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11:30 am, May 02, 2011 Alameda County Environmental Health

### Quarterly Summary Report- First Quarter 2011

76 Service Station No. 3538 411 West Mac Arthur Boulevard Oakland, CA

Antea Group Project No. C1Q3538020

April 28, 2011

Prepared for: ConocoPhillips 76 Broadway Sacramento, CA 95818 Prepared by:
Antea™Group
11050 White Rock Road
Suite 110
Rancho Cordova, CA
95670





Sacramento, California 95818

April 28, 2011

Ms. Barbara Jakub Alameda County Environmental Health 1131 Harbor Bay Parkway Alameda, CA 94502

Re: Semi Annual Summary Report Transmittal

Fourth Quarter 2010 through First Quarter 2011

Former 76 Service Station) #3538

411 West Mac Arthur Boulevard, Oakland, CA

Alameda County LOP Case No. R0251

Dear Ms. Jakub:

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

If you have any questions or need additional information, please call:

Ted Moise (Contractor)
ConocoPhillips
Risk Management & Remediation
76 Broadway
Sacramento, CA 95818

Phone: (510) 245-5162 Fax: (918) 662-4480

Ted.Moise@contractor.conocophillips.com

Sincerely,

Eric G. Hetrick Site Manager

Risk Management & Remediation

Attachment



Antea Group 11050 White Rock Road, Suite 110 Rancho Cordova, California 95670 www.anteagroup.com

April 28, 2011

Ms. Barbara Jakub Alameda County Health Care Services Department of Environmental Health 1131 Harbor Bay Parkway Alameda, California 94502-6577

RE: Semi Annual Summary Report – Fourth Quarter 2010 through First Quarter 2011 (Former 76 Service Station) #3538
411 West Mac Arthur Boulevard, Oakland, CA

Alameda County LOP Case No. R0251

Dear Ms. Jakub:

On behalf of ConocoPhillips Company (ConocoPhillips), Antea™Group formerly known as Delta Consultants (Delta), is submitting the subject report and forwarding a copy of TRC's Groundwater Monitoring Report – January through March, 2011, dated April 11, 2011.

Please contact Jan Wagoner at (916) 503-1275 if you have questions.

Sincerely,

**ANTEA GROUP** 

Jan Wagoner Project Manager

James B. Barnard, P.G.

California Registered Professional Geologist No. 7478

Enclosure

cc: Mr. Ted Moise - ConocoPhillips (electronic copy only)



## SEMI-ANNUAL SUMMARY REPORT Fourth Quarter 2010 through First Quarter 2011 Former 76 Service Station No. 3538 411 W. MacArthur Blvd. Oakland, California

### SITE DESCRIPTION

The subject site is a former Tosco (76) service station located on the southwest corner of MacArthur Boulevard and Webster Street in Oakland, California. The site is currently a used car sales lot and is entirely fenced. All petroleum storage and dispensing equipment were removed in September of 1998, during station demolition activities. Six groundwater-monitoring wells are present, four on-site wells and two off-site wells.

### SITE BACKGROUND AND ACTIVITY

July 1989: One 10,000-gallon and one 12,000-gallon gasoline underground storage tanks (USTs) were removed and replaced with two new 12,000-gallon USTs. One 550-gallon waste oil UST and the associated piping for all three tanks were also removed. No holes or cracks were observed in the gasoline USTs; however, holes were observed in the waste oil UST. Groundwater was encountered in the former UST pit at a depth of approximately 10.5 feet below ground surface (bgs), which prohibited the collection of soil samples below the former fuel USTs. Confirmation soil samples from the sidewalls contained moderate maximum concentrations of total petroleum hydrocarbons as gasoline (TPH-G), and low maximum concentrations of benzene. These sample areas were subsequently over-excavated. Soil samples from the base of the waste oil UST pit did not contain detections of TPH-G or benzene, toluene, ethyl-benzene, and xylenes (BTEX). (Kaprealian Engineering, INC., 1989)

<u>September 1989:</u> Kaprealian Engineering, INC. (KEI) installed four groundwater monitoring wells at the site to depths of approximately 30 feet bgs.

November 1992: Two additional groundwater monitoring wells were installed off-site to a depth of 30 feet bgs. (KEI, 1993)

<u>September 1998:</u> Two 12,000-gallon gasoline USTs and associated product piping and dispensers were removed from the site during station demolition activities. No holes or cracks were observed in the tanks. Confirmation soil samples contained low maximum concentrations of TPH-G and benzene. Methyl butyl ether (MTBE) was not detected.

October 2003: Site environmental consulting responsibilities were transferred to TRC.

<u>March 2006:</u> TRC conducted additional soil and groundwater assessment at the Site. The investigation involved the advancement of three onsite soil borings (SB-3, SB-4, and SB-5) and two offsite soil borings (SB-1 and SB-2) to sufficient depth to obtain representative groundwater samples (approximately 16 feet bgs).

October 2007: Site environmental consulting responsibilities were transferred to Delta.

<u>December 2010:</u> Antea Group oversaw the air-knifing and advancement of three direct push soil borings SB-8 through SB-10. SB-8 was advanced to 25 feet bgs in the vicinity of MW-3, north of the former UST pit, and east of the former dispenser islands. SB-9 was advanced to 30 feet bgs in the vicinity of previous boring SB-3, east of the former UST pit. SB-10 was advanced to 30 feet bgs in the vicinity of previous boring SB-5, south of the former UST pit and dispenser islands. A summary of field activities and results was submitted in the *Site Assessment Report* dated February 18, 2011.

### SENSITIVE RECEPTORS

A sensitive receptor survey has been conducted for the site. According to the California Department of Water Resources (DWR) records, no water supply wells have been located within 2,000 feet of the site. The nearest well identified was a private water well located approximately 2,500 feet east-southeast of the site.

### **GROUNDWATER MONITORING AND SAMPLING**

Currently, the two onsite monitoring wells MW-2 and MW-3 are monitored semi-annually during the first and third quarters and the remaining four wells are monitored annually during the third quarter. Groundwater samples collected and submitted are analyzed for total petroleum hydrocarbons as gasoline (TPHg) by Environmental Protection Agency (EPA) method 8015, BTEX and MTBE by EPA Method 8021B, and ethylene dibromide (EDB), and 1,2-DCA (EDC) by EPA method 8021B.

For the current reporting period, the groundwater monitoring well network was gauged and sampled by TRC on March 30, 2011. During the current event, all six wells were gauged; two wells (MW-2 and MW-3) were sampled. The groundwater flow direction beneath the site was reported south at a gradient of 0.02 feet per feet (ft/ft) south. This is consistent with the previous calculated gradient of 0.02 ft/ft south (09/21/2010 and 03/23/10).

Dissolved groundwater concentrations are reported as follows.

**TPHg** was above the laboratory's indicated reporting limits in groundwater samples collected from one of the two wells sampled, MW-3, at a concentration of 110  $\mu$ g/L. Previous sampling from the September 21, 2010 event indicated the presence of TPHg at 69  $\mu$ g/L in both groundwater monitoring wells MW-2 and MW-3.

Benzene was below the laboratory's indicated reporting limits in both well sampled during the current sampling event. Previous sampling from the March 23, 2010 event indicated the presence of benzene at 1.6  $\mu$ g/L in MW-2 only.

MTBE was above the laboratory's indicated reporting limits in groundwater samples collected from both sampled wells, MW-2 (1.6  $\mu g/L$ ) and MW-3 (73  $\mu g/L$ ). Previous sampling from the September 21, 2010 event indicated the presence of MTBE in the same two wells, MW-2 (1.6  $\mu g/L$ ) and MW-3 (48  $\mu g/L$ ). The maximum MTBE concentration reported during the current reporting period represents an increase from the September 2010 event.

A copy of TRC's Groundwater Monitoring Report - January through March 2011 is included as Attachment A.

### **REMEDIATION STATUS**

<u>October 1998:</u> A total of 516.44 tons (approximately 380 cubic yards) of soil generated during station demolition was transported from the site to Forward Landfill in Manteca, California for disposal.

Active soil and groundwater remediation is not currently being conducted at the site.

### **CONCLUSIONS AND RECOMMENDATIONS**

Reported petroleum hydrocarbon concentrations in the Site's monitoring wells continue to decline. In Delta's Site Conceptual Model dated November 21, 2008, Delta proposed collecting a grab-groundwater sample no more than 30 feet south of the site to assess the southern extent of the hydrocarbon and fuel oxygenate plume. Although several letters have been issued to the property owner, no response has been received. Antea Group continues to work jointly with Conoco Phillips to procure access onto the private property.

Site Assessment activities were performed as described in Delta's *Work Plan for Additional Assessment*, dated June 3, 2009, and *Amendment to Work plan for Additional Assessment*, dated November 5, 2010, and were approved in an Alameda County Health Care Services Agency (ACHCSA) letter to COP dated October 5, 2010. Results of this assessment were presented in Antea Group's *Site Assessment Report* dated February 18, 2011.

Results of the December, 2010 assessment activities indicate at least 10-15 feet of soil with non-reportable benzene concentrations are present immediately below the ground surface in boring SB-9 and no reportable benzene concentrations were reported in boring SB-8 to 20 feet bgs. This would indicate the potential for vapor intrusion in the vicinity of borings SB-3, MW-3, SB-8, and SB-9 are minimal and no additional vapor intrusion assessment is necessary.

Historically, groundwater flow was predominantly to the south-southeast and south, and to a lesser extent northeast, east northeast, southwest, and south-southwest. During the 2006 TRC investigation, reported TPHg concentrations in boring SB-2 (east across Webster Street) were below the laboratory's indicated reporting limits for each constituent analyzed. This indicates that while residual petroleum hydrocarbons may be present in boring SB-9 in the eastern portion of the former service station site, petroleum hydrocarbons have not migrated offsite across Webster Street. Petroleum hydrocarbons present in boring SB-10 indicate petroleum hydrocarbons are present in groundwater south of the former USTs.

Antea Group recommends that, upon implementation of an access agreement for boring SB-6 and proper permitting for boring SB-7, these borings be advanced. However, Antea Group proposes to shift the location of boring SB-6 slightly to the west closer to the property line between the 402 37<sup>th</sup> Street and 412 37<sup>th</sup> Street properties. This location will put this boring more directly down-gradient (south) of the former USTs and boring SB-10

### RECENT CORRESPONDENCE

Electronic Mail (email) from ACHCSA to Antea Group dated December 27, 2010 granting an extension to February 18, 2011 for submittal of the *Additional Assessment Report*.

### **FOURTH QUARTER 2010 AND FIRST QUARTER 2011: ACTIVITIES**

- TRC performed fourth quarter 2010 and first quarter 2011 monitoring and sampling activities on March 30, 2011 and prepared their results in the *Groundwater Monitoring Report* dated April 11, 2011.
- Antea Group submitted the *Additional Assessment Report* dated February 18, 2011 summarizing December 2010 boring advancement activities and results.

### **SECOND AND THIRD QUARTERS 2011: PLANNED ACTIVITIES**

- Semi-Annual groundwater monitoring and sampling will be performed during the third quarter 2011.
- Antea Group prepared and submitted Semi-Annual Summary Report Fourth Quarter 2010 through First Quarter 2011 dated April 29, 2011

### **REMARKS**

The descriptions, conclusions, and recommendations contained in this report represent Antea Group's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Antea Group, the data from those reports is used "as is" and is assumed to be accurate. Antea Group does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This report is based upon a specific scope of work requested by the client. The Contract between Antea Group and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were conducted. This report is intended only for the use of Antea Group's Client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea Group makes no express or implied warranty as to the contents of this report.

CONSULTANT: Antea Group

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### Attachment A

Groundwater Monitoring Report – January through March 2011



123 Technology Drive West Irvine, CA 92618

949.727.9336 PHONE 949.727.7399 FAX

www.TRCsolutions.com

DATE:

April 11, 2011

TO:

Delta Consultants

11050 White Rock Road, Suite 110

Rancho Cordova, CA 95670

ATTN:

MR. JAN WAGONER

SITE:

FORMER 76 STATION 3538

411 WEST MACARTHUR BLVD.

OAKLAND, CALIFORNIA

RE:

GROUNDWATER MONITORING REPORT

JANUARY THROUGH MARCH 2011

This Groundwater Monitoring Report for Former 76 Station 3538 is being sent to you for your review and comment. If no comments are received by **April 18, 2011**, copies of this report will be sent to you for distribution.

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

Sincerely,

TRC

Daniel Lee Technical Writer



123 Technology Drive West Irvine, CA 92618

949.727.9336 PHONE 949.727.7399 FAX

www.TRCsolutions.com

DATE:

April 11, 2011

TO:

ConocoPhillips Company

76 Broadway

Sacramento, CA 95818

ATTN:

MR. TED MOISE

SITE:

FORMER 76 STATION 3538

411 WEST MACARTHUR BLVD.

OAKLAND, CALIFORNIA

RE:

GROUNDWATER MONITORING REPORT

JANUARY THROUGH MARCH 2011

Dear Mr. Moise:

Please find enclosed our Groundwater Monitoring Report for Former 76 Station 3538, located at 411 West MacArthur Blvd, Oakland, California. If you have any questions regarding this report, please call us at (949) 727-9336.

