#### **RECEIVED**

10:01 am, Mar 13, 2009

Alameda County Environmental Health



Sacramento, California 95818

March 11, 2009

Barbara Jakub Alameda County Health Agency 1131 Harbor Bay parkway, Suite250 Alameda, California 94502-577

Re:

Quarterly Summary Report—First Quarter 2009 Former 76 Service Station # 7124 RO # 2444 10151 International Blvd. Oakland, CA

Dear Ms. Jakub:

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 call me at (916) 558-7666.

Sincerely,

Terry L. Grayson Site Manager

Risk Management & Remediation



Stantec Consulting Corporation 3017 Kilgore Road Suite 100 Rancho Cordova CA 95670 Tel: (916) 861-0400

Fax: (916) 861-0430

#### Quarterly Summary Report - First Quarter 2009 Former 76 Service Station No. 7124 10151 International Boulevard Oakland, California

Stantec Project No.: 211401060

Submitted to:
Ms. Barbara Jakub
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Oakland, California 94502

(Sent Via Electronic Upload to Alameda ftp)

Submitted by:
Stantec Consulting Corporation
3017 Kilgore Road, Suite 100
Rancho Cordova, California 95670
916-861-0400

Prepared on behalf of: ConocoPhillips Company Mr. Terry Grayson Site Manager 76 Broadway Sacramento, California 95818

March 11, 2009

**Quarterly Summary Report - First Quarter 2009** March 11, 2009

#### INTRODUCTION

On behalf of ConocoPhillips, Stantec Consulting Corporation (Stantec), is forwarding the quarterly summary report for the former 76 Service Station No. 7124, located at 10151 International Boulevard, in Oakland, California.

#### SITE DESCRIPTION

The site is currently an active Royal Gasoline Station located on the northwest corner of the intersection of International Boulevard and 102nd Avenue in Oakland, California (Figure 1). Site facilities include three underground storage tanks (USTs) and associated piping and fuel dispensers. A detailed site plan is included as Figure 2.

#### SITE GEOLOGY AND HYDROGEOLOGY

As shown in the United States Geological Survey Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California, prepared in 2000, the site is underlain by Holocene-aged alluvial fan and fluvial deposits. Based on assessment activities performed by Stantec in September 2008, the subsurface generally consists of silty sands to depths of 5 to 7 feet below ground surface (bgs), with a clay layer generally being encountered beneath the sand layer to depths of 12 to 15 feet bgs. Below this clay layer, the subsurface generally consists of interbedded silt and clay layers with occasional sand layers with thicknesses of up to three feet being observed.

As outlined in the California Department of Water Resources 2003 *California Groundwater: Bulletin 118*, the site lies within the East Bay Plain Subbasin of the Santa Clara Valley Groundwater Basin. The East Bay Plain Subbasin is a northwest trending alluvial plain of Quaternary Age, bounded on the north by San Pablo Bay, on the east by the contact with Franciscan Complex rocks, on the south by the Niles Cone Groundwater Basin. The East Bay Plain Subbasin extends beneath San Francisco Bay to the west.

#### PREVIOUS ASSESSMENT

On March 22, 2000, SECOR International Incorporated (SECOR [now Stantec]) 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 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

#### **Quarterly Summary Report - First Quarter 2009**

March 11, 2009

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.

In September 2008, Stantec oversaw the advancement of two on-site and five off-site direct push soil borings. Soil and grab groundwater samples were collected and analyzed for total purgeable petroleum hydrocarbons (TPPH [aka gasoline]), BTEX, and 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) and 1,2-dichloroethane (1,2-DCA) via EPA Method 8260B. Maximum concentrations of TPPH and MTBE in groundwater were observed in off-site boring SB-4 (north of monitoring well MW-3), at concentrations of 45,000 micrograms per liter ( $\mu$ g/L), and 62  $\mu$ g/L, respectively.

#### **SENSITIVE RECEPTORS**

During the third quarter of 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.

During the third quarter of 2008, Stantec contacted the DWR to obtain copies of all well completion reports for wells located within 0.25-mile of the site. Stantec reviewed these well completion reports and determined that monitoring and vapor extraction wells associated with two sites are located within 0.25-mile of the site. One monitoring well is located approximately 650 feet south-southeast of the site (cross-gradient), while six monitoring wells and two vapor extraction wells are located approximately 1,150 feet north-northwest of the site (cross-gradient). No domestic or industrial supply wells or irrigation wells were located within 0.25-mile of the site.

Stantec also performed a utility survey at the site. The survey was conducted by having Underground Services Alert (USA) mark the site for utilities. Stantec staff subsequently hired a private utility locator to confirm utility locations and attempt to locate any potential utilities not marked by USA. Based on depth to groundwater (generally 15 to 20 feet bgs) and observed dissolved-phase hydrocarbon distribution, Stantec felt the utility trenches represent likely preferential pathways, and accordingly, did not determine the depths of the utility trenches.

**Quarterly Summary Report - First Quarter 2009** 

March 11, 2009

#### 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 TPPH, BTEX, fuel oxygenates TBA, MTBE, DIPE, ETBE, TAME, and ethanol, and lead scavengers EDB and 1,2-DCA by EPA Method 8260B.

#### DISCUSSION

During the first quarter 2009, depth to groundwater ranged between 17.30 and 19.10 feet below top of casing (toc). Historical groundwater depths have previously been reported between 15.11 and 19.25 feet below toc. The direction of groundwater flow was toward the west at a gradient of 0.007 foot/foot (Attachment 1). Historically, groundwater gradient flows to the west, southwest, and south, with a westerly gradient being the predominant direction.

The highest concentrations of TPPH and MTBE continue to be detected in on-site well MW-3 (historical highs of 130,000  $\mu$ g/L and 10,000  $\mu$ g/L, respectively, observed in 2003). This quarter, the maximum concentrations of TPPH and MTBE were reported in well MW-3 at 2,000  $\mu$ g/L, and 310  $\mu$ g/L, respectively (Attachment 1). The down-gradient/cross-gradient extent of the dissolved plume remains undefined by the existing monitoring well network.

#### **CHARACTERIZATION STATUS**

None of the groundwater samples collected during the first quarter 2009 quarterly sampling event showed detectable levels of any BTEX components. The highest concentrations of residual TPHg and/or 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 down-gradient (northwest) direction, but MTBE concentrations exhibit a generally declining trend, and variable TBA levels in MW-4 may indicate active degradation of MTBE.

#### **REMEDIATION STATUS**

Currently, there is no active remediation at this site.

#### **CURRENT ASSESSMENT ACTIVITIES**

In September 2008, Stantec oversaw the advancement of two on-site and five off-site direct push soil borings. Results of the site assessment activities are presented in Stantec's *Additional Assessment Report*, dated October 15, 2008. An electronic copy of the report was uploaded to the GeoTracker database on October 16, 2008, but due to an oversight on Stantec's part, the report was not uploaded to the Alameda County Environmental Health Services (ACEHS) ftp portal at that time. An electronic copy of the report was uploaded to the ACEHS ftp portal on February 2, 2009, as documented in Stantec's correspondence titled *Report Upload for Work Performed in May 2008* (letter was titled incorrectly; as the work was performed in September 2008), dated February 3, 2009.

#### **Quarterly Summary Report - First Quarter 2009**

March 11, 2009

#### RECENT SUBMITTALS/CORRESPONDENCE

Submitted – Quarterly Summary and Monitoring Report – Fourth Quarter 2008, dated November 19, 2008.

Submitted – Report Upload for Work Performed in May 2008, dated February 3, 2009.

#### **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, January through March 2009*, dated February 6, 2009 (Attachment 1).

#### THIS QUARTER ACTIVITIES (First Quarter 2009)

- 1. TRC performed quarterly groundwater monitoring and sampling event.
- 2. Stantec uploaded the *Additional Assessment Report*, dated October 15, 2008 to the ACEHS ftp portal.
- 3. Stantec prepared and submitted a quarterly summary and monitoring report.

#### **NEXT QUARTER ACTIVITIES (Second Quarter 2009)**

- 1. TRC to perform coordinated groundwater monitoring and sampling event.
- 2. Stantec to prepare and submit quarterly summary and monitoring report.
- 3. Stantec to review response from ACEH pertaining to Stantec's *Additional Assessment Report*, dated October 15, 2008.

#### **LIMITATIONS**

This report presents our understanding of existing conditions at the subject site located at 10151 International Boulevard, Oakland, California. Evaluations of the geologic conditions at the site for the purposes of this investigation are inherently limited due to the number of observation points. There are no representations, warranties, or guarantees that the points selected for sampling are representative of the entire site. Data from this report reflects the conditions at specific locations at a specific point in time. Stantec assumes no responsibility for work reported or performed by other consultants or contractors. Stantec makes no warranties or guarantees for the groundwater monitoring report (Attachment 1) prepared by TRC. No other interpretation, representations, warranties, guarantees, express or implied, are included or intended in the report findings.

Sincerely,

**Stantec Consulting Corporation** 

Benjamin Chevlen, P.G.

