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1:09 pm, Oct 12, 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

October 5, 2009  
(date)

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

Re: Chevron Facility # 9-1740

Address: 6550 Moraga Avenue, Oakland, California

I have reviewed the attached report titled Second Semi-Annual 2009 Groundwater Monitoring Report and dated October 5, 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,

Stacie H. Frerichs  
Project Manager

Enclosure: Report



**CONESTOGA-ROVERS  
& ASSOCIATES**

10969 Trade Center Drive, Suite 106, Rancho Cordova, CA 95670  
Telephone: 916-889-8900 Facsimile: 916-889-8999  
www.CRAworld.com

October 5, 2009

Reference No. 611978

Mr. Mark Detterman PG, CEG  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Re: Second Semi-Annual 2009 Groundwater Monitoring Report  
Chevron Service Station No. 9-1740  
6550 Moraga Avenue  
Oakland, California  
LOP Case #RO0000256

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Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA) is submitting the attached *Groundwater Monitoring and Sampling Report* (report) on behalf of Chevron Environmental Management Company (Chevron) for the site referenced above. The report (prepared by Gettler-Ryan Inc. and dated September 21, 2009) presents the results of the second semi-annual 2009 monitoring event (Attachment A). Sampling of wells C-2 and C-4 is performed on a semi-annual basis during the first and third quarters; sampling of well C-3 is performed annually during the first quarter. Also attached are Figure 1 (Vicinity Map) showing the site location, and Figure 2 (Concentration Map) presenting the second semi-annual 2009 analytical results along with a rose diagram. The monitoring results during 2009 are summarized below.

During 2009, petroleum hydrocarbon concentrations in the site wells generally were similar to or less than those observed during 2008. Elevated concentrations of total petroleum hydrocarbons as diesel (TPHd) (1,800 micrograms per liter [ $\mu\text{g/L}$ ] and 2,000  $\mu\text{g/L}$ ), TPH as gasoline (TPHg) (1,700  $\mu\text{g/L}$  and 2,700  $\mu\text{g/L}$ ), benzene (360  $\mu\text{g/L}$  and 440  $\mu\text{g/L}$ ), and methyl tertiary butyl ether (MTBE) (900  $\mu\text{g/L}$  and 930  $\mu\text{g/L}$ ) were detected in well C-4 during 2009. The detected concentrations are consistent with historical fluctuations. The TPHd concentrations in well C-4 during 2009 were significantly less than those during 2008. The MTBE concentrations in well C-4 have remained relatively stable over the past several years. Low concentrations of toluene (up to 11  $\mu\text{g/L}$ ), ethylbenzene (up to 3  $\mu\text{g/L}$ ), and xylenes (up to 3  $\mu\text{g/L}$ ) were also detected in well C-4 during 2009. TPHd was not detected in well C-2 during 2009; TPHg (89  $\mu\text{g/L}$ ) was only detected during the current event. Benzene, toluene, ethylbenzene, and xylenes (BTEX) were not detected in well C-2 during 2009, and have not been detected in this well since 1999. MTBE (54  $\mu\text{g/L}$  and 240  $\mu\text{g/L}$ ) was detected in well C-2 during 2009. Although fluctuations occur, concentrations in well C-2 generally continue to decrease. Only low concentrations of TPHd (55  $\mu\text{g/L}$ ) and MTBE (3  $\mu\text{g/L}$ ) were detected in well C-3 during 2009. Petroleum hydrocarbons generally have not been detected in this well throughout the course of monitoring with the exception of low concentrations of MTBE.

Equal  
Employment  
Opportunity Employer



October 5, 2009

Reference No. 611978

- 2 -

Based on the analytical results, impacted groundwater remains beneath the site, with the most significant concentrations in the area of well C-4 just downgradient of the underground storage tanks (USTs). Based on previous investigation results, the extent of impacted groundwater appears to have been adequately defined to the extent possible. CRA prepared and submitted to Alameda County Environmental Health (ACEH) a *Site Conceptual Model and Case Closure Request*, dated August 18, 2008, that concluded the residual impacted groundwater at the site did not pose a significant risk to potential onsite or offsite receptors, and the site appeared to meet the Regional Water Quality Control Board (RWQCB) criteria for closure as a low-risk groundwater case. CRA is currently awaiting a response from ACEH to the case closure request. In the meantime, monitoring and sampling will continue to further evaluate groundwater quality and concentration trends. However, in accordance with e-mails from ACEH dated September 11, 2009 (Attachment B), the monitoring and sampling frequency of wells C-2 and C-4 will be reduced to annual during the first quarter. Also, ethanol has been removed from the analytical suite for all the wells.

Please contact Mr. James Kiernan at (916) 889-8917 if you have any questions or require additional information.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Kelly M. Rider

James P. Kiernan, P.E. #C68498

KR/jt/3  
Encl.

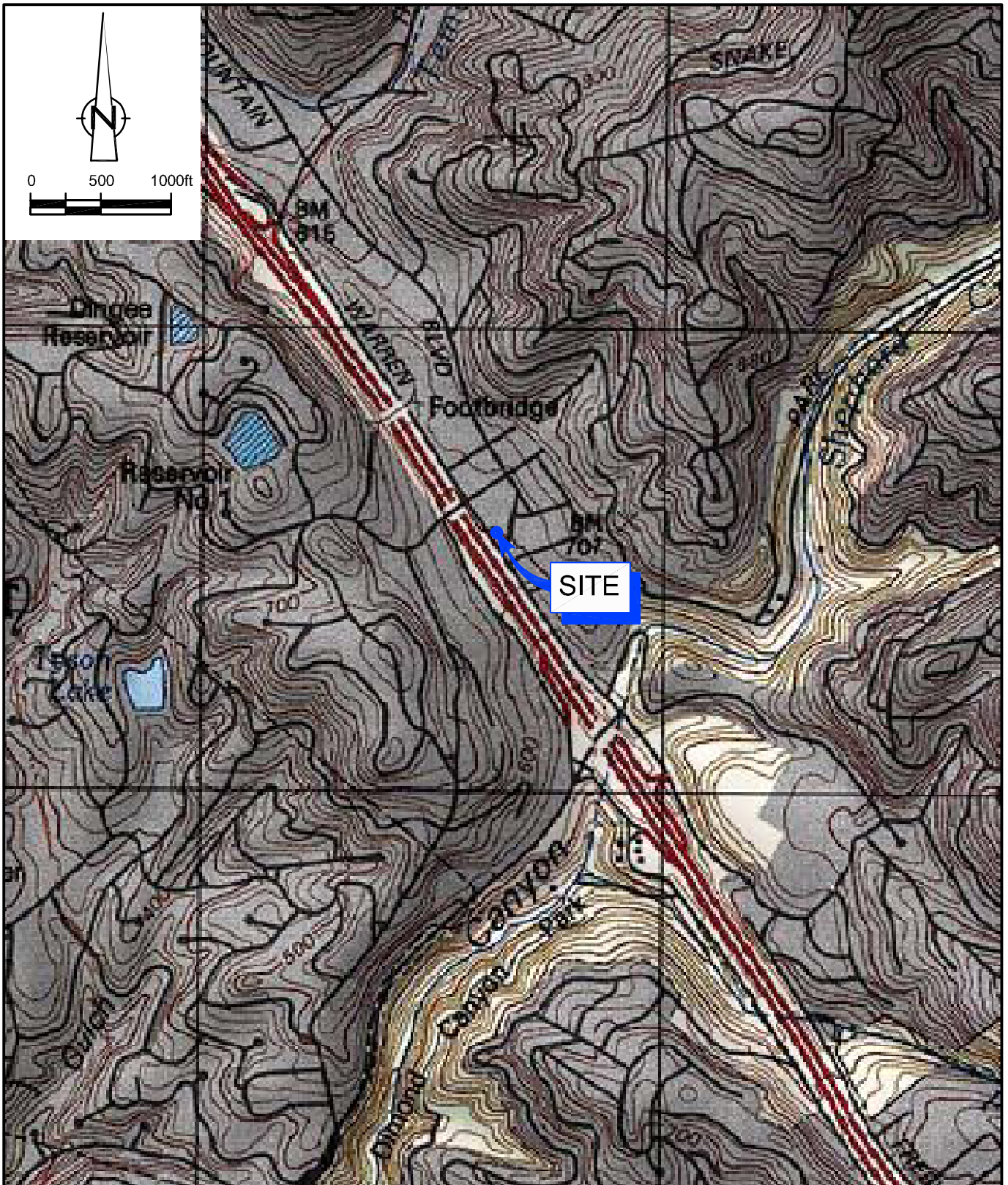


Figure 1 Vicinity Map  
Figure 2 Concentration Map - August 31, 2009

Attachment A Second Semi-Annual 2009 Groundwater Monitoring and Sampling Report  
Attachment B ACEH E-mails Dated September 11, 2009

cc: Ms. Stacie Frerichs, Chevron Environmental Management Company  
Mr. Douglas Durein, Ken Betts, Inc.