Sincerely,

TRC

Groundwater Programi Operations Manager

CC: Mr. Jan Wagoner, Delta Consultants (2 copies)

Enclosures 20-0400/3538R15.QMS

### GROUNDWATER MONITORING REPORT JANUARY THROUGH MARCH 2011

FORMER 76 STATION 3538 411 West MacArthur Blvd. Oakland, California

Prepared For:

Mr. Ted Moise CONOCOPHILLIPS COMPANY 76 Broadway Sacramento, California 95818

By:

Senior Project Geologist, Irvine Operations

Date: 4/11/11



	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 Table 2d: Additional Historic Analytical Results
Figures	Figure 1: Vicinity Map Figure 2: Groundwater Elevation Contour Map Figure 3: Dissolved-Phase TPH-G 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 – 3/30/11 Groundwater Sampling Field Notes – 3/30/11
Laboratory Reports	Official Laboratory Reports Quality Control Reports Chain of Custody Records
Statements	Purge Water Disposal Limitations

# Summary of Gauging and Sampling Activities January through March 2011 Former 76 Station 3538 411 West MacArthur Blvd. Oakland, CA

Project Coordinator: **Ted Moise** Water Sampling Contractor: **TRC** 

Telephone: 510-245-5162 Compiled by: Daniel Lee

Date(s) of Gauging/Sampling Event: 3/30/2011

Sample Points

Groundwater wells: 4 onsite, 2 offsite Points gauged: 6 Points sampled: 2

Purging method: Submersible pump/bailer

Purge water disposal: Crosby and Overton treatment facility

Other Sample Points: **0** Type: --

<u>Liquid Phase Hydrocarbons (LPH)</u>

Sample Points with LPH: **0** Maximum thickness (feet): --

LPH removal frequency: -- Method: --

Treatment or disposal of water/LPH: --

**Hydrogeologic Parameters** 

Depth to groundwater (below TOC): Minimum: 14.12 feet Maximum: 16.68 feet

Average groundwater elevation (relative to available local datum): **55.47 feet** Average change in groundwater elevation since previous event: **1.86 feet** 

Interpreted groundwater gradient and flow direction:

Current event: 0.02 ft/ft, south

Previous event: **0.02 ft/ft**, **south (9/21/2010)** 

**Selected Laboratory Results** 

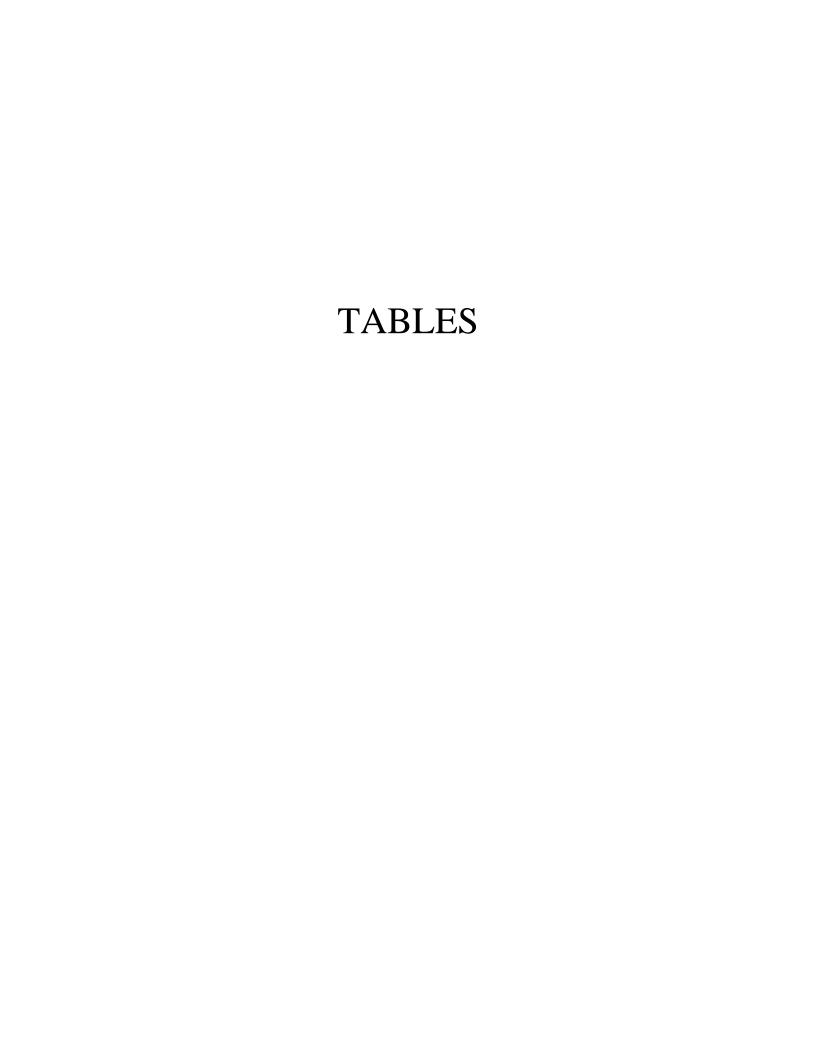
Sample Points with detected **Benzene: 0** Sample Points above MCL (1.0 µg/l): --

Maximum reported benzene concentration: --

Sample Points with TPH-G 1 Maximum: 110 μg/l (MW-3) Sample Points with MTBE 8021B 2 Maximum: 73 μg/l (MW-3)

Notes:

MW-1=Sampled Q3 only, MW-4=Sampled Q3 only, MW-5=Sampled Q3 only, MW-6=Sampled Q3 only



### TABLE KEY

### STANDARD ABBREVIATIONS

-- e not analyzed, measured, or collected

LPH = liquid-phase hydrocarbons

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**

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

1,2-DCA = 1,2-dichloroethane (same as EDC, ethylene dichloride)

### **NOTES**

- 1. Elevations are in feet above mean sea level. Depths are in feet below surveyed top-of-casing.
- 2. Groundwater elevations for wells with LPH are calculated as: <u>Surface Elevation Measured Depth to Water + (Dp x LPH Thickness)</u>, where Dp is the density of the LPH, if known. A value of 0.75 is used for gasoline and when the density is not known. A value of 0.83 is used for diesel.
- 3. Wells with LPH are generally not sampled for laboratory analysis (see General Field Procedures).
- 4. Comments shown on tables are general. Additional explanations may be included in field notes and laboratory reports, both of which are included as part of this report.
- 5. A "J" flag indicates that a reported analytical result is an estimated concentration value between the method detection limit (MDL) and the practical quantification limit (PQL) specified by the laboratory.
- 6. Other laboratory flags (qualifiers) may have been reported. See the official laboratory report (attached) for a complete list of laboratory flags.
- 7. Concentration graphs based on tables (presented following Figures) show non-detect results prior to the Second Quarter 2000 plotted at fixed values for graphical display. Non-detect results reported since that time are plotted at reporting limits stated in the official laboratory report.
- 8. Prior to the 1st quarter 2010, the word "monitor" was used in table comments interchangeably with the word "gauge". Starting in the 1<sup>st</sup> quarter 2010, the word "monitor" is used to include both "gauge" and "sample".

### **REFERENCE**

TRC began groundwater monitoring and sampling for Former 76 Station 3538 in October 2003. Historical data compiled prior to that time were provided by Gettler-Ryan Inc.

### **Contents of Tables 1 and 2** Site: Former 76 Station 3538

Current	<b>Event</b>												
Table 1	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	
Table 1a	Well/ Date	Ethylene- dibromide (EDB)	1,2-DCA (EDC)										
Historic	Data												
Table 2	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	
Table 2a	Well/ Date	TPH-D	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	EDB (504)	1,2-DCA (EDC)	DIPE	ETBE	TAME	Total Oil and Grease	Bromo- dichloro- methane	Bromo- form
Table 2b	Well/ Date	Bromo- methane	Carbon Tetra- chloride	Chloro- benzene	Chloro- ethane	Chloroform	Chloro- methane	Dibromo- chloro- methane	1,2- Dichloro- benzene	1,3- Dichloro- benzene	1,4- Dichloro- benzene	Dichloro- difluoro- methane	1,1-DCA
Table 2c	Well/ Date	1,1-DCE	cis- 1,2-DCE	trans- 1,2-DCE	1,2- Dichloro- propane	cis-1,3- Dichloro- propene	trans-1,3- Dichloro- propene	Methylene chloride	1,1,2,2- Tetrachloro- ethane	Tetrachloro- ethene (PCE)	Trichloro- trifluoro- ethane	1,1,1- Trichloro- ethane	1,1,2- Trichloro- ethane
Table 2d	Well/ Date	Trichloro- ethene (TCE)	Trichloro- fluoro- methane	Vinyl chloride									

Table 1
CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
March 30, 2011

### Former 76 Station 3538

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G 8015	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)	
<b>MW-1</b> 3/30/201	1 72.12	16.68	0.00	55.44	2.06								Sampled Q3 only
<b>MW-2</b> 3/30/201	1 71.34	16.58	0.00	54.76	1.83	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	1.6		
<b>MW-3</b> 3/30/201	1 71.40	16.50	0.00	54.90	1.78	110	ND<0.30	ND<0.30	ND<0.30	ND<0.60	73		
<b>MW-4</b> 3/30/201	1 71.54	16.35	0.00	55.19	1.96								Sampled Q3 only
<b>MW-5</b> 3/30/201	1 71.16	15.87	0.00	55.29	2.05								Sampled Q3 only
<b>MW-6</b> 3/30/201	1 71.37	14.12	0.00	57.25	1.50								Sampled Q3 only



### Table 1 a ADDITIONAL CURRENT ANALYTICAL RESULTS Former 76 Station 3538

Date	Ethylene-	
Sampled	dibromide	1,2-DCA
	(EDB)	(EDC)
	$(\mu g/l)$	$(\mu g/l)$
MANA 2	<u> </u>	
<b>MW-2</b> 3/30/2011	ND<0.50	ND<0.50
MW-3		
3/30/2011	ND<0.50	ND<0.50



Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
September 1989 Through March 2011
Former 76 Station 3538

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	
MW-1													
9/15/198	89					ND	ND	0.61	ND	ND			
1/23/199	90					ND	1.5	2.3	ND	4.3			
4/19/199	90					ND	ND	ND	ND	ND			
7/17/199	90					ND	ND	ND	ND	ND			
10/16/19	990					ND	ND	ND	ND	ND			
1/15/199	91					ND	ND	ND	ND	ND			
4/12/199	91					ND	ND	ND	ND	ND			
7/15/199	91					ND	ND	ND	ND	ND			
7/14/199	92					ND	ND	ND	ND	ND			
4/13/199	93 72.43	3 17.70	0.00	54.73									Sampled Q3 only
7/14/199	93 72.43	18.49	0.00	53.94	-0.79	ND	2.2	2.1	1.1	6.2			
10/14/19	93 72.10	18.32	0.00	53.78	-0.16								Sampled Q3 only
1/12/199	94 72.10	18.18	0.00	53.92	0.14								Sampled Q3 only
4/11/199	94 72.10	17.80	0.00	54.30	0.38								Sampled Q3 only
7/7/199	72.10	18.28	0.00	53.82	-0.48	ND	ND	ND	ND	ND			
10/5/199	94 72.10	18.55	5 0.00	53.55	-0.27								Sampled Q3 only
1/9/199	72.10	17.90	0.00	54.20	0.65								Sampled Q3 only
4/17/199	95 72.10	17.22	0.00	54.88	0.68								Sampled Q3 only
7/19/199	95 72.10	18.03	0.00	54.07	-0.81	ND	ND	ND	ND	ND			
10/26/19	95 72.10	18.67	7 0.00	53.43	-0.64								Sampled Q3 only
1/16/199	96 72.10	17.20	0.00	54.90	1.47								Sampled Q3 only
4/15/199	96 72.10	17.40	0.00	54.70	-0.20								Sampled Q3 only