Associate Geologist

BENJAMIN CHEVLEN No. 8471 Exp. 06/30/12

Ed Simonis, P.G. Senior Geologist

Attachments:

CC:

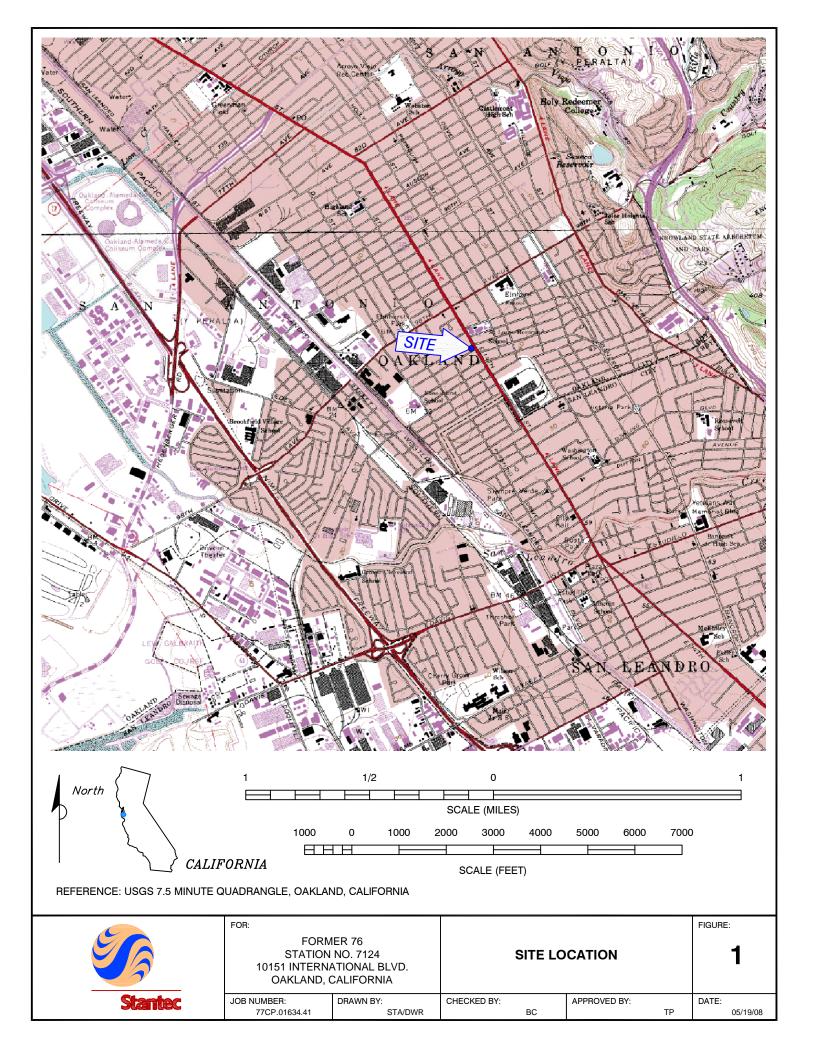
Figure 1 - Site Location Map

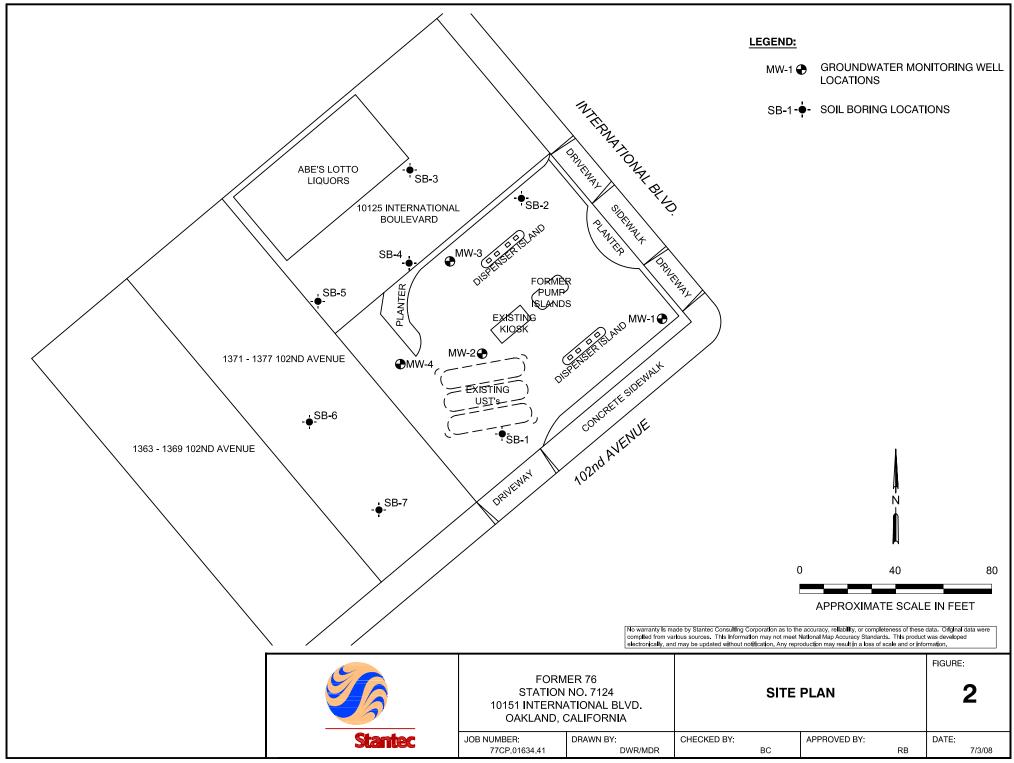
Figure 2 – Site Plan

Attachment 1 - TRC's Quarterly Monitoring Report – January through March 2009 dated – February 6, 2009.

Mr. Terry Grayson, ConocoPhillips (via electronic upload to Livelink only)

**FIGURES** 





## ATTACHMENT 1 TRC'S QUARTERLY MONITORING REPORT JANUARY THROUGH MARCH 2009

Quarterly Summary Report – First Quarter 2009 Former 76 Station 7124 10151 International Boulevard Oakland, California





21 Technology Drive Irvine, CA 92618

949.727.9336 PHONE 949.727.7399 FAX

www.TRCsolutions.com

DATE:

February 10, 2009

TO:

ConocoPhillips Company

76 Broadway

Sacramento, CA 95818

ATTN:

MR TERRY GRAYSON

SITE:

**76 STATION 7124** 

10151 INTERNATIONAL BOULEVARD

OAKLAND, CALIFORNIA

RE:

QUARTERLY MONITORING REPORT

JANUARY THROUGH MARCH 2009

Dear Mr. Grayson:

Please find enclosed our Quarterly Monitoring Report for 76 Station 7124, located at 10151 International Boulevard, 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, Stantec, Inc (2 copies)

Enclosures 200400/7124R22 QMS.doc

#### QUARTERLY MONITORING REPORT JANUARY THROUGH MARCH 2009

76 STATION 7124 10151 International Boulevard Oakland, California

Prepared For:

Mr. Terry Grayson CONOCOPHILLIPS COMPANY 76 Broadway Sacramento, California 95818

By:

Senior Project Geologist, Irvine Operations

Date: 2/6/09



No. PG3531

	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 2A: Historical Groundwater Flow Direction
	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 – 01/14/09
	Groundwater Sampling Field Notes – 01/14/09
Laboratory	Official Laboratory Reports
Reports	Quality Control Reports
	Chain of Custody Records
Statements	Purge Water Disposal
	Limitations

# Summary of Gauging and Sampling Activities January 2009 through March 2009 76 Station 7124 10151 International Boulevard Oakland, CA

Project Coordinator: Telephone:	Terry Grayson 916-558-7666		Water Sampling Contractor: <i>TRC</i> Compiled by: <b>Christina Carrillo</b>
Date(s) of Gauging/	Sampling Event: 0	1/14/0	
Sample Points			
Groundwater wells: Purging method: <b>S</b> Purge water disposa Other Sample Points	ubmersible pump i: Veolia/Rodeo	Unit 10	Points gauged: 4 Points sampled: 4
Liquid Phase Hydr	rocarbons (LPH)		
Sample Points with LPH removal freque Treatment or dispos	ncy:	m thickn	ess (feet): Method:
Hydrogeologic Pa	rameters		
Average change in g Interpreted groundv Current event:	er elevation (relative Proundwater elevation Pater gradient and fl	to avail on since low dired	able local datum): 19.55 feet previous event: 0.19 feet ction:
Selected Laborato	ry Results		
Sample Points with o Maximum report	detected <b>Benzene:</b> ed benzene concent		Sample Points above MCL (1.0 μg/l):
Sample Points with Sample Points with	•	3 3	Maximum: <b>2,000 μg/l (MW-3)</b> Maximum: <b>320 μg/l (MW-3)</b>

Notes:

### **TABLES**

#### **IABLE 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)

D = duplicate P = no-purge sample

#### **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

IBA = tertiary butyl alcohol
ICA = trichloroethane
ICE = trichloroethane
trichloroethane

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

IRPH = 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.

#### 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

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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)
Table 1a	Well/ Date	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME					
Historic	Data												
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)
Table 2a	Well/ Date	ТВА	Ethanol (8015B)	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME				

Table 1

CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

January 14, 2009

76 Station 7124

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness			TPH-G (8015M)	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)	$(\mu g/l)$	$(\mu g/l)$	
MW-1 01/14/09 MW-2	9 37.37	17.30	0.00	20.07	0.20		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
01/14/09	9 37.87	18.40	0.00	19.47	0.25		66	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2.5	
<b>MW-3</b> 01/14/09	9 37.72	18.33	0.00	19.39	0.17		2000	ND<0.50	ND<0.50	ND<0.50	ND<1.0		320	
<b>MW-4</b> 01/14/0	9 38.36	19.10	0.00	19.26	0.15		430	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2.4	



Table 1 a
ADDITIONAL CURRENT ANALYTICAL RESULTS
76 Station 7124

Sampled Ethanol dibromide 1,2-DCA  TBA (8260B) (EDB) (EDC) DIPE ETBE TAME (μg/l) (μg/l) (μg/l) (μg/l) (μg/l) (μg/l) (μg/l)  MW-1 01/14/09 ND<10 ND<250 ND<0.50 ND	Date			Ethylene-				
(μg/l)	Sampled		Ethanol	dibromide	1,2-DCA			
MW-1 01/14/09 ND<10 ND<250 ND<0.50 ND<0.50 ND<0.50 ND<0.50 ND<0.50 ND<0.50  MW-2 01/14/09 ND<10 ND<250 ND<0.50 ND<0.50 ND<0.50 ND<0.50 ND<0.50 ND<0.50  MW-3 01/14/09 ND<10 ND<250 ND<0.50 ND<0.50 ND<0.50 ND<0.50 ND<0.50 ND<0.50  MW-4		TBA	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME
01/14/09 ND<10 ND<250 ND<0.50 ND		(µg/l)	(μg/ <b>l</b> )	(µg/l)	(µg/l)	(µg/l)	(μg/l)	(µg/l)
01/14/09 ND<10 ND<250 ND<0.50 ND	MW-1							
01/14/09 ND<10 ND<250 ND<0.50		ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
01/14/09 ND<10 ND<250 ND<0.50	MW-2							
01/14/09 ND<10 ND<250 ND<0.50 ND<0.50 ND<0.50 ND<0.50 ND<0.50 ND<0.50		ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
01/14/09 ND<10 ND<250 ND<0.50 ND<0.50 ND<0.50 ND<0.50 ND<0.50	MW.3							
		ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	MW 4							
		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 January 2009
76 Station 7124

