

#### RECEIVED

3:24 pm, Feb 10, 2009

Alameda County Environmental Health Stacie H. Frerichs Team Lead Marketing Business Unit Chevron Environmental Management Company 6001 Bollinger Canyon Road San Ramon, CA 94583 Tel (925) 842-9655 Fax (925) 842-8370

February 6, 2009 (date)

Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Re: Chevron Facility #\_9-8341\_\_\_\_

Address: 3530 MacArthur Boulevard, Oakland, California

I have reviewed the attached report titled *Fourth Quarter 2008 Groundwater Monitoring and Sampling Report* and dated February 6, 2009.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Conestoga-Rovers & Associates, upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

SHFrencho

Stacie H. Frerichs Project Manager

Enclosure: Report



2000 Opportunity Dr, Suite 110, Roseville, California 95678 Telephone: 916-677-3407, ext. 100 Facsimile: 916-677-3687 www.CRAworld.com

February 6, 2009

Reference No. 611650

Mr. Steven Plunkett Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Re: Fourth Quarter 2008 Groundwater Monitoring Report and Proposed Sampling Reductions Chevron Service Station 9-8341 3530 MacArthur Boulevard Oakland, California LOP Case #RO0000405

Dear Mr. Plunkett:

Conestoga-Rovers & Associates (CRA) is submitting the attached *Groundwater Monitoring and Sampling Report* (report) on behalf of Chevron Environmental Management Company (Chevron) for the referenced site. The report (prepared by Gettler-Ryan Inc. and dated December 8, 2008) presents the results of the monitoring and sampling of wells MW-1 through MW-3 during fourth quarter 2008. These wells are monitored and sampled on a quarterly basis. Also attached are Figure 1 (Vicinity Map) showing the site location, and Figure 2 (Concentration Map) presenting the fourth quarter 2008 analytical results along with a rose diagram. The monitoring results during 2008 are discussed below.

During 2008, petroleum hydrocarbon concentrations in the site wells generally were similar to those observed during 2007. Total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and xylenes (BTEX) were not detected in wells MW-1, MW-2, or MW-3 during 2008, and generally have not been detected in these wells throughout the course of monitoring. Elevated concentrations of methyl tertiary butyl ether (MTBE) (ranging from 740 to 1,700 micrograms per liter [ $\mu$ g/L]) were detected in well MW-2 during 2008; the detected concentrations are consistent with historical fluctuations. Although fluctuations occur, the MTBE concentrations in this well have significantly decreased since the start of monitoring. Low concentrations of MTBE (up to 2  $\mu$ g/L) were detected in well MW-3 during 2008; low concentrations of MTBE are periodically detected in this well. MTBE was not detected in well MW-1 during 2008 and has not been detected since 1998.

Based on the analytical results, impacted groundwater (MTBE) remains beneath the site, primarily in the area of well MW-2 downgradient of the underground storage tanks (USTs) and dispensers. The MTBE concentrations in this well have significantly decreased since the start of monitoring. Only low concentrations of MTBE have been detected in well MW-3. CRA recommends continued monitoring and sampling to further evaluate groundwater quality and

Equal Employment Opportunity Employer



February 6, 2009

Reference No. 611650

concentration trends. However, as petroleum hydrocarbons generally are not detected in wells MW-1 and MW-3, CRA proposes a reduction of the monitoring frequency of these wells to semi-annual. If we do not receive a response from ACEH regarding the proposed sampling reductions, we will assume consent and these wells will not be sampled during second quarter 2009.

2

As requested by Alameda County Environmental Health (ACEH), five borings downgradient and crossgradient of the site were attempted in December 2006 to further evaluate the extent of impacted groundwater. The proposed boring locations were in MacArthur Boulevard and Magee Avenue as the nearby property owners would not grant access. However, the borings could not be completed due to underground utility conflicts. Available options to further investigate the extent of impacted groundwater are currently being evaluated.

James P. Kiernan, P.E. #C68498

Please contact Mr. James Kiernan at (916) 751-4102 if you have any questions or require additional information.

Sincerely,

**CONESTOGA-ROVERS & ASSOCIATES** 

Christopher J. Benedict

CB/kw/2 Encl.

Figure 1 Vicinity Map

Figure 2 Concentration Map – November 13, 2008

Attachment A Fourth Quarter 2008 Groundwater Monitoring and Sampling Report

cc: Ms. Stacie Frerichs, Chevron Environmental Management Company



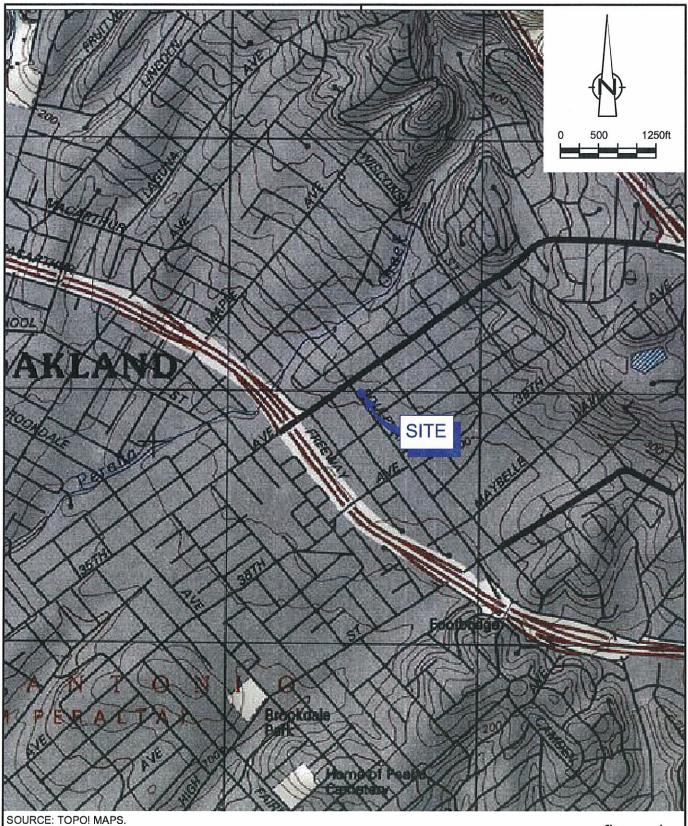
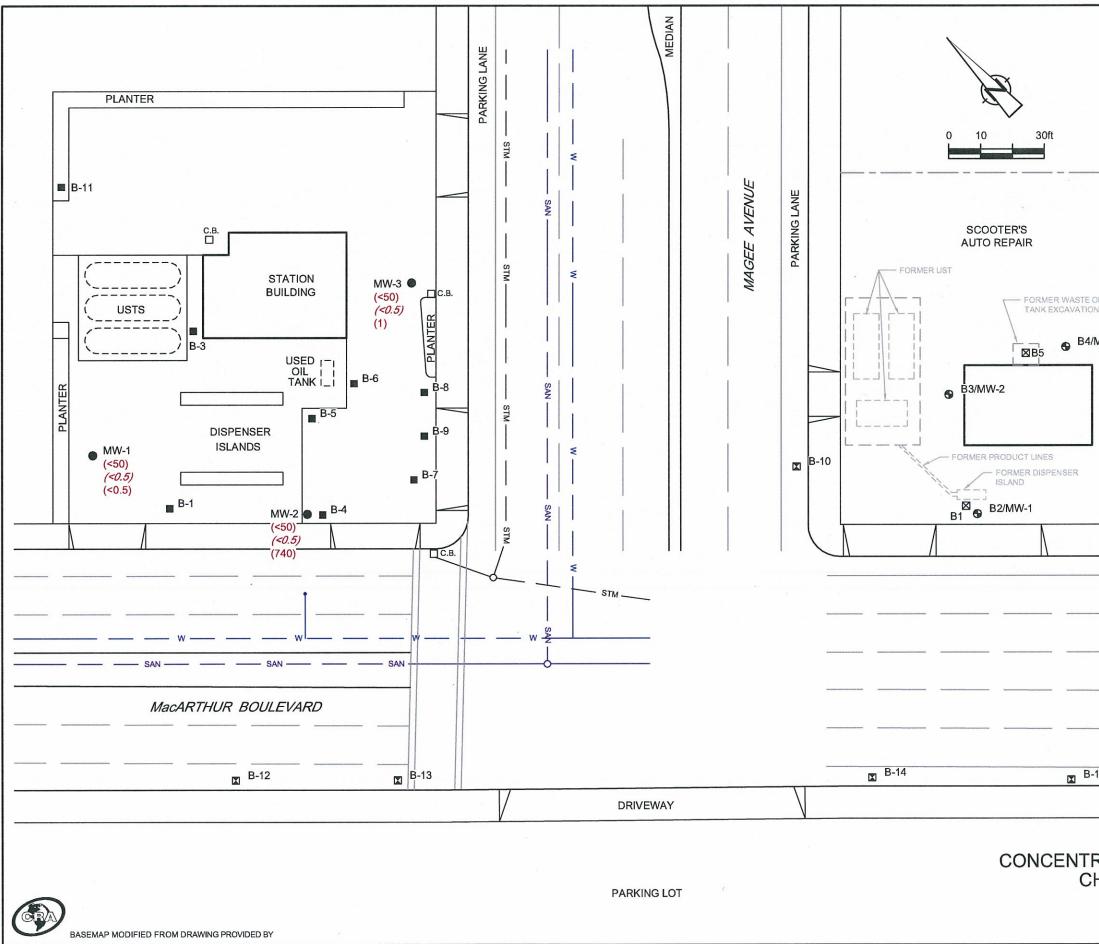


