



**Olivia Skance**  
Team Lead  
Marketing Business Unit

**Chevron Environmental  
Management Company**  
6101 Bollinger Canyon Road  
San Ramon, CA 94583  
Tel (925) 790-6521

January 20, 2012

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

**RECEIVED**

**3:21 pm, Jan 23, 2012**

Alameda County  
Environmental Health

Re: Chevron Facility # 9-2029

Address: 890 West MacArthur Boulevard, Oakland, California

I have reviewed the attached report titled Second Semi-Annual 2011 Groundwater Monitoring Report and dated January 20, 2012.

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,

Olivia Skance  
Project Manager

Enclosure: Report



**CONESTOGA-ROVERS  
& ASSOCIATES**

10969 Trade Center Drive  
Rancho Cordova, California 95670  
Telephone: (916) 889-8900 Fax: (916) 889-8999  
[www.CRAworld.com](http://www.CRAworld.com)

January 20, 2012

Reference No. 611974

Mr. Mark Detterman, P.G., C.E.G.  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Re: Second Semi-Annual 2011 Groundwater Monitoring Report  
Former Chevron Service Station 9-2029  
890 West MacArthur Boulevard  
Oakland, California  
Case No. RO0002438

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Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA) is submitting the attached *Groundwater Monitoring and Sampling Report* (report) to Alameda County Environmental Health (ACEH) on behalf of Chevron Environmental Management Company (Chevron) for the site referenced above. The report (prepared by Gettler-Ryan Inc. and dated December 5, 2011) presents the results of the sampling of wells MW-5 through MW-8 during fourth quarter 2011. Wells MW-5 through MW-8 are sampled semi-annually during the second and fourth quarters. Also attached are Figure 1 (Vicinity Map) showing the site location, and Figure 2 (Concentration Map) presenting the fourth quarter 2011 analytical results along with a rose diagram. The monitoring results during 2011 are discussed below.

Elevated concentrations of total petroleum hydrocarbons as gasoline (TPHg) (up to 5,700 micrograms per liter [ $\mu\text{g}/\text{L}$ ]) continue to be detected in wells MW-5, MW-6, and MW-7 adjacent to and downgradient of the site. TPHg was not detected in MW-6 during the first semi-annual event, but the current concentration (5,700  $\mu\text{g}/\text{L}$ ) is once again within the historical range in this well. The cause of this fluctuation is unknown, but appears to have been anomalous. Low concentrations of benzene (6  $\mu\text{g}/\text{L}$ ) were detected in MW-5. A higher benzene concentration (260  $\mu\text{g}/\text{L}$ ) was detected in MW-6 during the current event and like TPHg, a significant fluctuation was observed. Conversely, the benzene concentration in MW-7 during the current event (2  $\mu\text{g}/\text{L}$ ) was significantly less than that during the previous event (180  $\mu\text{g}/\text{L}$ ). Low concentrations of toluene, ethylbenzene, and xylenes (up to 180  $\mu\text{g}/\text{L}$ ) were also detected in these wells. Although fluctuations occur, the TPHg and benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations in these wells are decreasing overall.

The methyl tertiary butyl ether (MTBE) concentrations in MW-5 have consistently decreased and it is no longer detected. The MTBE concentrations in MW-6 have also decreased and only a

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**CONESTOGA-ROVERS  
& ASSOCIATES**

January 20, 2012

Reference No. 611974

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low concentration (37 µg/L) remains. The MTBE concentrations in MW-7 have remained stable and low (5 µg/L during both events of 2011). Low concentrations of tertiary butyl alcohol (TBA) (up to 19 µg/L) were detected in MW-6 and MW-7, likely indicating natural biodegradation of MTBE in the subsurface. Other fuel oxygenates were not detected.

TPHg, BTEX, and fuel oxygenates were not detected in MW-8 during 2011 and have not been detected in this well since the initial event in 2008.

Based on the analytical results, impacted groundwater is present downgradient of the site in the area of wells MW-5, MW-6, and MW-7. However, extensive source removal was performed and concentrations are generally decreasing. The monitoring and previous investigation results indicate that the extent of impacted groundwater is adequately defined. CRA recommends continued monitoring to further evaluate groundwater quality and concentration trends and the suitability of the site for low-risk case closure.

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

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

James P. Kiernan, P.E.



JK/aa/14

Encl.



**CONESTOGA-ROVERS  
& ASSOCIATES**

January 20, 2012

Reference No. 611974

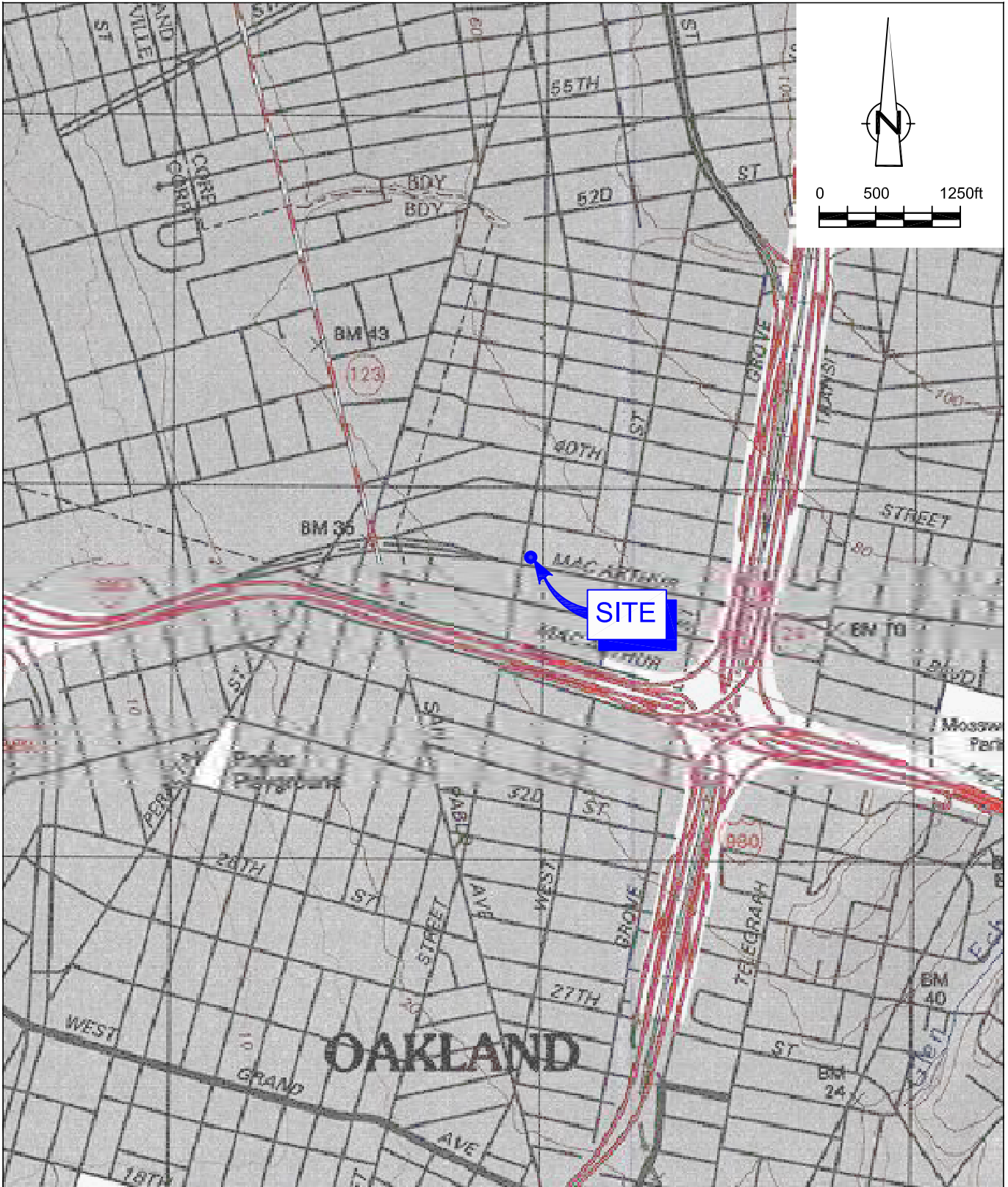
- 3 -

Figure 1          Vicinity Map  
Figure 2          Concentration Map

Attachment A    Groundwater Monitoring and Sampling Report

cc:    Ms. Olivia Skance, Chevron (*electronic copy*)  
      Mr. Stephen O'Kane, Westmac, LLC

## FIGURES



SOURCE: TOPO! MAPS.