## FIGURES

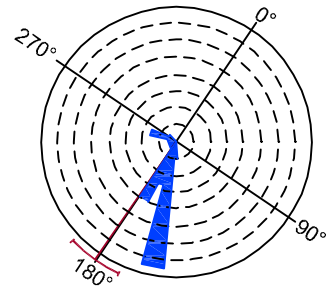


SOURCE: TOPOIMAP

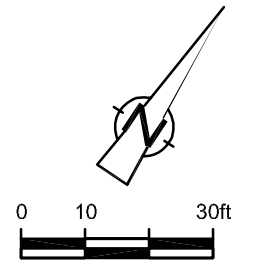
figure 1

VICINITY MAP  
 CHEVRON SERVICE STATION 9-1740  
 6550 MORAGA AVENUE  
 Oakland, California

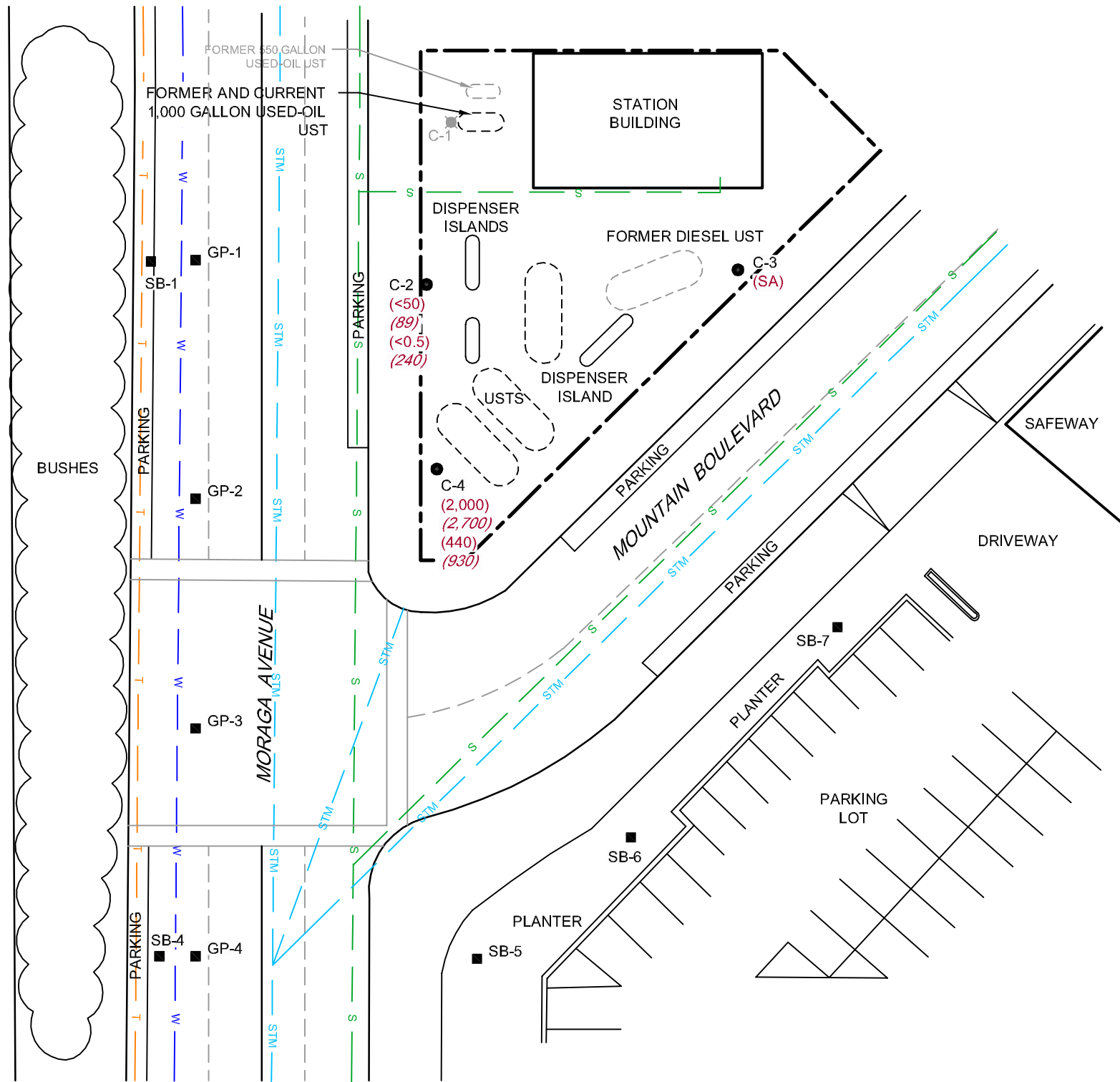




HISTORICAL GROUNDWATER FLOW DIRECTION



WARREN FREEWAY (STATE ROUTE 13)



**LEGEND**

- GP-1 ■ SOIL BORING LOCATION
- C-2 ● MONITORING WELL LOCATION
- C-1 ■ DESTROYED MONITORING WELL LOCATION

- SEWER LINE
- STORM DRAIN
- WATER LINE
- SBC LINE

- (59) TPHd CONCENTRATION (ug/L)
- (57) TPHg CONCENTRATION (ug/L)
- (<0.5) BENZENE CONCENTRATION (ug/L)
- (150) MTBE CONCENTRATION (ug/L)

figure 2

CONCENTRATION MAP - AUGUST 31, 2009  
 CHEVRON SERVICE STATION 9-1740  
 6550 MORAGA AVENUE  
 Oakland, California



\* FEATURES OUTSIDE OF SERVICE STATION NOT SURVEYED

ATTACHMENT A

SECOND SEMI-ANNUAL 2009 GROUNDWATER MONITORING AND SAMPLING REPORT



# GETTLER-RYAN Inc.



## TRANSMITTAL

September 28, 2009

G-R #386507

TO: Mr. James Kiernan  
Conestoga-Rovers & Associates  
10969 Trade Center Drive, Suite 107  
Rancho Cordova, CA 95670

FROM: Deanna L. Harding  
Project Coordinator  
Gettler-Ryan Inc.  
6747 Sierra Court, Suite J  
Dublin, California 94568

RE: **Chevron Service Station  
#9-1740 (MTI)  
6550 Moraga Avenue  
Oakland, California  
RO 0000256**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
2	September 21, 2009	Groundwater Monitoring and Sampling Report Second Semi-Annual Event of August 31, 2009

### COMMENTS:

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

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

Please provide any comments/changes and propose any groundwater monitoring modifications for the next event prior to **October 12, 2009**, at which time this final report will be distributed to the following:

cc: Mr. Eddie So, RWQCB-San Francisco Bay Region, 1515 Clay St., Suite 1400, Oakland, CA 94612  
(No Hard Copy)  
Mr. Mark Detterman, 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/9-1740-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

September 28, 2009  
(date)

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

Re: Chevron Facility #9-1740

Address: 6550 Moraga Ave., Oakland, California

I have reviewed the attached routine groundwater monitoring report dated September 28, 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 Gettler-Ryan, Inc., 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,

A handwritten signature in black ink that reads "Stacie H. Frerichs".

Stacie H. Frerichs  
Project Manager

Enclosure: Report

## WELL CONDITION STATUS SHEET

Client/Facility #: Chevron #9-1740  
 Site Address: 6550 Moraga Avenue  
 City: Oakland, CA

Job # 386507  
 Event Date: 8-31-09  
 Sampler: Jrc

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	Grout Seal (Deficient) inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y/N	REPLACE CAP Y/N	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Yes / No
C-2	o.k						→	N	N	12" PEMCO/2	No
C-3	o.k						→	↓	↓	12" PEMCO/2	↓
C-4	o.k						→	↓	↓	12" POMECO/3	↓

Comments \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



September 21, 2009  
G-R Job #386507

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

**RE: Second Semi-Annual Event of August 31, 2009**  
Groundwater Monitoring & Sampling Report  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

Dear Ms. 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).

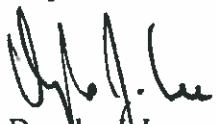
Static groundwater levels were measured and the wells were checked for the presence of separate-phase hydrocarbons. Static water level data, groundwater elevations, and separate-phase hydrocarbon thickness (if any) are presented in the attached Table 1. A Potentiometric Map is included as Figure 1.

