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Alameda County Environmental Health

Quarterly Status Summary Report First Quarter 2009 76 Station No. 0752 800 Harrison Street Oakland, California

Stantec Project No.: 211402300

Submitted to: Mr. Steven Plunkett Senior Hazardous Materials Specialist Alameda County Environmental Health Care Services Agency 1131 Harbor Bay Parkway Alameda, California 94502-9335

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

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

April 14, 2009

INTRODUCTION

On behalf of ConocoPhillips, Stantec Consulting Corporation (Stantec) has prepared this quarterly status summary report for 76 Station No. 0752, located at 800 Harrison Street, Oakland, California.

SITE SETTING

The site is an active 76 Service Station located at the intersection of Harrison Street and Eighth Street in the City of Oakland, California. The site is bounded to the northwest by Harrison Street, to the east and southeast by a church, apartments, and an office building, and to the southwest by Eighth Street, across which are a former Shell Service Station and former Arco Service Station.

Current site facilities consist of a single-story convenience store and smog shop, three product dispenser islands under two canopies, and two 12,000-gallon double-wall poly-steel gasoline underground storage tanks (USTs).

The site is located in the East Bay Plain sub-basin in the Santa Clara Valley groundwater basin, as identified in the California Regional Water Quality Control Board (CRWQCB) – San Francisco Bay Region's San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan), dated January 18, 2007. This basin has been designated as having existing beneficial uses for municipal and domestic water supply, industrial process water supply, industrial service water supply, and agricultural water supply.

PREVIOUS ASSESSMENT

In November 1990, two gasoline USTs and one waste oil UST were removed from the site. The tanks consisted of one 10,000 gallon regular unleaded gasoline storage tank, one 10,000 gallon super unleaded gasoline storage tank, and one 280 gallon waste oil tank. The tanks were made of steel, and no apparent holes or cracks were observed in the fuel tanks; however, the waste oil tank contained one 1/8th-inch square hole. Following removal of the tanks, soil samples were collected from the excavation beneath the fuel tanks at depths of approximately 12 to 14 feet below ground surface (bgs), and from beneath the waste oil tank at a depth of approximately 6.5 feet bgs. Due to observed soil staining, KEI collected an additional soil sample from the fuel tank pit at a depth of approximately 19 feet bgs. KEI returned to the site in December 1990 to collect seven soil samples from beneath the six fuel dispensers and one sample from the product piping trench at depths of approximately 2.5 feet bgs. At the request of the Alameda County Environmental Health Service (ACEHS), KEI returned to the site in January 1991 to collect one additional soil sample from beneath the waste oil tank pit. Following sampling activities, the waste oil tank pit was overexcavated to the sample depth of 9.5 feet bgs. The results are presented in Kaprelian Engineering Inc.'s (KEI) February 1, 1991 Soil Sampling Report.

In May 1991, three groundwater monitoring wells (MW1, MW2, and MW3) and two exploratory borings (EB1 and EB2) were installed at the site. The monitoring wells were completed at depths of 33 to 33.5 feet bgs. The exploratory borings were each drilled to total depths of 23

feet bgs. Dissolved phase petroleum hydrocarbons were detected at maximum concentrations of 5,800 μ g/L TPHg (MW3), 1,200 μ g/L benzene (MW3), 40 μ g/L toluene (MW3), 140 μ g/L ethylbenzene (MW3), and 97 μ g/L xylenes (MW3). The results are presented in KEIs' July 5, 1991 *Preliminary Groundwater Investigation*.

In September and October 1992, three additional groundwater monitoring wells (MW4, MW5, and MW6) were installed at and in the site vicinity to further delineate the extent of petroleum hydrocarbon impact to groundwater. The three new wells were each completed to total depths ranging from 32 to 33 feet bgs. Dissolved phase petroleum hydrocarbons were detected at maximum concentrations of 3,900 μ g/L TPHg (MW6), 420 μ g/L benzene (MW6), 12 μ g/L toluene (MW6), 100 μ g/L ethylbenzene (MW5), and 61 μ g/L xylenes (MW5). The results are presented in KEIs' November 17, 1992, *Continuing Ground Water Investigation*.

In April 1993, two additional monitoring wells (MW7 and MW8) were installed in the vicinity of the site. Monitoring wells MW7 and MW-8 were completed at total depths of 33 feet bgs and 29 feet bgs, respectively. Dissolved phase petroleum hydrocarbons were detected at maximum concentrations of 450 μ g/L TPHg (MW8), 18 μ g/L benzene (MW8), 1.8 μ g/L toluene (MW8), 1.8 μ g/L toluene (MW8), 1.8 μ g/L ethylbenzene (MW8), and 1.7 μ g/L xylenes (MW7). KEI concluded that the horizontal extent of the soil impact at the site had been defined, and that the impact was limited to the areas beneath the fuel tanks and the southernmost pump island. Based on the groundwater monitoring data evaluated through April 1993, the groundwater flow direction had been consistently to the southwest or south-southwest. The results are presented in KEIs' May 24, 1993, *Continuing Ground Water Investigation*.

In November 1993, PHR Environmental Consultants (PHR) performed a Phase I environmental assessment providing a history of USTs and a list of other cases in the area. No determination was made as to other possible contributing sources. The results are presented in PHRs' November 29, 1993, *Phase I Environmental Assessment*.

In January 1994, KEI completed a Remedial Action Plan (RAP) recommending a soil vapor extraction (SVE) pilot test and the installation of a SVE remediation system. SVE details and other recommendations are presented in KEIs' April 1, 1994 *Remedial Action Plan*.

In February 1994, KEI completed 10 exploratory borings (EB-3 through EB-12) for divestment. Soil analytical results from the borings indicated that petroleum hydrocarbons were present at maximum concentrations of 19 mg/kg TPHd [EB11(6)], 21,000 mg/kg TPHg [EB8(18.5)], 7.0 mg/kg benzene [EB8(18.5)], 78 mg/kg toluene [EB8(18.5)], 26 mg/kg ethylbenzene [EB8(18.5)], and 140 mg/kg xylenes [EB8(18.5)]. Results of the site assessment activities are included in KEIs' April 1, 1994 *Subsurface Investigation*.

A soil vapor extraction (SVE) pilot test was performed at the site in August 1995. The results of the SVE pilot test are presented in KEIs' October 3, 1995 *Pilot Vapor Extraction Test Report.* The results indicated that vapor extraction was not effective due to partially saturated soil. KEI revised their report and results are presented in the October 23, 1995 *Pilot Vapor Extraction Test Report. Test Report.*

In November 1996, one 1,100 gallon waste oil UST and former product dispensers and associated piping were removed from the site. No apparent holes or cracks were observed in

the waste oil tank. Following the removal of the tank, one soil sample was collected from beneath the waste oil tank at a depth of approximately 9.5 feet bgs, three soil samples were collected from beneath product dispensers at depths of approximately 3-5.5 feet bgs, and two soil samples were collected from beneath the product piping trenches at depths of approximately 3-3.5 feet bgs. Following sampling activities, the soil beneath the product dispenser PD1 was excavated to a depth of 5.5 feet bgs. The analytical results from the soil samples indicated minor to non- concentrations of TPHg and BTEX. The results are presented in KEIs' January 10, 1997, *Soil Sampling Report*.

In April 2001, Gettler Ryan prepared a site conceptual model (SCM) that summarized two downgradient sites (Former Chan's Shell and Former ARCO). The SCM indicated that Chan's Shell station had contamination under four removed tanks, and the ARCO station had contamination under six removed tanks. Results indicated that petroleum hydrocarbon concentrations at both of these stations were higher than those at the subject site and therefore the subject site was not primarily responsible for impact beneath the former Shell and ARCO sites. Gettler Ryan recommended that no additional delineation was warranted and pending results of four additional quarters of sampling, the frequency of the monitoring program should be reduced. The details are presented in Gettler Ryans' April 23, 2001, *Site Conceptual Model*.

In October 2003, consulting responsibility for the site was transferred from Gettler Ryan to TRC.

In February 2007, TRC advanced two onsite and four offsite exploratory borings (CPT-1 through CPT-6) to a depth of 50 feet bgs and collected discrete grab groundwater samples. Two water bearing zones were identified at depths between 21-30 feet bgs (shallow zone) and 42-50 feet bgs (deeper zone). Dissolved phase hydrocarbons were primarily detected in the shallow zone with maximum concentrations of 40,000 µg/L total purgeable petroleum hydrocarbons (TPPH, CPT-2), 270 µg/L benzene (CPT-5), 10 µg/L toluene (CPT-5), 690 µg/L ethylbenzene (CPT-2), 840 µg/L total xylenes (CPT-2), and 74,000 µg/L MTBE (CPT-5). The results are presented in TRCs' September 28, 2007, Additional Soil and Groundwater Investigation Report.

In January 2009, consulting responsibility for the site was transferred from TRC to Stantec Consulting.

SENSITIVE RECEPTORS

Lake Merritt is located approximately 2508 feet northeast of the site. According to Gettler Ryan's April 23, 2001 *Site Conceptual Model,* the Oakland Inner Harbor is located approximately ½-mile southwest of the site, and in 2001, the Alameda County Public Works Agency conducted a 1-mile radius well search. Information was obtained from a review of well completion reports on file with the Alameda County Public Works Agency. No domestic or municipal wells were identified within the area. Four irrigation wells and one industrial well were identified within the 1-mile search radius. The closest well to the site was an irrigation well at Laney College (900 Fallon Street), located approximately 1,880 feet southeast of the site.

GROUNDWATER MONITORING AND SAMPLING

The site has been monitored and sampled since 1991. From 1991 to 1993 the groundwater monitoring wells were monitored monthly and sampled quarterly. From 1993 to 1996 the groundwater monitoring wells were monitored/sampled quarterly. From 1996 to present the groundwater monitoring wells have been monitored/sampled semi-annually. Based on telephone communication with Mr. Steven Plunkett of the Alameda County Health Agency, coordination of semiannual monitoring with the adjacent former Shell (726 Harrison) and former Arco (706 Harrison) sites will begin during the third quarter 2009.

Currently, eight wells (MW-1 through MW-8) are gauged and sampled semi-annually and are coordinated with the groundwater monitoring and sampling event at the neighboring Former Arco Station, located at 706 Harrison Street. Samples are analyzed for TPHg, BTEX, MTBE and ethanol using EPA Method 8260.

During the first quarter 2009 monitoring and sampling event, the eight wells were gauged and sampled on January 26, 2009, and the following maximum concentrations were reported:

 TPHg:
 8,800 μg/L (MW-3)

 Benzene:
 27 μg/L (MW-3)

 Toluene:
 3.3 μg/L (MW-5)

 Ethylbenzene
 2.5 μg/L (MW-5)

 Total xylenes
 11 μg/L (MW-5)

 MTBE:
 13,000 μg/L (MW-3)

Hydrocarbon concentrations in the majority of site wells generally continue to decline or remain stable.