figure 1



VICINITY MAP CHEVRON SERVICE STATION 9-8341 3530 MACARTHUR BOULEVARD Oakland, California

611650-203(PRES001)GN-WA001 OCT 28/2008



<sup>611650-120(003)</sup>GN-WA001 FEB 06/2009

. . . .

	LEGEND
MW-1 ●	MONITORING WELL LOCATION
B-7	SOIL BORING LOCATION
B-10 🖾	SOIL BORING LOCATION MET WITH REFUSAL
STM	STORM DRAIN LINE
<u> </u>	SANITARY SEWER LINE
W WWW	WATER LINE
B2/MW-1 🚱	SCOOTER'S AUTO REPAIR GROUNDWATER MONITORING WELL
B1 🛛	SCOOTER'S AUTO REPAIR SOIL BORING, NOVEMBER 1998
(<50)	TPHg CONCENTRATION (ug/L)
	BENZENE CONCENTRATION (ug/L)
OIL (<0.5)	MTBE CONCENTRATION (ug/L)
/MW-3	
	0° 90° 1111 111 110°
HIS	TORICAL GROUNDWATER FLOW DIRECTION
/	
	alas kenyemmenya panalan kanala kanala kanala kenyempenya
-15	
	figuro 2
HEVRON SERVIO	figure 2 OVEMBER 13, 2008 CE STATION 9-8341 THUR BOULEVARD <i>Oakland, California</i>

#### ATTACHMENT A

#### FOURTH QUARTER 2008 GROUNDWATER MONITORING AND SAMPLING REPORT



### TRANSMITTAL

December 17, 2008 G-R #386346

- TO: Mr. Brian Carey Conestoga-Rovers & Associates 2000 Opportunity Drive, Suite 110 Roseville, California 95678
- FROM: Deanna L. Harding Project Coordinator Gettler-Ryan Inc. 6747 Sierra Court, Suite J Dublin, California 94568

RE: Chevron Service Station #9-8341 MTI 3530 MacArthur Boulevard Oakland, California RO 0000405 RWQCB-Case No. 01-1930

#### WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
2	December 8, 2008	Groundwater Monitoring and Sampling Report Fourth Quarter Event of November 13, 2008

#### COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced report for <u>your</u> use and distribution to the following:

Ms. Stacie H. Frerichs, Chevron EMC, 6111 Bollinger Canyon Road, Room 3596, San Ramon, CA 94583

Please provide any comments/changes and propose any groundwater monitoring modifications for the next event prior to *December 30, 2008*, at which time this final report will be distributed to the following:

cc: Mr. Chuck Headlee, RWQCB-S.F. Bay Region, 1515 Clay St., Suite 1400, Oakland. CA 94612 (No Hard Copy)

Mr. Steven Plunkett, Alameda County Health Care Services, Dept. of Environmental Health, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577 (No Hard Copy-UPLOAD TO ALAMEDA CO.)

Enclosures

trans/9-8341-SHF



Stacie H. Frerichs Team Lead Marketing Business Unit Chevron Environmental Management Company 6001 Bollinger Canyon Road San Ramon, CA 94583 Tel (925) 842-9655 Fax (925) 842-8370

December 17, 2008 (date)

Alameda County Health Care Services 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Re: Chevron Facility #<u>9-8341</u>

Address: 3530 MacArthur Blvd., Oakland, California

have reviewed the attached routine groundwater monitoring report dated <u>December 17, 2008</u>.

l agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Gettler-Ryan, Inc., upon whose assistance and advice l have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

l declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

rencho

Stacie H. Frerichs Project Manager

Enclosure: Report

#### WELL CONDITION STATUS SHEET

Client/Facility #: Site Address: City:		carthur B	lvd.			-	Job # Event Date: Sampler:	, <del>0</del> 8			
WELL ID	Vault Frame Condition	Gasket/ O-Ring (M)missing	BOLTS (M) Missing (R) Replaced	Bolt Flanges B= Broken S= Stripped R=Retap	APRON Condition C=Cracked B=Broken G=Gone	<b>Grout Seal</b> (Deficient) inches from TOC	<b>Casing</b> (Condition prevents tight cap seal)	REPLACE LOCK Y / N	REPLACE CAP Y / N	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Yes / No
MW-1	OL	h	NA	NA	OK	or	OK	2	て	2 CIRCULAL VALLE	
MW-2	OIL	~					<u> </u>	2	て	BOART L 8"3	
<u>11w-3</u>	OIL		\$P	S=2	OLL		->	て	4	MONALSON 12"/2	
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-•• <u></u>											
Comments							L	l			

Comments



December 8, 2008 G-R Job #386346

Ms. Stacie H. Frerichs Chevron Environmental Management Company 6111 Bollinger Canyon Road, Room 3596 San Ramon, CA 94583

#### RE: Fourth Quarter Event of November 13, 2008 Groundwater Monitoring & Sampling Report Chevron Service Station #9-8341 3530 MacArthur Boulevard Oakland, California

Dear Ms. H. Frerichs:

This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater levels were measured and the wells were checked for the presence of separate-phase hydrocarbons. Static water level data, groundwater elevations and separate-phase hydrocarbon thickness (if any) are presented in the attached Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells and submitted to a state certified laboratory for analyses. The field data sheets for this event are attached. Analytical results are presented in the table(s) listed below. The chain of custody document and laboratory analytical report are also attached. All groundwater and decontamination water generated during sampling activities was removed from the site, per the Standard Operating Procedure.

