	Matrix Spike	0711763-01	ND	10.100	10.000	ug/L		101		88 - 110
		Matrix Spike Duplicat	e 0711763-01	ND	10.070	10.000	ug/L		101		88 - 110
4-Bromofluorobenzene (Surrogate)	BQJ0526	Matrix Spike	0711763-01	ND	9.9400	10.000	ug/L		99.4		86 - 115
		Matrix Spike Duplicat	e 0711763-01	ND	9.9400	10.000	ug/L		99.4		86 - 115



Project: 7124

Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/12/2007 14:18

## Volatile Organic Analysis (EPA Method 8260)

### **Quality Control Report - Laboratory Control Sample**

Constituent									Control Limits			
	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery		rcent overy	RPD	Lab Quals
Benzene	BQJ0526	BQJ0526-BS1	LCS	24.360	25.000	0.50	ug/L	97.4	70	- 130		
Toluene	BQJ0526	BQJ0526-BS1	LCS	25.370	25.000	0.50	ug/L	101	70	- 130		
1,2-Dichloroethane-d4 (Surrogate)	BQJ0526	BQJ0526-BS1	LCS	10.080	10.000		ug/L	101	76	- 114		
Toluene-d8 (Surrogate)	BQJ0526	BQJ0526-BS1	LCS	10.040	10.000		ug/L	100	88	- 110	* = **********************************	
4-Bromofluorobenzene (Surrogate)	BQJ0526	BQJ0526-BS1	LCS	9.9500	10.000		ug/L	99.5	86	- 115		



Project: 7124

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/12/2007 14:18

## **Volatile Organic Analysis (EPA Method 8260)**

#### **Quality Control Report - Method Blank Analysis**

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BQJ0526	BQJ0526-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BQJ0526	BQJ0526-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BQJ0526	BQJ0526-BLK1	ND	ug/L	0.50		
Ethylbenzene	BQJ0526	BQJ0526-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BQJ0526	BQJ0526-BLK1	ND	ug/L	0.50		
Toluene	BQJ0526	BQJ0526-BLK1	ND	ug/L	0.50		
Total Xylenes	BQJ0526	BQJ0526-BLK1	ND	ug/L	0.50		
t-Amyl Methyl ether	BQJ0526	BQJ0526-BLK1	ND	ug/L	0.50		1 11
t-Butyl alcohol	BQJ0526	BQJ0526-BLK1	ND	ug/L	10		
Diisopropyl ether	BQJ0526	BQJ0526-BLK1	ND	ug/L	0.50		
Ethanol	BQJ0526	BQJ0526-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BQJ0526	BQJ0526-BLK1	ND	ug/L	0.50	***************************************	
Total Purgeable Petroleum Hydrocarbons	BQJ0526	BQJ0526-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BQJ0526	BQJ0526-BLK1	98.7	%	76 - 114 (L	.CL - UCL)	
Toluene-d8 (Surrogate)	BQJ0526	BQJ0526-BLK1	97.3	%	88 - 110 (L	.CL - UCL)	
4-Bromofluorobenzene (Surrogate)	BQJ0526	BQJ0526-BLK1	97.5	%	86 - 115 (L	.CL - UCL)	



TRC Alton Geoscience

21 Technology Drive Irvine, CA 92618-2302 Project: 7124

Project Number: [none]

Project Manager: Anju Farfan

Reported: 10/12/2007 14:18

#### **Notes And Definitions**

MDL

Method Detection Limit

ND

Analyte Not Detected at or above the reporting limit

PQL

Practical Quantitation Limit

RPD

Relative Percent Difference

A01

PQL's and MDL's are raised due to sample dilution.

S09

The surrogate recovery on the sample for this compound was not within the control limits.

Submission #: ()		,, <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	CAMDIE	PECEIE	T EODM		v. No. 10	01/21/04	Page _	Of				
SHIPPNO SINFORMATION Federal Express D UPS D Hand Delivery D Boc Lab Fleid Service D Other D Specify)  Refrigerant: Ice D Blue Ice D None D Other D Comments:    Country   Comments   Comments   Comments   Comments		520	*		TOKW	Ke.	— <del>T</del>		· age _		<del></del>			
Federal Express				oue:										
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All samples received? Yes of No O All samples containers intact? Yes of No O Description(s) match COC? Yes of No O Date/Time COC Types of No O	Custody Seals Ice Chesture			None 🗖	Commer	nts:	* 5,8,							
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 BC LABORATORIES, INC.

4100 Atlas Court □ Bakersfield, CA 93308 (661) 327-4911 □ FAX (661) 327-1918

**CHAIN OF CUSTODY** 

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#### **STATEMENTS**

#### **Purge Water Disposal**

Non-hazardous groundwater produced during purging and sampling of monitoring was accumulated at TRC's groundwater monitoring facility at Concord, California, for transportation by a licensed carrier, 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 others.

#### 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.