This quarter, the direction of groundwater flow was to the southwest at an approximate gradient of 0.02 foot per foot (ft/ft), which is consistent with previous gradients evaluated at the site. Depth to groundwater ranged from 18.46 feet to 20.74 feet below the top of casing (TOC). The average groundwater elevation was 13.72 feet. It should be noted that wells MW-7 and MW-8 were purged by TRC prior to measurement of groundwater levels in the majority of the wells. This may affect the validity of the elevation data.

TRC's Semi-Annual Monitoring Report dated March 5, 2009, is presented as Attachment 1, and includes Tables 1, 1a, 2 through 2c, coordinated event data -Table 2, Figures 1 through 5, graphs, field data sheets, and groundwater analytical reports.

REMEDIATION STATUS

Remediation is not currently being conducted at the site.

CURRENT ASSESSMENT ACTIVITIES

No additional assessment activities were performed during first quarter 2009.

CHARACTERIZATION STATUS

KEI indicated in their May 24, 1993 *Continuing Groundwater Investigation* report that the horizontal extent of contamination in soil had been adequately delineated and was limited to areas beneath the fuel tanks and southernmost pump island. The lateral extent of hydrocarbons in groundwater has been delineated to the north, east, and south.

WASTE DISPOSAL SUMMARY

The volume and disposal method of purged groundwater generated during semi-annual monitoring and sampling is reported in TRC's monitoring report.

RECENT SUBMITTALS/CORRESPONDENCE

No recent submittals or correspondence.

Work Completed (First Quarter 2009)

• Conducted first quarter 2009 groundwater monitoring and sampling activities (conducted by TRC).

Work Planned (Second and Third Quarter 2009)

- Submit Quarterly Status Summary Report First Quarter.
- ConocoPhillips and Stantec are working with representatives of the adjoining former Shell and ARCO sites to enter into a commingled plume agreement to remediate the three sites as efficiently and cooperatively as possible.
- Conduct coordinated third quarter 2009 groundwater monitoring and sampling activities.

Stantec Quarterly Status Summary Report First Quarter 2009 76 Station No. 0752 April 14, 2009

LIMITATIONS

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of ConocoPhillips Company and its representatives as it pertains to the property located at 800 Harrison Street, Oakland, California, for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

Prepared By: Shook

Laura Shook Geologic Project Specialist

Information, conclusions, and recommendations provided by Stantec in this document have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Name: Diane Barclay, C.H.G. Principal Geologist Signature:

Date: April 14, 2009

Stamp:



Attachment 1: TRC Semi-Annual Monitoring Report, October 2008 through March 2009

CC. Ms. Shelby Lathrop (via electronic upload to Livelink) Mr. Mark Jonas, Conestoga-Rovers & Associates (via <u>mjonas@CRAworld.com</u>) Mr. Robert Kitay, Aqua Science Engineers Inc. (via rkitay@aquascienceengineers.com)

ATTACHMENT 1 TRC SEMI-ANNUAL MONITORING REPORT OCTOBER 2008 THROUGH MARCH 2009

Quarterly Status Summary Report – First Quarter 2009 76 Station No.0752 800 Harrison Street Oakland, California



21 Technology Drive Irvine, CA 92618

949.727.9336 PHONE 949.727.7399 FAX

www.TRCsolutions.com

DATE: March 5, 2009

- TO: ConocoPhillips Company 76 Broadway Sacramento, California 95818
- ATTN: MR. TERRY GRAYSON
- SITE: 76 STATION 0752 800 HARRISON STREET OAKLAND, CALIFORNIA
- RE: SEMI-ANNUAL MONITORING REPORT OCTOBER 2008 THROUGH MARCH 2009

Dear Mr. Borgh:

Please find enclosed our Semi-Annual Monitoring Report for 76 Station 0752, located at 800 Harrison Street, 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: Ms. Diane Barclay, Stantec (2 copies)

Enclosures 20-0400/0752R12.QMS

SEMI-ANNUAL MONITORING REPORT OCTOBER 2008 THROUGH MARCH 2009

76 STATION 0752 800 Harrison Street Oakland, California

Prepared For:

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

By:

No. PG3531 CALIE Senior Project Geologist, Irvine Operations 09 Date:

	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 Table 2b: Additional Historic Analytical Results Table 2c: Additional Historic Analytical Results
Coordinated Event Data	Former Arco Station Table 2: Groundwater Elevation and Analytical Data
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 Benzene Concentrations vs. Time
Field Activities	General Field Procedures Field Monitoring Data Sheet - 01/26/09 Groundwater Sampling Field Notes - 01/26/09
Laboratory Reports	Official Laboratory Reports Quality Control Reports Chain of Custody Records
Statement	Purge Water Disposal Limitations

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Summary of Gauging and Sampling Activities October 2008 through March 2009 76 Station 0752 800 Harrison Street Oakland, CA

Project Coordinator: Telephone:	Terry Grayson 916-558-7666	Water Sampling Contractor: TRC Compiled by: Christina Carrillo
Date(s) of Gauging/S	ampling Event: 01/2	6/09
Sample Points		
Groundwater wells: Purging method: Su Purge water disposal Other Sample Points:	4 onsite, 4 offs bmersible pump : Veolia/Rodeo Unit 0 Type:	ite Points gauged: 8 Points sampled: 8
Liquid Phase Hydro	ocarbons (LPH)	
Sample Points with L LPH removal frequen Treatment or disposa	PH: 0 Maximum th cy: Il of water/LPH:	ickness (feet): Method:
Hydrogeologic Par	ameters	
Depth to groundwate Average groundwate Average change in gr Interpreted groundwa Current event: Previous event:	r (below TOC): Mir r elevation (relative to a roundwater elevation sin ater gradient and flow o 0.02 ft/ft, southwest 0.025 ft/ft, southwest	nimum: 18.46 feet Maximum: 20.74 feet available local datum): 13.72 feet nce previous event: -0.41 feet direction: t st (07/28/08)
Selected Laborato	ry Results	
Sample Points with d Maximum reporte	etected Benzene:	3 Sample Points above MCL (1.0 μg/l): 3 on: 27 μg/l (MW-3)
Sample Points with Sample Points with	TPH-G by GC/MS	5 Maximum: 8,800 μg/l (MW-3) 7 Maximum: 13,000 μg/l (MW-3)

Notes:

This report presents the results of groundwater monitoring and sampling activities performed by TRC. Please contact the primary consultant for other specific information on this site.

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STANDARD ABBREVIATIONS

- ____ not analyzed, measured, or collected LPH liquid-phase hydrocarbons Trace = less than 0.01 foot of LPH in well = micrograms per liter (approx. equivalent to parts per billion, ppb) μg/l milligrams per liter (approx. equivalent to parts per million, ppm) mg/l -----ND <not detected at or above laboratory detection limit TOC top of casing (surveyed reference elevation) -----
- D = duplicate
- P = no-purge sample

<u>ANALYTES</u>		
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.
- 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.
- 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 0752 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 0752

Current Event

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	Ethanol (8260B)											
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	TPH-D	ТВА	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	Total Oil and Grease	Chloroform	Tetrachloro- ethene (PCE)	Trichloro- ethene (TCE)
Table 2b	Well/ Date	Cadmium (dissolved)	Calcium	Chromium (total)	lron (total)	Lead (total)	Manganese (dissolved)	Nickel (total)	Zinc (dissolved)	Nitrate	Sulfate	Alkalinity (bicarb.)	BOD
Table 2c	Well/ Date	Post-purge Dissolved	Pre-purge Dissolved										

Oxygen Oxygen

Table 1 CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS January 26, 2009 76 Station 0752

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)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
MW-1			(Scree	en Intervai	l in feet: 13.	.5-33.5)								
01/26/09	9 34.69	20.74	0.00	13.95	-0.59		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		5.2	
MW-2			(Scree	n Interval	l in feet: 15-	-33)								
01/26/09	34.72	20.50	0.00	14.22	-0.60	~~	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
MW-3			(Scree	n Interval	l in feet: 15-	-33)								
01/26/09	33.14	19.54	0.00	13.60	-0.54		8800	27	ND<12	ND<12	ND<25		13000	
MW-4			(Scree	n Interval	l in feet: 15	-33)								
01/26/09	9 32.71	18.80	0.00	13.91	-0.46		500	ND<0.50	ND<0.50	ND<0.50	ND<1.0		830	
MW-5			(Scree	n Interva	l in feet: 15	-32)								
01/26/09	9 32.95	19.25	0.00	13.70	-0.55		1400	7.4	3.3	2.5	11		3.3	
MW-6			(Scree	n Interva	l in feet: 15	-32)								
01/26/09	9 32.16	18.46	0.00	13.70	0.04		570	ND<0.50	ND<0.50	ND<0.50	ND<1.0		500	
MW-7			(Scree	en Interva	l in feet: 13	-33)								
01/26/0	9 32.20	18.90	0.00	13.30	-0.40		80	7.9	0.58	ND<0.50	ND<1.0		10	
MW-8			(Scree	n Interva	l in feet: 11-	-29)								
01/26/09	9 32.00	18.65	0.00	13.35	-0.15		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		22	

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Table 2HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTSJune 1991 Through January 2009

76 Station 0752

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Date	TOC	Depth to	LPH	Ground-	Change									Comments
Sampled	Elevation	Water	Inickness	water Flevation	in Flevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	
				Lievation	Liovation	(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)	
MW-1			(Scre	en Interva	l in feet: 13.	.5-33.5)								
06/05/9	1 34.94					ND		ND	ND	ND	ND			
09/30/9	1 34.94					ND		ND	ND	ND	ND			
12/30/9	1 34.94					ND		ND	ND	ND	ND			
04/02/9	2 34.94					ND		ND	ND	ND	ND			
06/30/9	2 34.94					ND		ND	ND	ND	ND			
09/15/9	2 34.94					76		1.0	ND	ND	ND			
12/21/9	2 34.94	21.17	0.00	13.77		95		0.69	ND	ND	1.0			
04/28/9	3 34.94					920		3.1	2.3	1.2	9.7			
07/23/9	3 34.94	20.13	0.00	14.81		ND		0.5	0.66	ND	ND			
10/05/9	3 34.69	20.30	0.00	14.39	-0.42	92		1.5	ND	ND	0.72			
01/03/9	94 34.69	20.52	0.00	14.17	-0.22	ND		ND	ND	ND	ND			
04/02/9	94 34.69	20.16	0.00	14.53	0.36	ND		ND	ND	ND	ND			
07/05/9	94 34.69	19.27	0.00	15.42	0.89	250		4.8	13	1.2	7.3		~~	
10/06/9	34.69	20.87	0.00	13.82	-1.60	540		1.4	ND	0.66	11			
01/02/9	34.69	19.67	0.00	15.02	1.20	140		ND	ND	ND	ND			
04/03/9	34.69	17.61	0.00	17.08	2.06	580		3.6	0.8	ND	4.0			
07/14/9	5 34.69	18.58	0.00	16.11	-0.97	260		2.1	ND	ND	1.2			
10/10/9	5 34.69	19.60	0.00	15.09	-1.02	220		2.0	ND	25	5.6	29	** **	
01/03/9	6 34.69	19.69	0.00	15.00	-0.09	190		2.4	ND	0.71	1.2			
04/10/9	6 34.69	17.65	0.00	17.04	2.04	540		8.9	1.7	1.5	7.4	50		
07/09/9	6 34.69	18.52	0.00	16.17	-0.87	490		3.0	1.4	1.3	2.5	150		
01/24/9	97 34.69	17.72	0.00	16.97	0.80	760		27	0.89	5.2	10	510		