Please call if you have any questions or comments regarding this report. Thank you.

Sincerely,

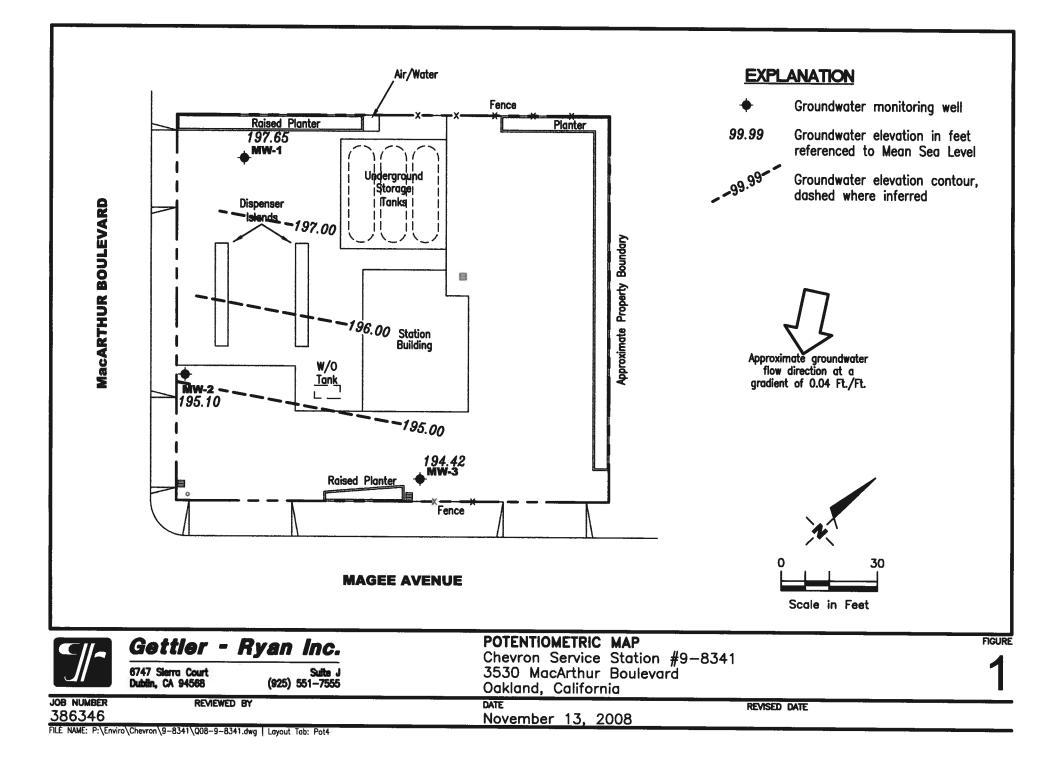
Deanna L. Harding Project Coordinator

Douglas J.Lee Senior Geologist, P.G. No. 6882

No. 6882

Figure 1: Table 1: Attachments:

Potentiometric Map Groundwater Monitoring Data and Analytical Results s: Standard Operating Procedure - Groundwater Sampling Field Data Sheets Chain of Custody Document and Laboratory Analytical Reports



# Table 1 Groundwater Monitoring Data and Analytical Results Chevron Service Station #9-8341 3530 MacArthur Boulevard

#### Oakland, California

WELL ID/	тос	GWE	DTW	TPH-G	B	T				
DATE	(ft.)	(msl)	рт н (ft.)	(μg/L)	в (µg/L)	ι (μg/L)	E (µg/L)	X (µg/L)	МТВЕ (µg/l)	ETHANOL♦
MW-1	<u> </u>		<u></u>	······································		<u></u>	48.47	(µg/1-)	(pg/L)	(µg/L)
04/04/96	202.47	198.65	3.82	<50	<0.5	<0.5	<0.5	<0.5	ND	
11/01/96	202.47	197.45	5.02	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/06/97	202.47	199.72	2.75	<50	<0.5	<0.5	<0.5	<0.5	14	
04/14/97	202.47	197.71	4.76	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
07/17/97	202.47	196.72	5.75	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/29/97	202.47	196.97	5.50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
02/04/98	202.47	199.80	2.67	<50	4.2	<0.5	<0.5	<0.5	94	
04/03/98	202.47	197.06	5.41	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
07/29/98	202.47	192.26	10.21	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/26/98	202.47	195.66	6.81	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/18/99	202.47	196.05	6.42	<50	<0.5	<0.5	<0.5	<0.5	<2.0	
04/15/99	202.47	197.13	5.34	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
07/22/99	202.47	196.97	5.50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/13/99	202.47	196.43	6.04	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/21/00	202.47	197.11	5.36	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
04/10/00	202.47	197.60	4.87	<50	<0.50	<0.50	< 0.50	< 0.50	<2.5	
07/12/00	202.47	197.05	5.42	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	
10/05/00	202.47	196.79	5.68	<50.0	< 0.500	<0.500	<0.500	<0.500	<2.50	
01/05/01	202.47	197.30	5.17	<50	<0.50	<0.50	< 0.50	< 0.50	<2.5	
04/05/01	202.47	197.83	4.64	<50	< 0.50	<0.50	<0.50	< 0.50	<2.5	
08/20/01	202.47	197.29	5.18	<50	< 0.50	<0.50	<0.50	<0.50	<2.5	
11/26/01	202.47	197.65	4.82	<50	<0.50	<0.50	<0.50	<1.5	<2.5	
02/14/02	202.47	197.68	4.79	<50	<0.50	<0.50	<0.50	<1.5	<2.5	
05/07/02	202.47	197.55	4.92	<50	<0.50	<0.50	<0.50	<1.5	<2.5	
08/02/02	202.47	197.36	5.11	<50	<0.50	<0.50	<0.50	<1.5	<2.5	
11/11/02	202.47	197.40	5.07	<50	< 0.50	<0.50	<0.50	<1.5	<2.5	
02/03/03	202.47	197.69	4.78	<50	<0.50	<0.50	<0.50	<1.5	<2.5	
05/05/03	202.47	198.86	3.61	<50	<0.5	<0.5	<0.5	<1.5	<2.5	
08/04/03 <sup>4</sup>	202.47	197.39	5.08	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50
11/19/034	202.47	197.44	5.03	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50
02/16/044	202.47	198.01	4.46	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50
06/03/04 <sup>4</sup>	202.47	197.52	4.95	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50
08/20/04 <sup>4</sup>	202.47	197.22	5.25	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50
11/15/044	202.47	197.86	4.61	<50	<0.5	<0.5	<0.5	<0.5	< 0.5	<50