Page 1 of 14

Date	100	Deptil to	LIII	Orouna-	Change in								Comments
Sampled	Elevation	Water	Thickness	water Elevation	Elevation	TPH-G			Ethyl-	Total	MTBE	MTBE	
				Dievation		8015	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	(µg/l)	(µg/l)	(µg/l)	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	
MW-1	continued	l											
7/11/19	96 72.10	18.03	0.00	54.07	-0.63	ND	ND	ND	ND	ND	ND		
1/17/19	97 72.10	16.54	0.00	55.56	1.49								Sampled Q3 only
7/21/19	97 72.10	18.16	0.00	53.94	-1.62	ND	ND	ND	ND	ND	ND		
1/14/19	98 72.10	16.05	0.00	56.05	2.11								Sampled Q3 only
7/6/199	98 72.10	16.46	0.00	55.64	-0.41	ND	ND	ND	ND	ND	ND		
1/13/19	99 72.10	17.37	0.00	54.73	-0.91								Sampled Q3 only
8/31/19	99 72.12	2 17.00	0.00	55.12	0.39	ND	ND	ND	ND	ND	ND		
1/21/20	000 72.12	2 17.04	0.00	55.08	-0.04								Sampled Q3 only
7/10/20	000 72.12	2 18.10	0.00	54.02	-1.06	ND	ND	ND	ND	ND	ND		
1/4/200	01 72.12	2 17.95	0.00	54.17	0.15								Sampled Q3 only
7/16/20	001 72.12	18.03	0.00	54.09	-0.08	ND	ND	ND	ND	ND	ND		
1/28/20	002 72.12	2 17.31	0.00	54.81	0.72								Sampled Q3 only
7/12/20	002 72.12	2 18.15	0.00	53.97	-0.84	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		
1/14/20	003 72.12	2 17.66	0.00	54.46	0.49								Sampled Q3 only
7/10/20	003 72.12	2 17.86	0.00	54.26	-0.20	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0		
2/4/200	04 72.12	2 17.43	0.00	54.69	0.43								Sampled Q3 only
7/29/20	004 72.12	18.12	0.00	54.00	-0.69	ND<50	ND<0.3	0.38	ND<0.3	ND<0.6	ND<1	ND<0.5	
3/2/200	05 72.12	2 16.15	0.00	55.97	1.97								Sampled Q3 only
9/30/20	005 72.12	2 18.04	0.00	54.08	-1.89	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/23/20	006 72.12	2											Inaccessible due to gate Sampled Q3 only
9/26/20	006 72.12	2 17.90	0.00	54.22		ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/15/20	007 72.12	2 17.22	0.00	54.90	0.68								Sampled Q3 only

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Comments

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Date

TOC

Depth to

LPH

Ground- Change in

Table 2 HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS September 1989 Through March 2011 Former 76 Station 3538

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	water	Change in Elevation	TPH-G			Ethyl-	Total	MTBE	MTBE	Comments
				Elevation	1	8015	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$							
MW-1	continued	<u> </u>											
9/27/20	007 72.12	2 18.49	0.00	53.63	-1.27	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/27/20	008 72.12	2 17.57	0.00	54.55	0.92								Sampled Q3 only
9/17/20	008 72.12	2 18.20	0.00	53.92	-0.63	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/27/20	009 72.12	2 16.75	0.00	55.37	1.45								Sampled Q3 only
9/17/20	009 72.12	2 18.18	0.00	53.94	-1.43	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/23/20	72.12	2 17.34	0.00	54.78	0.84								Sampled Q3 only
9/21/20	72.12	2 18.74	0.00	53.38	-1.40	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/30/20	72.12	2 16.68	0.00	55.44	2.06								Sampled Q3 only
MW-2													
9/15/19	189					290	ND	12	ND	ND			
1/23/19	90					400	73	36	10	40			
4/19/19	90					3900	550	5.1	91	390			
7/17/19	90					490	76	0.59	11	46			
10/16/19	990					1400	430	2.0	48	240			
1/15/19	91					680	170	0.7	19	81			
4/12/19	91					2200	160	4.3	23	62			
7/15/19	91					2200	770	12	72	370			
10/15/19	991					140	44	0.56	1.5	12			
1/15/19	92					220	37	0.52	1.1	7			
4/14/19	92					150	6.2	ND	ND	1.4			
7/14/19	92					130	3.7	ND	ND	ND			
10/12/19	992					370	3.4	0.56	ND	11			
1/8/199	93					510	ND	ND	ND	ND			
								Daga 3	2 of 14				

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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
September 1989 Through March 2011
Former 76 Station 3538

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	water	Change in Elevation	TPH-G			Ethyl-	Total	MTBE	MTBE	Comments
				Elevation	1	8015	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
MW-2	continue	d											
4/13/19	93 71.6	3 17.86	0.00	53.77		410	42	7.7	6.4	28	200		
7/14/19	93 71.6	3 18.38	0.00	53.25	-0.52	110	6.5	ND	ND	1.1	250		
10/14/19	993 71.3	8 18.20	0.00	53.18	-0.07	230	5.3	ND	ND	2.1			
1/12/19	94 71.3	8 18.08	0.00	53.30	0.12	300	7.8	3.8	1.8	10			
4/9/19	94 71.3	8 17.97	0.00	53.41	0.11	120	10	0.88	1.1	4.9			
4/11/19	94 71.3	8 17.88	0.00	53.50	0.09								
7/7/199	94 71.3	8 17.81	0.00	53.57	0.07	110	4.4	ND	ND	ND			
10/5/19	94 71.3	8 18.33	0.00	53.05	-0.52	720	20	ND	ND	3.1			
1/9/199	95 71.3	8 17.40	0.00	53.98	0.93	ND	ND	ND	ND	ND			
4/17/19	95 71.3	8 17.50	0.00	53.88	-0.10	93	5.6	0.62	1.7	5.5			
7/19/19	95 71.3	8 18.01	0.00	53.37	-0.51	77	32	0.58	1.7	4.1			
10/26/19	995 71.3	8 18.21	0.00	53.17	-0.20	54	13	ND	ND	0.72	220		
1/16/19	96 71.3	8 16.58	0.00	54.80	1.63	120	23	ND	ND	0.99			
4/15/19	96 71.3	8 17.61	0.00	53.77	-1.03	340	21	ND	2.2	3.7	45		
7/11/19	96 71.3	8 17.98	0.00	53.40	-0.37	540	34	ND	4.3	12	150		
1/17/19	97 71.3	8 17.08	0.00	54.30	0.90	320	63	2.4	9.4	26	260		
7/21/19	97 71.3	8 18.06	0.00	53.32	-0.98	160	13	ND	1.3	1.6	180		
1/14/19	98 71.3	8 16.52	0.00	54.86	1.54	66	6.3	ND	ND	0.98	100		
7/6/199	98 71.3	8 16.87	0.00	54.51	-0.35	ND	2.3	ND	ND	ND	11		
1/13/19	999 71.3	8 17.88	0.00	53.50	-1.01	53	24	ND	0.52	0.98	120		
8/31/19	99 71.3	4 18.45	0.00	52.89	-0.61	86	14	ND	0.63	ND	21		
1/21/20	000 71.3	4 17.73	0.00	53.61	0.72	ND	1.94	ND	ND	ND	10.1		
7/10/20	000 71.3	4 18.14	0.00	53.20	-0.41	ND	ND	ND	ND	ND	46.6		

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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
September 1989 Through March 2011
Former 76 Station 3538

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G			Ethyd	Total	MTBE	MTBE	Comments
Sumpred	Zie van on	,, 4,00	111101111000	Elevation		8015	Benzene	Toluene	Ethyl- benzene	Total Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(μg/l)	(μg/l)	
	continued									., .			
1/4/200			0.00	53.32	0.12	ND	0.925	ND	ND	ND	ND		
7/16/20	01 71.34	18.02	0.00	53.32	0.00	ND	ND	ND	ND	ND	ND		
1/28/20	02 71.34	17.57	0.00	53.77	0.45	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		
7/12/20	02 71.34	18.05	0.00	53.29	-0.48	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		
1/14/20	03 71.34	17.44	0.00	53.90	0.61	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0		
7/10/20	03 71.34	1											Car parked over well
2/4/200	04 71.34	17.22	0.00	54.12		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0		
7/29/20	04 71.34	1											Sampled Q3 only
3/2/200	05 71.34	16.63	0.00	54.71		99	26	ND<0.50	3.5	2.8	ND<5.0		
9/30/20	05 71.34	17.94	0.00	53.40	-1.31	ND<50	1.2	ND<0.30	ND<0.30	ND<0.60	1.6		
3/23/20	06 71.34	16.74	0.00	54.60	1.20	ND<50	3.6	ND<0.30	0.35	ND<0.60	2.5		
9/26/20	06 71.34	17.91	0.00	53.43	-1.17	ND<50	1.2	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/15/20	07 71.34	17.45	0.00	53.89	0.46	110	6.5	ND<0.30	0.70	ND<0.60	1.7		
9/27/20	07 71.34	18.23	0.00	53.11	-0.78	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/27/20	08 71.34	17.77	0.00	53.57	0.46	ND<50	1.8	ND<0.30	ND<0.30	ND<0.60	1.3		
9/17/20	08 71.34	18.06	0.00	53.28	-0.29	ND<50	1.6	ND<0.30	ND<0.30	ND<0.60	3.1		
3/27/20	09 71.34	17.43	0.00	53.91	0.63	ND<50	3.5	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
9/17/20	09 71.34	18.01	0.00	53.33	-0.58	ND<50	2.7	ND<0.30	ND<0.30	ND<0.60	1.1		
3/23/20	10 71.34	17.47	0.00	53.87	0.54	ND<50	0.68	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
9/21/20	10 71.34	18.41	0.00	52.93	-0.94	69	1.6	ND<0.30	ND<0.30	ND<0.60	1.6		
3/30/20	11 71.34	16.58	0.00	54.76	1.83	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	1.6		
MW-3													
9/15/19	89					32	ND	ND	ND	ND			
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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
September 1989 Through March 2011
Former 76 Station 3538

Date Sampled	TOC Elevation		LPH Thickness	water Elevation		TPH-G 8015	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)	
<b>MW-3</b> 1/23/19	<b>continued</b> 90	l 				450	110	1.2	4.4	11			
4/19/19						3100	600	27	54	220			
7/17/19						4000	270	48	130	250			
10/16/19						740	210	1.4	2.5	82			
1/15/19						3200	460	1.4	120	270			
4/12/19			 			880	170		34	110			
						9200	1300	1.1 230	54 490	1900			
7/15/19													
10/15/19						3100	390	34	150	390			
1/15/19						3000	590	14	310	750			
4/14/19						14000	660	48	560	2000			
7/14/19						21000	890	200	1200	4300			
10/12/19						3200	160	10	230	540			
1/8/199						1100	48	0.99	0.9	93			
4/13/19	93 72.06	17.96	0.00	54.10		12000	290	38	760	2300	1400		
7/14/19	93 72.06	18.54	0.00	53.52	-0.58	6300	190	ND	430	1000	860		
10/14/19	993 71.86	18.45	0.00	53.41	-0.11	2500	52	ND	110	250			
1/12/19	94 71.86	18.34	0.00	53.52	0.11	3800	78	ND	180	390			
4/9/199	94 71.86	18.19	0.00	53.67	0.15	1800	22	ND	140	280			
4/11/19	94 71.86	5 18.12	0.00	53.74	0.07								
7/7/199	94 71.86	18.21	0.00	53.65	-0.09	110	4.5	ND	ND	ND			
10/5/19	94 71.86	18.58	0.00	53.28	-0.37	ND	ND	ND	ND	ND			
1/9/199	71.86	5 17.69	0.00	54.17	0.89	ND	0.68	ND	ND	ND			
4/17/19	95 71.86	5 17.68	0.00	54.18	0.01	3700	80	10	270	510			

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Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
September 1989 Through March 2011
Former 76 Station 3538

	Date Sampled	TOC Elevat		Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
_		(feet	t)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	
	MW-3	contin	ued												
	7/19/19	95 7	1.86	18.20	0.00	53.66	-0.52	15000	330	27	990	2400			
	10/26/19	995 7	1.86	18.32	0.00	53.54	-0.12	14000	420	180	750	1600	4800		
	1/16/19	96 7	1.86	17.95	0.00	53.91	0.37	920	38	ND	30	57			
	4/15/19	96 7	1.86	17.78	0.00	54.08	0.17	9700	240	ND	570	860	3200		
	7/11/19	96 7	1.86	18.19	0.00	53.67	-0.41	13000	69	5.5	430	900	740		
	1/17/19	97 7	1.86	17.23	0.00	54.63	0.96	4400	25	ND	270	580	1600		
	7/21/19	97 7	1.86	18.29	0.00	53.57	-1.06	9000	36	ND	450	800	950		
	1/14/19	98 7	1.86	16.71	0.00	55.15	1.58	7100	40	ND	380	360	930		
	7/6/199	98 7	1.86	17.03	0.00	54.83	-0.32	6800	39	ND	320	360	370		
	1/13/19	99 7	1.86	18.00	0.00	53.86	-0.97	1800	9.4	ND	58	36	180		
	8/31/19	99 7	1.40		0.00										Well obstructed at 0.5 feet.
	1/21/20	00 7	1.40	17.58	0.00	53.82		ND	ND	ND	ND	ND	21.4		
	7/10/20	00 7	1.40	18.05	0.00	53.35	-0.47	ND	ND	ND	ND	ND	162		
	8/25/20	00 7	1.40	17.82	0.00	53.58	0.23							180	
	1/4/200	01 7	1.40	18.16	0.00	53.24	-0.34	ND	ND	ND	ND	ND	193		
	7/16/20	01 7	1.40	17.98	0.00	53.42	0.18	ND	ND	ND	ND	ND	660		
	1/28/20	02 7	1.40	17.84	0.00	53.56	0.14	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	34		
	7/12/20	02 7	1.40	17.87	0.00	53.53	-0.03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	11	19	
	1/14/20	03 7	1.40	17.28	0.00	54.12	0.59	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	12		
	7/10/20	03 7	1.40	17.64	0.00	53.76	-0.36	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	23		
	2/4/200	04 7	1.40	17.05	0.00	54.35	0.59	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	26		
	7/29/20	04 7	1.40	17.82	0.00	53.58	-0.77	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<1		
	3/2/200	05 7	1.40	16.47	0.00	54.93	1.35	93	ND<0.50	ND<0.50	ND<0.50	ND<0.50	140		