Figure 1

VICINITY MAP  
 CHEVRON SERVICE STATION 9-2029  
 890 WEST MACARTHUR BOULEVARD  
*Oakland, California*



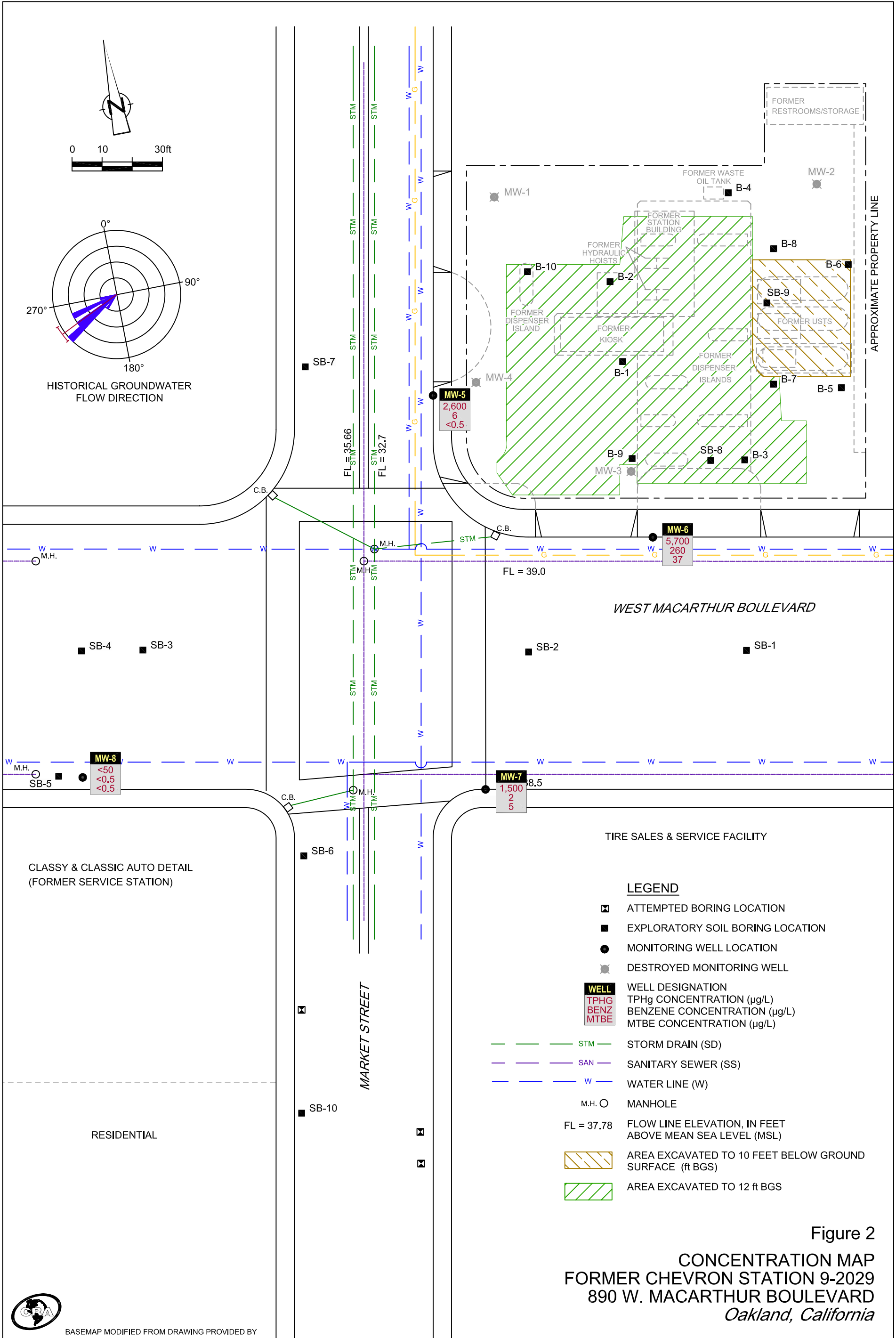


Figure 2  
**CONCENTRATION MAP**  
**FORMER CHEVRON STATION 9-2029**  
**890 W. MACARTHUR BOULEVARD**  
*Oakland, California*

ATTACHMENT A

GROUNDWATER MONITORING AND SAMPLING REPORT





December 5, 2011  
G-R Job #386911

Ms. Olivia Skance  
Chevron Environmental Management Company  
6101 Bollinger Canyon Road  
San Ramon, CA 94583

**RE: Second Semi-Annual Event of November 10, 2011**  
Groundwater Monitoring & Sampling Report  
Former Chevron Service Station #9-2029  
890 West MacArthur Boulevard  
Oakland, California

Dear Ms. Skance:

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.

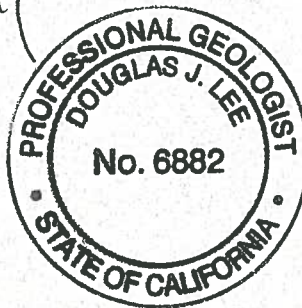
Groundwater samples were collected from the monitoring wells and submitted to a state certified laboratory for analyses. The field data sheets for this event are attached. Analytical results are presented in the table(s) listed below. The chain of custody document and laboratory analytical report are 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.