# Table 1 Groundwater Monitoring Data and Analytical Results Chevron Service Station #9-8341 3530 MacArthur Boulevard

Oakland, California

WELL ID/	тос	GWE	DTW	TPH-G	Oakland, Califo B	T	Ē	X	MTBE	ETHANOL
DATE	(ft.)	(msl)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-1 (cont)										
02/14/054	202.47	198.18	4.29	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50
05/16/054	202.47	198.62	3.85	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/31/054	202.47	197.19	5.28	69	12	12	<0.5	12	<0.5	
11/30/054	202.47	197.36	5.11	<50	<0.5	<0.5	<0.5	1	<0.5	
02/17/064	202.47	198.47	4.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/19/064	202.47	198.09	4.38	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/25/064	202.47	197.23	5.24	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/22/064	202.47	197.09	5.38	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/01/074	202.47	198.00	4.47	<50	<0.5	<0.5	<0.5	<0.5	<0.5	220
04/30/07 <sup>4</sup>	202.47	197.96	4.51	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/31/074	202.47	197.40	5.07	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
10/27/074	202.47	197.46	5.01	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/08/084	202.47	199.06	3.41	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/02/084	202.47	198.17	4.30	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/31/084	202.47	197.26	5.21	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/13/084	202.47	197.65	4.82	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-2										
04/04/96	198.88	196.07	2.81	<50	<0.5	<0.5	<0.5	<0.5	6,100	
11/01/96	198.88	195.27	3.61	<500	<5.0	<5.0	<5.0	<5.0	2,600	
01/06/97	198.88	195.97	2.91	<2,000	31	<20	<20	<20	4,000	
04/14/97	198.88	195.43	3.45	<2,000	<20	<20	<20	<20	5,100/5,800 <sup>1</sup>	
07/17/97	198.88	194.98	3.90	<500	<5.0	<5.0	<5.0	<5.0	2,300/2,900 <sup>1</sup>	
10/29/97	198.88	192.96	5.92	120 <sup>2</sup>	12	<0.5	<0.5	<0.5	810/900 <sup>1</sup>	
02/04/98	198.88	195.05	3.83	<1,000	<10	<10	<10	<10	<b>2,100/2,800<sup>1</sup></b>	
04/03/98	198.88	191.55	7.33	<1,000	<10	<10	<10	<10	3,800/3,600 <sup>1</sup>	
07/29/98	198.88	189.86	9.02	120 <sup>3</sup>	<0.5	<0.5	<0.5	<0.5	<b>2,800/3,900<sup>1</sup></b>	
10/26/98	198.88	192.77	6.11	<50	<0.5	<0.5	<0.5	< 0.5	1,200	
01/18/99	198.88	194.67	4.21	<1,000	<10	<10	<10	10.5	2,530	
04/15/99	198.88	194.56	4.32	<50	<0.5	<0.5	<0.5	<0.5	5,270	
07/22/99	198.88	193.73	5.15	<50	8.92	<0.5	<0.5	<0.5	1,450	
10/13/99	198.88	192.23	6.65	<250	<2.5	<2.5	<2.5	<2.5	1,740	
01/21/00	198.88	192.78	6.10	69.6	<0.5	<0.5	<0.5	<0.5	1,110	

# Table 1 Groundwater Monitoring Data and Analytical Results Chevron Service Station #9-8341 3530 MacArthur Boulevard Oakland, California

Oakland, California											
WELL ID	TOC	GWE	DTW	TPH-G	В	Т	E	x	MTBE	ETHANOL	
DATE	(ft.)	(msl)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
MW-2 (cont)											
04/10/00	198.88	194.42	4.46	<500	<5.0	<5.0	<5.0	<5.0	1,700		
07/12/00	198.88	195.24	3.64	<50.0	< 0.500	<0.500	< 0.500	< 0.500	187		
10/05/00	198.88	194.06	4.82	<50.0	< 0.500	<0.500	< 0.500	< 0.500	<2.50		
01/05/01	198.88	195.17	3.71	<50	<0.50	<0.50	< 0.50	< 0.50	1,800		
04/05/01	198.88	192.94	5.94	<50	<0.50	<0.50	<0.50	< 0.50	5,500		
08/20/01	198.88	193.18	5.70	<50	<0.50	< 0.50	<0.50	< 0.50	2,000		
11/26/01	198.88	193.55	5.33	<50	<0.50	< 0.50	<0.50	<1.5	990		
02/14/02	198.88	194.42	4.46	58	<0.50	< 0.50	<0.50	<1.5	1,200		
05/07/02	198.88	194.49	4.39	<50	<0.50	<0.50	< 0.50	<1.5	<2.5		
08/02/02	198.88	194.81	4.07	<50	<0.50	<0.50	<0.50	<1.5	490		
11/11/02	198.88	194.76	4.12	<50	<0.50	<0.50	<0.50	<1.5	470		
02/03/03	198.88	193.93	4.95	<50	<0.50	<0.50	<0.50	<1.5	690		
05/05/03	198.88	194.38	4.50	<50	<0.5	<0.5	<0.5	<1.5	680		
08/04/03 <sup>4</sup>	198.88	195.02	3.86	<50	<0.5	<0.5	<0.5	<0.5	460	<50	
11/19/034	198.88	195.32	3.56	<50	<0.5	<0.5	<0.5	<0.5	540	<50	
02/16/044	198.88	195.73	3.15	<50	<1	<1	<1	<1	1,200	<130	
06/03/044	198.88	195.18	3.70	<50	<0.5	<0.5	<0.5	<0.5	190	<50	
08/20/04 <sup>4</sup>	198.88	194.85	4.03	<50	<0.5	<0.5	<0.5	<0.5	130	<50	
11/15/044	198.88	195.54	3.34	<50	<0.5	<0.5	<0.5	<0.5	230	<50	
02/14/054	198.88	195.54	3.34	<50	<0.5	<0.5	<0.5	<0.5	600	<50	
05/16/054	198.88	194.99	3.89	<50	<0.5	<0.5	<0.5	<0.5	130		
08/31/05 <sup>4</sup>	198.88	194.81	4.07	<50	<0.5	<0.5	<0.5	0.8	450		
11/30/054	198.88	193.13	5.75	<50	<0.5	<0.5	<0.5	2	280		
02/17/064	198.88	195.56	3.32	<50	<0.5	<0.5	<0.5	<0.5	790		
05/19/064	198.88	193.80	5.08	<50	<0.5	<0.5	<0.5	<0.5	530		
08/25/064	198.88	194.85	4.03	<50	<0.5	<0.5	<0.5	<0.5	330		
11/22/064	198.88	193.44	5.44	<50	<0.5	<0.5	<0.5	<0.5	310		
02/01/074	198.88	195.30	3.58	<50	<0.5	<0.5	<0.5	<0.5	770		
04/30/074	198.88	194.73	4.15	<50	<0.5	<0.5	<0.5	<0.5	92		
07/31/074	198.88	194.68	4.20	<50	<0.5	<0.5	<0.5	<0.5	20		
10/27/074	198.88	195.00	3.88	<50	<0.5	<0.5	<0.5	<0.5	220		
02/08/08 <sup>4</sup>	198.88	194.86	4.02	<50	<0.5	<0.5	<0.5	<0.5	860		