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

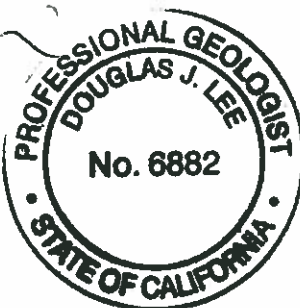
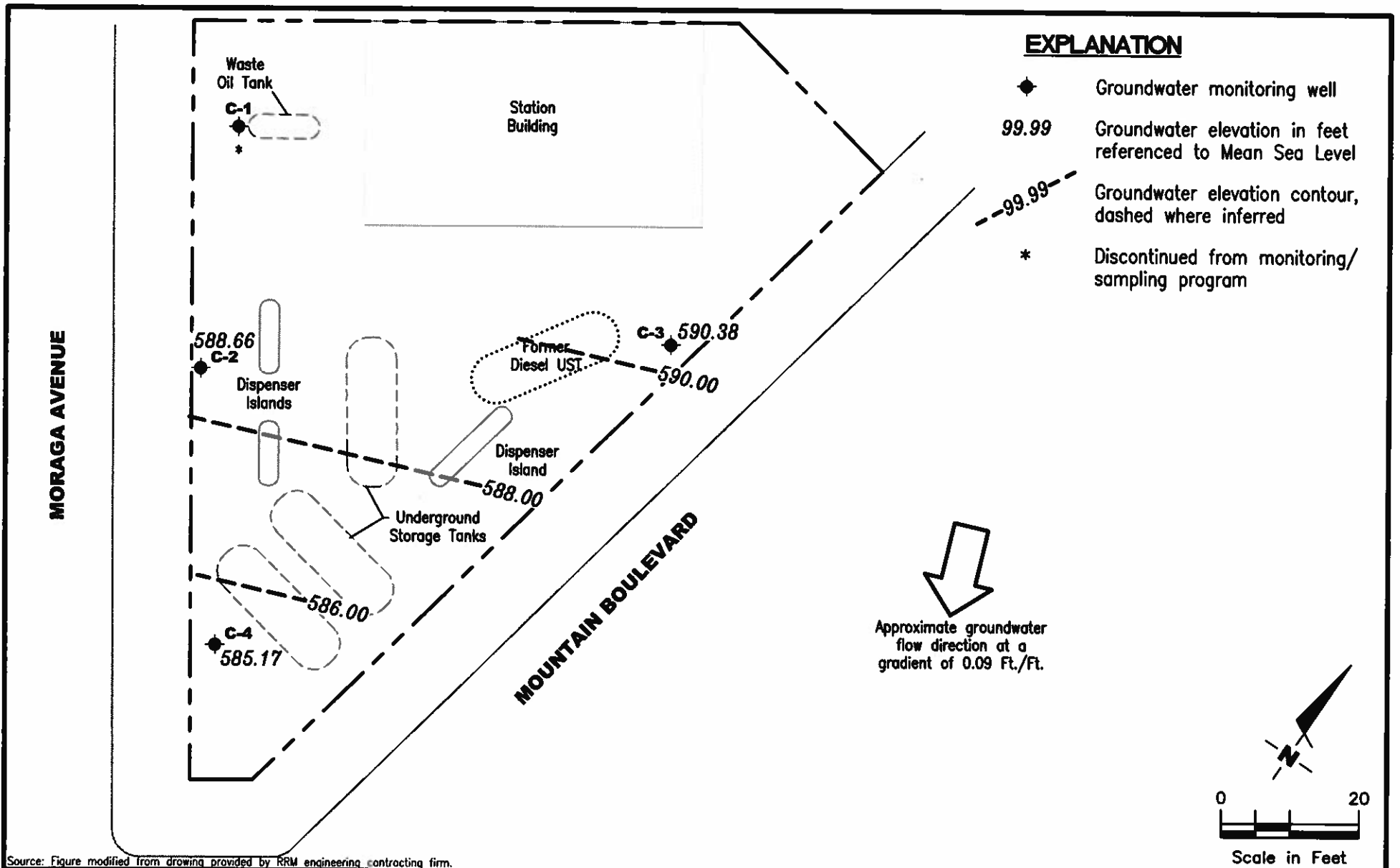


Figure 1: Potentiometric Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Dissolved Oxygen Concentrations  
Table 3: Groundwater Analytical Results - Oxygenate Compounds  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and Laboratory Analytical Reports



**GETTLER - RYAN INC.**  
 6747 Sierra Court, Suite J  
 Dublin, CA 94568 (925) 551-7555

**POTENTIOMETRIC MAP**  
 Chevron Service Station #9-1740  
 6550 Moraga Avenue  
 Oakland, California

FIGURE

1

PROJECT NUMBER  
 386507

REVIEWED BY

DATE  
 August 31, 2009

REVISED DATE

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	TOC* (%)	GWE (msl)	DTW (ft)	SPHT (ft)	TPH-DRG (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>C-2</b>											
03/25/91	594.57	571.68	22.89	--	--	<50	1.0	<0.5	<0.5	2.0	--
07/01/91	594.57	587.20	7.37	--	--	660	190	2.5	28	22	--
09/25/91	594.57	587.59	6.98	--	--	110	200	1.9	21	1.7	--
12/23/91	594.57	589.56	5.01	--	--	<50	1.2	1.2	<0.5	1.8	--
03/24/92	594.57	577.30	17.27	--	--	100	5.9	7.9	4.0	14	--
06/23/92	594.57	590.75	3.82	--	--	190	45	4.5	9.5	10	--
09/30/92	594.57	580.56	14.01	--	--	240	99	2.3	11	6.1	--
12/16/92	594.57	580.05	14.52	--	--	280	160	6.2	7.4	5.0	--
03/30/93	594.57	583.49	11.08	--	--	110	21	<0.5	0.8	<1.5	--
06/10/93	594.57	583.08	11.49	--	--	180	53	2.6	8.0	5.8	--
09/02/93	594.57	580.49	14.08	--	--	51	18	0.8	4.4	<1.5	--
12/06/93	594.57	579.87	14.70	--	--	<50	20	1.3	2.7	<0.5	--
03/02/94	594.57	579.70	14.87	--	--	<50	9.9	1.6	<0.5	0.8	--
06/03/94	594.57	579.35	15.22	--	--	440	300	2.7	61	2.1	--
09/07/94	594.57	587.27	7.30	--	--	80	30	<0.5	1.6	<0.5	--
12/06/94	594.57	589.29	5.28	--	--	120	51	<0.5	4.7	<0.5	--
03/31/95	594.57	589.13	5.44	--	--	770	250	<5.0	74	<5.0	--
06/15/95	594.57	589.62	4.95	--	--	240	76	<1.0	26	<1.0	--
09/25/95	594.57	587.78	6.79	--	--	<50	1.2	<0.5	<0.5	<0.5	--
12/19/95	594.57	588.94	5.63	--	--	<250	23	<2.5	<2.5	<2.5	860
03/31/97	594.57	589.74	4.83	--	--	<500	48	<5.0	<5.0	<5.0	2,900
06/23/97	594.57	589.98	4.59	--	--	1200	240	<10	<10	<10	4,900
09/02/97	594.57	590.02	4.55	--	--	1400	340	<5.0	54	6.9	2,500
12/15/97	594.57	590.26	4.31	--	--	540	100	<2.5	8.7	<2.5	2,400
03/10/98	594.57	590.00	4.57	--	--	<500	<5.0	<5.0	<5.0	<5.0	3,000
06/16/98	594.57	589.99	4.58	--	--	120	6.6	<1.0	<1.0	<1.0	2,500
08/25/98	594.57	589.67	4.90	--	--	140	<0.5	<0.5	<0.5	<0.5	2,600
12/29/98	594.57	589.77	4.80	--	--	1830	17.7	<10.0	<10.0	14.9	4,600/4,890 <sup>1</sup>
03/09/99	594.57	590.21	4.36	--	--	120	16	<1.0	<1.0	<1.0	3,400
06/23/99 <sup>2</sup>	594.57	589.92	4.65	--	--	--	--	--	--	--	--
09/28/99	594.57	585.99	8.58	--	--	<50	<0.5	<0.5	<0.5	<0.5	1,250
02/29/00	594.57	586.59	7.98	--	--	122	<0.5	<0.5	<0.5	<0.5	249
08/29/00	594.57	587.52	7.05	0.00	--	<50	<0.50	<0.50	<0.50	<0.50	390
03/27/01	594.57	587.73	6.84	0.00	--	<50.0	<0.500	<0.500	<0.500	<0.500	9.72
09/05/01 <sup>4</sup>	594.57	587.37	7.20	0.00	58 <sup>5</sup>	360	<0.50	<0.50	<0.50	<1.5	1,300/1,000 <sup>1</sup>
03/04/02 <sup>4</sup>	594.57	587.59	6.98	0.00	270 <sup>6</sup>	190	<0.50	<0.50	<0.50	<1.5	440