Date	TOC	Depth to	LPH	Ground-	Change									Comments
Sampled	Elevation	Water	Thickness		in Elevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	
						(8015M)	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
<u></u>	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(µg/l)	(μg/l)	(µg/l)	(μg/l)	(μg/l)	(µg/l)	(µg/l)	
MW-1														
04/08/0	02 37.37	14.27	0.00	23.10	<b></b> .	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<2.0	
07/28/0	)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	
11/03/0	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	
01/24/0	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	
04/02/0	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	
07/01/0	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	
10/02/0	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	
01/09/0	)4 37.37	13.79	0.00	23.58	2.89		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<		ND<2	
04/26/0	)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	
07/22/0	)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	)4 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	
01/12/0	)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	
06/20/0	37.37	14.38	0.00	22,99	-1.55	<b></b>	ND<50			ND<0.50	ND<1.0		ND<0.50	
09/23/0	)5 37.37	15.92	0.00	21.45	-1.54	~~	ND<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<1.0		ND<0.50	
03/24/0	6 37.37	11.85	0.00	25.52	4.24		ND<50		ND<0.50		ND<1.0		ND<0.50	
05/30/0	6 37.37	13.30	0.00	24.07	-1.45		ND<50			ND<0.50	ND<1.0		ND<0.50	
08/22/0	6 37.37	15.11	0.00	22,26	-1.81		ND<50			ND<0.50			ND<0.50	
10/31/0	6 37.37	16.11	0.00	21.26	-1.00		ND<50			ND<0.50			ND<0.50	
01/12/0	7 37.37	15.55	0.00	21.82	0.56		ND<50			ND<0.50			ND<0.50	
04/04/0		15.31	0.00	22.06	0.24					ND<0.50			ND<0.50	
07/05/0		16.21	0.00	21.16	-0.90		ND<50			ND<0.50			ND<0.50	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 2002 Through January 2009
76 Station 7124

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water	Change									Comments
Sampled	Elevation	w ater	THICKHESS		in Elevation	TPH-G	TPH-G	n	The Land	Ethyı-	Total	MTBE	MTBE	
	(feet)	(feet)	(feet)	(feet)	(feet)	(8015M) (μg/l)	(GC/MS) (μg/l)	Benzene (µg/l)	Toluene	benzene	Xylenes	(8021B)	(8260B)	
			(ICCI)	(1001)	(ICCC)	(μg/1)	(μg/1)	(µg/1)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	
<b>MW-1</b> 10/01/0	<b>continued</b> 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	<u></u>	ND<0.50	
01/11/0		14.48		22.89	2.65		ND<50		ND<0.50		ND<0.30		ND<0.50	
04/04/0		16.17		21.20	-1.69		ND<50		ND<0.50		ND<1.0 ND<1.0			Gaussid on \$ 22.09
07/02/0		16.70		20.67	-0.53		ND<50		ND<0.50		ND<1.0		ND<0.50	Gauged on 5-22-08
10/02/0		17.50		19.87	-0.80		ND<50		ND<0.50				ND<0.50	
01/14/0		17.30		20.07	0.20		ND<50				ND<1.0		ND<0.50	
·	7 31.31	17.50	0.00	20.07	0.20		ND~30	ND~0.30	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
MW-2 04/08/0	2 37.87	15.86	0.00	22.01		4400		NID <2.5	NID -0. 6	<i>c</i> 1	ND 0.5	200	100	
07/28/0		17,28			 -1.42			ND<2.5	ND<2.5	6.4	ND<2.5	380	490	
11/03/0		18.03		20.59			3200	ND<2.5	ND<2.5	ND<2.5	ND<5.0		170	
01/24/0				19.84	-0.75		3800	ND<5.0	ND<5.0	ND<5.0	ND<10		72	•
		15.59		22.28	2.44		410	ND<2.5	ND<2.5	ND<2.5	ND<5.0		490	
04/02/0		16.50		21.37	-0.91		1000	ND<5.0	ND<5.0	ND<5.0	ND<10	<del></del>	180	
07/01/0		16.94	0.00	20.93	-0.44		1900	ND<2.5	ND<2.5	ND<2.5	ND<5.0		120	
10/02/0		17.93	0.00	19.94	-0.99		6900	ND<0.50	ND<0.50	ND<0.50	ND<1.0		32	
01/09/0		15.42	0.00	22.45	2.51		1000	ND<2.5	ND<2.5	ND<2.5	ND<5.0		300	
04/26/0						~~					-			Covered with asphalt
07/22/0														Covered with asphalt
10/29/04			0.00											Well is paved over.
01/12/0		·									·			Well was paved over.
06/20/0:		15.94	0.00	21.93			120	ND<0.50	ND<0.50	ND<0.50	ND<1.0		46	
09/23/0:		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:		17.41	0.00	20.46	-0.12		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		11	
03/24/0	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	
7124								Page 2	2 of 6					<b>©TRC</b>

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 2002 Through January 2009
76 Station 7124

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water	Change									Comments
Sampled	Elevation	w atti	THICKHESS		in Elevation	TPH-G	TPH-G	_	_	Ethyl-	Total	MTBE	MTBE	
	(foot)	(foot)	(foot)			(8015M)	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(μg/l)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	
	continued													
05/30/0				22.71	-1.39		120		ND<0.50		ND<1.0		6.6	
08/22/0		16.49		21.38	-1.33		81	ND<0.50	ND<0.50	ND<0.50	ND<0.50		3.0	
10/31/0		17.15	0.00	20.72	-0.66		93	ND<0.50	ND<0.50	ND<0.50	ND<0.50	<del></del>	2.0	
01/12/0	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	
04/04/0	7 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	
07/05/0	7 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	
10/01/0	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	
01/11/0	8 37.87	16.80	0.00	21.07	1.45		130	ND<0.50	ND<0.50	ND<0.50	0.1> <b>D</b> N		7.7	
05/22/0	8 37.87	17.46	0.00	20.41	-0.66		140	ND<0.50	ND<0.50	ND<0.50	ND<1.0		4.2	Gauged and sampled on 5-22- 08
07/02/0	8 37.87	17.94	0.00	19.93	-0.48		75	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2.4	
10/02/0	8 37.87	18.65	0.00	19.22	-0.71		130	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2.1	
01/14/0	9 37.87	18.40	0.00	19.47	0.25		66	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2.5	
MW-3														
04/08/0	2 37.72	15.86	0.00	21.86		8700		65	ND<25	400	ND<25	6500	8300	
07/28/0	2 37.72	17.22	0.00	20.50	-1.36		4500	ND<25	ND<25	ND<25	ND<50		1100	
11/03/0	2 37.72	17.90	0.00	19.82	-0.68		25000	ND<5.0	ND<5.0	25	ND<10		470	
01/24/0	3 37.72	15.57	0.00	22.15	2.33		6000	ND<25	ND<25	94	ND<50		10000	
04/02/0	3 37.72	16.45	0.00	21.27	-0.88		130000	ND<100	ND<100	ND<100	ND<200		4400	
07/01/0	3 37.72	16.88	0.00	20.84	-0.43		9400	ND<10	ND<10	ND<10	ND<20		2200	
10/02/0	3 37.72	17.85	0.00	19.87	-0.97		73000	ND<50	ND<50	ND<50	ND<100		460	
01/09/0	4 37.72	15.31	0.00	22.41	2.54		8700	ND<25	ND<25	98	ND<50		3800	
04/26/0	4 37.72	16.62	0.00	21.10	-1.31		6700	ND<25	ND<25	ND<25	ND<50	***	3900	
								- ·		- 12	112 00		5700	

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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 2002 Through January 2009
76 Station 7124

Date Sampled	TOC Elevation	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
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	$(\mu g/l)$	(μg/l)	(μg/l)	(µg/l)	
MW-3	continued													3000
07/22/0	37.72	17.62	0.00	20.10	-1.00		13000	ND<25	ND<25	ND<25	ND<50		980	
10/29/0		17.29	0.00	20.43	0.33		4600	ND<5.0	ND<5.0	13	ND<10		640	
01/12/0	37.72	14.64	0.00	23.08	2.65		6100	0.88	0.99	.30	2.2		6900	
06/20/0	37.72	15.91	0.00	21.81	-1.27		1900	ND<0.50	0.21J	0.52	0.46J		960	
09/23/0		17.20		20.52	-1.29		2400	ND<0.50	ND<0.50	ND<0.50	ND<1.0		160	
12/13/0		17.32		20.40	-0.12		2100	ND<2.5	ND<2.5	ND<2.5	ND<5.0		340	
03/24/0		13.86	0.00	23.86	3.46		2200	ND<5.0	ND<5.0	ND<5.0	ND<10		970	
05/30/0	6 37.72	15.69	0.00	22.03	-1.83		1500	ND<12	ND<12	ND<12	ND<25		760	
08/22/0	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		17.36		20.36	-0.85		2200	ND<0.50	ND<0.50	ND<0.50	ND<0.50		58	
01/12/0		16.85	0.00	20.87	0.51		2600	ND<0.50	ND<0.50	ND<0.50	ND<0.50	77	680	
04/04/0		16.62	0.00	21.10	0.23		1700	ND<0.50	ND<0.50	ND<0.50	ND<0.50		650	
07/05/0	77 37.72	17.42	0.00	20.30	-0.80		2400	ND<0.50	ND<0.50	ND<0.50	ND<0.50		160	
10/01/0	37.72	18.16	0.00	19.56	-0.74		1700	ND<1.0	ND<1.0	ND<1.0	ND<1.0		87	
01/11/0	18 37.72	15.84	0.00	21.88	2.32		2200	ND<0.50	ND<0.50	1.6	ND<1.0		1300	
04/04/0	18 37.72	17.30	0.00	20.42	-1.46		1600	ND<1.0	ND<1.0	ND<1.0	ND<2.0		470	Gauged on 5-22-08
07/02/0	8 37.72	17.84	0.00	19.88	-0.54		1200	ND<0.50	ND<0.50	ND<0.50	ND<1.0		91	
10/02/0	8 37.72	18.50	0.00	19.22	-0.66		2100	ND<0.50	ND<0.50	ND<0.50	ND<1.0		84	
01/14/0	9 37.72	18.33	0.00	19.39	0.17		2000	ND<0.50	ND<0.50	ND<0.50	ND<1.0		320	
MW-4														
04/08/0	2 38.36	16.59	0.00	21.77		13000		ND<5.0	ND<5.0	28	ND<5.0	790	980	
07/28/0	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	
11/03/0	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	
7124						,		Page 4	4 of 6					<b>OTRC</b>

