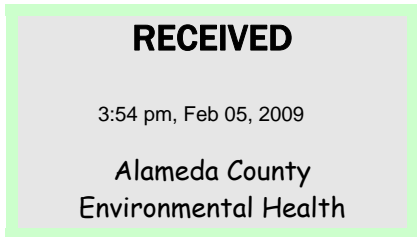




Stacie H. Frerichs  
Team Lead  
Marketing Business Unit

**Chevron Environmental  
Management Company**  
6001 Bollinger Canyon Road  
San Ramon, CA 94583  
Tel (925) 842-9655  
Fax (925) 842-8370



February 3, 2009  
(date)

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

Re: Chevron Facility # 20-6127

Address: 2301-2311 Blanding Avenue, Alameda, California

I have reviewed the attached report titled Fourth Quarter 2008 Groundwater Monitoring Report  
\_\_\_\_\_ and dated February 3, 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**

2000 Opportunity Drive, Suite 110  
Roseville, California 95678  
Telephone: (916) 751-4100 Fax: (916) 751-4199  
<http://www.craworld.com>

February 3, 2009

Reference No. 631916

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

Re: Fourth Quarter 2008 Groundwater Monitoring Report  
Former Signal Oil Marine Storage and Distribution Facility  
(Former Chevron Bulk Plant 20-6127)  
2301-2311 Blanding Avenue  
Alameda, California  
LOP Case No. RO0002466

---

Dear Mr. Wickham:

Conestoga-Rovers & Associates (CRA) is submitting the attached *Groundwater Monitoring and Sampling Report* (report) on behalf of Chevron Environmental Management Company (Chevron) for the referenced site. The report (prepared by Gettler-Ryan Inc. and dated November 14, 2008) presents the results of the fourth quarter 2008 monitoring event. Well MW-1 is sampled on a quarterly basis; a surface water sample (CS-2) is also collected from Alameda Canal on a quarterly basis. Also attached are Figure 1 (Vicinity Map) showing the site location, and Figure 2 (Concentration Map) presenting the fourth quarter 2008 analytical results. The monitoring results during 2008 are summarized below.

During 2008, petroleum hydrocarbon concentrations in well MW-1 generally were similar to or less than those observed during 2007. Total petroleum hydrocarbons as diesel (TPHd) was detected in well MW-1 at concentrations ranging from 580 to 1,700 micrograms per liter ( $\mu\text{g}/\text{L}$ ) during 2008. The TPHd concentrations in well MW--1 have remained relatively stable throughout the course of monitoring. TPH as gasoline (TPHg) was not detected in well MW--1 during the first quarter event, but low concentrations (ranging from 62 to 93  $\mu\text{g}/\text{L}$ ) were detected during the remaining three events. Benzene (3  $\mu\text{g}/\text{L}$  and 0.7  $\mu\text{g}/\text{L}$ ) was only detected during two of the four events during 2008. The TPHg and benzene concentrations in well MW-1 have significantly decreased since the start of monitoring in 2001. Toluene, ethylbenzene, and xylenes generally were not detected in well MW-1 during 2008, with the exception of a low concentration of xylenes (0.8  $\mu\text{g}/\text{L}$ ) during the fourth quarter event; these constituents generally have not been detected for several years. Methyl tertiary butyl ether (MTBE) was not detected in well MW-1 during 2008, and has never been detected in this well. TPHd, TPHg, benzene, toluene, ethylbenzene, and xylenes (BTEX), and MTBE generally were not detected in the surface water samples collected during 2008, with the exception of a low concentration of TPHd (85  $\mu\text{g}/\text{L}$ ) during the first quarter event. Petroleum hydrocarbons generally have not been detected in the surface water samples throughout the course of monitoring.