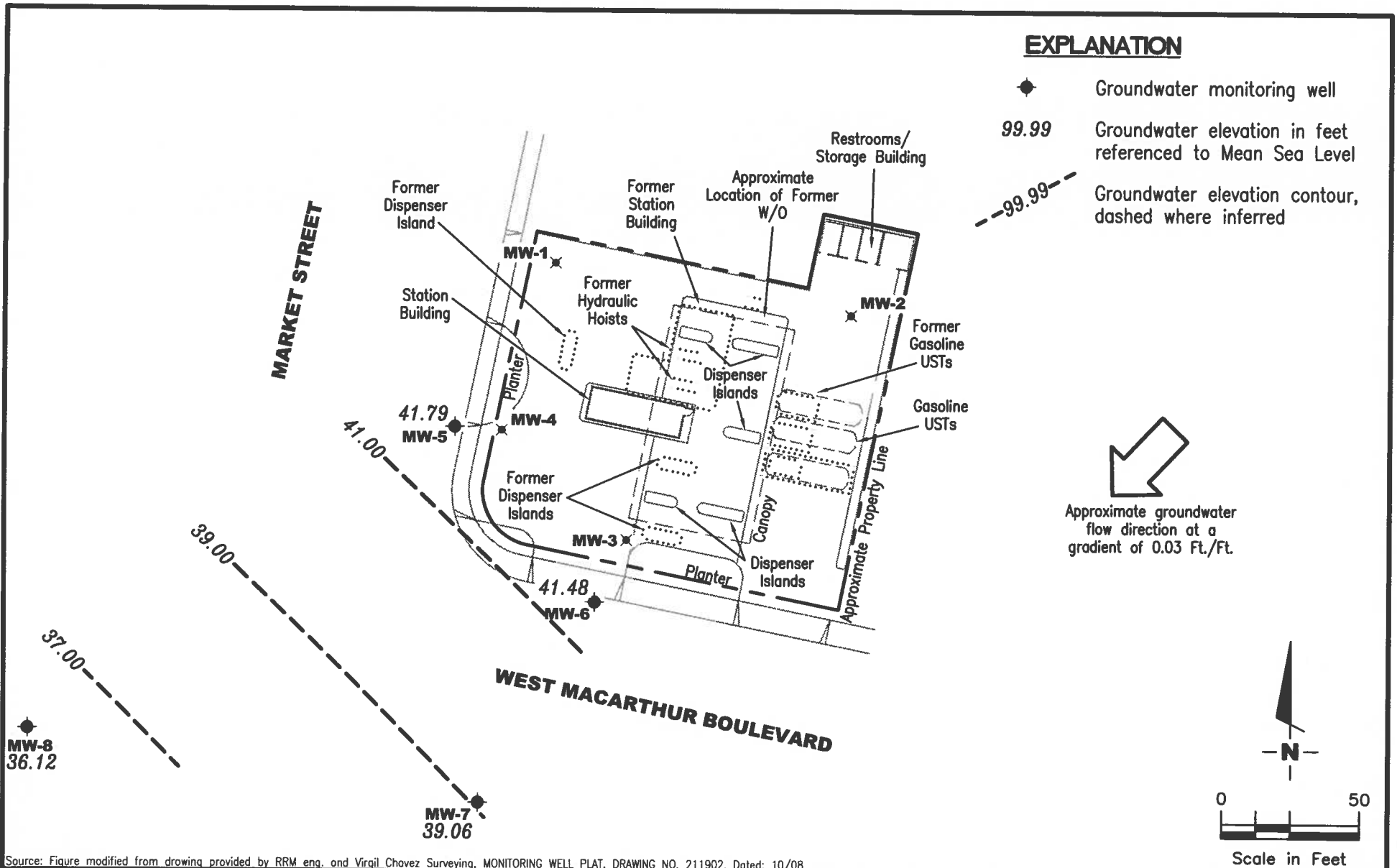
Sincerely,

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: 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**  
 Former Chevron Service Station #9-2029  
 890 West MacArthur Boulevard  
 Oakland, California

FIGURE  
**1**

PROJECT NUMBER <b>386911</b>	REVIEWED BY	DATE November 10, 2011	REVISED DATE
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**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-2029  
890 West MacArthur Blvd.  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>MW-5</b>									
08/22/08 <sup>1</sup>	49.39	9.97	39.42	--	--	--	--	--	--
08/27/08 <sup>3</sup>	49.39	10.03	39.36	54	0.5	0.8	<0.5	0.7	10
11/21/08 <sup>3</sup>	49.39	8.42	40.97	6,000	93	6	37	6	8
02/13/09 <sup>3</sup>	49.39	7.11	42.28	5,100	31	5	20	3	6
05/08/09 <sup>3</sup>	49.39	7.21	42.18	3,600	18	4	14	2	2
08/07/09 <sup>3</sup>	49.39	9.60	39.79	520	0.7	<0.5	<0.5	<0.5	2
11/05/09 <sup>3</sup>	49.39	7.08	42.31	7,400	16	5	18	4	0.9
05/06/10 <sup>3</sup>	49.39	6.08	43.31	3,500	4	2	3	0.9	0.9
11/03/10 <sup>5</sup>	49.39	9.05	40.34	5,000	13	4	8	3	0.9
05/10/11 <sup>5</sup>	49.39	7.26	42.13	3,200	6	4	7	0.9	<0.5
<b>11/10/11<sup>5</sup></b>	<b>49.39</b>	<b>7.60</b>	<b>41.79</b>	<b>2,600</b>	<b>6</b>	<b>3</b>	<b>10</b>	<b>2</b>	<b>&lt;0.5</b>
<b>MW-6</b>									
08/22/08 <sup>1</sup>	49.07	8.98	40.09	--	--	--	--	--	--
08/27/08 <sup>3</sup>	49.07	8.98	40.09	6,000	990	4	350	530	440
11/21/08 <sup>3</sup>	49.07	8.12	40.95	14,000	1,000	15	1,300	550	300
02/13/09 <sup>3</sup>	49.07	5.84	43.23	9,700	630	4	510	36	180
05/08/09 <sup>3</sup>	49.07	5.77	43.30	7,600	240	4	470	67	38
08/07/09 <sup>3</sup>	49.07	8.49	40.58	14,000	1,500	12	1,400	180	330
11/05/09 <sup>3</sup>	49.07	6.72	42.35	22,000	870	8	1,300	130	160
05/06/10 <sup>3</sup>	49.07	4.89	44.18	5,200	110	2	160	23	9
11/03/10 <sup>5</sup>	49.07	8.05	41.02	13,000	1,100	8	670	58	160
05/10/11 <sup>4,5</sup>	49.07	8.56	40.51	<50	0.6	<0.5	<0.5	<0.5	<0.5
<b>11/10/11<sup>5</sup></b>	<b>49.07</b>	<b>7.59</b>	<b>41.48</b>	<b>5,700</b>	<b>260</b>	<b>7</b>	<b>180</b>	<b>13</b>	<b>37</b>
<b>MW-7</b>									
08/22/08 <sup>1</sup>	48.74	10.20	38.54	--	--	--	--	--	--
08/27/08 <sup>3</sup>	48.74	10.19	38.55	<50	<0.5	0.6	<0.5	0.7	6
11/21/08 <sup>3</sup>	48.74	9.51	39.23	1,100	80	<0.5	65	0.7	6
02/13/09 <sup>3</sup>	48.74	7.95	40.79	630	30	<0.5	38	0.9	7
05/08/09 <sup>3</sup>	48.74	8.04	40.70	1,200	83	<0.5	190	2	8
08/07/09 <sup>3</sup>	48.74	9.88	38.86	8,900	240	0.7	770	5	5
11/05/09 <sup>3</sup>	48.74	9.03	39.71	12,000	630	<1	1,300	420	5