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 2002 Through January 2009
76 Station 7124

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water	Change									Comments
Bumpied	Dievation	Water	THICKICSS		in Elevation	TPH-G	TPH-G		<b></b>	Ethyl-	Total	MTBE	MTBE	
	(foot)	(f <sub>2</sub> -4)	(f4)			(8015M)	(GC/MS)	Benzene		benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(μg/l)	
			0.00											
01/24/0				22.09	2.39		ND<1000		ND<10	ND<10	ND<20		1000	
04/02/0				21.17	-0.92		130000	ND<100	ND<100	ND<100	ND<200		ND<400	
07/01/0			0.00	20.75	-0.42		15000	ND<2.5	ND<2.5	ND<2.5	ND<5.0		170	
10/02/0	38.36	18.58	0.00	19.78	-0.97		7100	ND<10	ND<10	ND<10	ND<20		70	
01/09/0	38.36	16.15	0.00	22.21	2.43		18000	ND<10	ND<10	ND<10	ND<20		530	
04/26/0	38.36	17.20	0.00	21.16	-1.05		6500	ND<10	ND<10	ND<10	ND<20		240	
07/22/0	38.36	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	
01/12/0	38.36	15.22	0.00	23.14	2.91		1300	ND<0.50	ND<0.50	ND<0.50	ND<1.0		620	
06/20/0	38.36	16.63	0.00	21.73	-1.41		980	ND<0.50	ND<0.50	ND<0.50	ND<1.0		110	
09/23/0	38.36	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	
03/24/0	38.36	14.48	0.00	23.88	3.56		1500	ND<12	ND<12	ND<12	ND<25		200	
05/30/0	6 38.36	15.79	0.00	22.57	-1.31		1200	ND<2.5	ND<2.5	ND<2.5	ND<5.0		130	
08/22/0	6 38.36	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	6 38.36	18.08	0.00	20.28	-0.82		1300	ND<0.50	ND<0.50				10	
01/12/0	7 38.36	17.57	0.00	20.79	0.51		820		ND<0.50				28	
04/04/0	7 38.36	17.40	0.00	20.96	0.17		460	ND<0.50	ND<0.50	ND<0.50	ND<0.50		41	
07/05/0	7 38.36	18.02	0.00	20.34	-0.62		920		ND<0.50				7.0	
10/01/0	7 38.36	18.89	0.00	19.47	-0.87		560		ND<0.50				3.0	
01/11/0	8 38.36	16.56	0.00	21.80	2.33		340		ND<0.50		ND<1.0		21	
05/22/0	8 38.36	18.10	0.00	20.26	-1.54		520		ND<0.50		ND<1.0		5.6	Gauged and sampled on 5-22-08

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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
April 2002 Through January 2009
76 Station 7124

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water	Change in Elevation	ТРН-G	ТРН-G			Ethyl-	Total	MTBE	MTBE	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(8015M) (μg/l)	(GC/MS) (μg/l)	Benzene (µg/l)	Totuene (μg/l)	benzene (μg/l)	Xylenes (μg/l)	(8021B) (μg/l)	(8260B) (μg/l)	
MW-4	continued	,			· · · · · · · · · · · · · · · · · · ·						(10)	(10)	(16)	
07/02/0	)8 38.36	18.55	0.00	19.81	-0.45		340	ND<0.50	ND<0.50	ND<0.50	ND<1.0		3.3	
10/02/0	)8 38.36	19.25	0.00	19.11	-0.70		790	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2.4	
01/14/0	9 38.36	19.10	0.00	19.26	0.15		430	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2.4	



Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 7124

Date Sampled		Ethanol	Ethanol	Ethylene- dibromide	1,2-DCA			
	TBA	(8015B)	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME
	(μg/l)	(mg/l)	(μg/l)	(μg/l)	(μg/l)	(µg/l)	(μg/l)	(µg/l)
MW-1								
07/28/02	ND<100	ND<500		ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
11/03/02	ND<100	ND<500		ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
01/24/03	ND<100	ND<500		ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
04/02/03	ND<100	ND<500		ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
07/01/03	ND<100	ND<500		ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
10/02/03	ND<100		ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
01/09/04	ND<100		ND<500	ND<2	ND<2.0	ND<2	ND<2	ND<2
04/26/04	ND<5.0		ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
07/22/04	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
01/12/05	ND<5.0		ND<50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
06/20/05	ND<10		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
09/23/05	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
03/24/06	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
05/30/06	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
08/22/06	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
01/12/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
04/04/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
07/05/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
10/01/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
01/11/08	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
04/04/08	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
07/02/08	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 7124

Date				Ethylene-					
Sampled		Ethanol	Ethanol	dibromide	1,2-DCA				
	TBA	(8015B)	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME	
	(µg/l)	(mg/l)	(µg/l)	(μg/l)	(µg/l)	(µg/l)	(µg/l)	(μg/l)	
MW-1 c	ontinued								
10/02/08	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
01/14/09	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
MW-2									
04/08/02	ND<2000	ND<10000		ND<40	ND<40	ND<40	ND<40	ND<40	
07/28/02	ND<500	ND<2500	w	ND<10	ND<10	ND<10	ND<10	ND<10	
11/03/02	ND<1000	ND<5000	<b>≈</b> ₽	ND<20	ND<20	ND<20	ND<20	ND<20	
01/24/03	ND<500	ND<2500		ND<10	ND<10	ND<10	ND<10	ND<10	
04/02/03	ND<1000	ND<5000		ND<20	ND<20	ND<20	ND<20	ND<20	
07/01/03	ND<500	ND<2500		ND<10	ND<10	ND<10	ND<10	ND<10	
10/02/03	ND<100		ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	
01/09/04	ND<500		ND<2500	ND<10	ND<10	ND<10	ND<10	ND<10	
06/20/05	25		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
09/23/05	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	
03/24/06	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
05/30/06	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
08/22/06	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	
01/12/07	ND<10		ND<250	ND<0.50	ND<0,50	ND<0.50	ND<0.50	ND<0.50	
04/04/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
07/05/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/01/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
01/11/08	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
05/22/08	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
07/02/08	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 7124

Date				Ethylene-					
Sampled		Ethanol	Ethanol	dibromide	i,2-DCA				
	TBA	(8015B)	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME	
	(μg/l)	(mg/l)	(µg/l)	(μg/l)	(μg/l)	(μg/l)	(µg/l)	(µg/l)	
MW-2 co	ontinued								
10/02/08	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
01/14/09	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
MW-3									
10/02/03	ND<10000		ND<50000	ND<200	ND<200	ND<200	ND<200	ND<200	
01/09/04	ND<5000	***	ND<25000	ND<100	ND<100	ND<100	ND<100	ND<100	
04/26/04	ND<250		ND<2500	ND<25	ND<25	ND<50	ND<25	ND<25	
07/22/04	ND<250		ND<2500	ND<25	ND<25	ND<50	ND<25	ND<25	
10/29/04	ND<50		ND<500	ND<5.0	ND<5.0	ND<10	ND<5.0	ND<5.0	
01/12/05	1300		ND<2500	ND<25	ND<25	ND<50	ND<25	ND<25	
06/20/05	39		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.31J	
09/23/05	ND<10		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
12/13/05	ND<50		ND<1200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	
03/24/06	ND<100		ND<2500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	
05/30/06	ND<250		ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12	
08/22/06	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	
01/12/07	43		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
04/04/07	130		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
07/05/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/01/07	ND<20		ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	
01/11/08	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
04/04/08	ND<20		ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	
07/02/08	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
10/02/08	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
01/14/09	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 7124

Date				Ethylene-	÷			
Sampled		Ethanol	Ethanol	dibromide	1,2-DCA			
	TBA	(8015B)	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME
	(μg/l)	(mg/l)	(μg/l)	(μg/l)	(µg/l)	(µg/l)	(μg/l)	(μg/l)
MW-4								
04/08/02	ND<5000	ND<25000	15 M	ND<100	ND<100	ND<100	ND<100	ND<100
07/28/02	ND<500	ND<2500		ND<10	ND<10	ND<10	ND<10	ND<10
11/03/02	ND<100	ND<500		ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
01/24/03	ND<2000	ND<10000		ND<40	ND<40	ND<40	ND<40	ND<40
04/02/03	ND<20000	ND<100000		ND<400	ND<400	ND<400	ND<400	ND<400
07/01/03	ND<500	ND<2500		ND<10	ND<10	ND<10	ND<10	ND<10
10/02/03	ND<2000		ND<10000	ND<40	ND<40	ND<40	ND<40	ND<40
01/09/04	ND<2000		ND<10000	ND<40	ND<40	ND<40	ND<40	ND<40
04/26/04	430		ND<1000	ND<10	ND<10	ND<20	ND<10	ND<10
07/22/04	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
01/12/05	1300		ND<250	ND<10	ND<2.5	ND<5.0	ND<2.5	ND<2.5
06/20/05	580		ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
09/23/05	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
03/24/06	1900		ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12
05/30/06	ND<50		ND<1200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
08/22/06	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
01/12/07	72		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
04/04/07	260		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
07/05/07	18		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
10/01/07	ND<10		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
01/11/08	140		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
05/22/08	52		ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 7124

Date				Ethylene-					
Sampled		Ethanol	Ethanol	dibromide	i,2-DCA				
	TBA	(8015B)	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME	
	$(\mu g/l)$	(mg/l)	(µg/l)	(μg/l)	(µg/l)	(µg/l)	(µg/l)	$(\mu g/l)$	
	(10)	,	,, ,	40,		W-0-7	11-0-7	(P****)	
MW-4 co	ontinued			407	107	487	4.5.7	(76-)	
<b>MW-4</b> co		***	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
	ontinued								