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>C-2 (cont)</b>											
09/03/02 <sup>4</sup>	594.57	587.29	7.28	0.00	760 <sup>6</sup>	120	<0.50	<0.50	<0.50	<1.5	290
03/29/03 <sup>4</sup>	594.57	588.06	6.51	0.00	<50 <sup>6</sup>	53	<0.5	<0.5	<0.5	<1.5	73
09/23/03 <sup>4,7</sup>	594.57	587.71	6.86	0.00	64 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	12
03/17/04 <sup>7,8</sup>	594.57	587.35	7.22	0.00	<50 <sup>6</sup>	82	<0.5	<0.5	<0.5	<0.5	370
09/13/04 <sup>7</sup>	594.57	589.16	5.41	0.00	<50 <sup>6</sup>	67	<0.5	<0.5	<0.5	<0.5	530
03/11/05 <sup>7</sup>	594.57	589.84	4.73	0.00	84 <sup>6</sup>	110	<0.5	<0.5	<0.5	<0.5	580
09/29/05 <sup>7</sup>	594.57	589.01	5.56	0.00	82 <sup>6,9</sup>	61	<0.5	<0.5	<0.5	<0.5	320
03/20/06 <sup>7</sup>	594.57	590.15	4.42	0.00	120 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	500
08/25/06 <sup>7</sup>	594.57	589.06	5.51	0.00	130 <sup>6</sup>	93	<0.5	<0.5	<0.5	<0.5	460
03/12/07 <sup>7</sup>	594.57	589.66	4.91	0.00	-- <sup>10</sup>	<50	<0.5	<0.5	<0.5	<0.5	110
03/21/07	594.57	589.85	4.72	0.00	220 <sup>6</sup>	--	--	--	--	--	--
09/21/07 <sup>7</sup>	594.57	588.93	5.64	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	180
03/10/08 <sup>7</sup>	594.57	589.76	4.81	0.00	<50 <sup>6</sup>	73	<0.5	<0.5	<0.5	<0.5	170
09/15/08 <sup>7</sup>	594.57	588.61	5.96	0.00	59 <sup>6</sup>	57	<0.5	<0.5	<0.5	<0.5	150
03/03/09 <sup>7</sup>	594.57	589.92	4.65	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	54
<b>08/31/09<sup>7</sup></b>	<b>594.57</b>	<b>588.66</b>	<b>5.91</b>	<b>0.00</b>	<b>&lt;50<sup>6</sup></b>	<b>89</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>240</b>
<b>C-3</b>											
03/25/91	597.14	591.98	5.16	--	--	<50	<0.5	<0.5	<0.5	0.5	--
07/01/91	597.14	591.30	5.84	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/25/91	597.14	591.20	5.94	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/23/91	597.14	591.20	5.94	--	--	<50	1.0	<0.5	<0.5	1.5	--
03/24/92	597.14	592.37	4.77	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/23/92	597.14	591.47	5.67	--	--	<50	0.9	1.1	0.5	1.6	--
09/30/92	597.14	590.84	6.30	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/16/92	597.14	591.57	5.57	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/30/93	597.14	592.08	5.06	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
06/10/93	597.14	591.85	5.29	--	--	<50	0.6	1.9	0.6	3.5	--
09/02/93	597.14	591.22	5.92	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
12/06/93	597.14	591.38	5.76	--	--	<50	<0.5	0.6	<0.5	<0.5	--
03/02/94	597.14	591.97	5.17	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/03/94	597.14	591.74	5.40	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/07/94	597.14	591.14	6.00	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/06/94	597.14	591.95	5.19	--	--	<50	<0.5	0.8	<0.5	<0.5	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	TOC* (%)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>C-3 (cont)</b>											
03/31/95	597.14	592.04	5.10	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/15/95	597.14	591.78	5.36	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/25/95	597.14	591.04	6.10	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/19/95	597.14	591.46	5.68	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/31/97	597.14	590.65	6.49	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/23/97	597.14	590.63	6.51	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/02/97	597.14	591.07	6.07	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/15/97	597.14	590.86	6.28	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/10/98	597.14	590.89	6.25	--	--	<50	<0.5	<0.5	<0.5	<0.5	4
06/16/98	597.14	590.80	6.34	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
08/25/98	597.14	590.61	6.53	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/29/98	597.14	590.59	6.55	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0
03/09/99	597.14	591.20	5.94	--	--	<50	<0.5	<0.5	<0.5	<0.5	3
09/28/99	597.14	590.26	6.88	--	SAMPLED ANNUALLY		--	--	--	--	--
02/29/00	597.14	591.56	5.58	--	--	<50	<0.5	<0.5	<0.5	<0.5	10
08/29/00	597.14	590.53	6.61	0.00	--	--	--	--	--	--	--
03/27/01	597.14	591.00	6.14	0.00	--	264	<2.50	<2.50	<2.50	<2.50	870
09/05/01	597.14	590.46	6.68	0.00	--	--	--	--	--	--	--/ <2 <sup>1</sup>
03/04/02	597.14	590.93	6.21	0.00	<50 <sup>6</sup>	<50	<0.50	<0.50	<0.50	<1.5	<5.0
09/03/02	597.14	590.40	6.74	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/29/03	597.14	590.86	6.28	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<1.5	<2.5
09/23/03	597.14	590.51	6.63	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/19/04 <sup>7</sup>	597.14	591.24	5.90	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	2
09/13/04	597.14	591.85	5.29	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/11/05 <sup>7</sup>	597.14	591.53	5.61	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	2
09/29/05	597.14	590.22	6.92	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/20/06 <sup>7</sup>	597.14	591.86	5.28	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	3
08/25/06	597.14	590.51	6.63	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/12/07 <sup>7</sup>	597.14	591.07	6.07	0.00	-- <sup>10</sup>	55	<0.5	<0.5	<0.5	<0.5	2
03/21/07	597.14	590.91	6.23	0.00	240 <sup>6</sup>	--	--	--	--	--	--
09/21/07	597.14	590.29	6.85	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/10/08 <sup>7</sup>	597.14	590.89	6.25	0.00	<50 <sup>6</sup>	87	<0.5	<0.5	<0.5	<0.5	3
09/15/08	597.14	590.15	6.99	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/03/09 <sup>7</sup>	597.14	591.22	5.92	0.00	55 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	3
08/31/09	597.14	590.38	6.76	0.00	SAMPLED ANNUALLY		--	--	--	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
C-4											
03/25/91	593.10	588.65	4.45	--	--	2700	240	16	<0.5	350	--
07/01/91	593.10	587.77	5.33	--	--	7900	1500	230	340	350	--
09/25/91	593.10	587.60	5.50	--	--	3200	850	160	150	220	--
12/23/91	593.10	588.18	4.92	--	--	4100	390	52	42	340	--
03/24/92	593.10	589.06**	4.19	0.19	--	--	--	--	--	--	--
06/23/92	593.10	588.34**	4.91	0.30	--	--	--	--	--	--	--
09/30/92	593.10	584.44	8.66	--	--	450	97	14	12	29	--
12/16/92	593.10	583.30	9.80	--	--	590	130	18	5.6	29	--
03/30/93	593.10	583.25**	10.00	0.12	--	--	--	--	--	--	--
06/10/93	593.10	583.46	9.64	--	--	1300	290	36	17	73	--
09/02/93	593.10	583.02	10.08	--	--	630	97	12	6.6	21	--
12/06/93	593.10	582.85	10.25	--	--	1900	600	68	27	130	--
03/02/94	593.10	584.36	8.74	--	--	2600	1200	110	43	180	--
06/03/94	593.10	583.27	9.83	--	--	780	180	13	8.5	26	--
09/07/94	593.10	582.80	10.30	--	--	<50	14	<0.5	0.7	<0.5	--
12/06/94	593.10	583.90	9.20	--	--	980	270	21	12	38	--
03/31/95	593.10	582.86	10.24	--	--	1500	450	25	11	49	--
06/15/95	593.10	582.78	10.32	--	--	960	250	15	4.5	37	--
09/25/95	593.10	584.72	8.38	--	--	<500	18	<5.0	<5.0	<5.0	--
12/19/95	593.10	582.94	10.16	--	--	<500	32	<5.0	<5.0	<5.0	--
03/31/97	593.10	588.42	4.68	--	--	3400	960	51	64	140	2,400
06/23/97	593.10	588.36	4.74	--	--	1600	580	19	8.2	27	2,300
09/02/97	593.10	588.33	4.77	--	--	6900	1400	59	130	410	3,100
12/15/97	593.10	588.60	4.50	--	--	3300	1200	37	74	130	3,700
03/10/98	593.10	588.92	4.18	--	--	1100	250	19	13	62	4,000
06/16/98	593.10	586.53	6.57	--	--	1200	350	<10	12	39	4,500
08/25/98	593.10	586.30	6.80	--	--	290	24	0.72	0.87	1.9	3,600
12/29/98	593.10	586.80	6.30	--	--	3190	957	<25	<25	<25	8,100/8,500 <sup>1</sup>
03/09/99	593.10	585.87	7.23	--	--	2200	850	15	35	56	5,900
06/23/99 <sup>2</sup>	593.10	585.60	7.50	--	--	--	--	--	--	--	--
09/28/99	593.10	586.15	6.95	--	--	1390	7.85	<5.0	<5.0	<5.0	4,190
02/29/00	593.10	586.09	7.01	--	--	<50	1.35	<0.5	<0.5	<0.5	310
08/29/00	593.10	586.58	6.52	0.00	--	150 <sup>3</sup>	60	<0.50	0.79	0.78	570
03/27/01	593.10	587.29	5.81	0.00	--	986	27.2	<2.50	3.25	4.11	252
09/05/01 <sup>4</sup>	593.10	586.72	6.38	0.00	3,800 <sup>5</sup>	330	140	0.84	<0.50	<1.5	580/520 <sup>1</sup>
03/04/02 <sup>4</sup>	593.10	587.44	5.66	0.00	2,900 <sup>6</sup>	170	67	<0.50	<0.50	<1.5	510