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-2029  
890 West MacArthur Blvd.  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>MW-7 (cont)</b>									
05/06/10 <sup>3</sup>	48.74	7.88	40.86	4,000	190	<0.5	270	7	6
11/03/10 <sup>5</sup>	48.74	9.48	39.26	5,700	150	0.7	45	2	4
05/10/11 <sup>5</sup>	48.74	8.82	39.92	3,500	180	<0.5	150	2	5
11/10/11 <sup>5</sup>	48.74	9.68	39.06	1,500	2	<0.5	2	<0.5	5
<b>MW-8</b>									
08/22/08 <sup>1</sup>	47.61	12.41	35.20	--	--	--	--	--	--
08/27/08 <sup>3</sup>	47.61	12.42	35.19	<50	<0.5	0.7	<0.5	0.6	<0.5
11/21/08 <sup>3</sup>	47.61	11.42	36.19	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/13/09 <sup>3</sup>	47.61	8.87	38.74	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/08/09 <sup>3</sup>	47.61	10.79	36.82	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/07/09 <sup>3</sup>	47.61	12.33	35.28	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/05/09 <sup>3</sup>	47.61	11.23	36.38	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/06/10 <sup>3</sup>	47.61	10.28	37.33	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/03/10 <sup>5</sup>	47.61	11.37	36.24	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/10/11 <sup>5</sup>	47.61	11.55	36.06	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/10/11 <sup>5</sup>	47.61	11.49	36.12	<50	<0.5	<0.5	<0.5	<0.5	<0.5
<b>MW-1</b>									
03/12/02 <sup>1</sup>	50.71	6.50	44.21	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 <sup>2</sup>
06/07/02	50.71	8.69	42.02	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 <sup>2</sup>
09/13/02	50.71	9.28	41.43	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 <sup>2</sup>
12/13/02	50.71	8.48	42.23	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 <sup>2</sup>
03/01/03	50.71	7.34	43.37	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<0.5 <sup>2</sup>
06/27/03 <sup>3</sup>	50.71	9.29	41.42	<50	<0.5	0.6	<0.5	<0.5	<0.5
09/30/03 <sup>3</sup>	50.71	10.17	40.54	<50	<0.5	0.6	<0.5	<0.5	<0.5
12/03/03 <sup>3</sup>	50.71	7.82	42.89	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/10/04 <sup>3</sup>	50.71	6.57	44.14	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/30/04 <sup>3</sup>	50.71	9.78	40.93	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/04 <sup>3</sup>	50.71	9.91	40.80	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/29/04 <sup>3</sup>	50.71	2.90	47.81	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/23/05 <sup>3</sup>	50.71	2.90	47.81	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/22/05 <sup>3</sup>	50.71	8.59	42.12	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/02/05 <sup>3</sup>	50.71	9.38	41.33	<50	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-2029  
890 West MacArthur Blvd.  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>MW-1 (cont)</b>									
12/02/05	50.71	8.44	42.27	--	--	--	--	--	--
03/20/06	50.71	3.05	47.66	--	--	--	--	--	--
06/01/06	50.71	6.77	43.94	--	--	--	--	--	--
09/11/06	50.71	9.18	41.53	--	--	--	--	--	--
DESTROYED									
<b>MW-2</b>									
03/12/02 <sup>1</sup>	52.57	6.09	46.48	<50	<0.50	<0.50	<0.50	<1.5	<2.5/3 <sup>2</sup>
06/07/02	52.57	8.65	43.92	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 <sup>2</sup>
09/13/02	52.57	9.58	42.99	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 <sup>2</sup>
12/13/02	52.57	8.50	44.07	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 <sup>2</sup>
03/01/03	52.57	7.00	45.57	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<0.5 <sup>2</sup>
06/27/03 <sup>3</sup>	52.57	9.59	42.98	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/03 <sup>3</sup>	52.57	10.64	41.93	<50	<0.5	<0.5	<0.5	<0.5	0.7
12/03/03 <sup>3</sup>	52.57	7.54	45.03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/10/04 <sup>3</sup>	52.57	6.05	46.52	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/30/04 <sup>3</sup>	52.57	10.15	42.42	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/04 <sup>3</sup>	52.57	10.14	42.43	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/29/04 <sup>3</sup>	52.57	2.29	50.28	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/23/05 <sup>3</sup>	52.57	2.44	50.13	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/22/05 <sup>3</sup>	52.57	8.99	43.58	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/02/05 <sup>3</sup>	52.57	10.17	42.40	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/02/05	52.57	8.99	43.58	--	--	--	--	--	--
03/20/06	52.57	2.70	49.87	--	--	--	--	--	--
06/01/06	51.57	6.51	45.06	--	--	--	--	--	--
09/11/06	51.57	10.06	41.51	--	--	--	--	--	--
DESTROYED									
<b>MW-3</b>									
03/12/02 <sup>1</sup>	50.31	6.50	43.81	12,000	600	8.5	1,100	370	700/650 <sup>2</sup>
06/07/02	50.31	7.74	42.57	14,000	630	8.8	1,200	160	520/490 <sup>2</sup>
09/13/02	50.31	9.73	40.58	3,000	270	3.2	200	11	600/640 <sup>2</sup>
12/13/02	50.31	8.60	41.71	24,000	1,100	14	2,400	220	650/540 <sup>2</sup>
03/01/03	50.31	6.75	43.56	16,000	500	9.0	1,200	130	460/330 <sup>2</sup>
06/27/03 <sup>3</sup>	50.31	9.25	41.06	9,500	390	6	450	30	470
09/30/03 <sup>3</sup>	50.31	10.31	40.00	2,000	110	1	100	3	710

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-2029  
890 West MacArthur Blvd.  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>MW-3 (cont)</b>									
12/03/03 <sup>3</sup>	50.31	8.18	42.13	19,000	970	8	2,100	85	420
03/10/04 <sup>3</sup>	50.31	6.10	44.21	15,000	550	6	960	95	220
06/30/04 <sup>3</sup>	50.31	9.80	40.51	3,200	150	1	100	3	660
09/30/04 <sup>3</sup>	50.31	10.18	40.13	1,900	66	0.8	84	4	690
12/29/04 <sup>3</sup>	50.31	4.58	45.73	16,000	470	7	820	47	170
03/23/05 <sup>3</sup>	50.31	5.07	45.24	18,000	380	6	960	58	140
06/22/05 <sup>3</sup>	50.31	8.12	42.19	16,000	700	6	950	62	300
09/02/05 <sup>3</sup>	50.31	9.41	40.90	8,400	380	4	510	41	440
12/02/05 <sup>3</sup>	50.31	7.97	42.34	16,000	490	6	1,200	32	170
03/20/06 <sup>3</sup>	50.31	5.32	44.99	4,200	79	0.8	2	10	34
06/01/06 <sup>3</sup>	50.31	7.07	43.24	5,400	67	1	26	3	28
09/11/06 <sup>3</sup>	50.31	9.07	41.24	14,000	270	5	240	38	97
DESTROYED									
<b>MW-4</b>									
03/12/02 <sup>1</sup>	49.93	5.34	44.59	9,700	360	5.3	1,100	150	170/170 <sup>2</sup>
06/07/02	49.93	8.52	41.41	7,300	170	2.7	280	21	200/120 <sup>2</sup>
09/13/02	49.93	9.86	40.07	5,800	92	4.5	80	14	190/160 <sup>2</sup>
12/13/02	49.93	9.42	40.51	10,000	250	2.2	330	19	170/200 <sup>2</sup>
03/01/03	49.93	7.33	42.60	12,000	300	4.6	900	110	160/100 <sup>2</sup>
06/27/03 <sup>3</sup>	49.93	9.62	40.31	7,500	110	2	200	58	130
09/30/03 <sup>3</sup>	49.93	11.13	38.80	3,600	18	<1	16	7	520
12/03/03 <sup>3</sup>	49.93	7.80	42.13	16,000	1,000	6	720	52	73
03/10/04 <sup>3</sup>	49.93	6.69	43.24	2,200	230	3	610	71	55
06/30/04 <sup>3</sup>	49.93	10.33	39.60	7,700	59	<1	78	17	110
09/30/04 <sup>3</sup>	49.93	10.75	39.18	4,800	100	1	33	10	400
12/29/04 <sup>3</sup>	49.93	3.34	46.59	13,000	250	3	480	27	42
03/23/05 <sup>3</sup>	49.93	4.24	45.69	12,000	130	2	280	16	24
06/22/05 <sup>3</sup>	49.93	7.95	41.98	6,400	290	2	11	11	18
09/02/05 <sup>3</sup>	49.93	9.46	40.47	3,700	180	1	13	7	18
12/02/05 <sup>3</sup>	49.93	7.60	42.33	11,000	840	5	480	24	34
03/20/06 <sup>3</sup>	49.93	4.50	45.43	790	14	<0.5	1	0.6	2
06/01/06 <sup>3</sup>	49.93	7.30	42.63	5,100	48	0.8	42	4	2
09/11/06 <sup>3</sup>	49.93	9.38	40.55	6,700	64	3	44	3	4
DESTROYED									