## **FIGURES**





SOURCE:

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



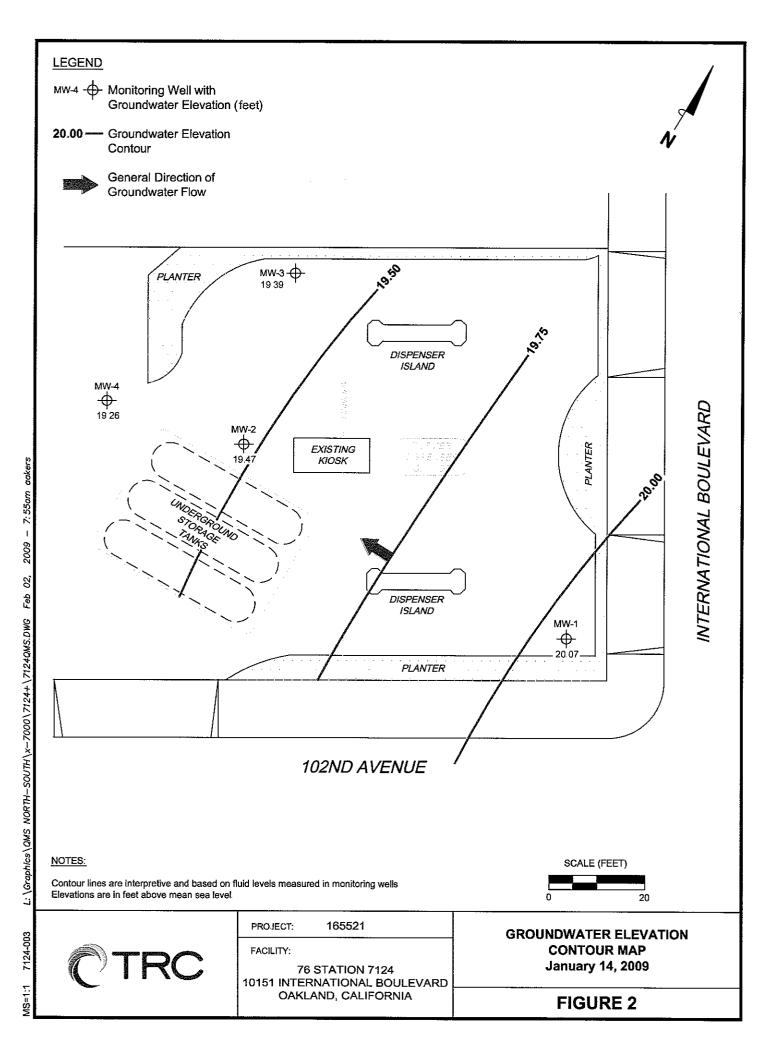
QUADRANGLE

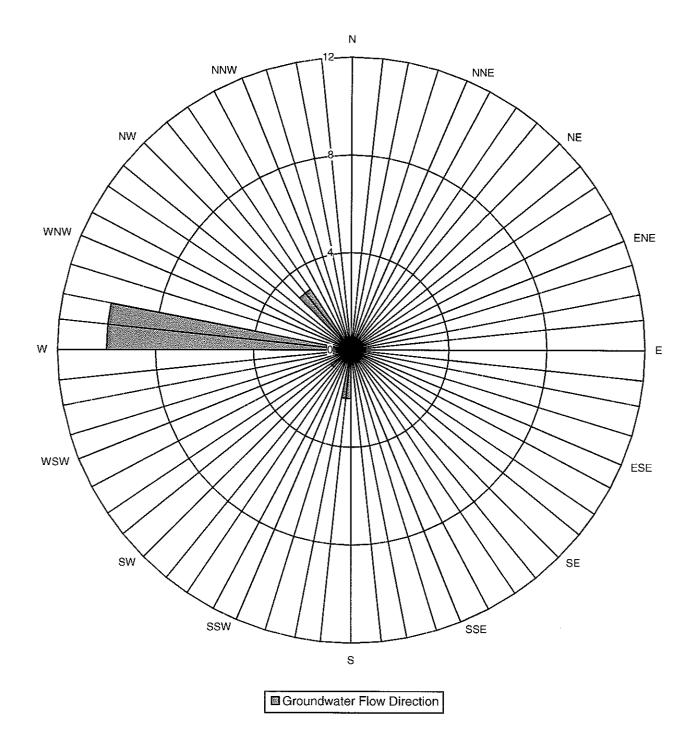


FACILITY:

76 STATION 7124 10151 INTERNATIONAL BOULEVARD OAKLAND, CALIFORNIA VICINITY MAP

FIGURE 1





LEGEND

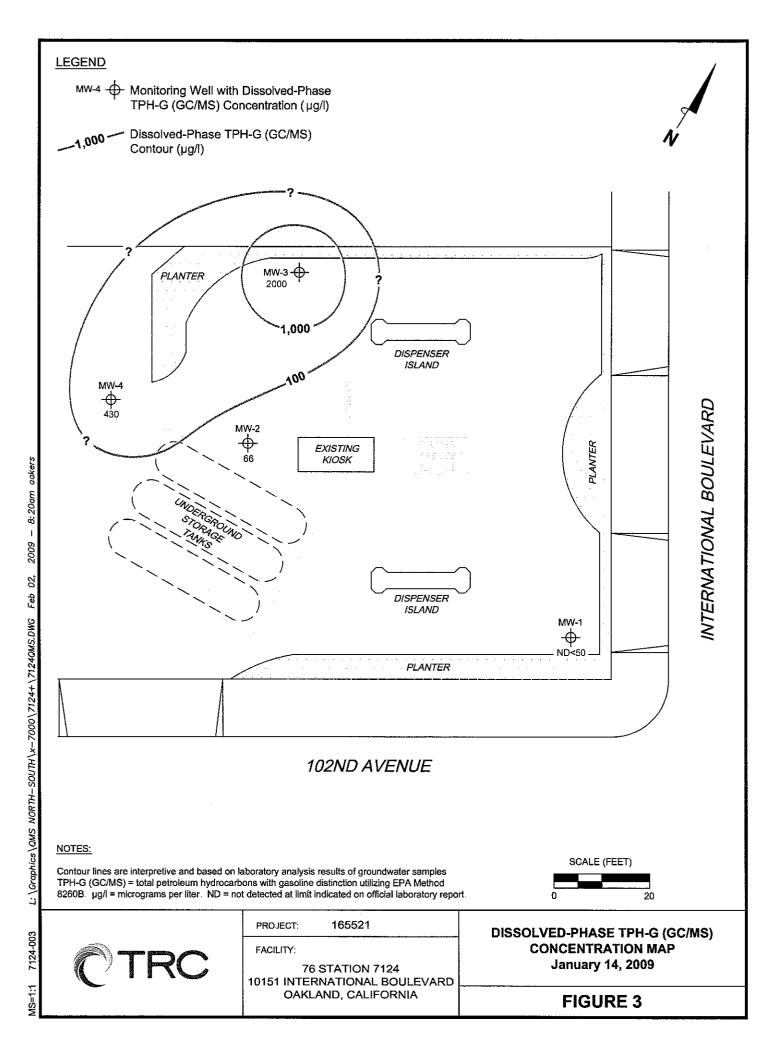
Concentric Circles Represent Quarterly Monitoring Events Conducted Since Fourth Quarter 2003. PROJECT: 154771