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**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	TOC* (%)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>C-4 (cont)</b>											
09/03/02 <sup>4</sup>	593.10	586.62	6.48	0.00	1,900 <sup>6</sup>	<50	12	<0.50	<0.50	<1.5	64
03/29/03 <sup>4</sup>	593.10	587.26	5.84	0.00	950 <sup>6</sup>	<50	3.3	<0.5	<0.5	<1.5	67
09/23/03 <sup>4,7</sup>	593.10	586.91	6.19	0.00	57 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	12
03/17/04 <sup>7,8</sup>	593.10	587.12	5.98	0.00	1,900 <sup>6</sup>	1,500	310	5	2	4	520
09/13/04 <sup>7</sup>	593.10	588.22	4.88	0.00	1,300 <sup>6</sup>	840	260	3	2	1	990
03/11/05 <sup>7</sup>	593.10	589.20	3.90	0.00	2,900 <sup>6</sup>	350	66	1	<1	<1	1,100
09/29/05 <sup>7</sup>	593.10	585.07	8.03	0.00	2,500 <sup>6</sup>	740	160	2	1	<1	1,500
03/20/06 <sup>7</sup>	593.10	589.47	3.63	0.00	1,200 <sup>6</sup>	1,400	300	5	1	2	1,600
08/25/06 <sup>7</sup>	593.10	588.30	4.80	0.00	1,300 <sup>6</sup>	450	82	2	<0.5	<0.5	1,300
03/12/07 <sup>7</sup>	593.10	585.50	7.60	0.00	-- <sup>10</sup>	670	110	1	<0.5	<0.5	1,100
03/21/07	593.10	585.07	8.03	0.00	1,800 <sup>6</sup>	--	--	--	--	--	--
09/21/07 <sup>7</sup>	593.10	585.20	7.90	0.00	2,100 <sup>6</sup>	260	18	<0.5	<0.5	<0.5	1,100
03/10/08 <sup>7</sup>	593.10	585.69	7.41	0.00	7,500 <sup>6</sup>	560	72	1	<0.5	<0.5	1,100
03/15/08	593.10	586.45	6.65	0.00	--	--	--	--	--	--	--
09/15/08 <sup>7</sup>	593.10	585.10	8.00	0.00	5,200 <sup>6</sup>	760	110	2	0.6	<0.5	1,100
03/03/09 <sup>7</sup>	593.10	585.94	7.16	0.00	1,800 <sup>6</sup>	1,700	360	5	2	1	900
08/31/09 <sup>7</sup>	593.10	585.17	7.93	0.00	2,000 <sup>6</sup>	2,700	440	11	3	3	930
<b>C-1</b>											
03/25/91	595.82	592.54	3.28	--	--	54	0.7	<0.5	<0.5	2.0	--
07/01/91	595.82	592.39	3.43	--	--	730	250	3.0	16	4.8	--
09/25/91	595.82	591.67	4.15	--	--	160	68	1.3	6.1	1.3	--
12/23/91	595.82	592.11	3.71	--	--	170	70	1.6	3.5	2.4	--
03/24/92	595.82	592.80	3.02	--	--	60	39	4.4	3.9	9.1	--
06/23/92	595.82	592.06	3.76	--	--	60	19	1.1	1.1	1.0	--
NOT MONITORED/SAMPLED											
<b>TRIP BLANK</b>											
03/25/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
07/01/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/25/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/23/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/24/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/23/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TPH-DRG (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>TRIP BLANK (cont)</b>											
09/30/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/16/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/30/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
06/10/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
09/02/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
12/06/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/02/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/03/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/07/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/06/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/31/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/15/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/25/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/19/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/31/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/23/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/02/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/15/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/10/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/16/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
08/25/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/29/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0
03/09/99	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/28/99	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/29/00	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
08/29/00	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
03/27/01	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500
09/05/01	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
03/04/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
<b>QA</b>											
09/03/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
03/29/03	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5
09/23/03 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/19/04 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/13/04 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	TOC* (%)	GWE (msl)	DTW (ft)	SPHT (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
QA (cont)											
03/11/05 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/29/05 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/20/06 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/25/06 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/12/07 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/21/07 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/10/08 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/15/08 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/03/09 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/31/09 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

**EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to August 29, 2000, were compiled from reports prepared by Blaine Tech Services, Inc.

TOC = Top of Casing

(ft.) = Feet

GWE = Groundwater Elevation

(msl) = Mean sea level

DTW = Depth to Water

SPHT = Separate Phase Hydrocarbon Thickness

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH = Total Petroleum Hydrocarbons

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

MTBE = Methyl Tertiary Butyl Ether

(µg/L) = Micrograms per liter

-- = Not Measured/Not Analyzed

QA = Quality Assurance/Trip Blank

\* TOC elevations are referenced to msl.

\*\* GWE corrected for the presence of Separate Phase Hydrocarbons (SPH), correction factor:  $[(TOC-DTW)+(SPHT \times 0.80)]$ .

<sup>1</sup> Confirmation run.

<sup>2</sup> ORC installed.

<sup>3</sup> Laboratory report indicates unidentified hydrocarbons C6-C12.

<sup>4</sup> ORC in well.

<sup>5</sup> Although requested on the Chain of Custody; Laboratory did not perform TPH-D analysis with silica-gel cleanup.

<sup>6</sup> Analyzed with silica gel cleanup.

<sup>7</sup> BTEX and MTBE by EPA Method 8260.

<sup>8</sup> ORC removed.

<sup>9</sup> Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It elutes in the DRO range later than #2 fuel and is also due to individual peaks eluting in the DRO range.

<sup>10</sup> Sample containers were lost during shipping.