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Equal  
Employment Opportunity  
Employer

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**CONESTOGA-ROVERS  
& ASSOCIATES**

February 3, 2009

2

Reference No. 631916

Based on the analytical results, impacted groundwater is present beneath the site in the area of well MW-1. However, concentrations in well MW-1 have significantly decreased and the remaining concentrations are relatively low. CRA recommends continued monitoring and sampling to further evaluate groundwater quality and concentration trends. During the most recent investigation at the site in August 2008, elevated concentrations of TPHd, TPHg, and benzene were detected in groundwater near MW-1; therefore, well MW-1 may not accurately represent groundwater quality beneath the site. As requested by Alameda County Environmental Health (ACEH) in a letter dated November 10, 2008, additional investigation is planned to further evaluate and monitor groundwater quality at the site. Based on the surface water sample analytical results, impacted groundwater does not appear to be discharging into Alameda Canal.

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

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Christopher J. Benedict

James P. Kiernan, PE #C68498

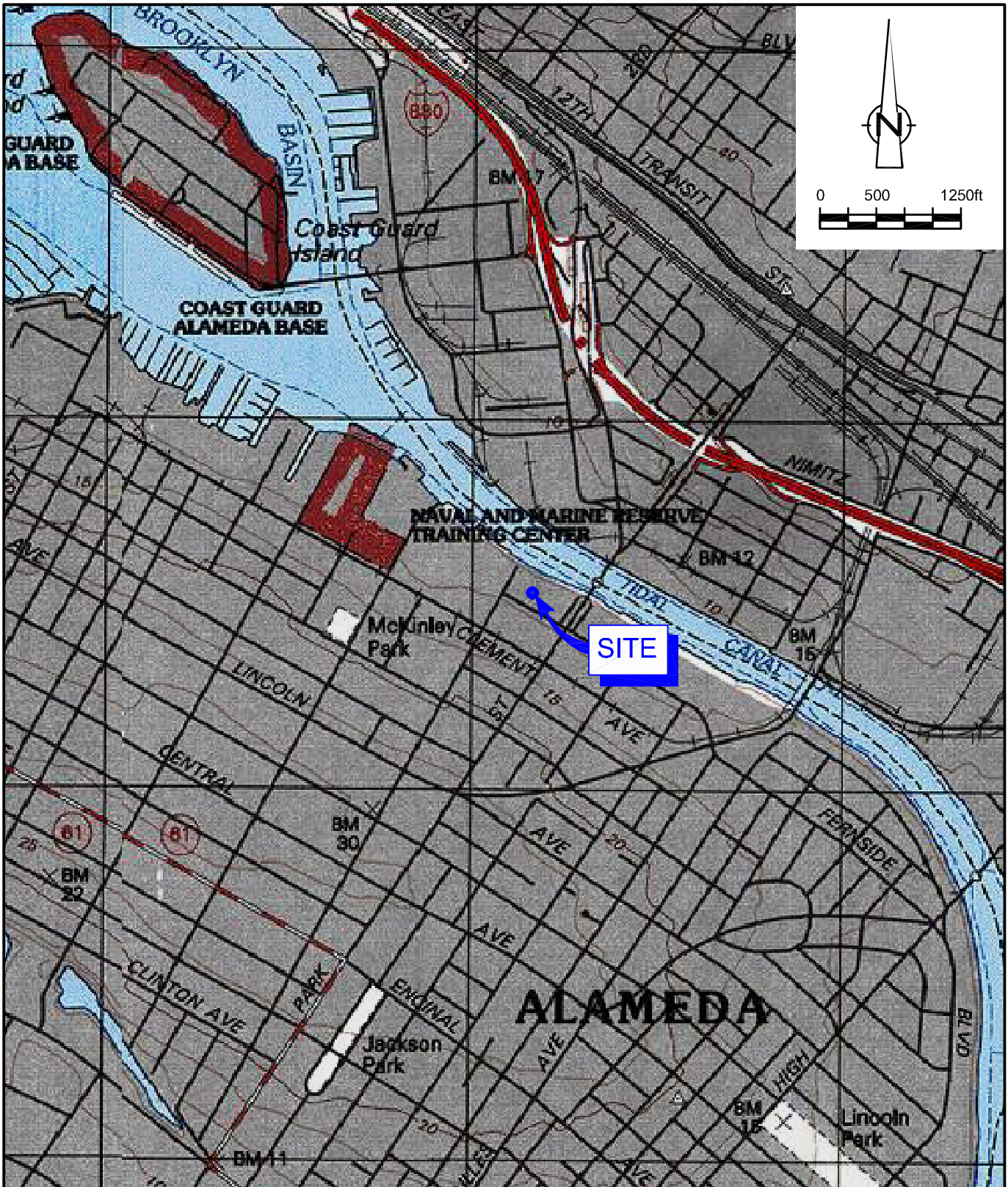
CB/kw/3

Encl.

Attachment A Fourth Quarter 2008 Groundwater Monitoring and Sampling Report

cc: Ms. Stacie Frerichs, Chevron Environmental Management Company  
Ms. Julie Beck Ball, Mr. Peter Reinhold Beck  
Mr. Monroe Wingate  
Mr. Tom Foley, Gallagher & Miersch