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Table 2 HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

June 1991 Through January 2009

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76 Station 0752

Date	TOC	Depth to	LPH	Ground-	Change									Comments
Sampled	Elevation	water	Inickness	Elevation	n Elevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	
	(feast)	(f1)	(5)	(80)	(51)	(8015M)	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(leet)	(reet)	(reer)	(Teet)	(Ieet)	(µg/I)	(µg/l)	(μg/l)	(µg/I)	(µg/l)	(µg/i)	(µg/1)	(µg/l)	
MW-1	continued	10.72	0.00	14.04	0.00		60	NTD -0 50	200 -0 -0 -0		NTD 10 50			
09/28/0	07 34.09	19.73	0.00	14.96	-0.89		68	ND<0.50	ND<0.50	ND<0.50	ND<0.50		15	
03/26/0	98 34.69	19.32	0.00	15.37	0.41		200	ND<0.50	ND<0.50	ND<0.50	1.0		47	
07/28/0	18 34.69	20.15	0.00	14.54	-0.83		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		8.7	
01/26/0	9 34.69	20.74	0.00	13.95	-0.59		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		5.2	
MW-2			(Scre	en Interval	in feet: 15	-33)								
06/05/9	91 34.97					49		ND	ND	ND	ND			
09/30/9	91 34.97					130		18	0.53	14	9.6			
12/30/9	91 34.97					91		16	0.89	11	1.9			
04/02/9	92 34.97		~~			88		12	0.32	6.3	7.2			
06/30/9	92 34.97					76		9.3	0.76	4.8	6.9			
09/15/9	92 34.97					1300		91	5.7	80	110			
12/21/9	92 34.97	20.85	0.00	14.12		960		97	3.2	74	96			
04/28/9	3 34.97					1300		76	1.9	130	87			
07/23/9	93 34.97	19.81	0.00	15.16		66		1.8	ND	2.5	2.0			
10/05/9	3 34.72	19.95	0.00	14.77	-0.39	120		12	ND	2.1	12	·		
01/03/9	94 34.72	20.21	0.00	14.51	-0.26	260		25	ND	5.5	26			
04/02/9	94 34.72	19.88	0.00	14.84	0.33	ND		0.65	ND	ND	0.99			
07/05/9	94 34.72	19.07	0.00	15.65	0.81	160		16	ND	0.73	10	** **		
10/06/9	94 34.72	20.55	0.00	14.17	-1.48	170		15	ND	1.4	11			
01/02/9	34.72	19.25	0.00	15.47	1.30	190		27	ND	0.95	11			
04/03/9	95 34.72	17.49	0.00	17.23	1.76	2400		65	6.6	19	63			
07/14/9	95 34.72	18.30	0.00	16.42	-0.81	750		270	ND	ND	13			
10/10/9	95 34.72	19.25	0.00	15.47	-0.95	50		1.6	ND	ND	ND	200		

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Table 2 HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS June 1991 Through January 2009 76 Station 0752

Date	TOC	Depth to	LPH	Ground-	Change									Comments
Sampled	Elevation	Water	Thickness	water Flevation	in Elevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	
				Lievation	LICVATION	(8015M)	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)								
MW-2	continued													
09/30/0	34.72	17.31	0.00	17.41	-1.75		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		9.1	
03/27/0	6 34.72	14.91	0.00	19.81	2.40		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2.7	
09/27/0	6 34.72	18.15	0.00	16.57	-3.24		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		7.7	
03/27/0	7 34.72	18.57	0.00	16.15	-0.42		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		1.4	
09/28/0	07 34.72	18.38	0.00	16.34	0.19		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	~~	ND<0.50	
03/26/0	34.72	19.06	0.00	15.66	-0.68		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
07/28/0	34.72	19.90	0.00	14.82	-0.84		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
01/26/0	9 34.72	20.50	0.00	14.22	-0.60		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
MW-3			(Scree	en Interval	in feet: 15-	-33)								
06/05/9	33.39	~				5800		1200	40	140	97			
09/30/9	91 33.39					6800		1400	130	290	240			
12/30/9	91 33.39					7200		2100	690	410	550			
04/02/9	92 33.39					8000		1400	200	300	310			
06/30/9	92 33.39					8900		1900	210	430	550			
09/15/9	2 33.39					10000		1900	330	400	580			
12/21/9	33.39	20.02	0.00	13.37		8500		1500	150	310	330			
04/28/9	3 33.39					2600		220	7.6	41	27			
07/23/9	3 33.39	19.00	0.00	14.39		4400		660	26	160	82	***		
10/05/9	3 33.14	19.20	0.00	13.94	-0.45	9200		720	88	140	140			
01/03/9	33.14	19.40	0.00	13.74	-0.20	4900		830	100	170	150			
04/02/9	33.14	19.01	0.00	14.13	0.39	6000	~-	800	30	140	110			
07/05/9	33.14	18.14	0.00	15.00	0.87	25000		ND	ND	ND	ND	~~~~		
10/06/9	33.14	19.73	0.00	13.41	-1.59	49000		1300	200	280	300			

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Table 2HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTSJune 1991 Through January 200976 Station 0752

Date	TOC	Depth to	LPH	Ground-	Change									Comments
Sampieu	Elevation	water	Inickness	Elevation	n Elevation	TPH-G	TPH-G	_		Ethyl-	Total	MTBE	MTBE	
	<i>(</i> 0)	(2)	<i>(</i> ^)			(8015M)	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(teet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
MW-3	continued													
02/04/0	4 33.14	16.15	0.00	16.99	0.59		130	7.9	ND<0.50	ND<0.50	ND<1.0		63	
08/11/0	4 33.14	16.64	0.00	16.50	-0.49		ND<20000	ND<200	ND<200	ND<200	ND<400		20000	
03/31/0	5 33.14	14.53	0.00	18.61	2.11		ND<20000	330	ND<200	ND<200	ND<400		78000	
09/30/0	5 33.14	16.55	0.00	16.59	-2.02		12000	360	40	ND<25	50		20000	
03/27/0	6 33.14	13.66	0.00	19.48	2.89		10000	150	ND<25	53	99		15000	
09/27/0	6 33.14	17.40	0.00	15.74	-3.74		ND<12000	ND<120	ND<120	ND<120	ND<120		12000	
03/27/0	7 33.14	17.55	0.00	15.59	-0.15		8700	180	ND<12	60	57		8900	
09/28/0	7 33.14	18.59	0.00	14.55	-1.04		9000	55	ND<50	ND<50	ND<50		11000	
03/26/0	8 33.14	18.19	0.00	14.95	0.40		450	13	1.3	0.84	1.4		7200	
07/28/0	8 33.14	19.00	0.00	14.14	-0.81		8300	ND<50	ND<50	ND<50	ND<100		13000	
01/26/0	9 33.14	19.54	0.00	13.60	-0.54		8800	27	ND<12	ND<12	ND<25		13000	
MW-4			(Scre	en Interva	l in feet: 15	-33)								
10/19/9	2					480		0.51	2.1	2.8	6.8			
12/21/9	2 33.12	19.73		13.39		220		ND	ND	0.97	0.74			
04/28/9	3 33.12			~~		ND		ND	ND	ND	ND			
07/23/9	3 33.12	18.72		14.40		85		ND	ND	ND	ND			
10/05/9	3 32.71	18.74		13.97	-0.43	130		ND	ND	ND	ND			
01/03/9	4 32.71	18.93	***	13.78	-0.19	210		ND	ND	0.76	1.6			
04/02/9	4 32.71	18.53		14.18	0.40	89		ND	ND	ND	ND			
07/05/9	4 32.71	17.67		15.04	0.86	190		ND	ND	ND	ND			
10/06/9	4 32.71	19.25		13.46	-1.58	170		0.85	ND	ND	0.74			
01/02/9	5 32.71	17.75		14.96	1.50	ND		ND	ND	ND	ND			
04/03/9	5 32.71	15.87		16.84	1.88	98	~~	ND	ND	ND	ND			

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Table 2 HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS June 1991 Through January 2009 76 Station 0752

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water	Change	TOUL C				and a	T . 1			Comments
Sumptou		Tr diel	1110001000	Elevation	Elevation	1PH-G (8015M)	TPH-G	Banzana	Toluene	Ethyl-	Total	MIBE	MTBE (8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(0021D) (ug/l)	(0200D) (ug/l)	
	continued			<u></u>	((10-7	(1.9.1)	(1-6-7)	(1-0)	(1-8)	(110-1)	(176/7)	(1817)	
08/11/0	4 32.71	16.16	0.00	16.55	-0.04		ND<5000	ND<50	ND<50	ND<50	ND<100		6400	
03/31/0	5 32.71	14.15	0.00	18.56	2.01		ND<1300	ND<0.50	ND<0.50	ND<0.50	ND<1.0		1600	
09/30/0	5 32.71	16.91	0.00	15.80	-2.76		900	ND<0.50	ND<0.50	ND<0.50	ND<1.0		3800	
03/27/0	6 32.71	13.94	0.00	18.77	2.97		870	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2000	
09/27/0	6 32.71	16.91	0.00	15.80	-2. 9 7		ND<1000	ND<10	ND<10	ND<10	ND<10		1600	
03/27/0	7 32.71	17.15	0.00	15.56	-0.24		1500	ND<2.5	ND<2.5	ND<2.5	ND<2.5		1700	
09/28/0	7 32.71	18.13	0.00	14.58	-0.98		590	ND<5.0	ND<5.0	ND<5.0	ND<5.0		1400	
03/26/0	8 32.71	17.66	0.00	15.05	0.47		390	ND<0.50	ND<0.50	ND<0.50	ND<1.0		1400	
07/28/0	8 32.71	18.34	0.00	14.37	-0.68		480	ND<1.0	ND<1.0	ND<1.0	ND<2.0		950	
01/26/0	9 32.71	18.80	0.00	13.91	-0.46		500	ND<0.50	ND<0.50	ND<0.50	ND<1.0		830	
MW-5			(Scree	en Interval	l in feet: 15	-32)								
10/19/9						2700		61	5.0	100	61			
12/21/9	33.25	19.75		13.50		1700		51	4.7	83	34			
04/28/9	3 33.25			~~		6700		200	190	250	430			
07/23/9	3 33.25	18.74		14.51		2000		122	8.0	68	47			
10/05/9	3 32.95	18.83		14.12	-0.39	1700		70	6.2	54	40	~~		
01/03/9	32.95	19.05		13.90	-0.22	1500		44	ND	42	46		~~	
04/02/9	4 32.95	18.68		14.27	0.37	1800		46	5.1	38	35			
07/05/9	32.95	17.90		15.05	0.78	2200		97	8.4	37	36			
10/06/9	32.95	19.37		13.58	-1.47	1600		79	5.7	28	22			
01/02/9	32.95	17.92		15.03	1.45	1700		50	8.6	30	28			
04/03/9	32.95	16.15		16.80	1.77	5400		190	240	170	420			
07/14/9	32.95	17.18		15.77	-1.03	3800		210	100	130	190		***	