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Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G 8015	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)	(θ2θθΒ) (μg/l)	
MW-3	continued												
9/30/200	05 71.40	17.79	0.00	53.61	-1.32	65	ND<0.30	ND<0.30	ND<0.30	ND<0.60	61		
3/23/200	06 71.40	16.61	0.00	54.79	1.18	54	ND<0.30	0.41	ND<0.30	0.98	63		
9/26/200	06 71.40	17.77	0.00	53.63	-1.16	51	ND<0.30	ND<0.30	ND<0.30	ND<0.60	41		
3/15/200	07 71.40	17.27	0.00	54.13	0.50	140	ND<0.30	ND<0.30	ND<0.30	ND<0.60	110		
9/27/200	07 71.40	18.48	0.00	52.92	-1.21	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	20		
3/27/200	08 71.40	17.67	0.00	53.73	0.81	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	19		
9/17/200	08 71.40	17.91	0.00	53.49	-0.24	56	ND<0.30	ND<0.30	ND<0.30	ND<0.60	43		
3/27/200	09 71.40	17.34	0.00	54.06	0.57	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	15		
9/17/200	09 71.40	17.88	0.00	53.52	-0.54	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	30		
3/23/201	10 71.40	17.33	0.00	54.07	0.55	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	22		
9/21/201	10 71.40	18.28	0.00	53.12	-0.95	69	ND<0.30	ND<0.30	ND<0.30	ND<0.60	48		
3/30/201	11 71.40	16.50	0.00	54.90	1.78	110	ND<0.30	ND<0.30	ND<0.30	ND<0.60	73		
MW-4													
9/15/198	89					ND	ND	ND	ND	ND			
1/23/199	90					ND	ND	0.4	ND	ND			
4/19/199	90					ND	ND	0.48	ND	ND			
7/17/199	90					ND	ND	ND	ND	ND			
10/16/19	990					ND	ND	ND	ND	ND			
1/15/199	91					ND	ND	ND		ND			
4/12/199	91					ND	ND	ND	ND	ND			
7/15/199	91					ND	ND	ND	ND	ND			
7/14/199	92					ND	1.3	2.5	ND	1.0			
4/13/199	93 71.98	17.67	0.00	54.31									Sampled Q3 only

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Date Sampled	TOC Elevation		Depth to Water	LPH Thickness	Ground- water	Change in Elevation	TPH-G			Ethyl-	Total	MTBE	MTBE	Comments
•					Elevation		8015	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	(µg/l)	$(\mu g/l)$	$(\mu g/l)$	
MW-4	continu	ıed												
7/14/19	93 71	.98	18.31	0.00	53.67	-0.64	ND	ND	ND	ND	ND			
10/14/19	993 71	.64	18.08	0.00	53.56	-0.11								Sampled Q3 only
1/12/19	94 71	.64	17.97	0.00	53.67	0.11								Sampled Q3 only
4/11/19	94 71	.64	17.70	0.00	53.94	0.27								Sampled Q3 only
7/7/199	94 71	.64	17.80	0.00	53.84	-0.10	ND	ND	ND	ND	ND			
10/5/19	94 71	.64	18.28	0.00	53.36	-0.48								Sampled Q3 only
1/9/199	95 71	.64	17.38	0.00	54.26	0.90								Sampled Q3 only
4/17/19	95 71	.64	17.21	0.00	54.43	0.17								Sampled Q3 only
7/19/19	95 71	.64	17.82	0.00	53.82	-0.61	ND	ND	ND	ND	ND			
10/26/19	95 71	.64	18.17	0.00	53.47	-0.35								Sampled Q3 only
1/16/19	96 71	.64	16.45	0.00	55.19	1.72								Sampled Q3 only
4/15/19	96 71	.64	17.35	0.00	54.29	-0.90								Sampled Q3 only
7/11/19	96 71	.64	17.81	0.00	53.83	-0.46	ND	ND	ND	ND	ND	ND		
1/17/19	97 71	.64	16.73	0.00	54.91	1.08								Sampled Q3 only
7/21/19	97 71	.64	17.91	0.00	53.73	-1.18	ND	ND	ND	ND	ND	ND		
1/14/19	98 71	.64	16.18	0.00	55.46	1.73								Sampled Q3 only
7/6/199	98 71	.64	16.49	0.00	55.15	-0.31	ND	ND	ND	ND	ND	ND		
1/13/19	99 71	.64	17.29	0.00	54.35	-0.80								Sampled Q3 only
8/31/19	99 71	.54		0.00										Well obstructed at 10.4 feet.
1/21/20	00 71	.54	17.51	0.00	54.03									Sampled Q3 only
7/10/20	00 71	.54	17.93	0.00	53.61	-0.42	ND	ND	ND	ND	ND	ND		
1/4/200	01 71	.54	18.10	0.00	53.44	-0.17								Sampled Q3 only
7/16/20	01 71	.54	17.76	0.00	53.78	0.34	ND	ND	ND	ND	ND	ND		
3538									Page 9	of 14				PTRC.

Date	TOC	Depth to	LPH		Change in								Comments
Sampled	Elevation	Water	Thickness	water Elevation	Elevation	TPH-G	_		Ethyl-	Total	MTBE	MTBE	
	(C 1)	(C 1)	(C 1)			8015	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)	
	continued		0.00	54.24	0.56								Samulad O2 only
1/28/20				54.34						 ND 0.50			Sampled Q3 only
7/12/20				53.73	-0.61	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		0 1 102 1
1/14/20				54.24	0.51								Sampled Q3 only
7/10/20				53.96		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0		
2/4/200				54.47	0.51								Sampled Q3 only
7/29/20			0.00	53.73	-0.74	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<1		
3/2/200				55.29	1.56								Sampled Q3 only
9/30/20			0.00	53.80	-1.49	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/23/20	06 71.54												Inaccessible due to gate; Sampled Q3 only
9/26/20	06 71.54	17.71	0.00	53.83		ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/15/20	07 71.54	17.56	0.00	53.98	0.15								Sampled Q3 only
9/27/20	07 71.54	18.16	0.00	53.38	-0.60	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/27/20	08 71.54	17.58	0.00	53.96	0.58								Sampled Q3 only
9/17/20	08 71.54	17.87	0.00	53.67	-0.29	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/27/20	09 71.54	17.17	0.00	54.37	0.70								Sampled Q3 only
9/17/20	09 71.54	17.86	0.00	53.68	-0.69	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/23/20	10 71.54	17.25	0.00	54.29	0.61								Sampled Q3 only
9/21/20	10 71.54	18.31	0.00	53.23	-1.06	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/30/20	11 71.54	16.35	0.00	55.19	1.96								Sampled Q3 only
MW-5													
11/30/19	992					ND	ND	ND	ND	ND			
1/8/199	93					ND	ND	ND	ND	ND			

**CTRC** 

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### Table 2 HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS September 1989 Through March 2011

Former 76 Station 3538

Date Sampled I	TOC Elevation	Depth to Water	LPH Thickness	Ground- water	Change in Elevation	TPH-G			Ethyl-	Total	MTBE	MTBE	Comments
				Elevation		8015	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	$(\mu g/l)$							
MW-5	continued												
4/13/1993	3 71.51	17.49	0.00	54.02		ND	ND	ND	ND	ND			
7/14/1993	3 71.51	18.02	0.00	53.49	-0.53	ND	ND	0.57	ND	ND			
10/14/199	93 71.23	17.82	0.00	53.41	-0.08	ND	ND	ND	ND	ND			
1/12/1994	4 71.23	17.74	0.00	53.49	0.08	ND	ND	0.84	ND	1.6			
4/11/1994	4 71.23	17.56	0.00	53.67	0.18								Sampled Q3 only
7/7/1994	1 71.23	17.50	0.00	53.73	0.06	ND	ND	ND	ND	ND			
10/5/1994	4 71.23	17.98	0.00	53.25	-0.48								Sampled Q3 only
1/9/1995	71.23	17.13	0.00	54.10	0.85								Sampled Q3 only
4/17/199	5 71.23	17.05	0.00	54.18	0.08								Sampled Q3 only
7/19/199:	5 71.23	17.59	0.00	53.64	-0.54	ND	ND	ND	ND	ND			
10/26/199	95 71.23	18.10	0.00	53.13	-0.51								Sampled Q3 only
1/16/1990	6 71.23	17.11	0.00	54.12	0.99								Sampled Q3 only
4/15/1990	6 71.23	17.22	0.00	54.01	-0.11								Sampled Q3 only
7/11/199	6 71.23	17.59	0.00	53.64	-0.37	ND	ND	ND	ND	ND	ND		
1/17/199	7 71.23	16.75	0.00	54.48	0.84								Sampled Q3 only
7/21/199	7 71.23	17.59	0.00	53.64	-0.84	ND	ND	ND	ND	ND	ND		
1/14/1998	8 71.23	16.16	0.00	55.07	1.43								Sampled Q3 only
7/6/1998	3 71.23	16.52	0.00	54.71	-0.36	ND	ND	ND	ND	ND	ND		
1/13/1999	9 71.23	17.62	0.00	53.61	-1.10								Sampled Q3 only
8/31/1999	9 71.16	17.76	0.00	53.40	-0.21	ND	ND	ND	ND	ND	ND		
1/21/2000	0 71.16	16.83	0.00	54.33	0.93								Sampled Q3 only
7/10/2000	0 71.16	17.46	0.00	53.70	-0.63	ND	ND	ND	ND	ND	ND		
1/4/2001	71.16	17.51	0.00	53.65	-0.05								Sampled Q3 only
3538								Page 11	of 14				PTPC

Ground- Change in

Date

TOC

Depth to

LPH

Sampled	Elevat		Water (feet)	Thickness (feet)	water Elevation (feet)	Elevation (feet)	TPH-G 8015 (μg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (μg/l)	MTBE (8260B) (μg/l)	
			(reet)	(Teet)	(Icci)	(1001)	(46/1)	(#6/1)	(46/1)	(46/1)	(μβ/1)	(με/1)	(με/1)	
<b>MW-5</b> 7/16/20		nued 1.16	17.32	0.00	53.84	0.19	ND	ND	ND	ND	ND	ND		
1/28/20		1.16	17.12	0.00	54.04	0.20								Sampled Q3 only
7/12/20		1.16	17.12	0.00	54.04	0.00	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		•
1/14/20		1.16	16.67	0.00	54.49	0.45								Sampled Q3 only
7/10/20		1.16	17.39	0.00	53.77	-0.72	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0		
2/4/20	04 7	1.16	16.23	0.00	54.93	1.16								Sampled Q3 only
7/29/20		1.16	16.02	0.00	55.14	0.21	ND<50	ND<0.3	0.64	ND<0.3	0.79	ND<1		
3/2/20	05 7	1.16	16.43	0.00	54.73	-0.41								Sampled Q3 only
9/30/20	005 7	1.16	17.41	0.00	53.75	-0.98	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/23/20	006 7	1.16	16.37	0.00	54.79	1.04								Sampled Q3 only
9/26/20	006 7	1.16	15.54	0.00	55.62	0.83	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/15/20	007 7	1.16	17.20	0.00	53.96	-1.66								Sampled Q3 only
9/27/20	007 7	1.16	18.01	0.00	53.15	-0.81	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/27/20	008 7	1.16	17.57	0.00	53.59	0.44								Sampled Q3 only
9/17/20	008 7	1.16	17.68	0.00	53.48	-0.11	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/27/20	009 7	1.16	17.14	0.00	54.02	0.54								Sampled Q3 only
9/17/20	009 7	1.16	17.60	0.00	53.56	-0.46	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/23/20	010 7	1.16	17.84	0.00	53.32	-0.24								Sampled Q3 only
9/21/20	010 7	1.16	17.92	0.00	53.24	-0.08	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/30/20	011 7	1.16	15.87	0.00	55.29	2.05								Sampled Q3 only
MW-6														
11/30/1	992						ND	ND	ND	ND	ND			
1/8/19	93						ND	ND	ND	ND	ND			
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Comments

### Table 2 HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS September 1989 Through March 2011

Former 76 Station 3538 TOC Depth to LPH Ground- Change in Date Comments Sampled Elevation Water Elevation Thickness water TPH-G Ethyl-Total MTBE MTBE Elevation 8015 Xylenes (8021B) (8260B) Benzene Toluene benzene  $(\mu g/l)$ (feet) (feet)  $(\mu g/l)$  $(\mu g/l)$  $(\mu g/l)$  $(\mu g/l)$  $(\mu g/l)$  $(\mu g/l)$ (feet) (feet) (feet) MW-6 continued 0.00 4/13/1993 71.79 11.94 59.85 ND ND ND ND ND