**Table 2**

**Dissolved Oxygen Concentrations**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

<b>WELL ID</b>	<b>DATE</b>	<b>Before Purging (mg/L)</b>	<b>After Purging (mg/L)</b>
<b>C-2</b>	08/29/00	1.97	--
	03/27/01	3.60	--
	09/05/01	2.80	--
	03/04/02	3.10	--
	09/03/02	2.70	--
	03/29/03	2.20	--
	09/23/03	0.50	--
<b>C-4</b>	08/29/00	2.11	--
	03/27/01	2.90	--
	09/05/01	2.30	--
	03/04/02	2.90	--
	09/03/02	2.10	--
	03/29/03	1.90	--
09/23/03	0.40	--	

**EXPLANATIONS:**

(mg/L) = Milligrams per liter

-- = Not Measured

**Table 3**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID	DATE	ETHANOL (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
C-2	09/05/01	--	<100	1,000	<2	240	30	<2	<2
	09/23/03	<50	--	12	--	--	--	--	--
	03/19/04	<50	--	370	--	--	--	--	--
	09/13/04	<50	--	530	--	--	--	--	--
	03/11/05	<50	--	580	--	--	--	--	--
	09/29/05	<50	--	320	--	--	--	--	--
	03/20/06	<50	--	500	--	--	--	--	--
	08/25/06	<50	--	460	--	--	--	--	--
	03/12/07	<50	--	110	--	--	--	--	--
	09/21/07	<50	--	180	--	--	--	--	--
	03/10/08	<50	--	170	--	--	--	--	--
	09/15/08	<50	--	150	--	--	--	--	--
	03/03/09	<50	--	54	--	--	--	--	--
	08/31/09	<50	--	240	--	--	--	--	--
C-3	09/05/01	--	<100	<2	<2	<2	<2	<2	<2
	03/19/04	<50	--	2	--	--	--	--	--
	09/13/04	SAMPLED ANNUALLY		--	--	--	--	--	--
	03/11/05	<50	--	2	--	--	--	--	--
	03/20/06	<50	--	3	--	--	--	--	--
	03/12/07	<50	--	2	--	--	--	--	--
	03/10/08	<50	--	3	--	--	--	--	--
	09/15/08	SAMPLED ANNUALLY		--	--	--	--	--	--
	03/03/09	<50	--	3	--	--	--	--	--
C-4	09/05/01	--	<100	520	<2	<2	15	<2	<2
	09/23/03	<50	--	12	--	--	--	--	--
	03/19/04	<50	--	520	--	--	--	--	--
	09/13/04	<100	--	990	--	--	--	--	--
	03/11/05	<100	--	1,100	--	--	--	--	--
	09/29/05	<100	--	1,500	--	--	--	--	--
	03/20/06	<50	--	1,600	--	--	--	--	--
	08/25/06	<50	--	1,300	--	--	--	--	--
	03/12/07	<50	--	1,100	--	--	--	--	--
	09/21/07	<50	--	1,100	--	--	--	--	--

**Table 3**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID	DATE	ETHANOL (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
C-4 (cont)	03/10/08	<50	--	1,100	--	--	--	--	--
	09/15/08	<50	--	1,100	--	--	--	--	--
	03/03/09	<100	--	900	--	--	--	--	--
	<b>08/31/09</b>	<b>&lt;50</b>	--	<b>930</b>	--	--	--	--	--

**Table 3**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

---

**EXPLANATIONS:**

TBA = t-Butyl alcohol  
MTBE = Methyl Tertiary Butyl Ether  
DIPE = di-Isopropyl ether  
ETBE = Ethyl t-butyl ether  
TAME = t-Amyl methyl ether

1,2-DCA = 1,2-Dichloroethane  
EDB = 1,2-Dibromoethane  
(µg/L) = Micrograms per liter  
-- = Not Analyzed

**ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds



## 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.



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1740 Job Number: 386507  
 Site Address: 6550 Moraga Avenue Event Date: 8-31-09 (inclusive)  
 City: Oakland, CA Sampler: Joe

Well ID: C-2  
 Well Diameter: 2 in.  
 Total Depth: 26.90 ft.  
 Depth to Water: 5.91 ft.

Date Monitored: 8-31-09

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.  
 xVF 0.17 = 357 x3 case volume = Estimated Purge Volume: 11 gal.  
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.10

### Purge Equipment:

Disposable Bailer   
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_  
 QED Bladder Pump \_\_\_\_\_  
 Other: \_\_\_\_\_

### Sampling Equipment:

Disposable Bailer   
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_  
 QED Bladder Pump \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: \_\_\_\_\_ ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbent Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 0700 Weather Conditions: Foggy  
 Sample Time/Date: 0735 18-31-09 Water Color: clear Odor: (C) N moderate  
 Approx. Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal. DTW @ Sampling: 6.41

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - <del>DS</del> )	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>0710</u>	<u>4</u>	<u>6.95</u>	<u>587</u>	<u>18.5</u>	_____	_____
<u>0716</u>	<u>7.5</u>	<u>6.90</u>	<u>615</u>	<u>18.7</u>	_____	_____
<u>0725</u>	<u>11</u>	<u>6.96</u>	<u>625</u>	<u>18.4</u>	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>C-2</u>	<u>6</u> x vov vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)/ETHANOL(8260)
	<u>2</u> x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sg (8015)

### COMMENTS:

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



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1740 Job Number: 386507  
 Site Address: 6550 Moraga Avenue Event Date: 8-31-09 (inclusive)  
 City: Oakland, CA Sampler: Joe

Well ID: C-3 Date Monitored: 8-31-09  
 Well Diameter: 2 in.  
 Total Depth: 18.88 ft.  
 Depth to Water: 6.76 ft.  Check if water column is less than 0.50 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

xVF \_\_\_\_\_ = \_\_\_\_\_ x3 case volume = Estimated Purge Volume: \_\_\_\_\_ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: \_\_\_\_\_

**Purge Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_  
 QED Bladder Pump \_\_\_\_\_  
 Other: \_\_\_\_\_

**Sampling Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_  
 QED Bladder Pump \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: \_\_\_\_\_ ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbent Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 1 Water Color: \_\_\_\_\_ Odor: Y / N \_\_\_\_\_  
 Approx. Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal. DTW @ Sampling: \_\_\_\_\_

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature ( C / F )	D.O. (mg/L)	ORP (mV)

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
C-	x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)/ETHANOL(8260)
	x 500mL ampers	YES	NP	LANCASTER	TPH-DRO w/sg (8015)

COMMENTS: Monday

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



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1740 Job Number: 386507  
 Site Address: 6550 Moraga Avenue Event Date: 8-31-09 (inclusive)  
 City: Oakland, CA Sampler: Sac

Well ID: C-4  
 Well Diameter: 2 in.  
 Total Depth: 24.76 ft.  
 Depth to Water: 7.93 ft.  
16.83 xVF 0.17 = 2.86

Date Monitored: 8-31-09

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.29 gal.

### Purge Equipment:

Disposable Bailer   
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_  
 QED Bladder Pump \_\_\_\_\_  
 Other: \_\_\_\_\_

### Sampling Equipment:

Disposable Bailer   
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_  
 QED Bladder Pump \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: \_\_\_\_\_ ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbent Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 0745 Weather Conditions: Foggy  
 Sample Time/Date: 0815 18-31-09 Water Color: clear Odor: 01 N strong  
 Approx. Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal. DTW @ Sampling: 8.48

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - 65)	Temperature (°F)	D.O. (mg/L)	ORP (mV)
<u>0755</u>	<u>3</u>	<u>6.57</u>	<u>644</u>	<u>18.8</u>	_____	_____
<u>0803</u>	<u>6</u>	<u>6.63</u>	<u>683</u>	<u>19.1</u>	_____	_____
<u>0808</u>	<u>9</u>	<u>6.65</u>	<u>688</u>	<u>19.0</u>	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>C-4</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)/ETHANOL(8260)
	<u>1</u> x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sg (8015)

COMMENTS: Pressure in well

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

# Chevron California Region Analysis Request/Chain of Custody



083109-D1

For Lancaster Laboratories use only  
 Acct. #: 12099 Sample # 5765345-47 Group #: 018870

Group # 1159997

CRA MTI Project #: 61H-1978				Analyses Requested															
Facility #: SS#9-1740 G-R#386507 Global ID#T0600100353				Matrix		Preservation Codes													
Site Address: 6550 MORAGA AVENUE, OAKLAND, CA				Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE 8260 <input type="checkbox"/> 8021 <input type="checkbox"/> TPH 8015 MOD GRC <input type="checkbox"/> TPH 8015 MOD DRO <input checked="" type="checkbox"/> Silica Gel Cleanup 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> Total Lead Method <input type="checkbox"/> Dissolved Lead Method <input type="checkbox"/> Ethanol (8260) <input checked="" type="checkbox"/>										
Chevron PM: MTI Lead Consultant: CRAKJ									<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES									
Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568																			
Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)																			
Consultant Phone #: 925-551-7555 Fax #: 925-551-7899																			
Sampler: <u>JOE AJEMIAN</u>																			
Sample Identification		Date Collected	Time Collected	Grab	Composite											Preservative Codes			
		H = HCl T = Thiosulfate N = HNO <sub>3</sub> B = NaOH S = H <sub>2</sub> SO <sub>4</sub> O = Other																	
		<input type="checkbox"/> J value reporting needed <input checked="" type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits																	
		Comments / Remarks																	
GA				<input checked="" type="checkbox"/>															
C-2		8-31-09	0735	<input checked="" type="checkbox"/>															
C-4		"	0815	<input checked="" type="checkbox"/>															