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Table 2 HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS June 1991 Through January 2009 76 Station 0752

Date	TOC	Depth to	LPH	Ground-	Change									Comments
Sampled	Elevation	Water	Thickness	water Elevation	in Flevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	
				Liotation		(8015M)	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)								
MW-5	continued													
03/31/0	5 32.95	14.30	0.00	18.65	2.08		5000	160	84	65	72		140	
09/30/0	5 32.95	16.19	0.00	16.76	-1.89		1200	26	5.8	2.4	9.2		38	
03/27/0	6 32.95	13.90	0.00	19.05	2.29		1100	13	12	4.7	16		8.8	
09/27/0	6 32.95	17.06	0.00	15.89	-3.16		1300	20	11	2.3	15		21	
03/27/0	7 32.95	17.43	0.00	15.52	-0.37		960	15	7.8	2.2	11	~~	14	
09/28/0	7 32.95	18.25	0.00	14.70	-0.82		1300	13	6.0	2.3	15		8.4	
03/26/0	8 32.95	17.82	0.00	15.13	0.43		1200	7.6	3.3	1.8	11	-	2.7	
07/28/0	8 32.95	18.70	0.00	14.25	-0.88		2000	12	4.9	3.2	17		ND<0.50	
01/26/0	9 32.95	19.25	0.00	13.70	-0.55		1400	7.4	3.3	2.5	11		3.3	
MW-6			(Scre	en Interval	l in feet: 15	-32)								
10/19/9	22			77		3900		420	12	60	28			
12/21/9	32.42	19.17		13.25		2300		370	11	39	15			
04/28/9	3 32.42				~~	1200		54	1.5	11	5.3			
07/23/9	3 32.42	18.17		14.25		580		19	0.99	3.4	2.7			
10/05/9	3 32.16	18.35		13.81	-0.44	1400		34	ND	5.3	7.3			
01/03/9	32.16	18.54		13.62	-0.19	1400		57	ND	8.5	11			
04/02/9	4 32.16	18.15		14.01	0.39	5300		ND	ND	ND	ND			
07/05/9	32.16	17.25		14.91	0.90	ND		ND	ND	ND	ND			
10/06/9	4 32.16	18.85		13.31	-1.60	11000		ND	ND	ND	ND		~~	
01/02/9	95 32.16	17.51		14.65	1.34	550		18	0.92	2.0	1.8			
04/03/9	5 32.16	15.48		16.68	2.03	6600		ND	ND	ND	ND		-	
07/14/9	32.16	16.63		15.53	-1.15	ND	**	ND	ND	ND	ND			
10/10/9	32.16	17.68		14.48	-1.05	ND		81	ND	ND	ND	75000		

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Table 2 HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS June 1991 Through January 2009 76 Station 0752

Date	TOC	Depth to	LPH	Ground-	Change									Comments
Sampled	Elevation	Water	Thickness	water Elevation	m Elevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	
	(64)	(6)	(61)	(60)	(0)	(8015M)	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(reet)	(feet)	(feet)	(feet)	(feet)	(µg/I)	(µg/1)	(µg/l)	(µg/l)	(µg/l)	(µg/I)	(µg/l)	(µg/l)	
MW-6	continued	15 40	0.00	16.60	1 50		1200	1.40					5000	
09/30/0	5 32.10	15.48	0.00	16.68	-1.78		4300	140	37	28	41		5800	
03/27/0	6 32.16	13.02	0.00	19.14	2.46		7200	34	0.66	0.96	18		9900	
09/27/0	6 32.16	16.56	0.00	15.60	-3.54		1800	ND<12	ND<12	ND<12	ND<12		3300	
03/27/0	7 32.16	16.73	0.00	15.43	-0.17	~~	1600	2.8	ND<2.5	ND<2.5	ND<2.5		1800	
09/28/0	7 32.16	17.75	0.00	14.41	-1.02		830	ND<5.0	ND<5.0	ND<5.0	ND<5.0		1600	
03/26/0	8 32.16	17.31	0.00	14.85	0.44		940	45	5.9	2.0	5.3		1300	
07/28/0	8 32.16	18.50	0.00	13.66	-1.19		500	ND<1.0	ND<1.0	ND<1.0	ND<2.0		750	
01/26/0	9 32.16	18.46	0.00	13.70	0.04		570	ND<0.50	ND<0.50	ND<0.50	ND<1.0		500	
MW-7			(Scre	en Interval	l in feet: 13-	-33)								
10/19/9	2	·				-					~~			
04/28/9	3 32.49					110		2.8	1.3	1.4	1.7			
07/23/9	3 32.49	18.60		13.89		790		23	3.3	28	5.4			
10/05/9	3 32.20	18.76		13.44	-0.45	360		10	1.2	0.91	0.99			
01/03/9	4 32.20	18.91		13.29	-0.15	ND		0.93	ND	0.75	1.9			
04/02/9	4 32.20	18.50		13.70	0.41	360		2.0	ND	ND	0.8			
07/05/9	4 32.20	17.52		14.68	0.98	ND		ND	ND	ND	ND			
10/06/9	4 32.20	19.25		12.95	-1.73	340		5.6	0.85	ND	1.2			
01/02/9	5 32.20	17.67		14.53	1.58	ND		ND	ND	ND	ND			
04/03/9	5 32.20	15.81		16.39	1.86	570		24	ND	3.4	5.8		~~	
07/14/9	5 32.20	17.05		15.15	-1.24	ND		14	ND	ND	ND			
10/10/9	5 32.20	18.08		14.12	-1.03	740		170	ND	ND	ND	13000		
01/03/9	6 32.20	18.02		14.18	0.06	360		16	1.3	2.7	1.4			
04/10/9	6 32.20	15.81		16.39	2.21	120		4.1	1.5	ND	0.88	3200		

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Table 2HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTSJune 1991 Through January 200976 Station 0752

D	ate	TOC	Depth to	LPH	Ground-	Change									Comments
San	npled	Elevation	Water	Thickness	water	in	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	
					Elevation	Elevation	(8015M)	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
		(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	 							
М	[W-7	continued													
0)9/27/0	6 32.20	16.96	0.00	15.24	-3.56		2800	180	ND<12	15	44		4200	
0)3/27/0	7 32.20	17.30	0.00	14.90	-0.34		920	66	2.9	3.4	4.5		970	
0)9/28/0	7 32.20	18.10	0.00	14.10	-0.80		4000	440	15	17	59		3300	
0)3/26/0	8 32.20	17.64	0.00	14.56	0.46		390	39	3.3	0.85	7.5		96	
0)7/28/0	8 32.20	18.50	0.00	13.70	-0.86		64	3.3	ND<0.50	ND<0.50	ND<1.0		8.7	
0)1/26/0	9 32.20	18.90	0.00	13.30	-0.40		80	7.9	0.58	ND<0.50	ND<1.0		10	
MW	-8			(Scree	en Interval	in feet: 11-	-29)								
C)4/28/9	3 32.33					450		18	1.8	1.8	1.4			
C)7/23/9	3 32.33	18.45		13.88		260		5.1	ND	0.6	ND			
1	0/05/9	3 32.00	18.57		13.43	-0.45	120		1.7	ND	ND	ND			
C	01/03/9	4 32.00	18.73		13.27	-0.16	ND		ND	ND	ND	ND	51		
C)4/02/9	4 32.00	18.30		13.70	0.43	150		1.2	ND	ND	ND			
C	07/05/9	4 32.00	17.41		14.59	0.89	730		17	ND	1.6	ND			
1	0/06/9	4 32.00	18.98		13.02	-1.57	140		ND	ND	ND	ND	~-		
C)1/02/9	5 32.00	17.58		14.42	1.40	440		18	0.72	2.0	1.8			
C)4/03/9	5 32.00	15.54		16.46	2.04	960		11	ND	ND	ND			
C)7/14/9	5 32.00	16.81		15.19	-1.27	280		4.2	2.6	1.1	3.3			
1	0/10/9	5 32.00	17.85		14.15	-1.04	110		1.3	0.62	0.67	ND	170		
C)1/03/9	6 32.00	17.82		14.18	0.03	63		ND	0.51	ND	1.8			
C)4/10/9	6 32.00	15.70		16.30	2.12	ND		1.1	0.61	ND	ND	60		
C)7/09/9	6 32.00	16.78		15.22	-1.08	72		1.0	ND	ND	ND	140		
C)1/24/9	7 32.00	15.79	0.00	16.21	0.99	ND		ND	ND	ND	ND	76		
C)7/23/9	7 32.00	17.69	0.00	14.31	-1.90	ND		ND	ND	ND	ND	270		

©TRC

Table 2HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTSJune 1991 Through January 200976 Station 0752

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)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
MW-8	continued	L												
07/28/0	08 32.00	18.50	0.00	13.50	-1.05		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		11	
01/26/0	9 32.00	18.65	0.00	13.35	-0.15		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		22	