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-2029  
890 West MacArthur Blvd.  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
TRIP BLANK									
QA									
03/12/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
06/07/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
09/13/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
12/13/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
03/01/03	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
06/27/03 <sup>3</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/03 <sup>3</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/03/03 <sup>3</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/10/04 <sup>3</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/30/04 <sup>3</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/04 <sup>3</sup>	--	--	--	<50	<0.5	<0.7	<0.8	<0.8	<0.5
12/29/04 <sup>3</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/23/05 <sup>3</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/22/05 <sup>3</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/02/05 <sup>3</sup>	--	--	--	<50	<0.5	1 <sup>4</sup>	<0.5	1 <sup>4</sup>	<0.5
12/02/05 <sup>3</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/20/06 <sup>3</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/01/06 <sup>3</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/11/06 <sup>3</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/27/08 <sup>3</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/21/08 <sup>5</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
02/13/09 <sup>5</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
05/08/09 <sup>5</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
08/07/09 <sup>5</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
DISCONTINUED									

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-2029  
890 West MacArthur Blvd.  
Oakland, California

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**EXPLANATIONS:**

TOC = Top of Casing  
(ft.) = Feet  
DTW = Depth to Water  
GWE = Groundwater Elevation  
(msl) = Mean sea level

TPH = Total Petroleum Hydrocarbons  
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 were surveyed on October 1, 2008, by CRA. The benchmark for this survey was a USGS bronze disk located near the north end of the curb return at the Northwest corner of 38th Street and Broadway, (Benchmark Elevation = 85.41 feet, NGVD29).  
TOC elevations were surveyed on March 14, 2002, by Virgil Chavez Land Surveying. The benchmark for this survey was a USGS bronze disk located near the north end of the curb return at the Northwest corner of 38th Street and Broadway, (Benchmark Elevation = 85.41 feet, NGVD29).

- <sup>1</sup> Well development performed.
- <sup>2</sup> MTBE by EPA Method 8260.
- <sup>3</sup> BTEX and MTBE by EPA Method 8260.
- <sup>4</sup> Laboratory confirmed analytical result.
- <sup>5</sup> BTEX by EPA Method 8260.



**Table 2**  
**Groundwater Analytical Results - Oxgenate Compounds**  
Former Chevron Service Station #9-2029  
890 West MacArthur Blvd.  
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)
MW-5	08/27/08	--	2	10	<0.5	<0.5	<0.5	--	--
	11/21/08	--	4	8	<0.5	<0.5	<0.5	--	--
	02/13/09	--	3	6	<0.5	<0.5	<0.5	--	--
	05/08/09	--	7	2	<0.5	<0.5	<0.5	--	--
	08/07/09	--	<2	2	<0.5	<0.5	<0.5	--	--
	11/05/09	--	2	0.9	<0.5	<0.5	<0.5	--	--
	05/06/10	--	<2	0.9	<0.5	<0.5	<0.5	--	--
	11/03/10	--	<2	0.9	<0.5	<0.5	<0.5	--	--
	05/10/11	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
	11/10/11	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
MW-6	08/27/08	--	390	440	<0.5	<0.5	6	--	--
	11/21/08	--	320	300	<13	<13	<13	--	--
	02/13/09	--	100	180	<1	<1	4	--	--
	05/08/09	--	16	38	<0.5	<0.5	0.9	--	--
	08/07/09	--	190	330	<3	<3	5	--	--
	11/05/09	--	86	160	<1	<1	4	--	--
	05/06/10	--	2	9	<0.5	<0.5	<0.5	--	--
	11/03/10	--	98	160	<3	<3	3	--	--
	05/10/11 <sup>1</sup>	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
	11/10/11	--	19	37	<1	<1	<1	--	--
MW-7	08/27/08	--	<2	6	<0.5	<0.5	<0.5	--	--
	11/21/08	--	5	6	<0.5	<0.5	<0.5	--	--
	02/13/09	--	<2	7	<0.5	<0.5	<0.5	--	--
	05/08/09	--	<2	8	<0.5	<0.5	<0.5	--	--
	08/07/09	--	4	5	<0.5	<0.5	<0.5	--	--
	11/05/09	--	9	5	<1	<1	<1	--	--
	05/06/10	--	3	6	<0.5	<0.5	<0.5	--	--
	11/03/10	--	6	4	<0.5	<0.5	<0.5	--	--
	05/10/11	--	3	5	<0.5	<0.5	<0.5	--	--
	11/10/11	--	4	5	<0.5	<0.5	<0.5	--	--

**Table 2**  
**Groundwater Analytical Results - Oxgenate Compounds**  
Former Chevron Service Station #9-2029  
890 West MacArthur Blvd.  
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)
MW-8	08/27/08	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
	11/21/08	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
	02/13/09	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
	05/08/09	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
	08/07/09	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
	11/05/09	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
	05/06/10	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
	11/03/10	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
	05/10/11	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
	11/10/11	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
MW-1	03/12/02	--	<100	<2	<2	<2	<2	<2	<2
	06/07/02	--	<100	<2	<2	<2	<2	<2	<2
	09/13/02	--	<100	<2	<2	<2	<2	<2	<2
	12/13/02	--	<100	<2	<2	<2	<2	<2	<2
	03/01/03	--	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/27/03	--	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	09/30/03	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	12/03/03	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	03/10/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/30/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	09/30/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	12/31/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	03/23/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/22/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	09/02/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DESTROYED									
MW-2	03/12/02	--	<100	3	<2	<2	<2	<2	<2
	06/07/02	--	<100	<2	<2	<2	<2	<2	<2
	09/13/02	--	<100	<2	<2	<2	<2	<2	<2
	12/13/02	--	<100	<2	<2	<2	<2	<2	<2
	03/01/03	--	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/27/03	--	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	09/30/03	<50	<5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5
	12/03/03	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 2**  
**Groundwater Analytical Results - Oxgenate Compounds**  
Former Chevron Service Station #9-2029  
890 West MacArthur Blvd.  
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)
MW-2 (cont)	03/10/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/30/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	09/30/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	12/31/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	03/23/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/22/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	09/02/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	DESTROYED								
MW-3	03/12/02	--	<100	650	<2	<2	18	<2	<2
	06/07/02	--	230	490	<5.0	<5.0	11	<5.0	<5.0
	09/13/02	--	170	640	<2	<2	8	<2	<2
	12/13/02	--	240	540	<2	<2	29	31	<2
	03/01/03	--	160	330	<0.5	<0.5	10	<0.5	<0.5
	06/27/03	--	200	470	<0.5	<0.5	11	<0.5	<0.5
	09/30/03	<50	120	710	<0.5	<0.5	6	0.7	<0.5
	12/03/03	<250	200	420	<3	<3	14	<3	<3
	03/10/04	<50	140	220	<0.5	<0.5	5	<0.5	<0.5
	06/30/04	<50	100	660	<0.5	<0.5	5	<0.5	<0.5
	09/30/04	<50	72	690	<0.5	<0.5	4	0.5	<0.5
	12/31/04	<50	77	170	<0.5	<0.5	5	<0.5	<0.5
	03/23/05	<50	<5	140	<0.5	<0.5	4	<0.5	3
	06/22/05	<250	150	300	<3	<3	6	<3	<3
	09/02/05	<100	99	440	<1	<1	<1	<1	<1
	12/02/05	<100	66	170	<1	<1	5	<1	<1
	03/20/06	<50	14	34	<0.5	<0.5	<0.5	<0.5	<0.5
	06/01/06	<50	12	28	<0.5	<0.5	0.8	<0.5	<0.5
09/11/06	<50	47	97	<0.5	<0.5	2	<0.5	<0.5	
DESTROYED									
MW-4	03/12/02	--	<100	170	<2	<2	13	<2	<2
	06/07/02	--	<100	120	<2	<2	14	<2	<2
	09/13/02	--	<100	160	<2	<2	14	<2	<2
	12/13/02	--	<100	200	<2	<2	17	<2	<2
	03/01/03	--	19	100	<0.5	<0.5	8	<0.5	<0.5
	06/27/03	--	22	130	<0.5	<0.5	11	<0.5	<0.5
	09/30/03	<100	<10	520	<1	<1	9	<1	<1