4/13/1993	/1./9	11.94	0.00	39.63		ND	ND	ND	ND	ND		
7/14/1993	71.79	17.20	0.00	54.59	-5.26	ND	0.99	2.4	ND	1.9		
10/14/1993	71.44	17.21	0.00	54.23	-0.36	ND	ND	0.64	ND	ND		
1/12/1994	71.44	17.44	0.00	54.00	-0.23	ND	ND	1.2	ND	2.9		
4/11/1994	71.44	13.66	0.00	57.78	3.78							 Sampled Q3 only
7/7/1994	71.44	14.05	0.00	57.39	-0.39	ND	ND	ND	ND	ND		
10/5/1994	71.44	14.16	0.00	57.28	-0.11							 Sampled Q3 only
1/9/1995	71.44	13.73	0.00	57.71	0.43							 Sampled Q3 only
4/17/1995	71.44	11.30	0.00	60.14	2.43							 Sampled Q3 only
7/19/1995	71.44	12.32	0.00	59.12	-1.02	ND	ND	ND	ND	ND		
10/26/1995	71.44	17.88	0.00	53.56	-5.56							 Sampled Q3 only
1/16/1996	71.44	16.38	0.00	55.06	1.50							 Sampled Q3 only
4/15/1996	71.44	14.00	0.00	57.44	2.38							 Sampled Q3 only
7/11/1996	71.44	13.58	0.00	57.86	0.42	ND	ND	ND	ND	ND	ND	
1/17/1997	71.44	15.42	0.00	56.02	-1.84							 Sampled Q3 only
7/21/1997	71.44	13.78	0.00	57.66	1.64	ND	ND	ND	ND	ND	ND	
1/14/1998	71.44	13.65	0.00	57.79	0.13							 Sampled Q3 only
7/6/1998	71.44	13.90	0.00	57.54	-0.25	ND	ND	ND	ND	ND	ND	
1/13/1999	71.44	14.93	0.00	56.51	-1.03							 Sampled Q3 only
8/31/1999	71.37	15.81	0.00	55.56	-0.95	ND	ND	ND	ND	ND	ND	
1/21/2000	71.37	16.13	0.00	55.24	-0.32							 Sampled Q3 only
7/10/2000	71.37	16.95	0.00	54.42	-0.82	ND	ND	ND	ND	ND	ND	
1/4/2001	71.37	17.09	0.00	54.28	-0.14							 Sampled Q3 only
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								-				© TRC



Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
September 1989 Through March 2011
Former 76 Station 3538

Date	TOC	Depth to	LPH		U								Comments
Sampled	Elevation	Water	Thickness	water Elevation	Elevation	TPH-G	D	TT. 1	Ethyl-	Total	MTBE	MTBE	
	(f4)	(f4)	(f4)	(f4)	(f4)	8015	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)	
	continued												
7/16/20	01 71.37	16.83	0.00	54.54	0.26	ND	ND	ND	ND	ND	ND		
1/28/20	02 71.37	14.58	0.00	56.79	2.25								Sampled Q3 only
7/12/20	02 71.37	16.76	0.00	54.61	-2.18	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5		
1/14/20	03 71.37	16.25	0.00	55.12	0.51								Sampled Q3 only
7/10/20	03 71.37	12.97	0.00	58.40	3.28	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0		
2/4/200	04 71.37	16.20	0.00	55.17	-3.23								Sampled Q3 only
7/29/20	04 71.37	14.98	0.00	56.39	1.22	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.6	1.3		
3/2/200	05 71.37	14.51	0.00	56.86	0.47								Sampled Q3 only
9/30/20	05 71.37	14.45	0.00	56.92	0.06	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	1.7		
3/23/20	06 71.37	16.55	0.00	54.82	-2.10								Sampled Q3 only
9/26/20	06 71.37	17.58	0.00	53.79	-1.03	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/15/20	07 71.37	13.72	0.00	57.65	3.86								Sampled Q3 only
9/27/20	07 71.37	14.18	0.00	57.19	-0.46	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/27/20	08 71.37	14.83	0.00	56.54	-0.65								Sampled Q3 only
9/17/20	08 71.37	14.70	0.00	56.67	0.13	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	2.8		
3/27/20	09 71.37	15.66	0.00	55.71	-0.96								Sampled Q3 only
9/17/20	09 71.37	15.31	0.00	56.06	0.35	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/23/20	10 71.37	15.42	0.00	55.95	-0.11								Sampled Q3 only
9/21/20	10 71.37	15.62	0.00	55.75	-0.20	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0		
3/30/20	11 71.37	14.12	0.00	57.25	1.50								Sampled Q3 only



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Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 3538

Date				Ethylene-							Bromo-	
Sampled			Ethanol	dibromide	EDB	1,2-DCA				Total Oil	dichloro-	Bromo-
	TPH-D	TBA	(8260B)	(EDB)	(504)	(EDC)	DIPE	ETBE	TAME	and Grease	methane	form
	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	(µg/l)	$(\mu g/l)$	(µg/l)	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	(mg/l)	$(\mu g/l)$	$(\mu g/l)$
MW-1												
9/15/1989	ND									ND		
1/23/1990	ND									1.5		
4/19/1990	ND									ND		
7/17/1990	ND									ND		
10/16/1990	ND									ND		
1/15/1991	ND									ND		
4/12/1991	ND									ND		
7/15/1991	ND									ND		
7/16/2001											1.7	
7/29/2004						ND<0.5					ND<0.5	ND<0.5
9/30/2005						ND<0.50					ND<0.50	ND<0.50
9/26/2006						ND<0.50					ND<0.50	ND<0.50
9/27/2007						ND<0.50					ND<0.50	ND<0.50
9/17/2008						ND<0.50					ND<0.50	ND<0.50
9/21/2010				ND<0.50	ND<0.010	ND<0.50						
MW-2												
9/21/2010				ND<0.50	ND<0.010	ND<0.50						
3/30/2011				ND<0.50		ND<0.50						
MW-3												
8/25/2000		ND		ND		ND	ND	ND	ND			
7/12/2002		ND<20	ND<500	ND<2.0		ND<2.0	ND<2.0	ND<2.0	ND<2.0			
9/21/2010				ND<0.50	ND<0.010	ND<0.50						
3/30/2011				ND<0.50		ND<0.50						

MW-4

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Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 3538

Date				Ethylene-							Bromo-	
Sampled			Ethanol	dibromide	EDB	1,2-DCA				Total Oil	dichloro-	Bromo-
	TPH-D	TBA	(8260B)	(EDB)	(504)	(EDC)	DIPE	ETBE	TAME	and Grease	methane	form
	$(\mu g/l)$	(mg/l)	$(\mu g/l)$	$(\mu g/l)$								
MW-4 co	ontinued											
9/21/2010				ND<0.50		ND<0.50						
MW-5												
9/21/2010				ND<0.50		ND<0.50						
MW-6												
9/21/2010				ND<0.50		ND<0.50						



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Table 2 b
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 3538

Date		Carbon					Dibromo-	1,2-	1,3-	1,4-	Dichloro-	
Sampled	Bromo-	Tetra-	Chloro-	Chloro-		Chloro-	chloro-	Dichloro-	Dichloro-	Dichloro-	difluoro-	
	methane	chloride	benzene	ethane	Chloroform	methane	methane	benzene	benzene	benzene	methane	1,1-DCA
	$(\mu g/l)$	(µg/l)	$(\mu g/l)$	$(\mu g/l)$	(µg/l)	$(\mu g/l)$	(µg/l)	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	(µg/l)
MW-1												
7/11/1996					0.96							
7/21/1997					1.0							
7/16/2001					45							
7/29/2004	ND<1	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
9/30/2005	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
9/26/2006	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
9/27/2007	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
9/17/2008	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50



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Table 2 c
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 3538

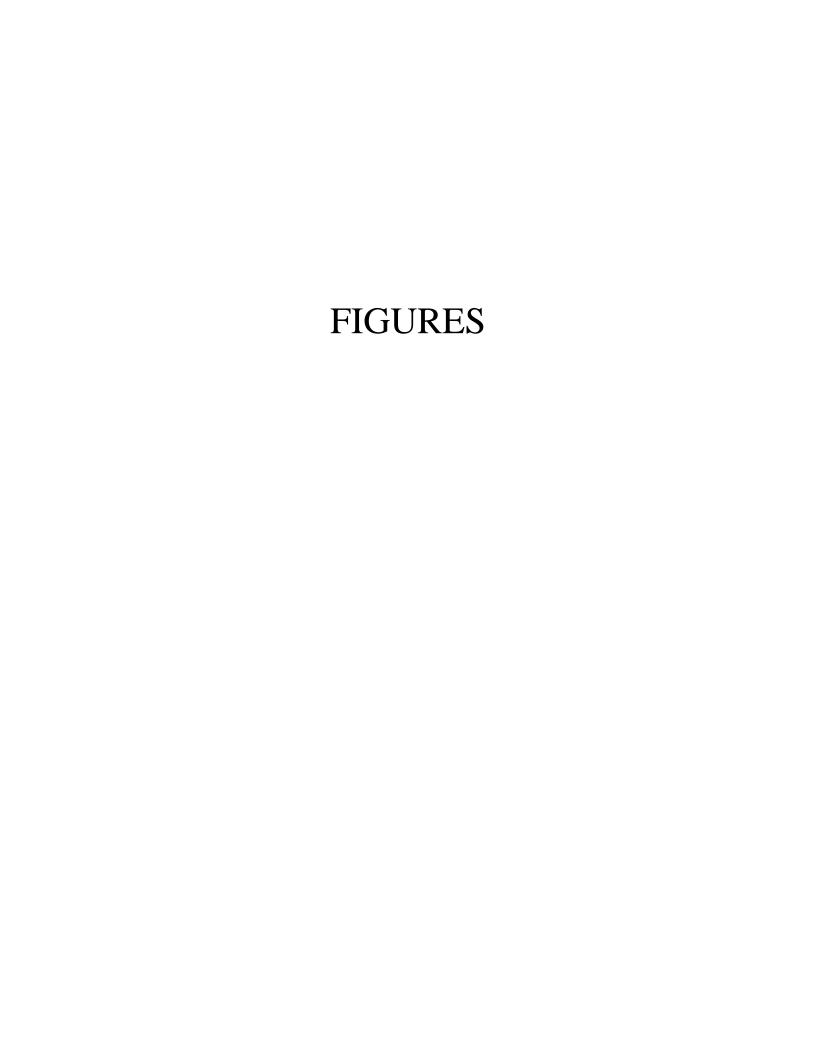
Date Sampled	1,1-DCE (μg/l)	cis- 1,2-DCE (μg/l)	trans- 1,2-DCE (µg/l)	1,2- Dichloro- propane (µg/l)	cis-1,3- Dichloro- propene (µg/l)	trans-1,3- Dichloro- propene (µg/l)	Methylene chloride (μg/l)	1,1,2,2- Tetrachloro- ethane (µg/l)	Tetrachloro- ethene (PCE) (µg/l)	Trichloro- trifluoro- ethane (µg/l)	1,1,1- Trichloro- ethane (µg/l)	1,1,2- Trichloro- ethane (µg/l)
MW-1												
9/15/1989									2.7			
1/23/1990									2.1			
4/19/1990									2.2			
7/17/1990									1.7			
10/16/1990									2.0			
1/15/1991									2.1			
4/12/1991									2.0			
7/15/1991									1.8			
7/14/1992									1.4			
7/14/1993									0.95			
7/7/1994									0.83			
7/19/1995									0.52			
7/11/1996									0.73			
7/21/1997									0.70			
8/31/1999									ND			
7/16/2001									ND			
7/12/2002	1.8								ND<0.60			
7/10/2003	0.89								ND<0.50			
7/29/2004	1.2	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<0.5	ND<0.5	13	ND<0.5	ND<0.5
9/30/2005	0.52	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	9.1	ND<0.50	ND<0.50
9/26/2006	0.60	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	7.0	ND<0.50	ND<0.50
9/27/2007	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	4.3	ND<0.50	ND<0.50
9/17/2008	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	5.4	ND<0.50	ND<0.50