Date Sampled			Ethonol	Ethylene-	1.2 DC4				T-+-1 O'l		Tetrachloro-	Trichloro-
	ת נומד	TDA	CHIMIUI	aibromiae	I,Z-DCA	DIDE	CTD	~~~ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Total Oil		etnene	ethene
	Irn-D	1BA	(8260B)	(EDB)	(EDC)	DIPE	EIBE	IAME	and Grease	Chloroform	(PCE)	(ICE)
	(µg/1)	(µg/1)	(µg/I)	(µg/I)	(µg/1)	(µg/I)	(µg/l)	(µg/1)	(mg/l)	(µg/I)	(µg/l)	(µg/l)
MW-1 01/26/09	continued		ND<250									
MW-2												
07/11/03			ND<500									
02/04/04		ND<100	ND<500									
08/11/04		~~	ND<50									
03/31/05			ND<50									
09/30/05			ND<250							-		
03/27/06			ND<250									
09/27/06			ND<250									
03/27/07			ND<250									
09/28/07			ND<250			10 41						
03/26/08			ND<250									
07/28/08			ND<250									
01/26/09			ND<250									
MW-3												
02/04/04		ND<100	ND<500									
08/11/04			ND<20000									
03/31/05			ND<20000									
09/30/05			ND<12000									
03/27/06			ND<12000								177 74	
09/27/06			ND<62000									
03/27/07		~~	ND<6200									
09/28/07			ND<25000				** **					
03/26/08			ND<250			~~~						
07/28/08			ND<25000		W							
0752						Page 2 of 5					<u> </u>	

Table 2 aADDITIONAL HISTORIC ANALYTICAL RESULTS76 Station 0752



Date Sampled	TPH -D . (μg/l)	ΤΒΑ (μg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Total Oil and Grease (mg/l)	Chloroform (µg/l)	Tetrachloro- ethene (PCE) (µg/l)	Trichloro- ethene (TCE) (µg/l)
MW-5 c	continued											
01/26/09			ND<250									
MW-6												
02/04/04	~~	ND<100	ND<500							~~		
08/11/04			ND<5000									
03/31/05			ND<5000									
09/30/05			ND<250									
03/27/06			ND<250									
09/27/06			ND<6200					70 cc			~~	
03/27/07			ND<1200									
09/28/07			ND<2500									
03/26/08			ND<250				** **					
07/28/08			ND<500							~~		
01/26/09			ND<250	10 - 10					~			
MW-7												
02/04/04		ND<100	ND<500									
08/11/04		70 AS	ND<5000				~~	-				
03/31/05			ND<5000					~~~				
09/30/05			ND<250									
03/27/06			ND<250		~~				~~			
09/27/06			ND<6200					~~				
03/27/07		~~	ND<500									
09/28/07			ND<5000									
03/26/08			ND<250									
07/28/08			ND<250									
01/26/09			ND<250									

Table 2
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 0752

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Date												
Sampled	Cadmium		Chromium	Iron	Lead	Manganese	Nickel	Zinc			Alkalinity	
	(dissolved)	Calcium	(total)	(total)	(total)	(dissolved)	(total)	(dissolved)	Nitrate	Sulfate	(bicarb.)	BOD
	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MW-1												
12/30/91	ND		0.0078		0.0057		ND	0.046	**			
04/02/92	ND		0.015		0.016		ND	0.02				***
06/30/92	ND		0.079		0.009		0.1	0.087				
04/10/96		21		15	***	2.6					160	
MW-2												
01/03/96		27	~~	77		3.0			0.22	97	130	2.2
04/10/96		58		60		7.0					460	•
MW-3												
01/03/96	·	43			~~					16		

Table 2 bADDITIONAL HISTORIC ANALYTICAL RESULTS76 Station 0752



COORDINATED EVENT DATA

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GROUNDWATER ELEVATION AND ANALYTICAL DATA FORMER ARCO STATION 706 HARRISON STREET OAKLAND, CALIFORNIA

Well ID/ Sample ID TOC	Date Sampled	TOC Depth to Water	Groundwater Elevation	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE by 8021B	MTBE by 8260B	Notes
		(ft)	(ft-msl)	(µg/l.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	
MW-1	8/13/1993	17.40	11.75	20,000	8,500	640	280	440	-	-	
29.15	12/14/1993	17.27	11.88	17,000	9,200	1,200	4,400	540	-	-	
	4/15/1994	17.00	12.15	9,500	3,600	530	160	280	-	-	
	12/29/1994	16.40	12.75	-	-	-	-	-	-	-	
	7/19/1996	15.83	13.32	17,000	5,200	1,100	330	530	-		sheen/odor
	1/27/1997	13.58	15.57	30,000	9,800	1,300	790	880	400	-	b,sheen/odor
	6/18/1997	16.11	13.04	19,000	5,600	1,400	510	770	1,200	800	a,b
	9/18/1997	16.62	12.53	48,000	18,000	4,400	1,000	1,700	ND<640	-	Ъ
	12/10/1997	15.93	13.22	22,000	4,900	1,300	580	650	460	260	a,b,odor
	2/18/1998	11.56	17.59	16,000	5,000	750	400	780	1,800	-	ь
	5/12/1998	13.53	15.62	19,000	4,600	810	450	770	5,500	-	b,c
	8/18/1998	15.19	13.96	12,000	3,600	1,300	300	570	5,100	3,700	a,b
	11/24/1998	15.67	13.48	13,000	3,600	890	330	380	6,100	-	b
	2/4/1999	15.31	13.84	20,000	5,900	830	450	500	4,900	-	ь
	5/18/1999	14.95	14.20	23,000	7,000	1,600	520	830	6,100	-	ь
	8/27/1999	15.84	13.31	19,000	5,800	1,700	410	710	1,800	2,100	a,b
	11/18/1999	16.39	12.76	20,000	4,900	630	410	580	4,900	3,600	Ъ
	2/29/2000	• 13.43	15.72	12,000	2,800	24	290	170	3,100	3,400	a
	5/25/2000	15.08	14.07	12,000	2,200	120	330	260	9,100	12,000	a,b
	8/9/2000	16.09	13.06	13,000	2,500	44	310	140	16,000	-	b
	11/9/2000	15.90	13.25	11,000	2,500	140	380	150	11,000	12,000	Ъ
	1/29/2001	16.05	13.10	9,600	3,100	100	77	200	2,600	2,400	Ъ
	4/16/2001	16.90	12.25	3,300	1,200	4.4	2.7	28	900	940	Ъ
	8/14/2001	17.13	12.02	2,000	500	3.4	24	7.8	68	53	a
	10/22/2001	16.11	13.04	220	83	0.63	2.8	ND<0.5	ND<10	5.7	а
	2/1/2002	16.93	12.22	640	220	1.7	4.7	0.57	ND<10		а
	5/10/2002	15.09	14.06	230	26	0.97	ND<0.5	ND<0.5	ND<5.0	-	a
	7/8/2002	15.20	13.95	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	
	10/2/2002	15.70	13.45	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	1/23/2003	15.09	14.06	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/29/2003	13.02	16.13	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
26.17	7/18/2003	14.50	11.67	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/9/2003	13.81	12.36	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	1/28/2004	13.09	13.08	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	•	
	4/7/2004	14.97	11.20	180	60	0.56	1.9	ND<0.5	ND<5.0	-	a
	7/23/2004	14.15	12.02	130	36	ND<0.5	0.65	ND<0.5	ND<5.0	-	a
	10/12/2004	16.30	9.87	ND<50	2.5	1.5	ND<0.5	0.86	ND<5.0	-	
	2/14/2005	13.85	12.32	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/27/2005	13.35	12.82	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0		
	7/19/2005	14.68	11.49	4,500	1,400	6.5	160	58	630	-	a
	10/18/2005	15.15	11.02	1,700	340	ND<5.0	28	ND<5.0	8,000	7,200	а
	1/23/2006	13.27	12.90	3,100	790	6.5	79	32	4,200	5,100	a
	4/12/2005	12.33	13.84	7,200	2,600	110	350	320	5,600	4,000	а
	7/10/2006	14.93	11.24	2,700	550	4:2	77	47	5,500	8,300	а
	10/16/2006	16.51	9.66	2,000	470	6.4	38	13	6,300	6,400	a
	1/26/2007	16.87	9.30	3,300	600	36	34	27	6,200	5,900	a
	4/18/2007	16.77	9.40	5,400	1,400	170	210	350	3,600	4,700	a,i
	8/2/2007	17.21	8.96	6,100	1,200	130	140	240	5,300	5,400	a
	10/23/2007	17.67	8.50	2,600	740	53	60	110	5,800	6,900	a,h,Sheen ^{Lab}
	1/30/2008	16.66	9.51	1.900	380	2.6	15	20	2,400	2,800	a
	4/18/2008	17.14	9.03	1,500	320	4.5	13	25	2,900	2,900	a
	7/28/2008	17.70	8.47	1,100	240	3.6	6.9	15	1,600	1,800	a

CRA 231116 (3)

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GROUNDWATER ELEVATION AND ANALYTICAL DATA FORMER ARCO STATION 706 HARRISON STREET OAKLAND, CALIFORNIA