WELL ID/ DATE         TOC (n)         GWE (n)         DTW (h)         TPH-G (h)(h)         B (h)(h)         T (h)(h)(h)         E (h)(h)         X (h)(h)         MTBE (h)(h)         ETHANOL4 (h)(h)           MW-2 (cont)         0         0         0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5<		Groundwater Monitoring Data and Analytical Results Chevron Service Station #9-8341 3530 MacArthur Boulevard Oakland, California												
MW-2 (cont)         Cont	WELL ID/	ele el		i e e e elele elelelelelelelele		В			X	MTBE	ETHANOL			
950208 <sup>4</sup> 198.88       194.50       4.38       <50       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5       <0.5 <th></th> <th>(ft.)</th> <th>(msl)</th> <th>(ft.)</th> <th>(µg/L)</th> <th>(µg/L)</th> <th>(µg/L)</th> <th>(µg/L)</th> <th>(µg/L)</th> <th>(µg/L)</th> <th>(µg/L)</th>		(ft.)	(msl)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	MW-2 (cont)													
11/13/08 <sup>4</sup> 198.88         195.10         3.78         <0.5         0.5			194.50	4.38	<50	<0.5	<0.5	<0.5	<0.5	1,700	6 <b>22</b> 6			
MW-3         III/01/96         199.10         194.91         4.19         <50         <0.5         <0.5         <0.5         <0.5         <2.5            01/06/97         199.10         194.93         4.17         <50	07/31/084	198.88	194.70	4.18	<50	<0.5	<0.5	<0.5	<0.5		( <del></del> )			
11/01/96       199.10       194.91       4.19       <50	11/13/084	198.88	195.10	3.78	<50	<0.5	<0.5	<0.5	<0.5	740				
11/01/96       199.10       194.91       4.19       <50	MW-3													
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	11/01/96	199.10	194.91	4.19	<50	<0.5	<0 5	<0.5	<0.5	~2.5				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	01/06/97										1. <b></b> () 1.729-11			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	04/14/97													
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	07/17/97	199.10												
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	10/29/97	199.10	193.90											
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	02/04/98	199.10	194.71											
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	04/03/98	199.10	195.78											
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	07/29/98	199.10	189.24	9.86										
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	10/26/98	199.10	193.59	5.51	<50									
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	01/18/99	199.10	194.68	4.42	<50									
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	04/15/99	199.10	194.54	4.56	<50									
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	07/22/99	199.10	192.45	6.65	<50	<0.5								
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	10/13/99	199.10	193.79	5.31	<50	<0.5								
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	01/21/00	199.10	193.18	5.92	<50	<0.5	< 0.5				122			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	04/10/00	199.10	194.32	4.78	<50	< 0.50	< 0.50							
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	07/12/00	199.10	193.86	5.24	<50.0	< 0.500	< 0.500	< 0.500						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10/05/00	199.10	195.17	3.93	<50.0	< 0.500	<0.500	<0.500						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	01/05/01		194.85	4.25	<50	<0.50	<0.50	<0.50	<0.50					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			194.72	4.38	<50	< 0.50	<0.50	<0.50	<0.50					
$02/14/02$ $199.10$ $194.82$ $4.28$ $<50$ $<0.50$ $<0.50$ $<0.50$ $<1.5$ $<2.5$ $ 05/07/02$ $199.10$ $194.58$ $4.52$ $85$ $<0.50$ $<0.50$ $<0.50$ $<1.5$ $<2.5$ $ 08/02/02$ $199.10$ $194.72$ $4.38$ $<50$ $<0.50$ $<0.50$ $<0.50$ $<1.5$ $610$ $ 08/02/02$ $199.10$ $194.72$ $4.38$ $<50$ $<0.50$ $<0.50$ $<0.50$ $<1.5$ $<2.5$ $ 11/11/02$ $199.10$ $195.04$ $4.06$ $<50$ $<0.50$ $<0.50$ $<0.50$ $<1.5$ $<2.5$ $ 02/03/03$ $199.10$ $194.02$ $5.08$ $<50$ $<0.50$ $<0.50$ $<1.5$ $<2.5$ $ 05/05/03$ $199.10$ $194.50$ $4.60$ $<50$ $<0.5$ $<0.5$ $<0.5$ $<1.5$ $<2.5$ $ 08/04/02^4$ $100$ $104.75$ $4.25$ $=150$ $<0.5$ $<0.5$ $<0.5$ $<1.5$ $<2.5$ $-$			194.35	4.75	<50	< 0.50	<0.50	< 0.50	<0.50	<2.5				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				5.50	<50	<0.50	<0.50	< 0.50	<1.5	<2.5				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				4.28	<50	<0.50	<0.50	< 0.50	<1.5	<2.5				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					85	<0.50	<0.50	<0.50	<1.5					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						<0.50	<0.50	<0.50	<1.5	<2.5				
05/05/03 199.10 194.50 4.60 <50 <0.5 <0.5 <0.5 <1.5 <2.5						<0.50	<0.50	<0.50	<1.5	4.5				
						<0.50	<0.50	<0.50	<1.5	<2.5				
08/04/03" 199.10 194.75 4.35 <50 <0.5 <0.5 <0.5 <0.5 <50							<0.5	<0.5	<1.5	<2.5				
	08/04/034	199.10	194.75	4.35	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50			

## Table 1 Groundwater Monitoring Data and Analytical Results Chevron Service Station #9-8341

3530 MacArthur Boulevard Oakland, California

					Oakland, Califo	ornia				
WELL ID/	TOC	GWE	DTW	TPH-G	В	Т	E	x	MTBE	ETHANOL
DATE	(fl.)	(mst)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-3 (cont)										
11/19/034	199.10	194.86	4.24	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50
02/16/044	199.10	195.32	3.78	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50
06/03/044	199.10	193.74	5.36	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50
08/20/044	199.10	194.75	4.35	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50
11/15/044	199.10	195.21	3.89	<50	<0.5	<0.5	<0.5	<0.5	2	<50
02/14/054	199.10	195.18	3.92	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50
05/16/054	199.10	195.34	3.76	<50	<0.5	<0.5	<0.5	<0.5	0.6	
08/31/054	199.10	194.89	4.21	54	7	7	<0.5	12	<0.5	
11/30/054	199.10	195.31	3.79	<50	<0.5	<0.5	<0.5	1	<0.5	
02/17/064	199.10	195.04	4.06	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/19/064	199.10	194.49	4.61	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/25/064	199.10	194.94	4.16	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/22/064	199.10	195.45	3.65	<50	<0.5	<0.5	<0.5	1	<0.5	
02/01/074	199.10	194.90	4.20	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
04/30/07 <sup>4</sup>	199.10	195.12	3.98	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/31/074	199.10	195.07	4.03	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
10/27/074	199.10	194.66	4.44	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/08/084	199.10	195.05	4.05	<50	<0.5	<0.5	<0.5	<0.5	1	
05/02/084	199.10	194.97	4.13	<50	<0.5	<0.5	<0.5	<0.5	2	
07/31/084	199.10	194.62	4.48	<50	<0.5	<0.5	<0.5	<0.5	0.6	
11/13/084	199.10	194.42	4.68	<50	<0.5	<0.5	<0.5	<0.5	1	-
TRIP BLANK 11/01/96				-50						
				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/06/97				<50	<0.5	<0.5	<0.5	<0.5	<2.5	-
04/14/97				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
07/17/97				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/29/97	0.00			<50	<0.5	<0.5	<0.5	<0.5	<2.5	
02/04/98				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
04/03/98				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
07/29/98				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/26/98				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/18/99				<50	<0.5	<0.5	<0.5	<0.5	<2.0	