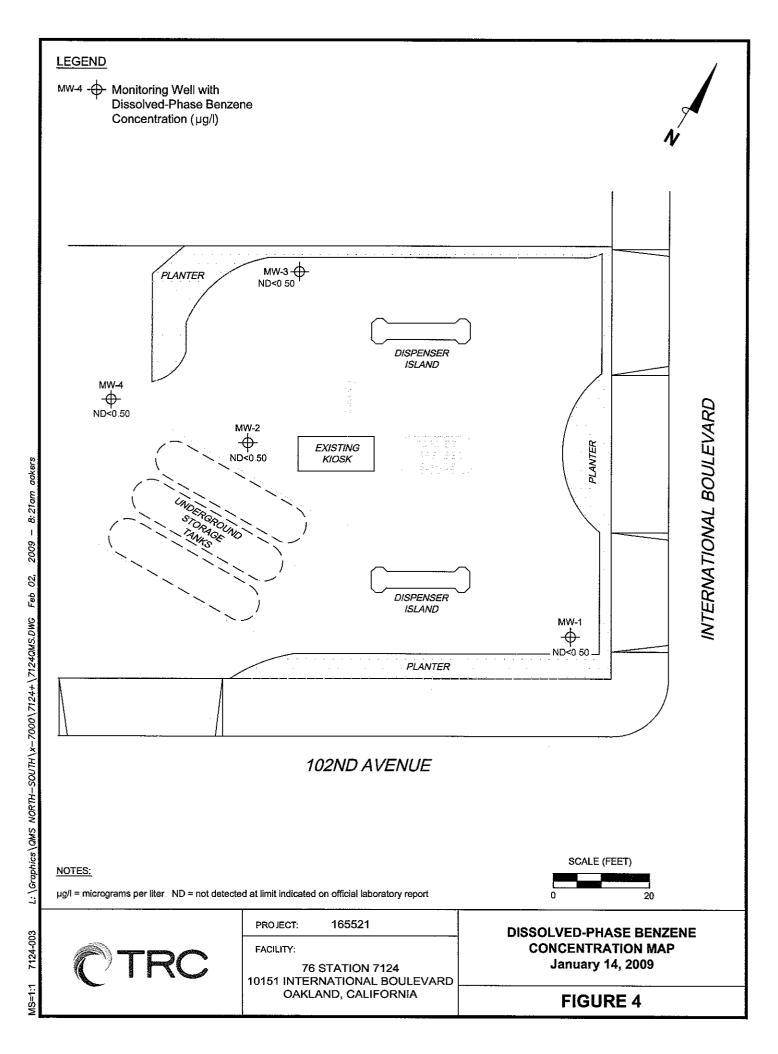
HISTORICAL GROUNDWATER FLOW DIRECTION

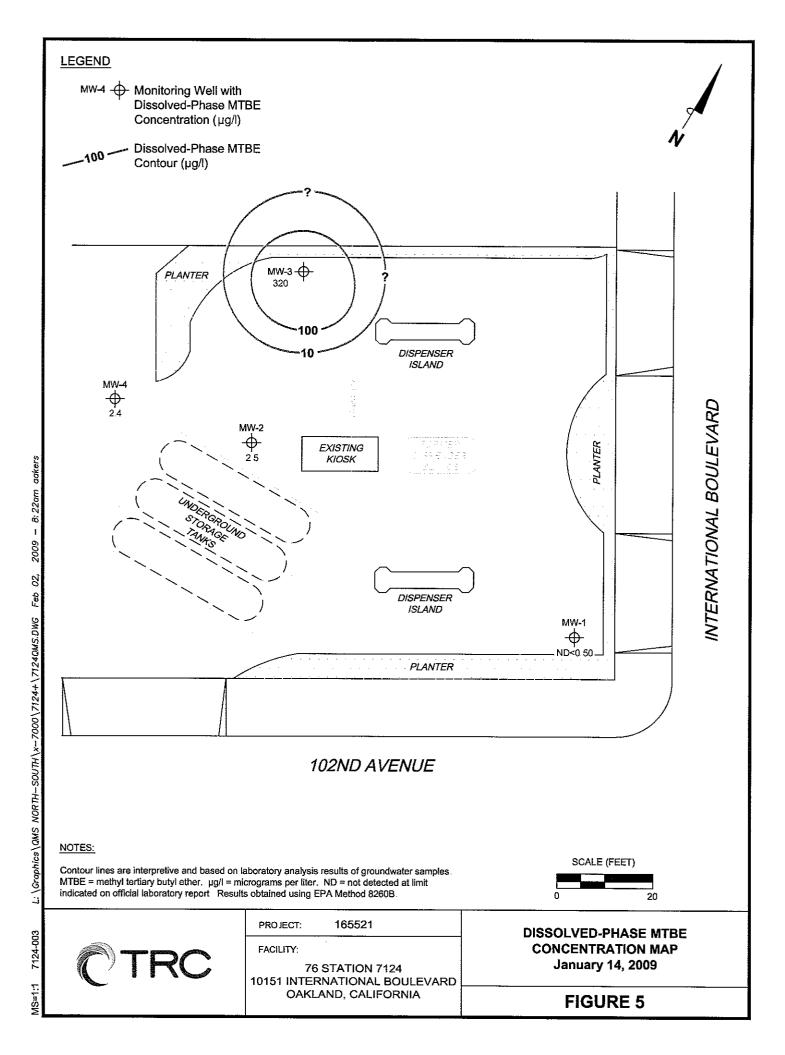


76 STATION 7124 10151 INTERNATIONAL BOULEVARD OAKLAND, CALIFORNIA

**FIGURE 2A** 

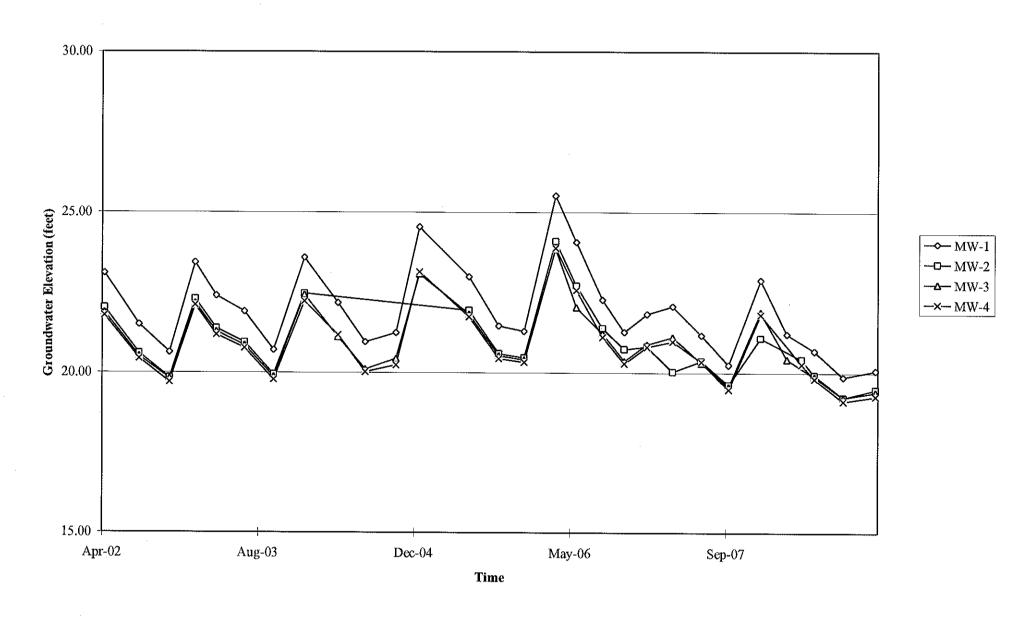






# **GRAPHS**

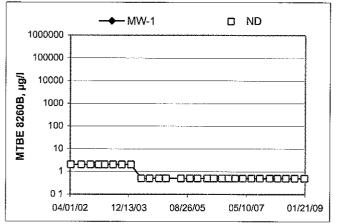
# Groundwater Elevations vs. Time 76 Station 7124

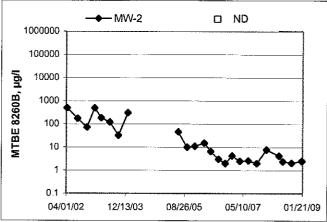


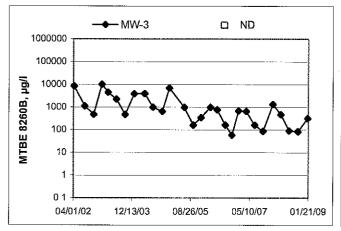
Elevations may have been corrected for apparent changes due to resurvey

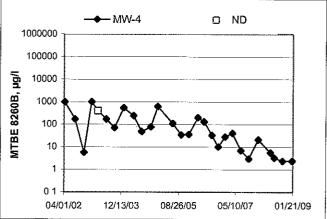
#### MTBE 8260B Concentrations vs Time

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 easing 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 is 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 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.

3/7/08 version

# FIELD MONITORING DATA SHEET

Technician:	- ·	+sili	) Jot	o #/Task #:	1655 A	SH-FA	150 J	Date: <u>/- / \                                </u>
Site #		09	Projec	t Manager	<u> </u>	Lollins	,	Pageof\
Well#	тос	Time Gauged	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
MW-1	V	1020	24.80	17.30			1100	4
MW-2	ン	1025	25.20	18.40			1127	411
MW-4	~	1029	24.95	19,10	+		1142	of 11
MW-3		1033	25,15	18.33	-1		1207	4"
		<u> </u>						
	<u> </u>							
	<u> </u>							**
	<u>.                                    </u>							
							ĺ	

FIELD DATA COMPLETE QA/QC COC WELL BOX CONDITION SHEETS

MANIFEST DRUM INVENTORY TRAFFIC CONTROL

GROUNDWATER SAMPLING FIELD NOTES

		Tech	nician:	Das	sim_	-			
Site: 712	<u> </u>	Proje	ct No.:	65521					1-09
Well No				Purge Method	:5	ub	<del></del>		
Depth to Wa	ter (feet):	17.30	2	Depth to Prod	uct (feet):	~	<del>_</del>		
Total Depth	(feet)	.4.80		LPH & Water	Recovered (g	allons);		_	
Water Colum	nn (feet):	7,50	>	Casing Diame	eter (Inches): e (gallons):				
80% Rechar	ge Depth(fee	7,50 et): 18,6	5 <u>0</u>	1 Well Volume	ə (gallons):	5			
Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F,C)	рН	D.O. (mg/L.)	ORP	Turbidity
1030		(1001)	5	554,3	19.6	6.10			
700			10	5548	19.9	5.64	1		·
	1056		15	538.5	<u>≥0./</u>	5.49			1,1, de 4,1 = = 1
						<del> </del>			
Stati	c at Time Sa	moled	Tota	al Gallons Pur	ged		Sample	Time	<u> </u>
Jian	18.1			15		11	00		
Comments									
			<del></del>	·					
					_	1			
Well No.	MW-	- ン		Purge Metho	d: <u>5</u> 4	<u> 15 </u>			
			4	m d to Dun	dust (foot)				
Depth to W	ater (feet):	18.40		•	duct (feet):				
Total Depth	r (feet)	25.20		LPH & Water	r Recovered (g	gailons):		-	
Water Colu	ımn (feet):	6.80	<del>/_</del>	Casing Diam	eter (Inches):_				
80% Recha	arge Depth(fe	eet): <u>19,7</u>	<u>(0</u>	1 Well Volun	ne (gallons):				
Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F,(C)	рН	D.O. (mg/L)	ORP	Turbidity
1115		1.000	5	10291	19.6.	5.28			
<del>- / 11 /</del>			10	(035.5	20.5	5.40	<u> </u>		
	1121		15	634.7	20.7	5.52	<b></b> _		<del> </del> -
						<del></del>	<del>                                     </del>		<del> </del>
Cia	ntic at Time S	ampled	+	tai,Gallons Pu	rged	_ <del></del>	Sample	Time	
318		OO	1	5			1127		
Commen								<del></del> -	



Technician: 16551 Date: 1-14-09

100-4 Purge Method: 565

1 Well Volume (gallons):\_

**GROUNDWATER SAMPLING FIELD NOTES** 

Well No.
Purge Method:

Depth to Water (feet):
19.10

Depth to Product (feet):
LPH & Water Recovered (gallons):

Water Column (feet):
5.85

Casing Diameter (Inches):

(Inche

Site: 7124

80% Recharge Depth(feet):

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F, C)	pН	D.O. (mg/L)	ORP	Turbidity
1131			4	621.4	19.5	5.59			
<del></del>			8	63600	20.3	5.56			<u> </u>
<del> </del>	1137		12	621.8	20.7	5-56	······································		<u> </u>
Stat	ic at Time Sa	ampled	Tota	l al Gallons Pu	rged	<u></u>	Sample	Time	<u></u>
		60	12			114	<u>Z</u>		
omments				<u> </u>					

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F,C)	рН	D.O. (mg/L)	ORP	Turbidit
1155			5	1050.1	20.6	5.10			
<del></del>			10	1060-1	20,7	4.46			
	1201		15	666.2	20.7	4.5			
				90			<u></u>		
						<u> </u>	<u> </u>	<u> </u>	<u></u>
Stat	c at Time Sa	mpled	Tota	aj Galions Pu	rged		Sample	Time	
	18.5	3	15			12	207		
omments									



Date of Report: 01/23/2009

Anju Farfan

TRC

21 Technology Drive Irvine, CA 92618

RE.