Well ID/ Sample ID TOC	Date Sampled	TOC Depth to Water (ft)	Groundwater Elevation (fl-msi)	TPHg (µg/L)	Benzene (µg/L)	Toluene (μg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	МТВЕ by 8021B (µg/L)	МТВЕ by 8260В (µg/L)	Notes
MW-2	1/30/2008	16.99	10.54	52,000	2,700	11,000	1,700	7,300	5,300	4,700	a
(cont.)	4/18/2008	17.41	10.12	64,000	3,400	13,000	1,800	8,100	ND<4,000	2,200	a,h,i
	7/28/2008	17,99	9.54	51.000	2.000	6.200	1,300	2,700	ND<2,600	1,500	a.i.Sheen ^{Field}
	12/5/2008	18.56	8.97	74.000	2,200	12.000	1.700	7.500	2.500	1.900	a i Sheen ^{Field}
	1/26/2009	18 20	9 33	90,000	2 800	14 000	1,800	9,500	<3.500	1 600	a h i Shaon Field & Lab
	420/2007	10,20	7.00	20,000	2,000		1,500	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-0,200	2,000	a,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
MW-3	8/13/1993	17.05	12.72	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.5	-	-	No SVOCs.
29.77	12/14/1993	17.70	12.07	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.5	-	-	
	4/15/1994	17.40	12.37	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	-	-	
	12/29/1994	16.80	12.97	-	-	-	-	-	-	-	
	7/19/1996	16.28	13.49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	-	*	
	1/27/1997	13.83	15.94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	6/18/1997	16.53	13.24	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	9/18/1997	17.07	12.70	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	12/10/1997	16.15	13.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	2/18/1998	11.80	17.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/12/1998	13.85	15.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	8/18/1998	15.57	14.20	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	*	
	11/24/1998	16.04	13.73	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	2/4/1999	17.80	11.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/18/1999	15,29	14.48	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	8/27/1999	16.15	13.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/18/1999	16.77	13.00	-	_	-	-	-	-	-	
	2/29/2000	13.71	16.06	ND<50	2	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/25/2000	15.46	14.31		-	-	-	-	-	-	
	8/9/2000	16 46	13 31	ND<50	ND<05	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/9/2000	16.25	13.52		-	· · · · ·	-	_	-	_	
	1/29/2001	16.52	13 25	ND<50	NID<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	*	
	4/16/2001	16.95	12.82			-	-	_	-	-	
	8/14/2001	1711	12.65	ND<50	NID<0.5	NID<0.5	ND<0.5	ND<0.5	ND<5.0	_	
	10/22/2001	36.50	13.27	112 -00		-		_	-	_	
	2/1/2002	16.90	12.27	- ND-50		NTC<0.5	NID<0.5	NID<0 5	ND<50	_	
	5/10/2002	15.02	14.74	140-00	ND 40.0	140 -0.0	-	142 -0.0		_	
	7/9/2002	14.45	15 20	- NID-50	NTD-0 5	NT)<0.5	NID<0.5	NIDC0 5	NTD<5.0	_	
	10 (0 / 2002	15.02	13.52	1412-30	141/40.0	140-0.5	140-0.0	140 -0.0	-	_	
	10/2/2002	15.05	14.74		- NEX-0 5	- NT7-0 F	- NUX05	NID-05	- NID 25 0	-	
	1/23/2003	10.40	14.47	110/00	ND-0.5	140-0.5	140-0.0	1412~0.0	110~0.0	-	
26.70	4/29/2003	14.97	17.20	* N/D-/E0	- NTD-40 F	- እጠንረፅ ደ		- NTD0 #	- NID-5-6	-	
20.79	10 / 2003	14.00	11.77	142/50	MD<0.5	140-0.5	140-0.0	110-0.0	140-0.0		
	10/9/2003	14.13	12.00	-	-	×	- NID-0 F	~ NT0 F	- NID-5-0	•	
	1/28/2004	13.47	13.32	IND<50	ND<0.5	IND<0.5	ND<0.5	IND~0.5	ND~5.0	-	
	4/7/2004	15.41	11.36	-	-	-	-	- NTD-40 F	-	-	
	7/23/2004	14.54	12.25	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	IND~5.0	~	
	10/12/2004	16.58	10.21	-	-	-	-	-	-	-	
	2/14/2005	14.19	12.60	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/27/2005	13.68	13.11	-	-	•	-			-	
	7/19/2005	15.15	11.64	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/18/2005	15.60	11.19	-	~	-	-	-	-	-	
	1/23/2006	13.65	13.14	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	270	260	
	4/12/2006	11.94	14.85	-	-	~ /	-	-	-	-	
	7/10/2006	14.48	12.31	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1,100	1,600	
	10/16/2006	16.19	10.60	-	-	-	-	-	-	-	
	1/26/2007	16.56	10.23	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2,500	3,400	

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GROUNDWATER ELEVATION AND ANALYTICAL DATA FORMER ARCO STATION 706 HARRISON STREET OAKLAND, CALIFORNIA

Well ID/ Sample ID TOC	Date Sampled	TOC Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (µg/L)	Benzene (µg/L)	Toluene (μg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	МТВЕ by 8021B (µg/L)	МТВЕ by 8260B (µg/L)	Notes
MW-4	10/16/2006	17.21	10.99	3,200	440	26	34	63	7,800	7,500	a
(cont.)	1/26/2007	17.58	10.62	2,000	290	20	28	42	8,300	8,300	a
	4/18/2007	17.46	10.74	2,300	350	28	38	42	5,900	7,800	a,i
	8/2/2007	17.95	10.25	3,600	480	33	47	72	7,500	9,000	a
	10/23/2007	18.41	9.79	1,700	280	13	27	25	7,000	8,800	a
•	1/30/2008	17.49	10.71	1,300	130	4.9	13	12	6,500	8,200	a
	4/18/2008	17.90	10.30	2.300	240	14	25	27	6,900	6,400	a
	7/28/2008	18.49	9.71	3.400	390	100	33	100	4,600	5,000	a
	12/5/2008	19.07	9.13	2.400	310	30	41	67	2,100	1,700	a,i
	1/26/2009	18.71	9.49	1,600	180	14	21	33	1,300	1,200	a,Sheen ^{Field}
MW-5	12/16/1994	16.07	11.97	ND<50	1.1	ND<0.5	ND<0.5	2.4	-	-	
28.04	12/29/1994	16.10	11.94	•	~	-	-	-	-	-	
	7/19/1996	15.49	12.55	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	-	-	
	1/27/1997	13.60	14.44	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	6/18/1997	15.55	12.49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	9/18/1997	16.16	11.88	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	12/10/1997	15.41	12.63	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	2/18/1998	10.93	17.11	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/12/1998	13.25	14.79	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	8/18/1998	14.75	13.29	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/24/1998	15.15	12.89	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	2/4/1999	14.61	13.43	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/18/1999	14.15	13.89	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	•	
	8/27/1999	15.43	12.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/18/1999	15.97	12.07	-	-	-	-	-	-	-	
	2/29/2000	13.16	14.88	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/25/2000	14.72	13.32	-	-	-	-	-	-	-	
	8/9/2000	15.68	12.36	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/9/2000	15.39	12.65	-	-	-	-	-	-	-	
	1/29/2001	15.97	12.07	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/16/2001	16.24	11.80	-	-	-	-	•	-	-	
	8/14/2001	17.39	10.65	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/22/2001	15.90	12.14	-	-	-	-	-	-	-	
	2/1/2002	16.55	11.49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/10/2002	15.12	12.92	-	-	•	-	-	-	-	
	7/8/2002	15.92	12.12	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/2/2002	16.42	11.62	~	-	•	-	-	-	-	
	1/23/2003	14.90	13.14	ND<50	20	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/29/2003	12.05	15.99	-	-	-	-	-	-	-	
25.07	7/18/2003	14.28	10.79	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/9/2003	13.36	11.71	-	-	-	-	-	-	-	
	1/28/2004	12.68	12.39	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/7/2004	14.71	10.36	-	-	•	-	-	-	-	
	7/23/2004	13.49	11.58	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	i
	10/12/2004	15.88	9.19	-		-	-	•	-	-	
	2/14/2005	13.22	11.85	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	i
	4/27/2005	13.40	11.67	-	-	-	-	-	-	-	
	7/19/2005	14.21	10.86	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	i
	10/18/2005	14.79	10.28		-	-	-	-	-	-	
	1/23/2006	13.12	11.95	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	i
	4/12/2006	11.39	13.68	-	_	-	-	-	-	-	

CRA 231116 (3)

GROUNDWATER ELEVATION AND ANALYTICAL DATA FORMER ARCO STATION 706 HARRISON STREET OAKLAND, CALIFORNIA

Well ID/ Sample ID TOC	Date Sampled	TOC Depth to Water (A)	Groundwater Elevation (A.mel)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE by 8021B (426(1)	MTBE by 8260B	Notes
		<u></u>	yr-may	(µ8/L)	(µχ/L)	V4.8/1-/	(43)-57	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	4.8/-5/	(48) 6)	
MW-6	4/12/2006	12.66	13.47	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	
(cont.)	7/10/2006	14.64	11.49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	
	10/16/2006	16.50	9.63	^	*	-	-	-	-	-	
	1/26/2007	16.83	9.30	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	
	4/18/2007	16.72	9.41		-	•	-	-	-	-	
	8/2/2007	17.13	9.00	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	
	10/23/2007	17.71	8.42	-	-	-	-	-	-	-	
	1/30/2008	16.54	9.59	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	
	4/18/2008	17.02	9.11	-	-	-	-	-	-	-	
	7/28/2008	17.50	8.63	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	
	12/5/2008	17.89	8.24	•	-	-	~	-	-	-	
	1/26/2009	17.61	8.52	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5	ND<0.5	
MW-7	12/16/1994	17.07	12.60	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
29.67	12/29/1994	17.65	12.02	-	-	•	-	~	•	~	
	7/19/1996	16.44	13.23	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	1/27/1997	15.09	14.58	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	6/18/1997	16.59	13.08	73	ND<0.5	0.55	ND<0.5	ND<0.5	ND<5.0	-	đ
	9/18/1997	17.06	12.61	94	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	b,f
	12/10/1997	16.58	13.09	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	2/18/1998	12.60	17.07	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/12/1998	14.81	14.86	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	8/18/1998	15.67	14.00	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/24/1998	16.30	13.37	200	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	đ
	2/4/1999	15.99	13.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/18/1999	15.42	14.25	200	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	d
	8/27/1999	16.35	13.32	140	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	•	
	11/18/1999	16.81	12.86	-	-	-				•	
	2/29/2000	14.16	15.51	100	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	f
	5/25/2000	15.54	14.13		-		-			-	
	8/9/2000	16.56	13.11	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/9/2000	16.45	13.22	•	•	-	-	-	-	-	
	1/29/2001	16.92	12.75	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/16/2001	17.03	12.64	-	-	-	-	-	-	-	
	8/14/2001	17.27	12.40	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/22/2001	16.95	12.72	-	-	•	-	-	-	-	
26.70	2/1/2002	16.14	13.53	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/10/2002	15.30	14.37	-	-	-	-	-	•	-	
	7/8/2002	15.73	13.94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/2/2002	16.24	13.43	-	*	-	-	-	-	-	
	1/23/2003	15.70	13.97	ND<50	23	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/29/2003	12.68	16.99	-	-	-	-	-	-	-	
	7/18/2003	15.19	11.51	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/9/2003	14.45	12.25	-	-	-	-	-	-	-	
	1/28/2004	13.88	12.82	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/7/2004	15.71	10.99	-	-	-	-	-	-	-	
	7/23/2004	14.85	, 11.85	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	130	120	
	. 10/12/2004	16.90	9.80	-	-	-	-	-	-	-	
	2/14/2005	14.42	12.28	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	190	200	
	4/27/2005	13.75	12.95	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	1.3	
	7/19/2005	14.91	11.79	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	65	66	
	10/18/2005	15.40	11.30	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	12	15	

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FIGURES









NOTES:

Contour lines are interpretive and based on laboratory analysis results of groundwater samples. $\mu g/I =$ micrograms per liter. ND = not detected at limit indicated on official laboratory report. NA = not analyzed, measured, or collected. UST = underground storage tank. Former Arco data provided by CRA.





indicated on official laboratory report. NA = not analyzed, measured, or collected. UST = underground storage tank. Former Arco data provided by CRA. Results obtained using

EPA Method 8260B.