## Table 1 Groundwater Monitoring Data and Analytical Results Chevron Service Station #9-8341

3530 MacArthur Boulevard Oakland, California

					Oakland, Califo	rnia				
WELL ID/	тос	GWE	DTW	TPH-G	В	Т	E	x	MTBE	ETHANOL
DATE	(ft.)	(msl)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
TRIP BLANK (	(cont)									
04/15/99	14 <b>-12</b> -15		'	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1 <b></b> //
07/22/99	1 <b></b> (			<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/13/99				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/21/00				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
04/10/00				<50	<0.50	< 0.50	< 0.50	<0.50	<2.5	
07/12/00			122	<50.0	<0.500	<0.500	< 0.500	<0.500	<2.50	
10/05/00				<50.0	<0.500	<0.500	< 0.500	< 0.500	<2.50	
01/05/01				<50	<0.50	<0.50	<0.50	< 0.50	<2.5	
QA									210	
04/05/01				<50	<0.50	<0.50	<0.50	<0.50	<2.5	
08/20/01			122	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
11/26/01	-			<50	<0.50	<0.50	<0.50	<1.5	<2.5	_
02/14/02	·			<50	<0.50	<0.50	<0.50	<1.5	<2.5	
05/07/02	5 <u>-192</u>		200	<50	<0.50	<0.50	<0.50	<1.5	<2.5	
08/02/02				<50	<0.50	<0.50	<0.50	<1.5	<2.5	
11/11/02				<50	<0.50	<0.50	<0.50	<1.5	<2.5	
02/03/03	2.00			<50	< 0.50	<0.50	<0.50	<1.5	<2.5	
05/05/03				<50	<0.5	<0.5	<0.5	<1.5	<2.5	
08/04/03 <sup>4</sup>		55.	1	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/19/034				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/16/044				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
06/03/04 <sup>4</sup>				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/20/04 <sup>4</sup>				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/15/044	-			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/14/05 <sup>4</sup>				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/16/05 <sup>4</sup>				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/31/05 <sup>4</sup>				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/30/054		<u>200</u> 3		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<u></u>
02/17/064	-			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/19/064				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/25/064				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/22/064				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/01/074				<50	<0.5	<0.5	<0.5	<0.5	<0.5	22
04/30/07 <sup>4</sup>				<50	<0.5	<0.5	<0.5	<0.5	<0.5	

## Table 1 Groundwater Monitoring Data and Analytical Results Chevron Service Station #9-8341

3530 MacArthur Boulevard

#### Oakland, California

WELL ID/	TOC	GWE	DTW	TPH-G	B	Т	E	x	MTBE	ETHANOL
DATE	(ft.)	(msł)	(ft.)	(µg/L)	(µg/L)					(µg/L)
QA (cont)										
07/31/074				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
10/27/074				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/08/084				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/02/084				<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/31/084				<50	< 0.5	<0.5	<0.5	<0.5	<0.5	
11/13/084				<50	<0.5	<0.5	<0.5	<0.5	<0.5	

#### **EXPLANATIONS:**

Groundwater monitoring data and analytical results prior to April 10, 2000, were compiled from reports prepared by Blaine Tech Services, Inc.

TOC = Top of Casing	TPH-G = Total Petroleum Hydrocarbons as Gasoline	MTBE = Methyl tertiary butyl ether
(ft.) = Feet	$\mathbf{B} = \mathbf{B}\mathbf{e}\mathbf{n}\mathbf{z}\mathbf{e}\mathbf{n}\mathbf{e}$	ND = Not Detected
GWE = Groundwater Elevation	T = Toluene	= Not Measured/Not Analyzed
(msl) = Mean sea level	$\mathbf{E} = \mathbf{E}$ thylbenzene	$(\mu g/L) = Micrograms per liter$
DTW = Depth to Water	X = Xylenes	QA = Quality Assurance/Trip Blank

Ethanol by EPA Method 8260.

<sup>1</sup> Confirmation run.

<sup>2</sup> Chromatogram report indicates an unidentified hydrocarbon and gas.

<sup>3</sup> Chromatogram report indicates an unidentified hydrocarbon.

<sup>4</sup> BTEX and MTBE by EPA Method 8260.

#### STANDARD OPERATING PROCEDURE -GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by IWM to Chemical Waste Management located in Kettleman Hills, California.



#### WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Chevron #	9-8341		Job Numl	ber: <b>3</b>	86346			
Site Address:	3530 Maca	rthur Bivd.		Event Da	te:	11-1	3.08		(inclusive)
City:	Oakland, C	A		Sampler:		F			
Well ID	MW-			Date Monito	red:	11-	13.08		
Well Diameter	2	in.	Vo	ume 3/4	= 0.02	1"= 0.04	2"= 0.17	3"= 0.38	1
Total Depth	27.26	ft.			= 0.66	5"= 1.02	6"= 1.50	12"= 5.80	
Depth to Water	4.82		eck if water colu		0.50 ft.				1
Depth to Water w Purge Equipment: Disposable Bailer Stainless Steel Bailer Stack Pump Suction Pump Grundfos Peristaltic Pump QED Bladder Pump Other:		ge [(Height of Wa Sau Dis Pre Dis Per QE	= 3.81 ater Column x 0.20 mpling Equipmen posable Bailer posable Bailer crete Bailer istaltic Pump D Bladder Pump er:	0) + DTW]: <u>9:3</u>		Time Sta Time Co Depth to Depth to Hydrocai Visual Co Skimmer Amt Ren Amt Ren Water Re	arted: mpleted: Product: Water: rbon Thickne onfirmation/D	ss: escription: Sock (circle kimmer: Vell:	gal
Start Time (purge			Weather C				NAY		
Sample Time/Da				or: <u>LT. Bu</u>	<u>v.</u> 0	dor: Y / (	<u>`</u>		
Approx. Flow Rat Did well de-water		gpm.		Description:			Oner		
	· <u>ps</u>	n yes, rime.	Vo	iume:	gai.	. DIV @	i Sampling	<u> </u>	27
Time (2400 hr.)	Volume (gal.)	рН	Conductivity (µmhos/cm - µS)	Temperatur (CC)/ F		D.O. (mg/L)		ORP mV)	
1017	35	7.22	550	212					
1020	7.0	7.19	557	20.9					
1024	11-0		562	_204	<u> </u>				
				·					

	LABORATORY INFORMATION							
SAMPLE ID	(#) CONTAINI	ER REFRIG.	FRIG. PRESERV. TYPE LABORATORY		ANALYSES			
MW-	L x voa	a vial YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)			
	-							
				<u>-</u>				
		:						

#### COMMENTS:

Add/Replaced Lock: \_\_\_\_\_

Add/Replaced	Plug:	
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Add/Replaced Bolt: \_\_\_\_\_



#### WELL MONITORING/SAMPLING **FIELD DATA SHEET**

Client/Facility#:	Chevron #9-8341	Job Number:	386346			
Site Address:	3530 Macarthur Blvd.	Event Date:	11-13-08	— (inclusive)		
City:	Oakland, CA	Sampler:	FT			
Well ID	MW-2_	Date Monitored:	11.13.08			
Well Diameter Total Depth	$\frac{2}{32.78}$ ft.	Volume 3/4"≃ 0.02 Factor (VF) 4"= 0.66		-		
Depth to Water		column is less then 0.50				
Depth to Water v	29.00 xVF : 7 = 4.0		Estimated Purge Volume: 15.0	gal.		
Purge Equipment: Disposable Bailer Stainless Steel Bailer Stack Pump Suction Pump Grundfos Peristaltic Pump QED Bladder Pump Other:	Sampling Equip	mp	Time Started: Time Completed: Depth to Product: Depth to Water: Hydrocarbon Thickness: Visual Confirmation/Descriptio Skimmer / Absorbant Sock (cir Amt Removed from Skimmer: Amt Removed from Well: Water Removed: Product Transferred to:	ft ft ft cle one) gal gal		
Start Time (purge):       1114       Weather Conditions:       Superior         Sample Time/Date:       1136 / 11.13.08       Water Color:       LT. Bun.       Odor:       Y / N         Approx. Flow Rate:       20.0       gpm.       Sediment Description:       S. S. LT.         Did well de-water?       No.       If yes, Time:       Volume:       gal.       DTW @ Sampling:       9-52-						
Time (2400 hr.) 1119 1122 1123	Volume (gal.)       pH       Conductivity $5.0$ $7:2_1$ $606$ $10.0$ $7.18$ $615$ $15.9$ $7-15$ $621$		D.O. ORP (mg/L) (mV)	-		