7124

BC Work Order:

0900625

Invoice ID:

B056198

Enclosed are the results of analyses for samples received by the laboratory on 1/14/2009. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers

Client Service Rep

Authorized Signature



TRC 21 Technology Drive Irvine, CA 92618

Project: 7124

Project Number: Inone

Project Manager: Anju Farfan

Reported: 01/23/2009 10:27

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

Laboratory	Client Sample Information	On .			,
0900625-01	COC Number:		Receive Date:	01/14/2009 21:55	Delivery Work Order:
	Project Number:	7124	Sampling Date:	01/14/2009 21:00	Global ID: T0600173591
	Sampling Location:	Muu	Sample Depth:		Location ID (FieldPoint): MW-1
	Sampling Point:	MVV-1	Sample Matrix:	Water	Matrix: W
	Sampled By:	TRCI	outspic inaction,	110101	Sample QC Type (SACode): CS
	· · · · · · · · · · · · · · · · · · ·				Cooler ID:
0900625-02	COC Number:		Receive Date:	01/14/2009 21:55	Delivery Work Order:
	Project Number:	7124	Sampling Date:	01/14/2009 11:27	Global ID: T0600173591
	Sampling Location:		Sample Depth:	·	Location ID (FieldPoint): MW-2
	Sampling Point:	MW-2	Sample Matrix:	Water	Matrix: W
	Sampled By:	TRCI			Sample QC Type (SACode): CS
·····					Cooler ID:
0900625-03	COC Number:		Receive Date:	01/14/2009 21:55	Delivery Work Order:
	Project Number:	7124	Sampling Date:	01/14/2009 11:42	Global ID: T0600173591
	Sampling Location:		Sample Depth:		Location ID (FieldPoint): MW-4
	Sampling Point:	MW-4	Sample Matrix:	Water	Matrix: W
	Sampled By:	TRCI	·		Sample QC Type (SACode): CS
					Cooler ID:
0900625-04	COC Number:		Receive Date:	01/14/2009 21:55	Delivery Work Order:
	Project Number:	7124	Sampling Date:	01/14/2009 12:07	Global ID: T0600173591
	Sampling Location:		Sample Depth:		Location ID (FieldPoint): MW-3
	Sampling Point:	MVV-3	Sample Matrix:	Water	Matrix: W
	Sampled By:	TRCI			Sample QC Type (SACode): CS
					Cooler ID:

21 Technology Drive Irvine, CA 92618

Project: 7124

Project Number: Inone)

Project Manager: Anju Farfan

Reported: 01/23/2009 10:27

BCL Sample ID:	0900625-01	Client Sample	e Name:	7124, MW-1, 1/	14/2009 11:00:0	0AM							
Constituent	<i>t</i> .	Result	Units	PQL M	DL Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	1	BSA1059	ND	Quais
1,2-Dibromoethane		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	1	BSA1059	ND	
1,2-Dichloroethane		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	í	BSA1059	ND	
Ethylbenzene		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	1	BSA1059	ND	
Methyl t-butyl ether		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	1	BSA1059	ND	
Toluene		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	1	BSA1059	ND	
Total Xvienes		ND	ug/L	1.0	EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	1	BSA1059	ND	
t-Amvl Methyl ether		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	i	BSA1059	ND	
t-Butvi alcohol		ND	ug/L	10	EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	i	BSA1059	ND	
Diisopropyl ether		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	1	BSA1059	ND	
Ethanol		ND	ug/L	250	EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	1	BSA1059	ND	
Ethvi t-butyl ether		ND	цg/L	0.50	EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	1	BSA1059	ND	
Total Purgeable Petroleum Hvdrocarbons		ND	ug/L	50	EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	1	BSA1059	ND	
1,2-Dichloroethane-d4 (Sur	rogate)	102	%	76 - 114 (LCL - UCI	.) EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	í	BSA1059		
Toluene-d8 (Surrogate)		97.4	%	88 - 110 (LCL - UCL	.) EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	1	BSA1059		
4-Bromofluorobenzene (Sui	rogate)	103	%	86 - 115 (LCL - UCL	.) EPA-8260	01/20/09	01/20/09 17:14	SDU	MS-V10	1	BSA1059		

TRC 21 Technology Drive

Irvine, CA 92618

Project: 7124

Project Number: Inone!

Project Manager: Anju Farfan

Reported: 01/23/2009 10:27

BCL Sample ID: (	900625-02	Client Sample	e Name:	7124, MW-2, 1/1	1/2009 11:27:0	DAM							
Constituent		Result	Units	PQL MD	L Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	i	BSA1059	ND	Quais
1,2-Dibromoethane		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	i	BSA1059	ND	
1,2-Dichloroethane		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	1	B\$A1059	ND	
Ethylbenzene		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	1	BSA1059	ND	
Methyl t-butyl ether		2.5	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	1	BSA1059	ND	
Toluene		ND	ug/L	0,50	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	1	BSA1059	ND	
Total Xylenes		ND	ug/L	1.0	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	i	BSA1059	ND	
t-Amvi Methyl ether		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	1	BSA1059	ND	
t-Butyl alcohol		ND	ug/L	10	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	1	BSA1059	ND	
Diisopropyl ether		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	1	BSA1059	ND	
Ethanol		ND	цg/L	250	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	1	BSA1059	ND	
Ethyl t-butyl ether		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	í	BSA1059	ND	
Total Purgeable Petroleum Hydrocarbons	1	66	ug/L	50	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	1	BSA1059	ND	
1,2-Dichloroethane-d4 (Surr	rogate)	103	%	76 - 114 (LCL - UCL)	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	1	BSA1059		
Toluene-d8 (Surrogate)		91.4	%	88 - 110 (LCL - UCL)	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	1	BSA1059		<del>-</del>
4-Bromofluorobenzene (Sur	rogate)	104	%	86 - 115 (LCL - UCL)	EPA-8260	01/20/09	01/20/09 17:32	SDU	MS-V10	i	BSA1059		

TRC 21 Technology Drive Irvine, CA 92618

Project: 7124

Project Number: Inone! Project Manager: Anju Farfan Reported: 01/23/2009 10:27

BCL Sample ID: 0	900625-03	Client Sample	e Name:	7124, MW-4, 1/1	4/2009 11:42:0	DAM							
Constituent		Result	Units	PQL MD	L Method	Prep Date	Run Date/Time		Instru-		QC	MB	Lab
Benzene		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:50	Analyst SDU	ment ID MS-V10	Dilution	Batch ID BSA1059	Bias ND	Quals
1,2-Dibromoethane		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	i	BSA1059	ND	
1,2-Dichloroethane		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	1	BSA1059	ND	
Ethylbenzene		ND	ug/L	0,50	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	1	BSA1059	ND	
Methyl t-butyl ether		2.4	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	1	BSA1059	ND	
Toluene		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	í	BSA1059	ND	
Total Xylenes		ND	ug/L	1,0	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	i	BSA1059	ΝD	
t-Amyl Methyl ether		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	1	BSA1059	ND	
t-Butvi alcohol		ND	ug/L	10	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	1	BSA1059	ND	
Disopropyl ether		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	í	BSA1059	ND	
Ethanol		ND	ug/L	250	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	í	BSA1059	ND	
Ethyl t-butyl ether		ND	ug/L	0.50	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	1	BSA1059	ND	
Total Purgeable Petroleum Hydrocarbons		430	ug/L	50	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	1	BSA1059	ND	
1,2-Dichloroethane-d4 (Surro	ogate)	104	%	76 - 114 (LCL - UCL)	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	i	BSA1059		··
Toluene-d8 (Surrogate)		93.6	%	88 - 110 (LCL - UCL)	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	1	BSA1059		
4-Bromofluorobenzene (Surr	ogate)	109	%	86 - 115 (LCL - UCL)	EPA-8260	01/20/09	01/20/09 17:50	SDU	MS-V10	1	BSA1059		· · · · · · · · · · · · · · · · · · ·

TRC 21 Technology Drive

Irvine, CA 92618

Project: 7124

Project Number: Inonei

Project Manager: Anju Farfan

Reported: 01/23/2009 10:27

BCL Sample ID: 0900625-04	Client Sample	e Name:	7124, MW-3,	1/14/20	009 12:07:00	PM							
						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	01/20/09	01/20/09 18:08	SDU	MS-V10	1	BSA1059	ND	
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	i	BSA1059	ND	
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	1	BSA1059	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	1	BSA1059	ND	
Methyl t-butyl ether	320	ug/L	2.5		EPA-8260	01/20/09	01/22/09 04:55	SDU	MS-V10	5	BSA1059	ND	A01
Toluene	ND	ug/L	0.50		EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	1	BSA1059	ND	
Total Xylenes	ND	ug/L	1,0		EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	1	BSA1059	ND	
t-Amvi Methyl ether	ND	ug/L	0.50		EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	1	BSA1059	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	i	BSA1059	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	j	BSA1059	ND	
Ethanol	ND	ug/L	250		EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	í	BSA1059	ND	
Ethyl t-butvl ether	ND	ug/L	0.50		EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	1	BSA1059	ND	
Total Purgeable Petroleum Hydrocarbons	2000	ug/L	50		EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	1	BSA1059	ND	
1,2-Dichloroethane-d4 (Surrogate)	105	%	76 - 114 (LCL - U	ICL)	EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	1	BSA1059		
1,2-Dichloroethane-d4 (Surrogate)	105	%	76 - 114 (LCL - U	JCL)	EPA-8260	01/20/09	01/22/09 04:55	SDU	MS-V10	5	BSA1059		
Toluene-d8 (Surrogate)	90.1	%	88 - 110 (LCL - U	JCL)	EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	i	BSA1059		
Toluene-d8 (Surrogate)	92.1	%	88 - 110 (LCL - U	JCL)	EPA-8260	01/20/09	01/22/09 04:55	SDU	MS-V10	5	BSA1059	*	
4-Bromofluorobenzene (Surrogate)	114	%	86 - 115 (LCL - U	ICL)	EPA-8260	01/20/09	01/22/09 04:55	SDU	MS-V10	5	BSA1059		
4-Bromofluorobenzene (Surrogate)	115	%	86 - 115 (LCL - U	JCL)	EPA-8260	01/20/09	01/20/09 18:08	SDU	MS-V10	1	BSA1059		