**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Former Chevron Service Station #9-2029  
890 West MacArthur Blvd.  
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)
MW-4 (cont)	12/03/03	<50	18	73	<0.5	<0.5	5	<0.5	<0.5
	03/10/04	<50	11	55	<0.5	<0.5	4	<0.5	<0.5
	06/30/04	<100	<10	110	<1	<1	6	<1	<1
	09/30/04	<50	17	400	<0.5	<0.5	7	<0.5	<0.5
	12/31/04	<50	11	42	<0.5	<0.5	2	<0.5	<0.5
	03/23/05	<50	<5	24	<0.5	<0.5	1	<0.5	0.9
	06/22/05	<50	15	18	<0.5	<0.5	1	<0.5	<0.5
	09/02/05	<50	6	18	<0.5	<0.5	<0.5	<0.5	<0.5
	12/02/05	<50	11	34	<0.5	<0.5	1	<0.5	<0.5
	03/20/06	<50	<5	2	<0.5	<0.5	<0.5	<0.5	<0.5
	06/01/06	<50	<5	2	<0.5	<0.5	<0.5	<0.5	<0.5
	09/11/06	<50	<5	4	<0.5	<0.5	<0.5	<0.5	<0.5
	DESTROYED								

**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Former Chevron Service Station #9-2029  
890 West MacArthur Blvd.  
Oakland, California

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**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

<sup>1</sup> Laboratory confirmed analytical result.

## STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

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, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). 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 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, as directed by the scope of work. 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.

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 #9-2029 Job Number: 386911  
 Site Address: 890 West Macarthur Blvd. Event Date: 11-10-11 (inclusive)  
 City: Oakland, CA Sampler: Fr

Well ID: MW-5 Date Monitored: 11-10-11  
 Well Diameter: 2  
 Total Depth: 25.00 ft.  
 Depth to Water: 7.60 ft.  Check if water column is less than 0.50 ft.  
17.40 xVF 17 = 2.95 x3 case volume = Estimated Purge Volume: 90 gal.  
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.08

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

### Purge Equipment:

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

### Sampling Equipment:

Disposable Bailer /  
 Pressure Bailer \_\_\_\_\_  
 Metal Filters \_\_\_\_\_  
 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 / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_

Start Time (purge): 1015 Weather Conditions: Sunny  
 Sample Time/Date: 1035 / 11-10-11 Water Color: Clean Odor: 0 / N STRONG  
 Approx. Flow Rate: 1.5 gpm. Sediment Description: NONE  
 Did well de-water? No If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal. DTW @ Sampling: 10.95

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>1017</u>	<u>3.0</u>	<u>6.97</u>	<u>705</u>	<u>19.4</u>	_____	_____
<u>1019</u>	<u>6.0</u>	<u>6.96</u>	<u>711</u>	<u>19.9</u>	_____	_____
<u>1021</u>	<u>9.0</u>	<u>6.93</u>	<u>719</u>	<u>20.1</u>	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)/5 OXYS (8260)
	<u>2</u> x 1 liter ambers	YES	NP	CHEVRON RTC	CHEVRON PFI STUDY

COMMENTS: \_\_\_\_\_

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



# GETTLER - RYAN Inc.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-2029 Job Number: 386911  
 Site Address: 890 West Macarthur Blvd. Event Date: 11.10.11 (inclusive)  
 City: Oakland, CA Sampler: FT

Well ID: MW-6 Date Monitored: 11.10.11  
 Well Diameter: 2  
 Total Depth: 24.97 ft.  
 Depth to Water: 7.54 ft.  Check if water column is less than 0.50 ft.  
17.38 x VF .17 = 2.95 x3 case volume = Estimated Purge Volume: 9.0 gal.  
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.06

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

### Purge Equipment:

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

### Sampling Equipment:

Disposable Bailer /  
 Pressure Bailer \_\_\_\_\_  
 Metal Filters \_\_\_\_\_  
 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 / Absorbant Sock (circle one) /  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_

Start Time (purge): 1050 Weather Conditions: SUNNY  
 Sample Time/Date: 1110 / 11.10.11 Water Color: CLEAN Odor: D/N MODERATE  
 Approx. Flow Rate: 1.5 gpm. Sediment Description: NONE  
 Did well de-water? NO If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal. DTW @ Sampling: 10.98

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm - μS)	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>1052</u>	<u>3.0</u>	<u>6.94</u>	<u>762</u>	<u>19.1</u>		
<u>1054</u>	<u>6.0</u>	<u>6.91</u>	<u>770</u>	<u>19.7</u>		
<u>1056</u>	<u>9.0</u>	<u>6.89</u>	<u>781</u>	<u>20.0</u>		

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>TPH-GRO(8015)/BTEX(8260)/5 OXYS (8260)</u>
	<u>2</u> x 1 liter ambers	<u>YES</u>	<u>NP</u>	<u>CHEVRON RTC</u>	<u>CHEVRON PFI STUDY</u>

### COMMENTS:

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





# GETTLER - RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-2029 Job Number: 386911  
 Site Address: 890 West Macarthur Blvd. Event Date: 11.10.11 (inclusive)  
 City: Oakland, CA Sampler: FT

Well ID MW- 7  
 Well Diameter 2  
 Total Depth 24.91 ft.  
 Depth to Water 9.68 ft.  
15.23 xVF .17 = 2.58

Date Monitored: 11.10.11

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.

x3 case volume = Estimated Purge Volume: 8.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.72

### Purge Equipment:

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

### Sampling Equipment:

Disposable Bailer /  
 Pressure Bailer \_\_\_\_\_  
 Metal Filters \_\_\_\_\_  
 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 / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_

Start Time (purge): 1125 Weather Conditions: SUNNY  
 Sample Time/Date: 1145 / 11.10.11 Water Color: 6.0 Odor: D/N STWOK  
 Approx. Flow Rate: 1.5 gpm. Sediment Description: S. SILTY  
 Did well de-water? No If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal. DTW @ Sampling: 10.80

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (°/ F)	D.O. (mg/L)	ORP (mV)
<u>1127</u>	<u>2.5</u>	<u>6.93</u>	<u>708</u>	<u>19.9</u>		
<u>1129</u>	<u>5.0</u>	<u>6.90</u>	<u>715</u>	<u>20.2</u>		
<u>1131</u>	<u>8.0</u>	<u>6.87</u>	<u>722</u>	<u>20.8</u>		

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 7	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)/5 OXYS (8260)
	2 x 1 liter ambers	YES	NP	CHEVRON RTC	CHEVRON PFI STUDY

### COMMENTS:

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



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-2029 Job Number: 386911  
 Site Address: 890 West Macarthur Blvd. Event Date: 11.10.11 (inclusive)  
 City: Oakland, CA Sampler: FR

Well ID: MW-8  
 Well Diameter: 2 in.  
 Total Depth: 24.96 ft.  
 Depth to Water: 11.49 ft.