FIGURE 5

GRAPHS

Groundwater Elevations vs. Time 76 Station 0752



Elevations may have been corrected for apparent changes due to resurvey

Groundwater Elevations vs. Time 76 Station 0752



Elevations may have been corrected for apparent changes due to resurvey

Benzene Concentrations vs Time 76 Station 0752



GENERAL FIELD PROCEDURES

Groundwater Monitoring and Sampling Assignments

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

Fluid Level Measurements

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

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

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

Purging and Groundwater Parameter Measurement

TSR instructions may specify that a well not be purged (no-purge sampling), be purged using low-flow methods, or be purged using conventional pump and/or bail methods. Conventional purging generally consists of pumping or bailing until a minimum of three casing volumes of water have been removed or until the well has been pumped dry. Pumping is generally accomplished using submersi ble 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 car e 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: $A = \frac{1}{2}$ Date: 1 - 26 - 05Site # 0752Project Manager $A \cdot \frac{1}{6}$ Page 1 of 1

		Time	Total	Depth to	Depth to	Product Thickness	Time	
Well #	тос	Gauged	Depth	Water	Product	(feet)	Sampled	Misc. Well Notes
MW-8	~	0538	28.55	18.65	·		0605	2*
MW-7	/	0543	31.50	18.90	(0627	۹"
MW-2	レ	0657	30,80	20,50	**************************************		0747	3"
NW-1		0701	33.60	20.74			0810	Q "
MW-G	- L/	0708	30.55	18.46			0836	<u>⊃</u> "
MW-4	L	0712	32.30	18.80			0957	2"
MW-3	V	0716	30.55	14.54			0920	٦ ["]
MW - 5	V	0720	31.70	19.25			0950	ð "
		-						
e :								
					·····			
FIELD DATA		ETE	QA/QC		COC		ELL BOX CO	ONDITION SHEETS
							· · · · · · · · · · · · · · · · · · ·	
MANIFEST		DRUM IN	VENTOR	ſ	TRAFFIC (CONTROL		



GROUNDWATER SAMPLING FIELD NOTES

FRASILIS

Technician:

Site: 0752

Project No.:_

Date: 1-26-09

Well No. $\underline{MW} - \underline{8}$ Depth to Water (feet): $\underline{18.65}$ Total Depth (feet) $\underline{28.55}$ Water Column (feet): $\underline{9.90}$ 80% Recharge Depth(feet): $\underline{20.63}$

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uŞ/cm)	Temperature (F,C)	pН	D.O. (mg/L)	ORP	Turbidity
0553			Z	587.4	7.1	8.70			
	110		4	624.6	12:6	7.82			
	0558		li .	451.7	15.4	7.21			
				·					
Stati	ic at Time Sa	ampled	Tota	al Gallons Pu	rged		Sample	Time	
	18.74		· · (0		Ő	605		
Comments			•••••••••••••••••••••••••••••••••••••••						

1U Well No. 90 Depth to Water (feet): Total Depth (feet) 0 Water Column (feet):____ 21.42 80% Recharge Depth(feet):

Purge Method:

Depth to Product (feet):______

545

Casing Diameter (Inches): 2

1 Well Volume (gallons):_____

Time Start	Timè Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F,C)	рН	D.O. (mg/L)	ORP	Turbidity
Obis			3	222.9	12.9	7.23			
		· ·	4	216.2	16.2	7,17			
	0620		9	235.5	17.7	7,10			
Stat	ic at Time Sa	Impled	Tota	otal Gallons Purged Sample Time					
19,10			Q	G (0627		
Comments									
				······					



GROUNDWATER SAMPLING FIELD NOTES

Technician:

nello

Site: 0752

Project No.:___

Date: $1^{-2}6-09$

Well No. MW - Z

Depth to Water (feet): 20.50Total Depth (feet): 30.80Water Column (feet): 10.3080% Recharge Depth(feet): 22.56

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
10737			Z	461.5	10.8	7.14			
			-/	426.3	13.9	7.08	l		
	0741		Ý	387.7	15.9	7.0k			
								l	
Stat	ic at Time Sa	ampled	Tota	al Gallons Pu	ged	Sample Time			
20,80			6			0747-			
Comments		- -	<u>~</u>						

MIN-Well No. Depth to Water (feet):__ 20.7

 Total Depth (feet)
 33.60

 Water Column (feet):
 12.86

 80% Recharge Depth(feet):
 23.3

Purge Method:__

Depth to Product (feet):

546

LPH & Water Recovered (gallons):

Casing Diameter (Inches): 2

1 Well Volume (gallons): 3

Time Start	Timė Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F,C)	pН	D.O. (mg/L)	ORP	Turbidity
0438			3	145.3	13.2	7.32			
	1		le	18.9	16:0	7.25			
	0804		9	168.1	17.2	7.11			
			1						
	<u> </u>						<u> </u>		<u> </u>
Stati	ic at Time Sa	ampled	Total Gallons Purged			Sample Time			
	21.3	30	9				0810	s	
Comments									
· ·									



GROUNDWATER SAMPLING FIELD NOTES

BASilio

Technician:

Site: 075

65521 Project No.:

Date: 1-26-09

Well No. M.W.-C

Depth to Water (feet):_ Total Depth (feet) Water Column (feet): 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
D826			2	255,8	12.0	4.84			
			4	248.1	15.9	6.83			
	0830		U U	235.1	17.2	6.86			
	<i>y</i>								
Stat	ic at Time Sa	ampled	Tota	al Gallons Pu	rged ·		Sample	Time	
	18.	90		(c	Ť		2836	7	
Comments):								

ANIA Well No. 18.80 Depth to Water (feet): 22. 2 Total Depth (feet) Water Column (feet):__ Z 80% Recharge Depth(feet):

Purge Method:

Depth to Product (feet):______ LPH & Water Recovered (gallons):_____ Casing Diameter (Inches):_____2

SUL

え

1 Well Volume (gallons):

Time Start	Timė Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F,C)	рН	D.O. (mg/L)	ORP	Turbidity
0845			3	296.0	14.6	Ge. 64			
			0	280.1	17.3	6.45			
	0850		CI	262.5	18.6	6.43			
			, ,		, .				
Stati	c at Time Sa	ampled	Total Gallons Purged			Sample Time			
	19.60	>	9			(0 85	7	
Comments									



GROUNDWATE	ER SAMPLING FIELD NOTES
	Con l.
Technician:	TOASilis

Site: 0752 Project No.: _/(65521	Date: 1 - 26 - 09
Well No	Purge Method: <u>54</u> 5	
Depth to Water (feet): 19.54 Total Depth (feet) 30.55 Water Column (feet): 11.01 80% Recharge Depth(feet): 21.74	Depth to Product (feet): LPH & Water Recovered (gallons): Casing Diameter (Inches):2 1 Well Volume (gallons):2	······································

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature (F,C)	рН	D.O. (mg/L)	ORP	Turbidity
19910			2	518.0	15.6	6.38			
			4	503.6	17.7	6.46			
	0915		le	4167.2	18.6	657			
Stati	c at Time Sa	mpled	Tota	l Gallons Pur	raed		Sample	Time	
	19.	64		Ç	<u> </u>	ť	09z	O	
Comments	:								

MW-5 Well No. 9.2 Depth to Water (feet): 3 Total Depth (feet) Water Column (feet):_ 12 21 80% Recharge Depth(feet):

Purge Method:

Depth to Product (feet):_ LPH & Water Recovered (gallons):_ 2 Casing Diameter (Inches): 3

56

1 Well Volume (gallons):_

Time Start	Timė Stop	Depth to Water (feet)	Volume Purged (gallons)	Conduc- tivity (uS/cm)	Temperature	рН	D.O. (mg/L)	ORP	Turbidity
0936			3	213.0	16.1	6.17			
			0	352.9	18.2	6.74			
	0942		' <i>G</i>]	326.6	19.2	(0.77			
				-	- E]
Stat	ic at Time Sa	mpled	Total Gallons Purged Sample Tin			Time			
	19,5	0	9				095	50	
Comments	1		····						
Comments	• •								





Date of Report: 02/02/2009

Anju Farfan

TRC 21 Technology Drive Irvine, CA 92618

 RE:
 0752

 BC Work Order:
 0901071

 Invoice ID:
 B056665

Enclosed are the results of analyses for samples received by the laboratory on 1/26/2009. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Molly Meyers

Contact Person: Molly Meyers Client Service Rep

Authorized Signature

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation. 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A

TEC	Laboratories, Inc.	
	Environmental Testing Laboratory Since 1949	~ ·

TRC	Project: 0752	Reported:	02/02/2009 13:29
21 Technology Drive	Project Number: [none]		
Irvine, CA 92618	Project Manager: Aniu Farfan		

Laboratory / Client Sample Cross Reference

Laberatory	Client Sample Informatio	D.			
0901071-05	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 0752 MW-6 TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	01/26/2009 21:30 01/26/2009 08:36 Water	Delivery Work Order: Global ID: T0600101486 Location ID (FieldPoint): MW-6 Matrix: W Sample QC Type (SACode): CS Cooler ID:
0901071-06	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 0752 MW-4 TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	01/26/2009 21:30 01/26/2009 08:57 Water	Delivery Work Order: Global ID: T0600101486 Location ID (FieldPoint): MW-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:
0901071-07	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	0752 MW-3 TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	01/26/2009 21:30 01/26/2009 09:20 Water	Delivery Work Order: Global ID: T0600101486 Location ID (FieldPoint): MW-3 Matrix: W Sample QC Type (SACode): CS Cooler ID:
0901071-08	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	0752 MW-5 TRCI	Receive Date: Sampling Date: Sample Depth: Sample Matrix:	01/26/2009 21:30 01/26/2009 09:50 Water	Delivery Work Order: Global ID: T0600101486 Location ID (FieldPoint): MW-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:



TRC 21 Technology Drive Irvine, CA 92618 Project: 0752

Reported: 02/02/2009 13:29

Project Number: [none] Project Manager: Anju Farfan

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0901071-02	Client Sample	e Name:	0752, MW-7, 1/26	2009 6:27:00	AM							
						Prep	Run		Instru-		QC	MB	Lab
Constituent		Result	Units	PQL MDL	. Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene		7.9	ug/L	0.50	EPA-8260	01/27/09	01/27/09 16:36	KEA	MS-V10	1	BSA1507	ND	
Ethylbenzene		ND	ug/L	0.50	EPA-8260	01/27/09	01/27/09 16:36	KEA	MS-V10	1	BSA1507	ND	
Methyl t-butyl ether		10	ug/L	0.50	EPA-8260	01/27/09	01/27/09 16:36	KEA	MS-V10	1	BSA1507	ND	
Toluene		0.58	ug/L	0.50	EPA-8260	01/27/09	01/27/09 16:36	KEA	MS-V10	1	BSA1507	ND	
Total Xylenes		ND	ug/L	1.0	EPA-8260	01/27/09	01/27/09 16:36	KEA	MS-V10	1	8\$A1507	ND	
Ethanol		ND	ug/L	250	EPA-8260	01/27/09	01/27/09 16:36	KEA	MS-V10	1	BSA1507	ND	
Total Purgeable Petrole Hydrocarbons	IW	80	ug/L	50	EPA-8260	01/27/09	01/27/09 16:36	KEA	MS-V10	1	BSA1507	ND	
1,2-Dichloroethane-d4 (S	urrogate)	105	%	76 - 114 (LCL - UCL)	EPA-8260	01/27/09	01/27/09 16:36	KEA	MS-V10	1	BSA1507		
Toluene-d8 (Surrogate)		97.2	%	88 - 110 (LCL - UCL)	EPA-8260	01/27/09	01/27/09 16:36	KEA	MS-V10	1	BSA1507		
4-Bromofluorobenzene (S	Surrogate)	101	%	86 - 115 (LCL - UCL)	EPA-8260	01/27/09	01/27/09 16:36	KEA	MS-V10	1	BSA1507		