21 Technology Drive Irvine, CA 92618 Project: 7124

Project Number: Inonei

Project Manager: Anju Farfan

Reported: 01/23/2009 10:27

## Volatile Organic Analysis (EPA Method 8260)

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

		•		•						Contr	ol Limits
			Source	Source		Spike			Percent		Percent
Constituent	Batch ID	QC Sample Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery Lab Quals
Benzene	BSA1059	Matrix Spike	0816914-56	0	23.270	25.000	ug/L		93.1		70 - 130
		Matrix Spike Duplicate	0816914-56	0	24.240	25.000	ug/L,	4.1	97.0	20	70 - 130
Toluene	BSA1059	Matrix Spike	0816914-56	0	26.220	25.000	ug/L		105		70 - 130
		Matrix Spike Duplicate	0816914-56	0	26,990	25.000	ug/L	2.8	108	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BSA1059	Matrix Spike	0816914-56	ND	9.5200	10.000	ug/L		95.2		76 - 114
		Matrix Spike Duplicate	0816914-56	ND	9.4500	10.000	цg/L		94.5		76 - 114
Toluene-d8 (Surrogate)	BSA1059	Matrix Spike	0816914-56	ND	9.8100	10.000	ug/L		98.1		88 110
		Matrix Spike Duplicate	0816914-56	ND	9.4500	10.000	ug/L		94.5		88 - 110
4-Bromofluorobenzene (Surrogate)	BSA1059	Matrix Spike	0816914-56	ND	10.140	10,000	ug/L		101		86 - 115
		Matrix Spike Duplicate	0816914-56	ND	9.7200	10,000	ug/L		97.2		86 - 115

21 Technology Drive Irvine, CA 92618

Project: 7124

Project Number: Inone! Project Manager: Anju Farfan

Reported: 01/23/2009 10:27

# Volatile Organic Analysis (EPA Method 8260)

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

										Control	<u>Limits</u>	
Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Percent Recovery	RPD	Lab Quals
Benzene	BSA1059	BSA1059-BS1	LCS	22.780	25.000	0.50	ug/L	91.1		70 - 130		·
Toluene	BSA1059	BSA1059-BS1	LCS	25,760	25.000	0.50	ug/L	103		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BSA1059	BSA1059-BS1	LCS	9.6300	10.000		ug/L	96.3		76 - 114		
Toluene-d8 (Surrogate)	BSA1059	BSA1059-BS1	LCS	10.210	10.000		ug/L	102		88 - 110		
4-Bromofluorobenzene (Surrogate)	BSA1059	BSA1059-BS1	LCS	10.060	10.000		ug/L	101		86 - 115		

21 Technology Drive Irvine, CA 92618 Project: 7124

Project Number: [none]
Project Manager: Anju Farfan

Reported: 01/23/2009 10:27

# Volatile Organic Analysis (EPA Method 8260)

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

		<u> </u>					
Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BSA1059	BSA1059-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BSA1059	BSA1059-BLK1	ND	ug/L	0.50		•
1,2-Dichloroethane	BSA1059	B\$A1059-BLK1	ND	ug/L	0.50		
Ethylbenzene	BSA1059	BSA1059-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BSA1059	BSA1059-BLK1	ND	ug/L	0.50	,	
Toluene	BSA1059	BSA1059-BLK1	ND	ug/L	0.50		
Total Xvlenes	BSA1059	BSA1059-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BSA1059	BSA1059-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BSA1059	BSA1059-BLK1	ND	ug/L	10		,
Diisopropyl ether	BSA1059	BSA1059-BLK1	ND	ug/L	0.50	,	
Ethanol	BSA1059	BSA1059-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BSA1059	BSA1059-BLK1	ND	ug/L	0,50		
Total Purgeable Petroleum Hydrocarbons	BSA1059	BSA1059-BLK1	ND	ug/L	50	****	
1,2-Dichloroethane-d4 (Surrogate)	BSA1059	BSA1059-BLK1	98.0	%	76 - 114 (LC	L - UCL)	
Toluene-d8 (Surrogate)	BSA1059	BSA1059-BLK1	93.7	%	88 - 110 (L.C	L - UCL)	
4-Bromofluorobenzene (Surrogate)	BSA1059	BSA1059-BLK1	101	%	86 - 115 (LC	L - UCL)	

21 Technology Drive Irvine, CA 92618 Project: 7124

Project Number: Inone!

Project Manager: Anju Farfan

Reported: 01/23/2009 10:27

#### **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.

BC LABORATORIES INC.		SAMPL	RECE	PTFORM	f R	ev. No. 12	06/24/08	Page	Of	<u> </u>		
Submission #: 09-002	5											
SHIPPING INFOR Federal Express UPS UPS Ofther C	Hand Deli ☐ (Specify	very 🗆			lce Chesi Bex	iel (	TAINER le □ er □ (Specify)					
Refrigerant: Içe ☐ Blue Ice ☐	Мопе	□ Ot	her 🗆	Commen	its:							
Custody Seals   Ce Chest   Containers   None   Comments:												
All samples received? Yes 🗹 No 🗆 All samples containers intact? Yes 🗹 No 🗆 Description(s) match COC? Yes 🗹 No 🗅												
COC Received En	nissivity: <u>98</u> Container: <u>USA</u> Thermometer ID: <u>14463</u> Date/Tim							ne <u>01-14-</u> 09 Mit <u>Al</u> h				
SAMPLE CONTAINERS					T	NUMBERS						
	1	2	. 3	4	5	6	7	В	9	10		
QT GENERAL MINERALI GENERAL PHYSICAL PT PE UNPRESERVED												
OT INORGANIC CHEMICAL METALS	.,							<u> </u>				
PT INORGANIC CHEMICAL METALS												
PT CYANIDE												
PT NITROGEN FORMS		ر*				<u> </u>						
PT TOTAL SULFIDE			·									
202 NITRATE / NITRITE												
PT TOTAL ORGANIC CARBON									.5-			
PT TOX												
PT CHEMICAL OXYGEN DEMAND												
PtA PHENOLICS												
40ml VOA VIAL TRAVEL BLANK	10- 21	-A - 37	1/1 27	- C						ļ		
40ml VOA VIAL	1 B	A B	A 3	KO	( )	( )	( )	( )	(	( )		
QT EPA 413.1, 413.2, 418.1		<u></u> -								<u> </u>		
PT ODOR												
RADIOLOGICAL							<b> </b>					
BACTERIOLOGICAL										<del> </del>		
40 ml VOA VIAL- 504							<u></u>		<del></del>	<del> </del>		
OT EPA 508/608/8080							<u> </u>			<del> </del>		
QT EPA 515.1/8150												
QT EPA 525												
OT EPA 525 TRAVEL BLANK										╂┈┈╢		
100mi EPA 547					<del> </del>					<del>                                     </del>		
100ml EPA 531.1										<del> </del>		
OT EPA 548 OT EPA 549							-			╂		
									<del>,</del>	1		
OT ETA POLEM										<del>                                     </del>		
OT AMBER										1		
OT AMBER 8 OZ. JAR										<del>                                     </del>		
32 OZ. JAR												
SOIL SLEEVE										†		
PCB VIAL										<del>                                     </del>		
PLASTIC BAG						<del></del>	<del></del>			†		
FERROUS IRON								·		1		
ENCORE		~										
ANTOGER			!							<u> </u>		

Comments:

Sample Numbering Completed By: 100 Date/Time: 1500 TU05

A = Actual / C = Corrected

[H:\DOCS\WP80\LAB\_DOCS\FORMS\SAMREC2 \WPD]

BC LABORATORIES, INC.

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

**CHAIN OF CUSTODY** 

[2] [1] [2] [2] [2] [2] [2] [2] [2] [2] [2] [2		FAA (001) 327-1910	ble and deal was a great for the state.	Samuel Jastin	Artin Mil		di din kansa	计编辑系统法	ONE CONTRACT	obstances:	Quatemasica:
	09-0002	25		,	4mal	ysis	Re	que	stec	1	
Bill to: Conoco Phillips/ TRC	Consultant Firm: TRO		MATRIX (GW)	5						2	
Address: 10181 International	21 Technology Drive Irvine, CA 92618-230 Attn: Anju Farfan		Ground- water (S)	3, Gas by 8015		nates	7 8260B			22 826g	nested
City: Ookland		74 ,34	(WW) Waste- water	oy 8021B,	TPH GAS by 8015M TPH DIESEL by 8015	3260 full list w/ oxygenates	STEX/MTBE/OXYS BY	8260B	GC/MS		Time Requested
State: CA Zip:	Project #:	521	(SL)	삞	효교	ist .	3E/(	by	Ö,	1550	L
Conoco Phillips Mgr: Terry Lray	Sampler Name:	silio Del Pont	Sludge	TW	SAS NES		MTI	ON	-G by	$\mathcal{Q}$	l lor
Lab# Sample Description	Field Point Name	Date & Time Sampled		BTEX/MTBE by		8260 1	BTEX	ETHANOL by	ТРН-	(le	Turnaround
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TO 600 H3591	Relinguished by: (Si	griature) / (14/09			Receive		<u>_</u>		Date &	Time	1830
	Rober	K 1-14-09	2155	<i></i>	1,77	)Wu	Jo-		1-14	- <del>U</del>	255

#### 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.