Date Monitored: 11.10.11

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 13.47 xVF .17 = 2.28 x3 case volume = Estimated Purge Volume: 7.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.18

### 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 / Absorbant Sock (circle one)   
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 1200 Weather Conditions: SUNNY  
 Sample Time/Date: 1225 / 11.10.11 Water Color: BLU. Odor: Y10  
 Approx. Flow Rate: \_\_\_\_\_ gpm. Sediment Description: S. SILTY  
 Did well de-water? NO If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal. DTW @ Sampling: 13.44

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)
<u>1205</u>	<u>2.5</u>	<u>7.21</u>	<u>487</u>	<u>20.0</u>	_____	_____
<u>1210</u>	<u>5.0</u>	<u>7.19</u>	<u>492</u>	<u>20.6</u>	_____	_____
<u>1215</u>	<u>7.0</u>	<u>7.17</u>	<u>497</u>	<u>20.9</u>	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>TPH-GRO(8015)/BTEX(8260)/ 5 OXYS (8260)</u>

COMMENTS: \_\_\_\_\_

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

# Chevron California Region Analysis Request/Chain of Custody



11/10/11-06

For Lancaster Laboratories use only  
 Acct. #: 12099 Sample # 6467906-09 Group #: 008286

CRA MTI Project #: 61-1974

C# 1276166

Facility #: <u>SS#9-2029 G-R#386911 Global ID#T0600173887</u> Site Address: <u>890 WEST MACARTHUR BLVD., OAKLAND, CA</u> Chevron PM: <u>MTI</u> CRACKJ Kierman Consultant/Office: <u>G-R, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568</u> Lead Consultant: Consultant Prj. Mgr.: <u>Deanna L. Harding (deanna@grinc.com)</u> Consultant Phone #: <u>925-551-7555</u> Fax #: <u>925-551-7899</u> Sampler: <u>Frank Tennison</u>			Matrix <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air		Analyses Requested Preservation Codes H H H H H BTEX 8260 <input type="checkbox"/> 8021 <input type="checkbox"/> TPH 8015 MOD GPO TPH 8015 MOD DPO <input type="checkbox"/> Silica Gel Cleanup 8260 full scan S Oxygenates (8260) Total Lead Method Dissolved Lead Method					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						
Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil <input type="checkbox"/> Air	Total Number of Containers	BTEX 8260	TPH 8015 MOD GPO	TPH 8015 MOD DPO	8260 full scan	S Oxygenates (8260)	Total Lead Method	Dissolved Lead Method	Comments / Remarks
	11-10-11	1035	X			W		6	X	X			X			
MW-5	↓	1110	X			↓		6	X	X			X			
MW-6	↓	1145	X			↓		6	X	X			X			
MW-7	↓	1225	X			↓		6	X	X			X			
MW-8	↓		X			↓		6	X	X			X			

Turnaround Time Requested (TAT) (please circle) STD. TAT <u>72 hour</u> 48 hour 24 hour 4 day 5 day			Relinquished by: <u>[Signature]</u> Date: <u>11-10-11</u> Time: <u>1315</u>		Received by: <u>a. fulgor</u> Date: <u>11/10/11</u> Time: <u>1315</u>	
Data Package Options (please circle if required) EDF/EDD QC Summary Type I - Full Type VI (Raw Data) <input type="checkbox"/> Coelt Deliverable not needed WIP (RWQCB) Disk			Relinquished by: <u>a. fulgor</u> Date: <u>11/10/11</u> Time: <u>1630</u>		Received by: <u>SOUTHWEST</u> Date: _____ Time: _____	
Relinquished by Commercial Carrier: UPS FedEx <u>Other</u>			Relinquished by: _____ Date: _____ Time: _____		Received by: <u>[Signature]</u> Date: <u>11/11/11</u> Time: <u>2115</u>	
Temperature Upon Receipt: <u>0.9-3.0</u> °C			Custody Seals Intact? Yes No		_____	



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# Analysis Report

## ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron c/o CRA  
Suite 107  
10969 Trade Center Dr  
Rancho Cordova CA 95670

November 22, 2011

Project: 92029

Submittal Date: 11/11/2011  
Group Number: 1276166  
PO Number: 92029  
Release Number: MTI  
State of Sample Origin: CA

RECEIVED

NOV 23 2011

GETTLER-RYAN INC.  
GENERAL CONTRACTORS

### Client Sample Description

MW-5-W-111110 Grab Water  
MW-6-W-111110 Grab Water  
MW-7-W-111110 Grab Water  
MW-8-W-111110 Grab Water

### Lancaster Labs (LLI) #

6467906  
6467907  
6467908  
6467909

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

ELECTRONIC     Gettler-Ryan, Inc.  
COPY TO  
ELECTRONIC     Chevron c/o CRA  
COPY TO  
ELECTRONIC     Chevron  
COPY TO

Attn: Rachelle Munoz

Attn: Report Contact

Attn: Anna Avina



## **Analysis Report**

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Questions? Contact your Client Services Representative  
Jill M Parker at (717) 656-2300 Ext. 1241

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Robin C. Runkle".

**Robin C. Runkle**  
**Senior Specialist**



# Analysis Report

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Page 1 of 1

**Sample Description:** MW-5-W-111110 Grab Water  
Facility# 92029 Job# 386911 MTI# 61-1974 GRD  
890 W MacArthur-Oakland T0600173887 MW-5

LLI Sample # WW 6467906  
LLI Group # 1276166  
Account # 12099

**Project Name:** 92029

Collected: 11/10/2011 10:35 by FT Chevron c/o CRA  
Suite 107  
Submitted: 11/11/2011 21:15 10969 Trade Center Dr  
Reported: 11/22/2011 18:32 Rancho Cordova CA 95670

WMO05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			ug/l	ug/l	
10943	t-Amyl methyl ether	994-05-8	N.D.	0.5	1
10943	Benzene	71-43-2	6	0.5	1
10943	t-Butyl alcohol	75-65-0	N.D.	2	1
10943	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	10	0.5	1
10943	di-Isopropyl ether	108-20-3	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	3	0.5	1
10943	Xylene (Total)	1330-20-7	2	0.5	1
<b>GC Volatiles SW-846 8015B</b>			ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	2,600	50	1

### General Sample Comments

State of California Lab Certification No. 2501  
Trip blank vials were not received by the laboratory for this sample group.