**Turnaround Time Requested (TAT) (please circle)**

STD. TAT 72 hour 48 hour 24 hour 4 day 5 day

**Data Package Options (please circle if required)**

QC Summary Type I - Full **EDF/EDD**

Type VI (Raw Data)  Coeff Deliverable not needed

WIP (RWQCB)

Disk

Relinquished by: <u>[Signature]</u>	Date: 8-31-09	Time: 1000	Received by: <u>[Signature]</u>	Date: 9/3/09	Time: 1000
Relinquished by: <u>[Signature]</u>	Date: 31 AUG 09	Time: 1630	Received by: <u>FEIS EX</u>	Date:	Time:
Relinquished by: _____	Date:	Time:	Received by: _____	Date:	Time:
Relinquished by Commercial Carrier: UPS <u>FedEx</u> Other _____	Temperature Upon Receipt: 0.4-1.6 °C		Received by: <u>[Signature]</u>	Date: 9/1/09	Time: 0910
Custody Seals Intact? <u>Yes</u> No					



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2900 Fax: 717-656-2661 • www.lancasterlabs.com

## ANALYTICAL RESULTS

Prepared for:

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

916-677-3407

Prepared by:

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

September 12, 2009

RECEIVED

SEP 14 2009

GETTLER-RYAN INC.  
GENERAL CONTRACTORS

## SAMPLE GROUP

The sample group for this submittal is 1159997. Samples arrived at the laboratory on Tuesday, September 01, 2009. The PO# for this group is 91740 and the release number is MTI.

### Client Description

QA-T-090831 NA Water  
C-2-W-090831 Grab Water  
C-4-W-090831 Grab Water

### Lancaster Labs Number

5765345  
5765346  
5765347

## METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC      Gettler-Ryan, Inc.  
COPY TO

Attn: Cheryl Hansen



## ***Analysis Report***

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17603-2425 • 717-656-2300 Fax 717-656-2881 • www.lancasterlabs.com

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

Respectfully Submitted,

A handwritten signature in black ink that reads "Maria S. Lord".

**Maria S. Lord**  
**Senior Specialist**



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Lancaster Laboratories Sample No. WW 5765345

Group No. 1159997  
CA

QA-T-090831 NA Water

Facility# 91740 Job# 386507 MTI# 61H-1978 GRD  
6550 Moraga Ave-Oakland T0600100353 QA

Collected: 08/31/2009

Account Number: 12099

Submitted: 09/01/2009 09:10

Chevron c/o CRA

Reported: 09/12/2009 at 10:40

Suite 110

Discard: 10/13/2009

2000 Opportunity Drive  
Roseville CA 95678

MORTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>					
06054	Benzene	71-43-2	N.D.	ug/l 0.5	1
06054	Ethylbenzene	100-41-4	N.D.	0.5	1
06054	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
06054	Toluene	108-88-3	N.D.	0.5	1
06054	Xylene (Total)	1330-20-7	N.D.	0.5	1
<b>GC Volatiles SW-846 8015B</b>					
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	ug/l 50	1

### General Sample Comments

State of California Lab Certification No. 2501

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P092512AA	09/08/2009 12:50	Daniel H Heller	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	P092512AA	09/08/2009 12:50	Daniel H Heller	1
01146	GC VOA Water Prep	SW-846 5030B	1	09247A20A	09/04/2009 13:32	Tyler O Griffin	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09247A20A	09/04/2009 13:32	Tyler O Griffin	1





# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Lancaster Laboratories Sample No. WW 5765346

Group No. 1159997

CA

C-2-W-090831 Grab Water

Facility# 91740 Job# 386507 MTI# 61H-1978 GRD  
6550 Moraga Ave-Oakland T0600100353 C-2

Collected: 08/31/2009 07:35 by JA

Account Number: 12099

Submitted: 09/01/2009 09:10

Chevron c/o CRA

Reported: 09/12/2009 at 10:40

Suite 110

Discard: 10/13/2009

2000 Opportunity Drive  
Roseville CA 95678

MORC2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles</b>			SW-846 8260B	ug/l	
06067	Benzene	71-43-2	N.D.	0.5	1
06067	Ethanol	64-17-5	N.D.	50	1
06067	Ethylbenzene	100-41-4	N.D.	0.5	1
06067	Methyl Tertiary Butyl Ether	1634-04-4	240	0.5	1
06067	Toluene	108-88-3	N.D.	0.5	1
06067	Xylene (Total)	1330-20-7	N.D.	0.5	1

Preservation requirements were not met. The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH = 3.

<b>GC Volatiles</b>			SW-846 8015B	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	89	50	1
<b>GC Extractable TPH</b>			SW-846 8015B	ug/l	
<b>w/Si Gel</b>					
06610	TPH-DRO CA C10-C28 w/ Si Gel	n.a.	N.D.	50	1

### General Sample Comments

State of California Lab Certification No. 2501

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Triel#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D092461AA	09/03/2009 22:34	Florida A Cimino	1
06067	BTEX, MTBE, ETOH	SW-846 8260B	1	D092461AA	09/03/2009 22:34	Florida A Cimino	1
01146	GC VOA Water Prep	SW-846 5030B	1	09247A20A	09/04/2009 15:46	Tyler O Griffin	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09247A20A	09/04/2009 15:46	Tyler O Griffin	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	092450001A	09/02/2009 10:00	Olivia I Santiago	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	092450001A	09/04/2009 00:05	Diane V Do	1



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Lancaster Laboratories Sample No. WW 5765347

Group No. 1159997

C-4-W-090831 Grab Water

CA

Facility# 91740 Job# 386507 MTI# 61H-1978 GRD  
6550 Moraga Ave-Oakland T0600100353 C-4

Collected: 08/31/2009 08:15 by JA

Account Number: 12099

Submitted: 09/01/2009 09:10

Chevron c/o CRA

Reported: 09/12/2009 at 10:40

Suite 110

Discard: 10/13/2009

2000 Opportunity Drive  
Roseville CA 95678

MORC4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles</b>					
		<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
06067	Benzene	71-43-2	440	5	10
06067	Ethanol	64-17-5	N.D.	50	1
06067	Ethylbenzene	100-41-4	3	0.5	1
06067	Methyl Tertiary Butyl Ether	1634-04-4	930	0.5	1
06067	Toluene	108-88-3	11	0.5	1
06067	Xylene (Total)	1330-20-7	3	0.5	1
<b>GC Volatiles</b>					
		<b>SW-846 8015B</b>	<b>ug/l</b>	<b>ug/l</b>	
01728	TPH-GRO N. CA water C6-C12	n.a.	2,700	250	5
<b>GC Extractable TPH</b>					
		<b>SW-846 8015B</b>	<b>ug/l</b>	<b>ug/l</b>	
<b>w/Si Gel</b>					
06610	TPH-DRO CA C10-C28 w/ Si Gel	n.a.	2,000	50	1

### General Sample Comments

State of California Lab Certification No. 2501

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D092461AA	09/03/2009 22:57	Florida A Cimino	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	D092461AA	09/03/2009 23:20	Florida A Cimino	10
06067	BTEX, MTBE, ETOH	SW-846 8260B	1	D092461AA	09/03/2009 22:57	Florida A Cimino	1
06067	BTEX, MTBE, ETOH	SW-846 8260B	1	D092461AA	09/03/2009 23:20	Florida A Cimino	10
01146	GC VOA Water Prep	SW-846 5030B	1	09247A20A	09/04/2009 22:20	Tyler O Griffin	5
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09247A20A	09/04/2009 22:20	Tyler O Griffin	5
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	092450001A	09/02/2009 10:00	Olivia I Santiago	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	092450001A	09/04/2009 00:26	Diane V Do	1

## Quality Control Summary

 Client Name: Chevron c/o CRA  
 Reported: 09/12/09 at 10:40 AM

Group Number: 1159997

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 Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D092461AA	Sample number(s): 5765346-5765347							
Benzene	N.D.	0.5	ug/l	117		79-120		
Ethanol	N.D.	50.	ug/l	111		40-158		
Ethylbenzene	N.D.	0.5	ug/l	111		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	110		76-120		
Toluene	N.D.	0.5	ug/l	113		79-120		
Xylene (Total)	N.D.	0.5	ug/l	114		80-120		
Batch number: P092512AA	Sample number(s): 5765345							
Benzene	N.D.	0.5	ug/l	104		79-120		
Ethylbenzene	N.D.	0.5	ug/l	99		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	104		76-120		
Toluene	N.D.	0.5	ug/l	102		79-120		
Xylene (Total)	N.D.	0.5	ug/l	100		80-120		
Batch number: 09247A20A	Sample number(s): 5765345-5765347							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	127	127	75-135	0	30
Batch number: 092450001A	Sample number(s): 5765346-5765347							
TPH-DRO CA C10-C28 w/ Si Gel	N.D.	32.	ug/l	89	88	60-124	1	20

### 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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Max	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: D092461AA	Sample number(s): 5765346-5765347 UNSPK: P764176								
Benzene	106	111	80-126	5	30				
Ethanol	91	94	37-164	3	30				
Ethylbenzene	101	105	71-134	4	30				
Methyl Tertiary Butyl Ether	95	102	72-126	8	30				
Toluene	104	108	80-125	3	30				
Xylene (Total)	103	106	79-125	3	30				
Batch number: P092512AA	Sample number(s): 5765345 UNSPK: P765348								
Benzene	107	105	80-126	2	30				
Ethylbenzene	107	108	71-134	1	30				
Methyl Tertiary Butyl Ether	106	102	72-126	4	30				
Toluene	109	107	80-125	2	30				
Xylene (Total)	109	111	79-125	1	30				

\*- 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.