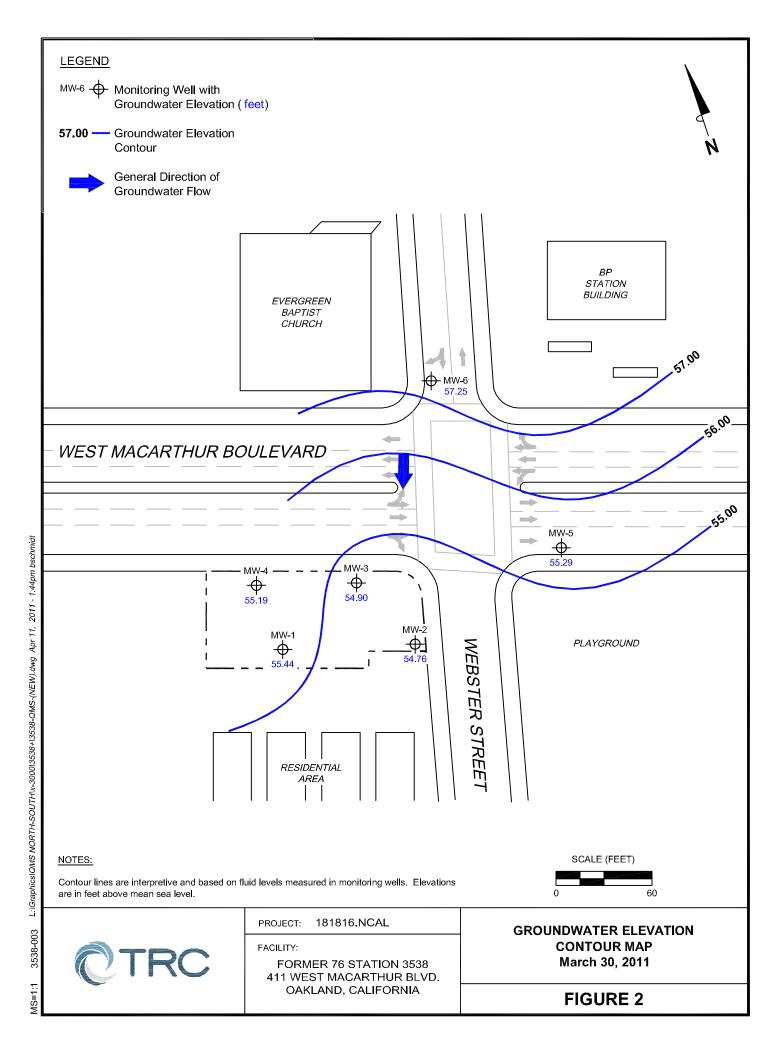
Page 1 of 1

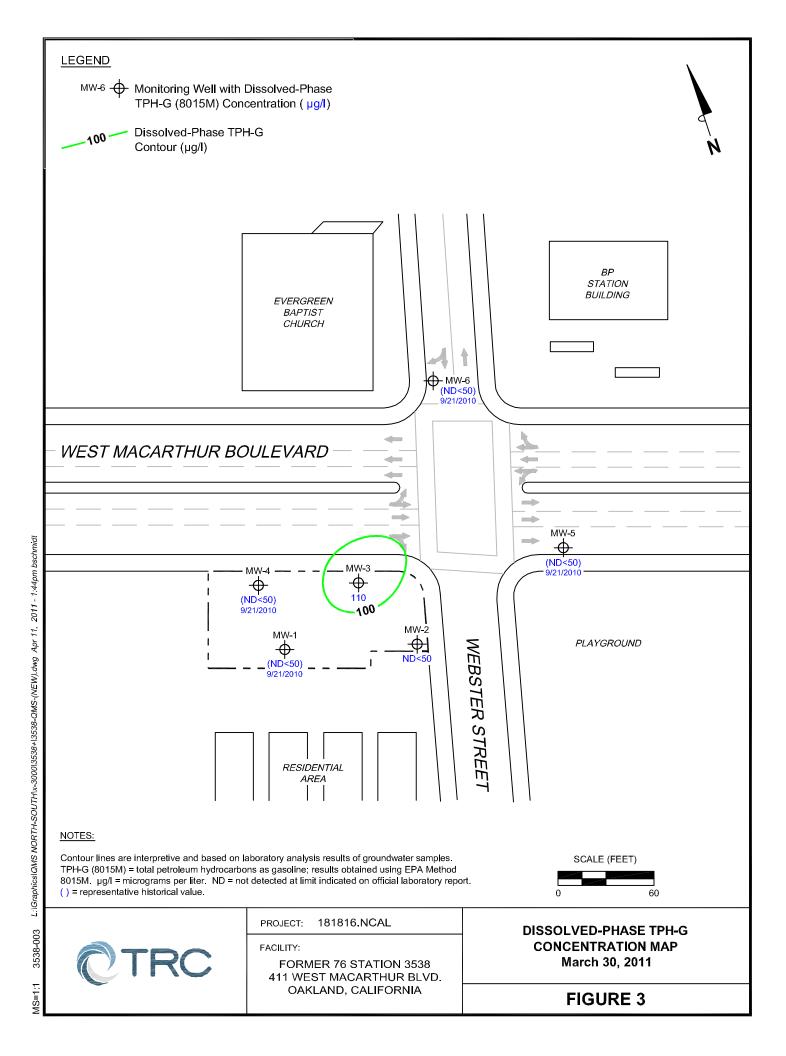
Table 2 d
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 3538

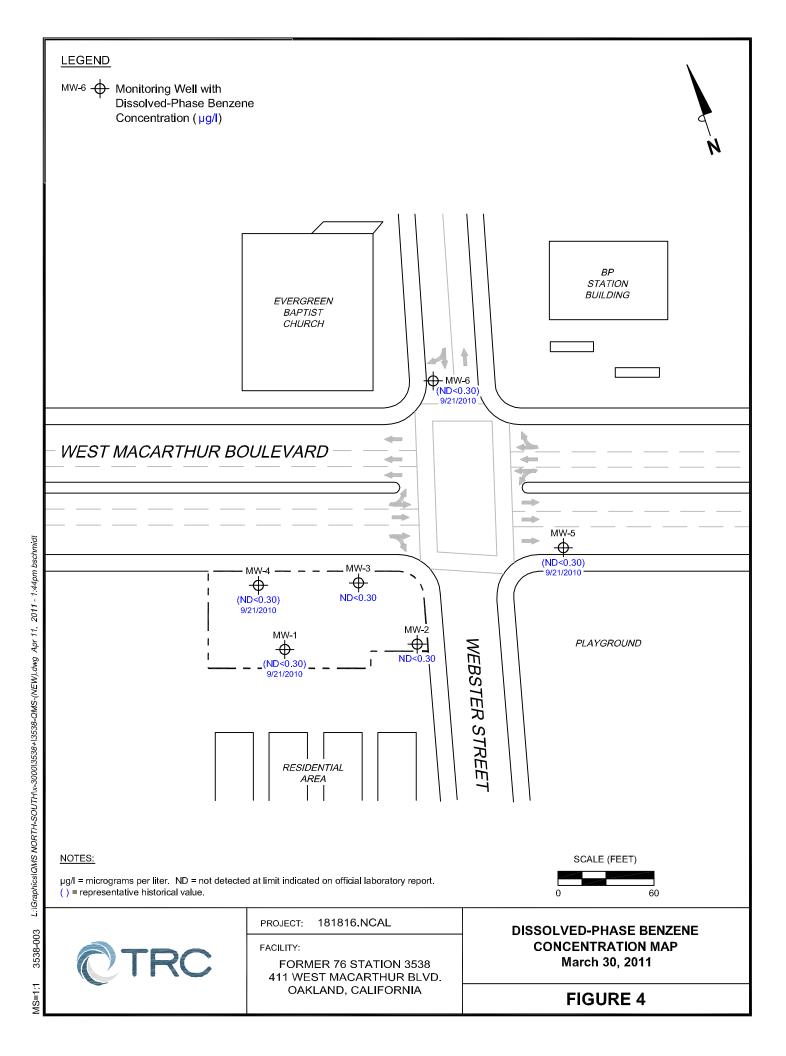
Date	Trichloro-	Trichloro-		
Sampled	ethene	fluoro-	Vinyl	
	(TCE)	methane	chloride	
	$(\mu g/l)$	$(\mu g/l)$	$(\mu g/l)$	
MW-1				
7/29/2004	ND<0.5	ND<0.5	ND<0.5	
9/30/2005	ND<0.50	ND<0.50	ND<0.50	
9/26/2006	ND<0.50	ND<0.50	ND<0.50	
9/27/2007	ND<0.50	ND<0.50	ND<0.50	
9/17/2008	ND<0.50	ND<0.50	ND<0.50	