LABORATORY INFORMATION							
SAMPLE ID (#) CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES							
MW-	2		x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)
14							

#### COMMENTS:

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Add/Replaced Bolt: \_\_\_\_\_



#### WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Chevron #9-8341	Job Number:	386346	
Site Address:	3530 Macarthur Blvd.	Event Date:	11.13.08	- (inclusive)
City:	Oakland, CA	Sampler:	FT	- ` ´
Well ID Well Diameter Total Depth Depth to Water Depth to Water w Purge Equipment: Disposable Bailer Stainless Steel Bailer Stack Pump Suction Pump Grundfos Peristaltic Pump QED Bladder Pump Other:	Z7.67       xVF       If       =       4.7         v/ 80% Recharge [(Height of Water Column x         Sampling Equip         Disposable Baile	0.20) + DTW]: 10.21	5"= 1.02 6"= 1.50 12"= 5.80	gal. (2400 hrs) (2400 hrs) ft ft ft ft ft ft ft ft
Start Time (purge Sample Time/Da Approx. Flow Rat Did well de-water Time (2400 hr.)	te: $105 / 11 \cdot 13 \cdot 08$ Water wei $= 1.5$ gpm. Sedime $? If yes, Time: Volume (gal.) pH Conductivit (\mu mhos/cm - 1)4.5 - 7.16 - 5139.0 - 7.16 - 520$	$\frac{1}{\mu S}  (C)  F  )$	<u>Sنربابد</u> Odor: Y / () al. DTW @ Sampling: D.O. ORP (mg/L) (mV)	21
1048	<u>14.0</u> 7.14 <u>526</u>	28.9		

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 3	💪 x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)

#### COMMENTS:

Add/Replaced Lock: \_\_\_\_\_

Add/Replaced Bolt: \_\_\_\_\_

Chev	ron Califo	ornia Re	gion /	Analysis	Request/C	Chain of Custod
Lancaster Laboratories 11130	8-\$7	Aoct. #:	12099			onty 2/Group #:008886
		oject# 61H-1	650	Analyses	Requested	1120125
Facility #:	CA	Matrix	HTH-		tion Codes	Preservative Codes $H = HCI$ $T = Thiosulfate$ $N = HNO_3$ $B = NaOH$
Chevron PM:G-R, Inc., 0747 Sierra Coult, Suite Consultant/Office:Deanna L, Harding (deanna@g	CRAKJ J. Dublin, CA 94568	Potable		Silica Gel Cleanup		$S = H_2SO_4$ $O = Other$ J value reporting needed
Consultant Phone #: Fax #:	25-551-7899		er of Containers E280 255 8021 [] GRO		Westrood	Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation
Sampler: FRINK TERMNONI		<u>Air</u>	Numb MTBE 15 MOD			Confirm highest hit by 8260
Sample Identification Date Collected	Time a E Collected 0 0	Soll Wate	Total BTEX + TPH 80	TPH 8015 MO 8260 full scan Oxygen Totai Lead	paeri pewossi0	Run oxy's on highest hit     Run oxy's on all hits
QA 11130	+		ZXX		·	Comments / Remarks
	1145			÷		- ,
MW-3 🖌	1105 X	4 4	٤XX			
			┽┨╌┠╌┨	╶┼╌┼╶┼	╾ <del>┥┡╸╎╶╎</del> ╴	-
Turnaround Time Requested (TAT) (please circle)           STD. TAT         72 hour         48 hour	Refinquished by	là			Received by	
24 hour 4 day 5 day	Refinquished by	lazer _	131	Dete Time		Date Time
Data Package Options (please circle if required)         QC Summary       Type I - Full         Type VI (Raw Data)       Coelt Deliverable not neede EDF/E	Relinquished by	r. V Commercial Carri	ler:	Date Time	Received by:	Date Time
WIP (RWQCB) Disk		Fedex Ot	ther	C°	pityon	And 1111157 0800

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Lancaster Laboratories, Inc., 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 (717) 656-2300 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

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4804.01 (north) Rev. 10/12/06



**Analysis Report** 

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#### ANALYTICAL RESULTS

Prepared for:

Chevron c/o CRA Suite 110 2000 Opportunity Drive Roseville CA 95678



NOV 2 6 2008

916-677-3407

GETTLER-RYAN INC. GENERAL CONTRACTORS

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

#### SAMPLE GROUP

The sample group for this submittal is 1120125. Samples arrived at the laboratory on Friday, November 14, 2008. The PO# for this group is 98341 and the release number is MTI.

Client Description QA-T-081113 NA Water MW-1-W-081113 Grab Water MW-2-W-081113 Grab Water MW-3-W-081113 Grab Water

ELECTRONIC Gettler-Ryan, Inc. COPY TO Lancaster Labs Number 5528858 5528859 5528860 5528861

Attn: Cheryl Hansen





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Questions? Contact your Client Services Representative Jill M Parker at (717) 656-2300

Respectfully Submitted,

Dorothy M. Love

Dorothy M. Love Group Leader





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Lancaster Laboratories Sample No.	WW5528858 Group No. 1120125
<b>QA-T-081113 NA Water Facility# 98341 Job# 386346 MTI# 3530 MacArthur-Oakland T0600101790</b> Collected:11/13/2008	
Submitted: 11/14/2008 08:55 Reported: 11/26/2008 at 11:04 Discard: 12/27/2008	Chevron c/o CRA Suite 110 2000 Opportunity Drive Roseville CA 95678

8341Q

				As Received		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle						
CAT		Analysis				Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
01728	TPH-GRO - Waters	SW-846 8015B modified	1 1	11/20/2008 19:54	Kathie J Bowman	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/22/2008 17:30	Kelly E Brickley	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/20/2008 19:54	Kathie J Bowman	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2008 17:30	Kelly E Brickley	1





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#### Lancaster Laboratories Sample No. WW5528859 Group No. 1120125 MW-1-W-081113 Grab Water Facility# 98341 Job# 386346 MTI# 61H-1650 GRD 3530 MacArthur-Oakland T0600101790 MW-1 Collected:11/13/2008 11:45 by FT

Submitted: 11/14/2008 08:55 Reported: 11/26/2008 at 11:04 Discard: 12/27/2008

83411

Account Number: 12099 Chevron c/o CRA

Suite 110 2000 Opportunity Drive Roseville CA 95678

				As Received		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

#### Laboratory Chronicle CAT Analysis Dilution No. Analysis Name Method Trial# Date and Time Analyst Factor 01728 TPH-GRO - Waters SW-846 8015B modified 1 11/20/2008 20:18 Kathie J Bowman 1 06054 BTEX+MTBE by 8260B SW-846 8260B 1 11/22/2008 17:51 Kelly E Brickley 1 01146 GC VOA Water Prep SW-846 5030B 1 11/20/2008 20:18 Kathie J Bowman 1 01163 GC/MS VOA Water Prep SW-846 5030B 1 11/22/2008 17:51 Kelly E Brickley 1