TRC	Project:	0752
21 Technology Drive	Project Number:	[none]
Irvine, CA 92618	Project Manager:	Anju Farfan

Reported: 02/02/2009 13:29

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0901071-04	4 Client Samp	le Name:	0752, MW-1, 1/26/2	2009 8:10:00	AM							
		•			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	01/27/09	01/27/09 16:00	KEA	MS-V10	1	BSA1507	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	01/27/09	01/27/09 16:00	KEA	MS-V10	1	BSA1507	ND	
Methyl t-butyl ether	5.2	ug/L	0.50	EPA-8260	01/27/09	01/27/09 16:00	KEA	MS-V10	1	BSA1507	ND	
Toluene	ND	ug/L	0.50	EPA-8260	01/27/09	01/27/09 16:00	KEA	MS-V10	1	BSA1507	ND	
Total Xylenes	ND	ug/L	1.0	EPA-8260	01/27/09	01/27/09 16:00	KEA	MS-V10	1	BSA1507	ND	
Ethanol	ND	ug/L	250	EPA-8260	01/27/09	01/27/09 16:00	KEA	MS-V10	.1	BSA1507	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	EPA-8260	01/27/09	01/27/09 16:00	KEA	MS-V1D	1.	BSA1507	ND	
1,2-Dichloroethane-d4 (Surrogate)	105	%	76 - 114 (LCL - UCL)	EPA-8260	01/27/09	01/27/09 16:00	KEA	MS-V10	1	BSA1507		
Toluene-d8 (Surrogate)	96.0	%	88 - 110 (LCL - UCL)	EPA-8260	01/27/09	01/27/09 16:00	KEA	MS-V10	1	BSA1507		
4-Bromofluorobenzene (Surrogate)	103	%	86 - 115 (LCL - UCL)	EPA-8260	01/27/09	01/27/09 16:00	KEA	MS-V10	1	BSA1507		



TRC

21 Technology Drive

Irvine, CA 92618

Project: 0752 Project Number: [none] Reported: 02/02/2009 13:29

Project Manager: Anju Farfan Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0901071-06	Client Sample	e Name:	0752, MW-4, 1	/26/200	09 8:57:00/	AM							
						Prep	Run		Instru-		QC	MB	Lab
Constituent	Result	Units	PQL N	IDL	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene	ND	ug/L	0.50		EPA-8260	01/27/09	01/27/09 15:25	KEA	MS-V10	1	BSA1507	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	01/27/09	01/27/09 15:25	KEA	MS-V10	1	B\$A1507	ND	
Methyi t-butyi ether	830	ug/L	5.0		EPA-8260	01/27/09	01/28/09 02:56	KEA	MS-V10	10	BSA1507	ND	A01
Toluene	ND	ug/L	0.50		EPA-8260	01/27/09	01/27/09 15:25	KEA	MS-V10	1	BSA1507	ND	
Total Xylenes	ND	ug/i.	1,0		EPA-8260	01/27/09	01/27/09 15:25	KEA	MS-V10	1	BSA1507	ND	
Ethanoi	ND	ug/L	250		EPA-8260	01/27/09	01/27/09 15:25	KEA	MS-V10	1	BSA1507	ND	
Total Purgeable Petroleum Hydrocarbons	500	ug/L	50		EPA-8260	01/27/09	01/27/09 15:25	KEA	MS-V10	1	BSA1507	ND	A90
1,2-Dichloroethane-d4 (Surrogate)	106	%	76 - 114 (LCL - U	CL)	EPA-8260	01/27/09	01/28/09 02:56	KEA	MS-V10	10	BSA1507		
1,2-Dichloroethane-d4 (Surrogate)	103	%	76 - 114 (LCL - U	CL)	EPA-8260	01/27/09	01/27/09 15:25	KEA	MS-V10	1	BSA1507		
Toluene-d8 (Surrogate)	95.7	%	88 - 110 (LCL - U	CL)	EPA-8260	01/27/09	01/27/09 15:25	KEA	MS-V10	1	BSA1507		
Toluene-d8 (Surrogate)	95,5	%	88 - 110 (LCL - U	CL)	EPA-8260	01/27/09	01/28/09 02:56	KEA	MS-V10	10	BSA1507		
4-Bromofluorobenzene (Surrogate)	93.7	%	86 - 115 (LCL - U	CL)	EPA-8260	01/27/09	01/28/09 02:56	KEA	MS-V10	10	BSA1507		
4-Bromofluorobenzene (Surrogate)	105	%	86 - 115 (LCL - U	CL)	EPA-8260	01/27/09	01/27/09 15:25	KEA	MS-V10	1	BSA1507		



TRC

21 Technology Drive Irvine, CA 92618 Project: 0752 Project Number: [none]

Reported: 02/02/2009 13:29

Project Manager: Anju Farfan Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 090107	1-08	Client Sampl	e Name:	0752, MW-5, 1	/26/20	09 9:50:00	AM							
							Prep	Run		Instru-		QC	MB	Lab
Constituent		Result	Units	PQL N	1DL´	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Bias	Quals
Benzene		7.4	ug/L	0.50		EPA-8260	01/27/09	01/27/09 15:07	KEA	MS-V10	1	BSA1507	ND	
Ethylbenzene		2.5	ug/L	0.50		EPA-8260	01/27/09	01/27/09 15:07	KEA	MS-V10	1	BSA1507	ND	
Methyl t-butyl ether		3.3	ug/L	0.50		EPA-8260	01/27/09	01/27/09 15:07	KEA	MS-V10	1	BSA1507	ND	
Toluene		3.3	ug/L	0.50		EPA-8260	01/27/09	01/27/09 15:07	KEA	MS-V10	1	BSA1507	ND	
Total Xylenes		11	ug/L.	1.0		EPA-8260	01/27/09	01/27/09 15:07	KEA	MS-V10	1	BSA1507	ND	
Ethanol		ND	ug/L	250		EPA-8260	01/27/09	01/27/09 15:07	KEA	MS-V10	1	BSA1507	ND	
Total Purgeable Petroleum Hydrocarbons		1400	ug/L	50		EPA-8260	01/27/09	01/27/09 15:07	KEA	MS-V10	1	BSA1507	ND	
1,2-Dichloroethane-d4 (Surrogate)		110	%	76 - 114 (LCL - UC	CL)	EPA-8260	01/27/09	01/27/09 15:07	KEA	MS-V10	1	BSA1507		
Toluene-d8 (Surrogate)		93.5	%	88 - 110 (LCL - UC	CL)	EPA-8260	01/27/09	01/27/09 15:07	KEA	MS-V10	1	BSA1507		
4-Bromofluorobenzene (Surrogate)	1	101	%	86 - 115 (LCL - UC	CL)	EPA-8260	01/27/09	01/27/09 15:07	KEA	MS-V10	1	BSA1507		



TRC

21 Technology Drive Irvine, CA 92618 Project: 0752 Project Number: [none] Reported: 02/02/2009 13:29

Project Manager: Anju Farfan Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

										Control	<u>Limits</u>	
					Spike			Percent		Percent		
Constituent	Batch ID	QC Sample ID	QC Type	Result	Level	PQL	Units	Recovery	RPD	Recovery	RPD	Lab Quals
Benzene	BSA1507	BSA1507-BS1	LCS	21.930	25.000	0.50	ug/L	87.7		70 - 130		
Toluene	BSA1507	BSA1507-BS1	LCS	25,260	25.000	0.50	ug/L	101		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BSA1507	BSA1507-BS1	LCS	10,450	10.000		ug/L	104		76 - 114		
Toluene-d8 (Surrogate)	BSA1507	BSA1507-BS1	LCS	9.8000	10.000		ug/L	98.0		88 - 110		
4-Bromofiuorobenzene (Surrogate)	BSA1507	BSA1507-BS1	LCS	10.440	10.000		ug/L	104		86 - 115		
1,2-Dichloroethane-d4 (Surrogate)	BSA1673	BSA1673-BS1	LCS	9.6300	10.000		ug/L	96.3		76 - 114		
Toluene-d8 (Surrogate)	BSA1673	BSA1673-BS1	LCS	10.080	10.000		ug/L	101		88 - 110		
4-Bromofiuorobenzene (Surrogate)	BSA1673	8SA1673-8S1	LCS	10.140	10.000		ug/L	101		86 - 115		

BC	Laboratories, Inc.	
	Environmental Testing Laboratory Since 1949	

TRC		Project:	0752	Reported:	02/02/2009 13:29
21 Technolo	ogy Drive	Project Number:	[none]		
Irvine, CA 92	2618	Project Manager:	Anju Farfan		
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.				
A90	TPPH does not exhibit a "gasoline" pattern. TPPH is entirely due to MTBE.				

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BC LAB	ORATORIES, INC.	4100 Atlas Court (661) 327-4911	Bakersfield, CA 933 FAX (661) 327-1918	08 }		CHAI	N OI	- ດາ	STC	DY		
		D D	901071			Anal	ysis	Re	que	sted		na n
Bill to: Co	noco Phillips/ TRC	Consultant Firm: TR	C	MATRIX			- mana a per mujer					<u> ANGRAN ANGRA</u>
Address: 800 H.	arison St.	21 Technology Drive Irvine, CA 92618-230 Attn: Anju Farfan	2	Ground- water (S)	Gas by 801		nates	8260B				lested
City:	Pakland	4-digit site#: 07 Workorder # 0/0	-52 286-4511010885	(WW) Waste-	y 8021B,	015M y 8015	/ oxyger	BΥ	8260B	/MS		me Requ
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Conoco Pl	hillips Mgr. Terry Kra	Sampler Name: BH	silio Del Real	Sludge	/MTE	SAS DIES	III	/MTE	NOL	ģ		Lour
Lab#	Sample Description	Field Point Name	Date & Time Sampled		BTEX	TPH C	82601	BTEX	ETHA	ТРН –		Turna
	!	MW-8 1-	26-09 0605	6-W				X	\times	X		5
	- 2	MW-7	0627									
	-3	UW-2	0747									
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	-7	MW-3	0920									
	-8	MW-5	V 095P									
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STATEMENTS

Purge Water Disposal

Non-hazardous groundwater produced during purging and sampling of monitoring wells 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 containing a significant amount of liquid-phase hydrocarbons was accumulated separately in drums 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.