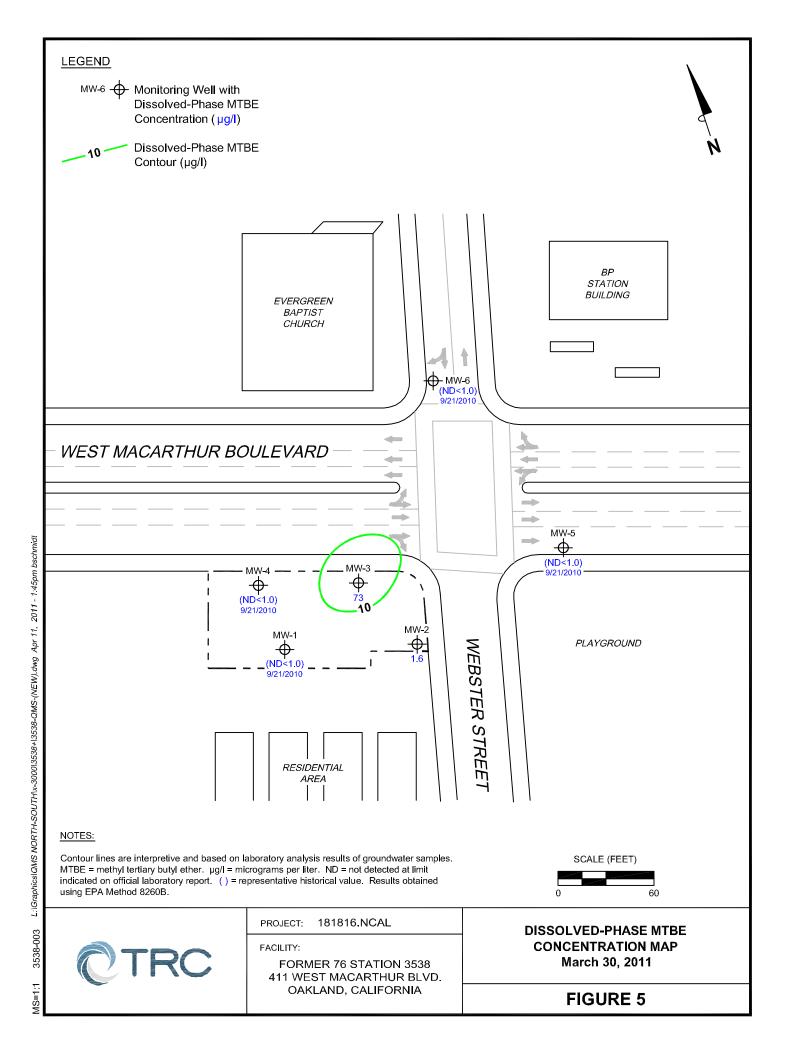


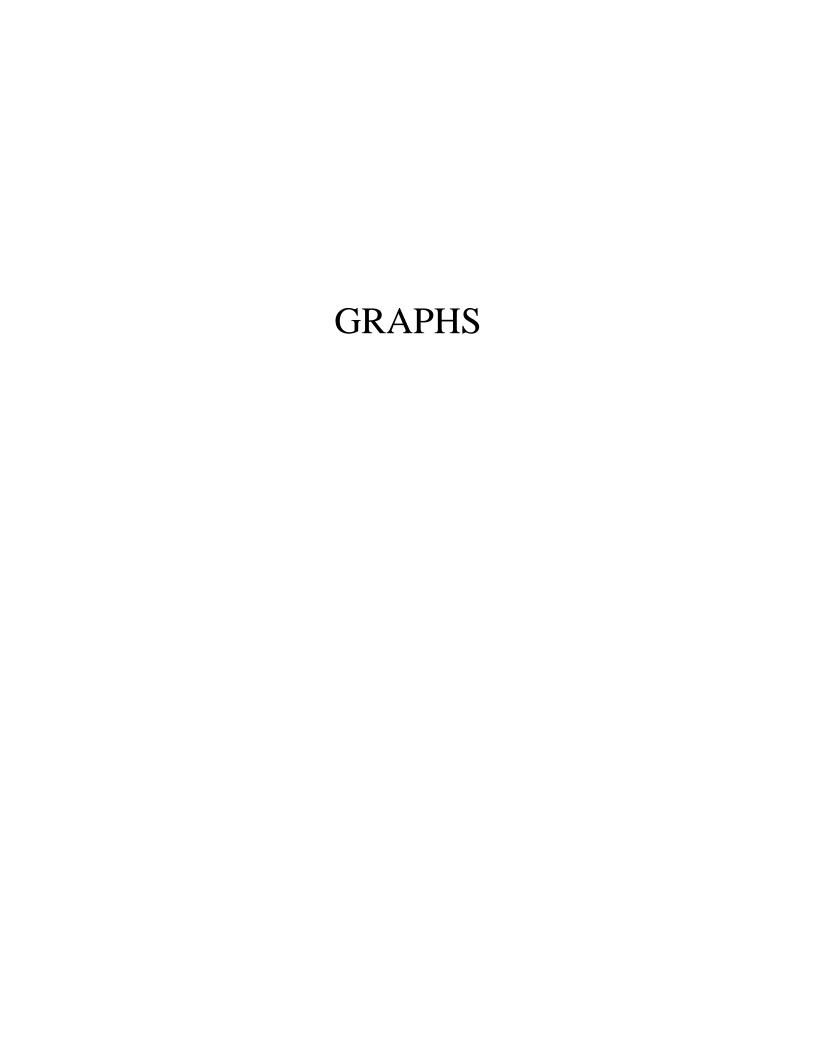




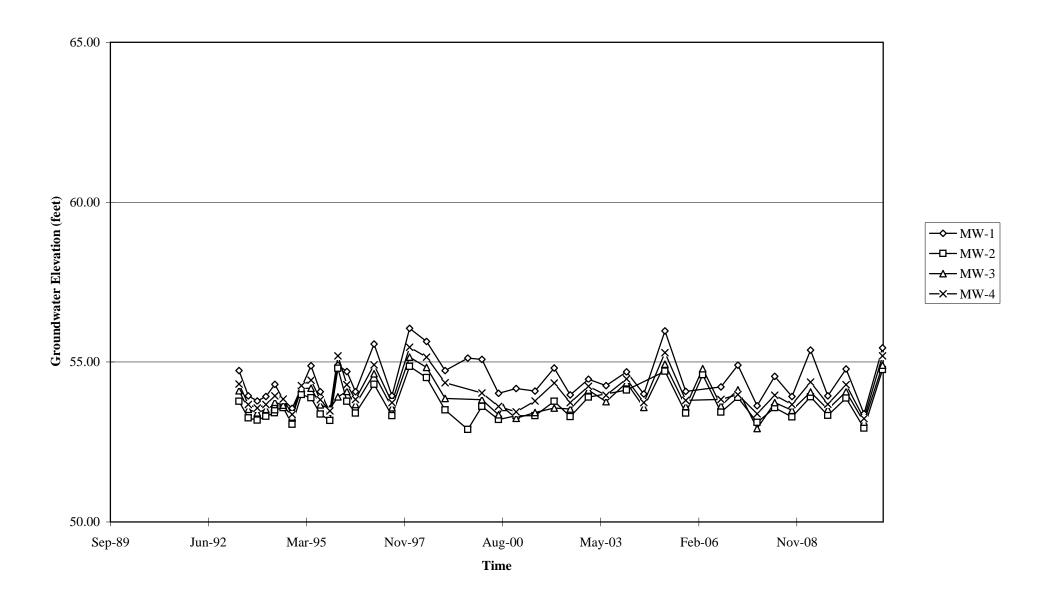


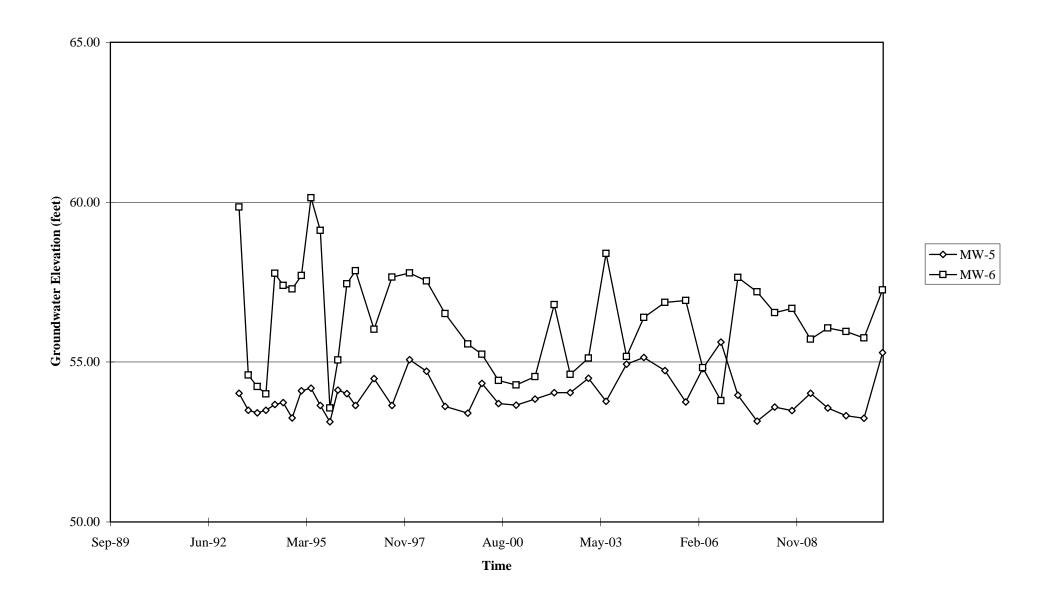






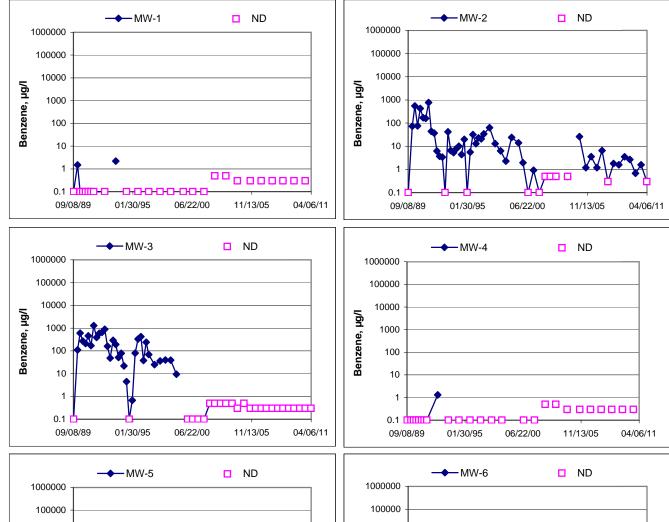
### Groundwater Elevations vs. Time Former 76 Station 3538

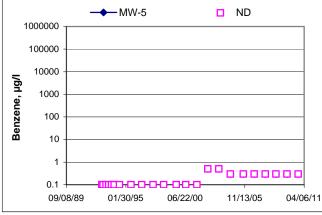


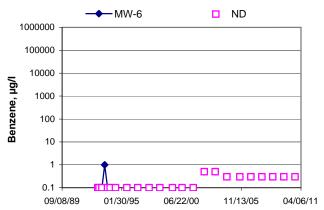


#### **Benzene Concentrations vs Time**

Former 76 Station 3538







#### GENERAL FIELD PROCEDURES

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

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

#### Fluid Level Measurements

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

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

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

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

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

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

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

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

### **Groundwater Sample Collection**

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

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

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

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

### Sequence of Gauging, Purging and Sampling

The sequence in which monitoring activities are conducted 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:_ Site#_	Bar	ulw	Job	#/Task #:	1818	816		Date: <u>3-30-11</u>
Site#	35	38	Projec	t Manager	A.	816 Collin	\$	Pageof _
Well#	тос	Time Gauged	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
NW-G	V			14.12			N/5	Z" Monitor
m-5	V		i l	15.87	_	_	N15	2"
NW-4	V	0801		16.35	·	~	1/15	21
MW-1	/		23.96	_		_	1/15	Z1 V.
MW-3	~			16.50			0854	2"
NW-2	/	0814		16.58			0840	2"
	~							
						. Ar		
FIELD DAT	A COMPL	ETE	QA/Q0	>	COC	V	VELL BOX C	CONDITION SHEETS

TRAFFIC CONTROL

MANIFEST

DRUM INVENTORY

## **GROUNDWATER SAMPLING FIELD NOTES**

		Tec	hnician:	Bay	siliv	<del></del>			
Site: <u>35</u>	38	Proje	ect No.:	181816	· · · · · · · · · · · · · · · · · · ·	. /	Date:	<u>3-30</u>	-)1
Well No	Mh	<u>/-3</u>	***************************************	Purge Metho	d:	3u5			
Depth to Wa	ater (feet):	16.50	<del></del>	Depth to Prod	duct (feet):				
		27.18			Recovered (g			_	
		10.68		Casing Diam	eter (Inches):_ e (gallons):	2_	**	<del></del>	
80% Rechar	rge Depth(fe	<sub>eet):18.63</sub>		1 Well Volum	e (gallons):	<u> </u>	-		
Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, 🖒)	pН	D.O. (mg/L)	ORP	Turbidity
Pre-P	urge								
0845			2	885.6	14.5				
	0849		- 7	764.3	16.7	7.72			
	00   1		<u> </u>	700.	17.0	1.60			
Station	c at Time Sa			al Gallons Pur	ged		Sample	Time	
Comments:	16.56		6			08	54		
Comments.	•		***************************************						
					.0				
		1-2	<del></del>	Purge Metho	d:	200	415		
Depth to Wa	ater (feet):	16.58	)	Depth to Pro	duct (feet):			-	
Total Depth	(feet)	24.60	Princeton constraints	LPH & Water	Recovered (g	allons):		_	
Water Colur	nn (feet):	8.02		Casing Diam	eter (Inches):_	2			
80% Rechai	rge Depth(fe	eet): <u>18.18</u>	rdemonstrate	1 Well Volum	ne (gallons):	2			
				•					

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F Ø )	рН	D.O. (mg/L)	ORP	Turbidity
Pre-F	urge			7. 2. 4.					
0826			2	610.4	16.1	8.32		-	
			4	577.3	17.2	8,22			
	0835		6	575.9	17.1	7.98			
Stat	c at Time Sa	ampled	Tot	al Gallons Pur	ged		Sample	Time	<u> </u>
	16.64		6			7	0840		
Comments			·						····





Date of Report: 04/06/2011

Anju Farfan

TRC 123 Technology Drive Irvine, CA 92618

RE: 3538 BC Work Order: 1104979 Invoice ID: B098158

Enclosed are the results of analyses for samples received by the laboratory on 3/31/2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers

Molly Meyers

Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014



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MU

Chain of Custody and Cooler Receipt Form for 1104979 Page 2 of 2

SHIPPING INFO	Hand D r □ (Spec	elive	ery 🗆	.: <del>2 kg</del>		lc	e Chest E Box (		None		ify)	_
Refrigerant: Ice Blue Ice	O No	ne [	Oth	er 🗆	Comm	ents	:					
Custody Seals Ice Chest  Intact? Yes O No D	Conta Intact? Y			None	Com	men	ts:					
All samples received? Yes ♥ No □	All samp	les o	ontainers	intact?	Yes 1920 I	No 🗅		Descripti	on(s) mate	h COC? Y	esyzo No I	0
COC Received		: <u>D</u>	.95 c	ontainer	Ott	_ TH	rermomete	er ID: <u>119</u>	3_	Date/Tim Analyst I	1-15-5 e W.C.L. Iin	2200)
SAMPLE CONTAINERS							SAMPLE N			1	Ι,	T
OT GENERAL MINERAL/ GENERAL PHYSIC	AL I	+	2	3	4	-+	5	6				10
PT PE UNPRESERVED	-	$\dashv$			_	_				<u> </u>		
QT INORGANIC CHEMICAL METALS		$\neg$										
PT INORGANIC CHEMICAL METALS	-	_			1							
PT CYANIDE		$\neg$			1							
PT NITROGEN FORMS		$\exists$				_						
PT TOTAL SULFIDE	_	$\neg$				-						
202. NITRATE / NITRITE		$\neg$				$\neg$					1	
PT TOTAL ORGANIC CARBON												
PT TOX												
PT CHEMICAL OXYGEN DEMAND				,				_				
PIA PHENOLICS		- ,						W 20 1 10	ç.	,	-4	
40mi VOA VIAL TRAVEL BLANK												
40ml VOA VIAL	:A	10:	D, A	-1	1	¢		( )	· t	1 1	1	1.1
QT EPA 413.1, 413.2, 418.1	- 1.1.		.:									
PT ODOR												
RADIOLOGICAL												1
BACTERIOLOGICAL	:		-									
40 ml VOA VIAL- 504							-					-
QT EPA 508/608/8080			-	ļ								
QT EPA 515.1/8150												
QT EPA 525		_								ļ		
QT EPA 525 TRAVEL BLANK	$\rightarrow$	_		-							-	
100ml EPA 547					_			ļ		-	-	
100m) EPA 531.1											-	-
QT EPA 548												
QT EPA 549				-			ļ				-	
QT EPA 632	_							ļ		-		
QT EPA 8015M				-							-	-
QT AMBER	_			-	_				<u> </u>		ļ	-
8 OZ. JAR				ļ	-			-				
32 O2. JAR												
SOIL SLEEVE				+								
PCB VIAL				+					-			
PLASTIC BAG	_									-		
FERROUS IRON		_		-	-				-		-	
ENCORE												
					μμ							



123 Technology Drive Irvine, CA 92618 Reported: 04/06/2011 15:13

Project: 3538

Project Number: 4514567456 Project Manager: Anju Farfan

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

**Laboratory** Client Sample Information

1104979-01 COC Number:

Project Number: 3538
Sampling Location: --Sampling Point: MW-3

Sampling Point: MW-3 Sampled By: TRCI **Receive Date:** 03/31/2011 21:45 **Sampling Date:** 03/30/2011 08:54