## Quality Control Summary

 Client Name: Chevron c/o CRA  
 Reported: 09/12/09 at 10:40 AM

Group Number: 1159997

### 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

Analysis Name	MS %RRC	MSD %RRC	MS/MSD Limits	RPD RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 09247A20A									
TPH-GRO N. CA water C6-C12	182*		63-154						
				5765345-5765347	UNSPK: P767686				

### 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: BTEX, MTBE, ETOH  
 Batch number: D092461AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5765346	97	90	90	94
5765347	97	88	91	98
Blank	98	93	90	94
LCS	97	92	89	98
MS	98	94	91	98
MSD	98	94	89	97
Limits:	80-116	77-113	80-113	78-113

 Analysis Name: BTEX+MTBE by 8260B  
 Batch number: P092512AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5765345	101	102	97	95
Blank	101	100	97	95
LCS	101	105	97	97
MS	102	105	97	97
MSD	101	103	97	96
Limits:	80-116	77-113	80-113	78-113

 Analysis Name: TPH-GRO N. CA water C6-C12  
 Batch number: 09247A20A

	Trifluorotoluene-F
5765345	86
5765346	89
5765347	108
Blank	85
LCS	126
LCSD	123
MS	137*
Limits:	63-135

 Analysis Name: TPH-DRO CA C10-C28 w/ Si Gel  
 Batch number: 092450001A  
 Orthoterphenyl

\*- 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.

## Quality Control Summary

Client Name: Chevron c/o CRA  
Reported: 09/12/09 at 10:40 AM

Group Number: 1159997

### Surrogate Quality Control

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5765346	90
5765347	114
Blank	90
LCS	108
LCSD	105

---

Limits: 59-131

**\*- 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:

<b>N.D.</b>	none detected	<b>BMQL</b>	Below Minimum Quantitation Level
<b>TNTC</b>	Too Numerous To Count	<b>MPN</b>	Most Probable Number
<b>IU</b>	International Units	<b>CP Units</b>	cobalt-chloroplatinate units
<b>umhos/cm</b>	micromhos/cm	<b>NTU</b>	nephelometric turbidity units
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>Cal</b>	(diet) calories	<b>lb.</b>	pound(s)
<b>meq</b>	millequivalents	<b>kg</b>	kilogram(s)
<b>g</b>	gram(s)	<b>mg</b>	milligram(s)
<b>ug</b>	microgram(s)	<b>l</b>	liter(s)
<b>ml</b>	milliliter(s)	<b>ul</b>	microliter(s)
<b>m3</b>	cubic meter(s)	<b>fib &gt;5 um/ml</b>	fibers greater than 5 microns in length per ml
<b>&lt;</b>	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.		
<b>&gt;</b>	greater than		
<b>ppm</b>	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.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	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	Inorganic Qualifiers
<b>A</b> TIC is a possible aldol-condensation product	<b>B</b> Value is <CRDL, but ≥IDL
<b>B</b> Analyte was also detected in the blank	<b>E</b> Estimated due to interference
<b>C</b> Pesticide result confirmed by GC/MS	<b>M</b> Duplicate injection precision not met
<b>D</b> Compound quantitated on a diluted sample	<b>N</b> Spike amount not within control limits
<b>E</b> Concentration exceeds the calibration range of the instrument	<b>S</b> Method of standard additions (MSA) used for calculation
<b>J</b> Estimated value	<b>U</b> Compound was not detected
<b>N</b> Presumptive evidence of a compound (TICs only)	<b>W</b> Post digestion spike out of control limits
<b>P</b> Concentration difference between primary and confirmation columns >25%	<b>*</b> Duplicate analysis not within control limits
<b>U</b> Compound was not detected	<b>+</b> Correlation coefficient for MSA <0.995
<b>X,Y,Z</b> Defined in case narrative	

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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ATTACHMENT B

ACEH E-MAILS DATED SEPTEMBER 11, 2009

**Kiernan, James**

---

**From:** Detterman, Mark, Env. Health [Mark.Detterman@acgov.org]  
**Sent:** Friday, September 11, 2009 3:26 PM  
**To:** Kiernan, James  
**Subject:** RE: RO256-Proposed Minor GWM Change

James,

The new Resolution 2009-0042 requires all LOPs to review all cases over the next year and low risk sites (presuming there is agreement) will get slightly lower priority, so it may take time for me to get to the site. That said we are attempting to do this over the next 6 months; we'll see how that works out... I do understand there is a conflict between the August 2007 workplan, the SCM and RFC submitted in August 2008, and the approval of the 2007 workplan by ACEH with modifications in September 2008. Not understanding the change in view I am reluctant to totally eliminate monitoring. Regardless, in the interim it seems appropriate for the site to be monitored on an annual basis in the quarter of highest detections rather than a semi-annual basis. This will reduce monitoring and save State funds for other purposes, but will allow us to track contamination at its highest / worst. Reviewing recent groundwater data, the quarter with the highest detections appears to be first quarter, in March of a year. If you disagree with the selection of the month for monitoring, let me know.

*Mark Detterman  
Hazardous Materials Specialist, PG, CEG  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502  
Direct: 510.567.6876  
Fax: 510.337.9335  
Email: mark.detterman@acgov.org*

*PDF copies of case files can be downloaded at:*

*<http://www.acgov.org/aceh/lop/ust.htm>*

---

**From:** Kiernan, James [mailto:jkiernan@croworld.com]  
**Sent:** Friday, September 11, 2009 2:12 PM  
**To:** Detterman, Mark, Env. Health  
**Subject:** RE: RO256-Proposed Minor GWM Change

In that case, you may come across a later one where we proposed to suspend monitoring on this site as well as RO233 as they have pending closure requests.

---

**From:** Detterman, Mark, Env. Health [mailto:Mark.Detterman@acgov.org]  
**Sent:** Friday, September 11, 2009 2:09 PM  
**To:** Kiernan, James  
**Subject:** RE: RO256-Proposed Minor GWM Change

Hi James,

Going through email today and I found that I had not replied to this one.

It would appear reasonable and appropriate to remove ethanol from the analytical suit at this site. There are between five to six years of non-detectable concentrations at good limits of detection at the site; monitoring has been conducted either on a semi-annual or annual basis.

10/5/2009



As always, I'll reserve the right to disagree with myself at some point in the future.

Sorry for the delay in responding.

*Mark Detterman*  
*Hazardous Materials Specialist, PG, CEG*  
*Alameda County Environmental Health*  
*1131 Harbor Bay Parkway*  
*Alameda, CA 94502*  
*Direct: 510.567.6876*  
*Fax: 510.337.9335*  
*Email: mark.detterman@acgov.org*

*PDF copies of case files can be downloaded at:*

*<http://www.acgov.org/aceh/lop/ust.htm>*

---

**From:** Kiernan, James [mailto:jkiernan@croworld.com]  
**Sent:** Friday, August 21, 2009 10:54 AM  
**To:** Detterman, Mark, Env. Health  
**Subject:** RO256-Proposed Minor GWM Change

Hi Mark,

After review of the data for site RO256 (Chevron 9-1740), we would like to propose that ethanol be removed from the analytical suite. It has been analyzed for years but has never been detected. Please let me know if this appears appropriate. We can submit this request as a formal letter if desired. Thanks.

Sincerely,

James P. Kiernan, P.E.  
**Conestoga-Rovers & Associates (CRA)**  
2000 Opportunity Drive, Suite 110  
Roseville, CA 95678  
Direct: (916) 751-4102  
Cell: (916) 919-6759  
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jkiernan@croworld.com

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10/5/2009