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
10943	BTEX + 5 Oxygenates Water	SW-846 8260B	1	Z113221AA	11/18/2011 18:51	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z113221AA	11/18/2011 18:51	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	11319B07A	11/16/2011 17:04	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11319B07A	11/16/2011 17:04	Laura M Krieger	1

**Sample Description: MW-6-W-111110 Grab Water**
**Facility# 92029 Job# 386911 MTI# 61-1974 GRD  
890 W MacArthur-Oakland T0600173887 MW-6**
**LLI Sample # WW 6467907**
**LLI Group # 1276166**
**Account # 12099**
**Project Name: 92029**

Collected: 11/10/2011 11:10 by FT

Chevron c/o CRA

Suite 107

Submitted: 11/11/2011 21:15

10969 Trade Center Dr

Reported: 11/22/2011 18:32

Rancho Cordova CA 95670

WMO06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			<b>ug/l</b>	<b>ug/l</b>	
10943	t-Amyl methyl ether	994-05-8	N.D.	1	2
10943	Benzene	71-43-2	260	1	2
10943	t-Butyl alcohol	75-65-0	19	4	2
10943	Ethyl t-butyl ether	637-92-3	N.D.	1	2
10943	Ethylbenzene	100-41-4	180	1	2
10943	di-Isopropyl ether	108-20-3	N.D.	1	2
10943	Methyl Tertiary Butyl Ether	1634-04-4	37	1	2
10943	Toluene	108-88-3	7	1	2
10943	Xylene (Total)	1330-20-7	13	1	2
<b>GC Volatiles SW-846 8015B</b>			<b>ug/l</b>	<b>ug/l</b>	
01728	TPH-GRO N. CA water C6-C12	n.a.	5,700	250	5

### General Sample Comments

State of California Lab Certification No. 2501

Trip blank vials were not received by the laboratory for this sample group.

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
10943	BTEX + 5 Oxygenates Water	SW-846 8260B	1	Z113221AA	11/18/2011 19:15	Daniel H Heller	2
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z113221AA	11/18/2011 19:15	Daniel H Heller	2
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	11319B07A	11/16/2011 20:04	Laura M Krieger	5
01146	GC VOA Water Prep	SW-846 5030B	1	11319B07A	11/16/2011 20:04	Laura M Krieger	5



# Analysis Report

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Sample Description: MW-7-W-111110 Grab Water

Facility# 92029 Job# 386911 MTI# 61-1974 GRD  
890 W MacArthur-Oakland T0600173887 MW-7

LLI Sample # WW 6467908

LLI Group # 1276166

Account # 12099

Project Name: 92029

Collected: 11/10/2011 11:45 by FT

Chevron c/o CRA

Suite 107

Submitted: 11/11/2011 21:15

10969 Trade Center Dr

Reported: 11/22/2011 18:32

Rancho Cordova CA 95670

WMO07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B ug/l</b>					
10943	t-Amyl methyl ether	994-05-8	N.D.	0.5	1
10943	Benzene	71-43-2	2	0.5	1
10943	t-Butyl alcohol	75-65-0	4	2	1
10943	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	2	0.5	1
10943	di-Isopropyl ether	108-20-3	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	5	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
<b>GC Volatiles SW-846 8015B ug/l</b>					
01728	TPH-GRO N. CA water C6-C12	n.a.	1,500	50	1

### General Sample Comments

State of California Lab Certification No. 2501

Trip blank vials were not received by the laboratory for this sample group.

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
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	Z113221AA	11/18/2011 19:39	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z113221AA	11/18/2011 19:39	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	11319B07A	11/16/2011 17:30	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11319B07A	11/16/2011 17:30	Laura M Krieger	1





# Analysis Report

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

**Sample Description:** MW-8-W-111110 Grab Water  
 Facility# 92029 Job# 386911 MTI# 61-1974 GRD  
 890 W MacArthur-Oakland T0600173887 MW-8

LLI Sample # WW 6467909  
 LLI Group # 1276166  
 Account # 12099

**Project Name:** 92029

Collected: 11/10/2011 12:25 by FT Chevron c/o CRA  
 Suite 107  
 Submitted: 11/11/2011 21:15 10969 Trade Center Dr  
 Reported: 11/22/2011 18:32 Rancho Cordova CA 95670

WMO08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles</b>			<b>ug/l</b>	<b>ug/l</b>	
10943	t-Amyl methyl ether	994-05-8	N.D.	0.5	1
10943	Benzene	71-43-2	N.D.	0.5	1
10943	t-Butyl alcohol	75-65-0	N.D.	2	1
10943	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	di-Isopropyl ether	108-20-3	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
<b>GC Volatiles</b>			<b>ug/l</b>	<b>ug/l</b>	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

### General Sample Comments

State of California Lab Certification No. 2501  
 Trip blank vials were not received by the laboratory for this sample group.

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
10943	BTEX + 5 Oxygenates Water	SW-846 8260B	1	Z113221AA	11/18/2011 20:03	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z113221AA	11/18/2011 20:03	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	11319B07A	11/16/2011 17:56	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11319B07A	11/16/2011 17:56	Laura M Krieger	1

## Quality Control Summary

 Client Name: Chevron c/o CRA  
 Reported: 11/22/11 at 06:32 PM

Group Number: 1276166

Matrix QC may not be reported if insufficient sample or 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.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: Z113221AA	Sample number(s): 6467906-6467909							
t-Amyl methyl ether	N.D.	0.5	ug/l	96	92	77-120	5	30
Benzene	N.D.	0.5	ug/l	101	97	79-120	5	30
t-Butyl alcohol	N.D.	2.	ug/l	104	97	62-129	7	30
Ethyl t-butyl ether	N.D.	0.5	ug/l	92	95	76-120	3	30
Ethylbenzene	N.D.	0.5	ug/l	106	99	79-120	8	30
di-Isopropyl ether	N.D.	0.5	ug/l	92	95	71-124	2	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	101	105	76-120	4	30
Toluene	N.D.	0.5	ug/l	107	101	79-120	5	30
Xylene (Total)	N.D.	0.5	ug/l	104	97	80-120	7	30
Batch number: 11319B07A	Sample number(s): 6467906-6467909							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	109	75-135	0	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: UST VOCs by 8260B - Water  
 Batch number: Z113221AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6467906	95	96	99	102
6467907	91	92	108	105
6467908	93	94	101	106
6467909	94	94	107	98
Blank	99	98	110	97
LCS	91	92	108	102
LCSD	98	99	103	97
Limits:	80-116	77-113	80-113	78-113

 Analysis Name: TPH-GRO N. CA water C6-C12  
 Batch number: 11319B07A  
 Trifluorotoluene-F

6467906	126
6467907	115
6467908	130

\*- 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: 11/22/11 at 06:32 PM

Group Number: 1276166

### Surrogate Quality Control

6467909	97
Blank	101
LCS	112
LCSD	111

Limits: 63-135

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\* - 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.

# Explanation of Symbols and Abbreviations

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

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>ug</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>ml</b>	milliliter(s)	<b>l</b>	liter(s)
<b>m3</b>	cubic meter(s)	<b>ul</b>	microliter(s)
<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>J</b>	estimated value – The result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
<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. All other results are reported on an as-received basis.		

## U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
<b>A</b>	TIC is a possible aldol-condensation product	<b>B</b>	Value is $<$ CRDL, but $\geq$ 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 sample 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>N</b>	Presumptive evidence of a compound (TICs only)	<b>U</b>	Compound was not detected
<b>P</b>	Concentration difference between primary and confirmation columns $>25\%$	<b>W</b>	Post digestion spike out of control limits
<b>U</b>	Compound was not detected	<b>*</b>	Duplicate analysis not within control limits
<b>X,Y,Z</b>	Defined in case narrative	<b>+</b>	Correlation coefficient for MSA $<0.995$

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

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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