Sample Depth: --Lab Matrix: Water

Lab Matrix: water
Sample Type: Groundwater

Delivery Work Order: Global ID: T0600101472 Location ID (FieldPoint): MW-3

Matrix: W

Sample QC Type (SACode): CS

Cooler ID:

1104979-02 COC Number: ---

Project Number: 3538
Sampling Location: --Sampling Point: MW-2

Sampled By: TRCI

Receive Date: 03/31/2011 21:45 Sampling Date: 03/30/2011 08:40

Sample Depth: --Lab Matrix: Water
Sample Type: Groundwater

Delivery Work Order: Global ID: T0600101472 Location ID (FieldPoint): MW-2

Matrix: W

Sample QC Type (SACode): CS

Cooler ID:



Reported:

TRC 04/06/2011 15:13 Project: 3538 123 Technology Drive Irvine, CA 92618 Project Number: 4514567456

# Volatile Organic Analysis (EPA Method 8260)

Project Manager: Anju Farfan

BCL Sample ID:	1104979-01	Client Sampl	e Name:	3538, MW-3, 3/30/2	2011 8:54:00AM			
Constituent		Result	Units	PQL	Method	MB Bias	Lab Quals	Run#
1,2-Dibromoethane		ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane		ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane-d4	(Surrogate)	105	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate	9)	102	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene	e (Surrogate)	96.4	%	86 - 115 (LCL - UCL)	EPA-8260			1

			Run					
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-8260	04/01/11	04/02/11 03:25	MGC	MS-V5	1	BUD0059	



123 Technology Drive Irvine, CA 92618 **Reported:** 04/06/2011 15:13

Project: 3538

Project Number: 4514567456 Project Manager: Anju Farfan

# Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 110	4979-01	Client Sampl	e Name:	3538, MW-3, 3/30/2	011 8:54:00AM			
Constituent		Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	ug/L	0.30	EPA-8021	ND		1
Toluene		ND	ug/L	0.30	EPA-8021	ND		1
Ethylbenzene		ND	ug/L	0.30	EPA-8021	ND		1
Methyl t-butyl ether		73	ug/L	1.0	EPA-8021	ND		1
Total Xylenes		ND	ug/L	0.60	EPA-8021	ND		1
Gasoline Range Organics (C4	l - C12)	110	ug/L	50	Luft	ND	A91	2
a,a,a-Trifluorotoluene (PID Sur	rogate)	106	%	70 - 130 (LCL - UCL)	EPA-8021			1
a,a,a-Trifluorotoluene (FID Sur	rogate)	76.6	%	70 - 130 (LCL - UCL)	Luft			2

			Run				QC	
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-8021	04/05/11	04/05/11 20:11	jjh	GC-V4	1	BUD0194	
2	Luft	04/05/11	04/05/11 20:11	jjh	GC-V4	1	BUD0194	



123 Technology Drive Irvine, CA 92618 **Reported:** 04/06/2011 15:13

Project: 3538

Project Number: 4514567456 Project Manager: Anju Farfan

# Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	1104979-02	Client Sampl	e Name:	3538, MW-2, 3/30/2	011 8:40:00AM			
Constituent		Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
1,2-Dibromoethane		ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane		ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane-d4	(Surrogate)	105	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate	e)	102	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene	e (Surrogate)	98.9	%	86 - 115 (LCL - UCL)	EPA-8260			1

			Run				QC	
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-8260	04/01/11	04/02/11 03:52	MGC	MS-V5	1	BUD0059	

123 Technology Drive Irvine, CA 92618 **Reported:** 04/06/2011 15:13

Project: 3538

Project Number: 4514567456 Project Manager: Anju Farfan

# Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1104979-02	Client Sampl	e Name:	3538, MW-2, 3/30/2	011 8:40:00AM			
Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run#
Benzene	ND	ug/L	0.30	EPA-8021	ND		1
Toluene	ND	ug/L	0.30	EPA-8021	ND		1
Ethylbenzene	ND	ug/L	0.30	EPA-8021	ND		1
Methyl t-butyl ether	1.6	ug/L	1.0	EPA-8021	ND		1
Total Xylenes	ND	ug/L	0.60	EPA-8021	ND		1
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	Luft	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	108	%	70 - 130 (LCL - UCL)	EPA-8021			1
a,a,a-Trifluorotoluene (FID Surrogate)	73.2	%	70 - 130 (LCL - UCL)	Luft			2

			Run				QC	
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-8021	04/05/11	04/05/11 20:33	jjh	GC-V4	1	BUD0194	
2	Luft	04/05/11	04/05/11 20:33	jjh	GC-V4	1	BUD0194	



123 Technology Drive Irvine, CA 92618 **Reported:** 04/06/2011 15:13

Project: 3538

Project Number: 4514567456 Project Manager: Anju Farfan

# Volatile Organic Analysis (EPA Method 8260)

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

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BUD0059						
Benzene	BUD0059-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BUD0059-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BUD0059-BLK1	ND	ug/L	0.50		
Toluene	BUD0059-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	BUD0059-BLK1	102	%	76 - 114	(LCL - UCL)	
Toluene-d8 (Surrogate)	BUD0059-BLK1	100	%	88 - 110	(LCL - UCL)	
4-Bromofluorobenzene (Surrogate)	BUD0059-BLK1	97.4	%	86 - 115	5 (LCL - UCL)	



123 Technology Drive Irvine, CA 92618 **Reported:** 04/06/2011 15:13

Project: 3538

Project Number: 4514567456 Project Manager: Anju Farfan

# Volatile Organic Analysis (EPA Method 8260)

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

		•	•		·	•		Control L	imits	
				Spike		Percent		Percent		Lab
Constituent	QC Sample ID	Type	Result	Level	Units	Recovery	RPD	Recovery	RPD	Quals
QC Batch ID: BUD0059										
Benzene	BUD0059-BS1	LCS	25.100	25.000	ug/L	100		70 - 130		
Toluene	BUD0059-BS1	LCS	25.260	25.000	ug/L	101		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BUD0059-BS1	LCS	10.390	10.000	ug/L	104		76 - 114		
Toluene-d8 (Surrogate)	BUD0059-BS1	LCS	10.060	10.000	ug/L	101		88 - 110		
4-Bromofluorobenzene (Surrogate)	BUD0059-BS1	LCS	9.9700	10.000	ug/L	99.7		86 - 115		



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

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

		•		•			•	•			
									Cont	rol Limits	
		Source	Source		Spike			Percent		Percent	Lab
Constituent	Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals
QC Batch ID: BUD0059	Use	d client samp	ole: Y - Des	cription: MV	V-5, 03/28/2	011 10:57					
Benzene	MS MS	1104965-07	ND	24.440	25.000	ug/L		97.8		70 - 130	
	MSD	1104965-07	ND	24.800	25.000	ug/L	1.5	99.2	20	70 - 130	
Toluene	MS	1104965-07	ND	26.290	25.000	ug/L		105		70 - 130	
	MSD	1104965-07	ND	25.820	25.000	ug/L	1.8	103	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1104965-07	ND	9.4200	10.000	ug/L		94.2		76 - 114	
	MSD	1104965-07	ND	9.8500	10.000	ug/L	4.5	98.5		76 - 114	
Toluene-d8 (Surrogate)	MS	1104965-07	ND	10.260	10.000	ug/L		103		88 - 110	
	MSD	1104965-07	ND	10.070	10.000	ug/L	1.9	101		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1104965-07	ND	10.070	10.000	ug/L		101		86 - 115	
	MSD	1104965-07	ND	9.7400	10.000	ug/L	3.3	97.4		86 - 115	



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# Purgeable Aromatics and Total Petroleum Hydrocarbons

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

QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
BUD0194-BLK1	ND	ug/L	0.30		
BUD0194-BLK1	ND	ug/L	0.30		
BUD0194-BLK1	ND	ug/L	0.30		
BUD0194-BLK1	ND	ug/L	1.0		
BUD0194-BLK1	ND	ug/L	0.60		
BUD0194-BLK1	ND	ug/L	50		
BUD0194-BLK1	107	%	70 - 130	(LCL - UCL)	
BUD0194-BLK1	71.2	%	70 - 130	(LCL - UCL)	
	BUD0194-BLK1 BUD0194-BLK1 BUD0194-BLK1 BUD0194-BLK1 BUD0194-BLK1 BUD0194-BLK1	BUD0194-BLK1 ND	BUD0194-BLK1 ND ug/L	BUD0194-BLK1 ND ug/L 0.30  BUD0194-BLK1 ND ug/L 0.30  BUD0194-BLK1 ND ug/L 0.30  BUD0194-BLK1 ND ug/L 1.0  BUD0194-BLK1 ND ug/L 1.0  BUD0194-BLK1 ND ug/L 0.60  BUD0194-BLK1 ND ug/L 50  BUD0194-BLK1 ND ug/L 50	BUD0194-BLK1 ND ug/L 0.30 BUD0194-BLK1 ND ug/L 0.30 BUD0194-BLK1 ND ug/L 0.30 BUD0194-BLK1 ND ug/L 1.0 BUD0194-BLK1 ND ug/L 1.0 BUD0194-BLK1 ND ug/L 0.60 BUD0194-BLK1 ND ug/L 50 BUD0194-BLK1 ND Ug/L 50



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# Purgeable Aromatics and Total Petroleum Hydrocarbons

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

	•		•		•		•			
								Control I	imits	
				Spike		Percent		Percent		Lab
Constituent	QC Sample ID	Type	Result	Level	Units	Recovery	RPD	Recovery	RPD	Quals
QC Batch ID: BUD0194										
Benzene	BUD0194-BS1	LCS	36.043	40.000	ug/L	90.1		85 - 115		
Toluene	BUD0194-BS1	LCS	34.741	40.000	ug/L	86.9		85 - 115		
Ethylbenzene	BUD0194-BS1	LCS	36.451	40.000	ug/L	91.1		85 - 115		
Methyl t-butyl ether	BUD0194-BS1	LCS	35.846	40.000	ug/L	89.6		85 - 115		
Total Xylenes	BUD0194-BS1	LCS	106.52	120.00	ug/L	88.8		85 - 115		
Gasoline Range Organics (C4 - C12)	BUD0194-BS1	LCS	1110.3	1000.0	ug/L	111		85 - 115		
a,a,a-Trifluorotoluene (PID Surrogate)	BUD0194-BS1	LCS	44.218	40.000	ug/L	111		70 - 130		
a,a,a-Trifluorotoluene (FID Surrogate)	BUD0194-BS1	LCS	35.573	40.000	ug/L	88.9		70 - 130		



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## **Purgeable Aromatics and Total Petroleum Hydrocarbons**

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

									Cont		
		Source	Source		Spike			Percent		Percent	Lab
Constituent	Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals
QC Batch ID: BUD0194	Use	d client samp	ole: N								
Benzene	MS	1104069-61	ND	37.010	40.000	ug/L		92.5		70 - 130	
	MSD	1104069-61	ND	36.311	40.000	ug/L	1.9	90.8	20	70 - 130	
Toluene	MS	1104069-61	ND	36.486	40.000	ug/L		91.2		70 - 130	
	MSD	1104069-61	ND	35.021	40.000	ug/L	4.1	87.6	20	70 - 130	
Ethylbenzene	MS	1104069-61	ND	38.538	40.000	ug/L		96.3		70 - 130	
	MSD	1104069-61	ND	36.546	40.000	ug/L	5.3	91.4	20	70 - 130	
Methyl t-butyl ether	MS	1104069-61	ND	35.660	40.000	ug/L		89.2		70 - 130	
	MSD	1104069-61	ND	34.926	40.000	ug/L	2.1	87.3	20	70 - 130	
Total Xylenes	MS	1104069-61	ND	112.64	120.00	ug/L		93.9		70 - 130	
	MSD	1104069-61	ND	106.60	120.00	ug/L	5.5	88.8	20	70 - 130	
Gasoline Range Organics (C4 - C12)	MS	1104069-61	ND	1074.6	1000.0	ug/L		107		70 - 130	
	MSD	1104069-61	ND	1142.0	1000.0	ug/L	6.1	114	20	70 - 130	
a,a,a-Trifluorotoluene (PID Surrogate)	MS	1104069-61	ND	44.754	40.000	ug/L		112		70 - 130	
	MSD	1104069-61	ND	43.320	40.000	ug/L	3.3	108		70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1104069-61	ND	35.793	40.000	ug/L		89.5		70 - 130	
· · ·	MSD	1104069-61	ND	35.532	40.000	ug/L	0.7	88.8		70 - 130	



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#### **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

TPH does not exhibit a "gasoline" pattern. TPH is entirely due to MTBE. A91

### **STATEMENTS**

### **Purge Water Disposal**

Non-hazardous groundwater produced during purging and sampling of monitoring wells is accumulated at TRC's groundwater monitoring field office at Concord, California, for transportation by a licensed carrier to an authorized disposal facility. Currently, non-hazardous purge water is transported under a bulk non-hazardous waste manifest to Crosby and Overton, Inc. in Long Beach, California.

#### 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.

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