Roseville CA 95678

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Lancaster Laboratories Sample No. WW5528860	Group No. 1120125
MW-2-W-081113 Grab Water Facility# 98341 Job# 386346 MTI# 61H-1650 GR 3530 MacArthur-Oakland T0600101790 MW-2 Collected:11/13/2008 11:36 by FT	D Account Number: 12099
Submitted: 11/14/2008 08:55 Reported: 11/26/2008 at 11:04 Discard: 12/27/2008	Chevron c/o CRA Suite 110 2000 Opportunity Drive

83412

<b>CAT</b> No. 01728	<b>Analysis Name</b> TPH-GRO N. CA water C6-C12	CAS Number n.a.	As Received Result N.D.	As Received Method Detection Limit 50	<b>Units</b> ug/l	Dilution Factor
06054	BTEX+MTBE by 8260B				-3, -	-
02010	Methyl Tertiary Butyl Ether	1634-04-4	740	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

		Laboratory	· Chro	nicle		
CAT		-		Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
01728	TPH-GRO - Waters	SW-846 8015B modifie	d 1	11/21/2008 02:50	Kathie J Bowman	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/22/2008 18:54	Kelly E Brickley	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/21/2008 02:50	Kathie J Bowman	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2008 18:54	Kelly E Brickley	1



### **Analysis Report**

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#### Lancaster Laboratories Sample No. WW5528861

Group No. 1120125

Account Number: 12099

MW-3-W-081113 Grab Water Facility# 98341 Job# 386346 MTI# 61H-1650 GRD 3530 MacArthur-Oakland T0600101790 MW-3 Collected:11/13/2008 11:05 by FT

Submitted: 11/14/2008 08:55 Reported: 11/26/2008 at 11:04 Discard: 12/27/2008 Chevron c/o CRA Suite 110 2000 Opportunity Drive Roseville CA 95678

83413

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	1	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

		Laboratory	Chro	nicle		
CAT		-		Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
01728	TPH-GRO - Waters	SW-846 8015B modified	1	11/24/2008 23:43	Linda C Pape	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/22/2008 19:16	Kelly E Brickley	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/24/2008 23:43	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2008 19:16	Kelly E Brickley	1





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#### Quality Control Summary

Client Name: Chevron c/o CRA Reported: 11/26/08 at 11:04 AM Group Number: 1120125

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

#### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD Limits	RPD	<u>RPD Max</u>
Batch number: 08324A07A TPH-GRO N. CA water C6-C12	Sample n N.D.	umber(s): 50.	5528858-55 ug/l	28860 100	109	75-135	9	30
Batch number: 08326F20A TPH-GRO N. CA water C6-C12	Sample n N.D.	umber(s): 50.	5528861 ug/l	100	100	75-135	0	30
Batch number: F083274AA Methyl Tertiary Butyl Ether Benzene Toluene Ethylbenzene Xylene (Total)	Sample n N.D. N.D. N.D. N.D. N.D. N.D.	umber(s): 0.5 0.5 0.5 0.5 0.5	5528858-55 ug/l ug/l ug/l ug/l ug/l ug/l	28861 95 99 101 100 102		73-119 78-119 85-115 82-119 83-113		

#### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	MS <u>%RBC</u>	MSD <u>%REC</u>	MS/MSD Limits	<u>RPD</u>	RPD <u>MAX</u>	BKG Conc	DUP Conc	DUP RPD	Dup RPD <u>Max</u>
Batch number: 08324A07A TPH-GRO N. CA water C6-C12	Sample 136	number(s)	: 5528858 63-154	-55288	60 UNSP	K: 5528859			
Batch number: 08326F20A TPH-GRO N. CA water C6-C12	Sample 109	number(s)	: 5528861 63-154	UNSPK	: P5306	11			
Batch number: F083274AA	Sample	number(s)	: 5528858	-552886	51 UNSP	K: 5528859			
Methyl Tertiary Butyl Ether	100	94	69-127	6	30				
Benzene	108	101	83-128	7	30				
Toluene	109	101	83-127	7	30				
Ethylbenzene	110	101	82-129	8	30				
Xylene (Total)	111	103	82-130	7	30				

#### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TPH-GRO N. CA water C6-C12 Batch number: 08324A07A Trifluorotoluene-F

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.



### **Analysis Report**

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#### Quality Control Summary

Client Name: Chevron c/o CRA Reported: 11/26/08 at 11:04 AM

Group Number: 1120125

Surrogate Quality Control

5528858 5528859 5528860 5528861 Blank LCS MS MSD	93 92 91 92 93 93 94 93	94 92 91 90 93 93 92	96 94 94 94 96 95 95	96 97 95 93 99 98 98
5528859 5528860 5528861 Blank LCS MS	93 92 91 92 93 94	92 91 90 93 93	94 94 94 96 95	97 95 93 99
5528859 5528860 5528861 Blank LCS	93 92 91 92 93	92 91 90 93	94 94 94	97 95 93
5528859 5528860 5528861 Blank	93 92 91 92	92 91 90	94 94	97 95
5528859 5528860 5528861	93 92 91	92 91	94	97
5528859 5528860	93 92	92		
5528859	93	94	96	96
	92	93	96	97
Analysis N Batch numb	ame: BTEX+MTBE by 8260B er: F083274AA Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzen
Limits:	63-135			
MS	109			
LCSD	108			
LCS	109			
Blank	83			
5528861	84	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	
	Trifluorotoluene-F			
Analysis M Batch numb	Jame: TPH-GRO N. CA water ber: 08326F20A	C6-C12		
Limits:	63-135			
MS	126			
LCSD	125			
LCS	122			
Blank	112			
	109			
5528859 5528860	112			

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

#### Lancaster Laboratories Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.none detectedTNTCToo Numerous To CountIUInternational Unitsumhos/cmmicromhos/cmCdegrees CelsiusCal(diet) caloriesmeqmilliequivalentsggram(s)ugmicrogram(s)mImilliliter(s)m3cubic meter(s)	BMQL MPN CP Units NTU F Ib. kg mg I ul fib >5 um/ml	Below Minimum Quantitation Level Most Probable Number cobalt-chloroplatinate units nephelometric turbidity units degrees Fahrenheit pound(s) kilogram(s) milligram(s) liter(s) microliter(s) fibers greater than 5 microns in length per ml
---	---	---

< less than – The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

**Dry weight** basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

#### **Organic Qualifiers**

- A TIC is a possible aldol-condensation product
- B Analyte was also detected in the blank
- C Pesticide result confirmed by GC/MS
- D Compound quatitated on a diluted sample
- E Concentration exceeds the calibration range of the instrument
- J Estimated value
- **N** Presumptive evidence of a compound (TICs only)
- P Concentration difference between primary and confirmation columns >25%
- U Compound was not detected
- X,Y,Z Defined in case narrative

#### **Inorganic Qualifiers**

- B Value is <CRDL, but ≥IDL
- E Estimated due to interference
- M Duplicate injection precision not met
- N Spike amount not within control limits
- S Method of standard additions (MSA) used for calculation
- U Compound was not detected
- W Post digestion spike out of control limits
- \* Duplicate analysis not within control limits
- + Correlation coefficient for MSA < 0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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