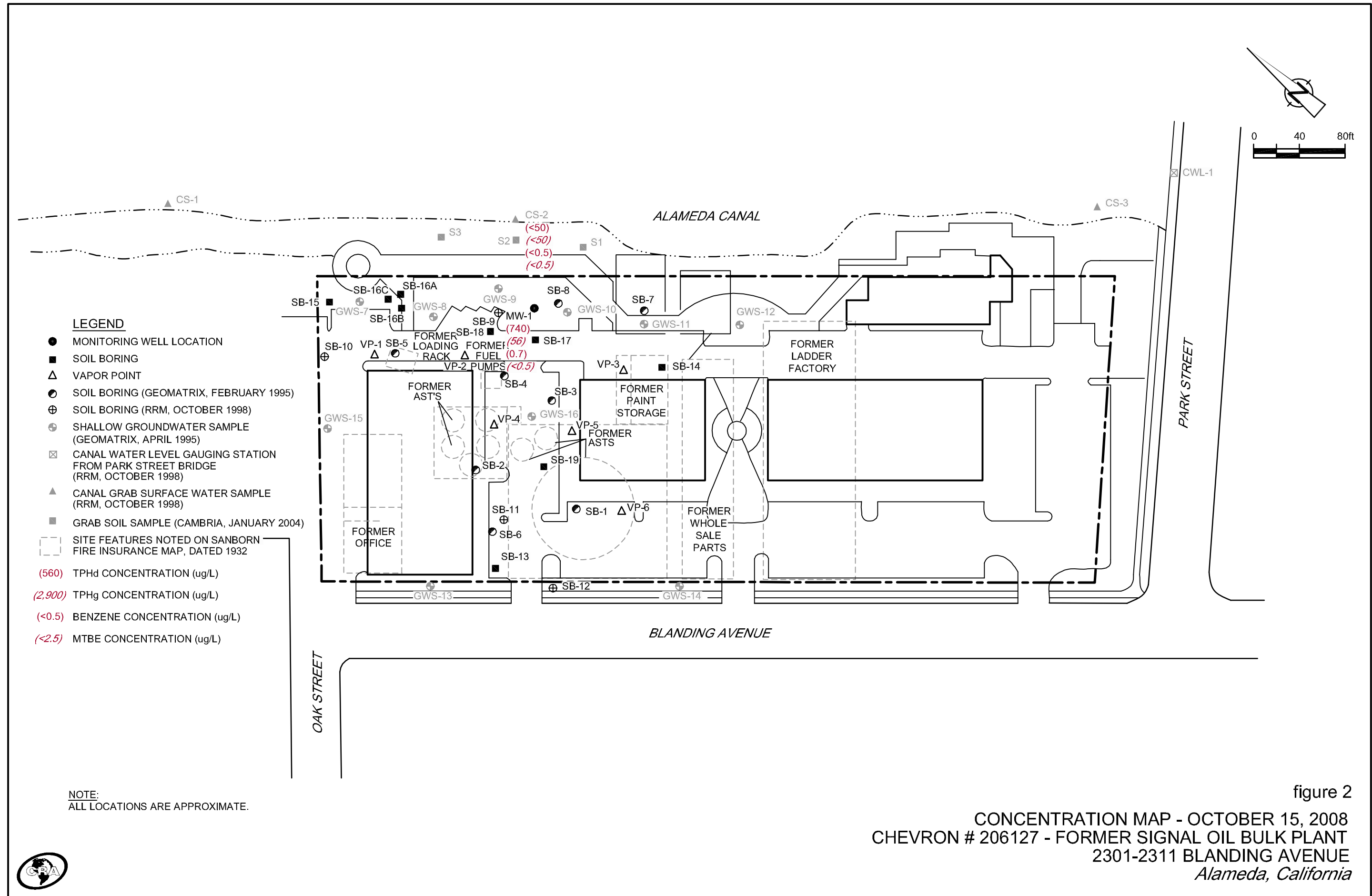


SOURCE: TOPO! MAPS.

figure 1

VICINITY MAP  
 CHEVRON # 206127 - FORMER SIGNAL OIL BULK PLANT  
 2301-2311 BLANDING AVENUE  
 Alameda, California





ATTACHMENT A

FOURTH QUARTER 2008 GROUNDWATER MONITORING AND SAMPLING REPORT





# GETTLER-RYAN Inc.



## TRANSMITTAL

November 14, 2008

G-R #386498

TO: Mr. James Kiernan  
Conestoga-Rovers & Associates  
2000 Opportunity Drive, Suite 110  
Roseville, CA 95678

CC: Ms. Stacie H. Frerichs  
Chevron EMC  
6111 Bollinger Canyon Road  
Room 3596  
San Ramon, California 94583  
(VIA PDF)

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

RE: **Chevron #206127 (MTI)**  
**2301-2337 Blanding Avenue**  
**Alameda, California**  
**(Former Signal Oil Marine Terminal)**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	November 14, 2008	Groundwater Monitoring and Sampling Report Fourth Quarter Event of October 15, 2008

### COMMENTS:

Pursuant to your request, we are providing you with a copy of the above referenced report for **your use and distribution to the following (via PDF):**

Mr. Steven Plunkett, Alameda County Health Care Services, Dept. of Environmental Health, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577  
(Distributed by Conestoga-Rovers & Associates via PDF)

Enclosures

trans/206127-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

November 14, 2008  
(date)

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

Re: Chevron Facility # 206127

Address: 2301-2337 Blanding Ave., Alameda, California

I have reviewed the attached routine groundwater monitoring report dated November 14, 2008.

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







# GETTLER - RYAN INC.



November 14, 2008  
G-R Job #386498

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

**RE: Fourth Quarter Event of October 15, 2008**  
Groundwater Monitoring & Sampling Report  
Chevron #206127 (Former Signal Oil Marine Terminal)  
2301-2337 Blanding Avenue  
Alameda, California

Dear Ms. H. Frerichs:

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

Static groundwater level was measured and the well was checked for the presence of separate-phase hydrocarbons. Static water level data, groundwater elevation, and separate-phase hydrocarbon thickness (if any) are presented in the attached Table 1. A Groundwater Elevation Map is included as Figure 1.

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

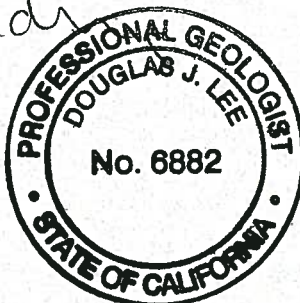
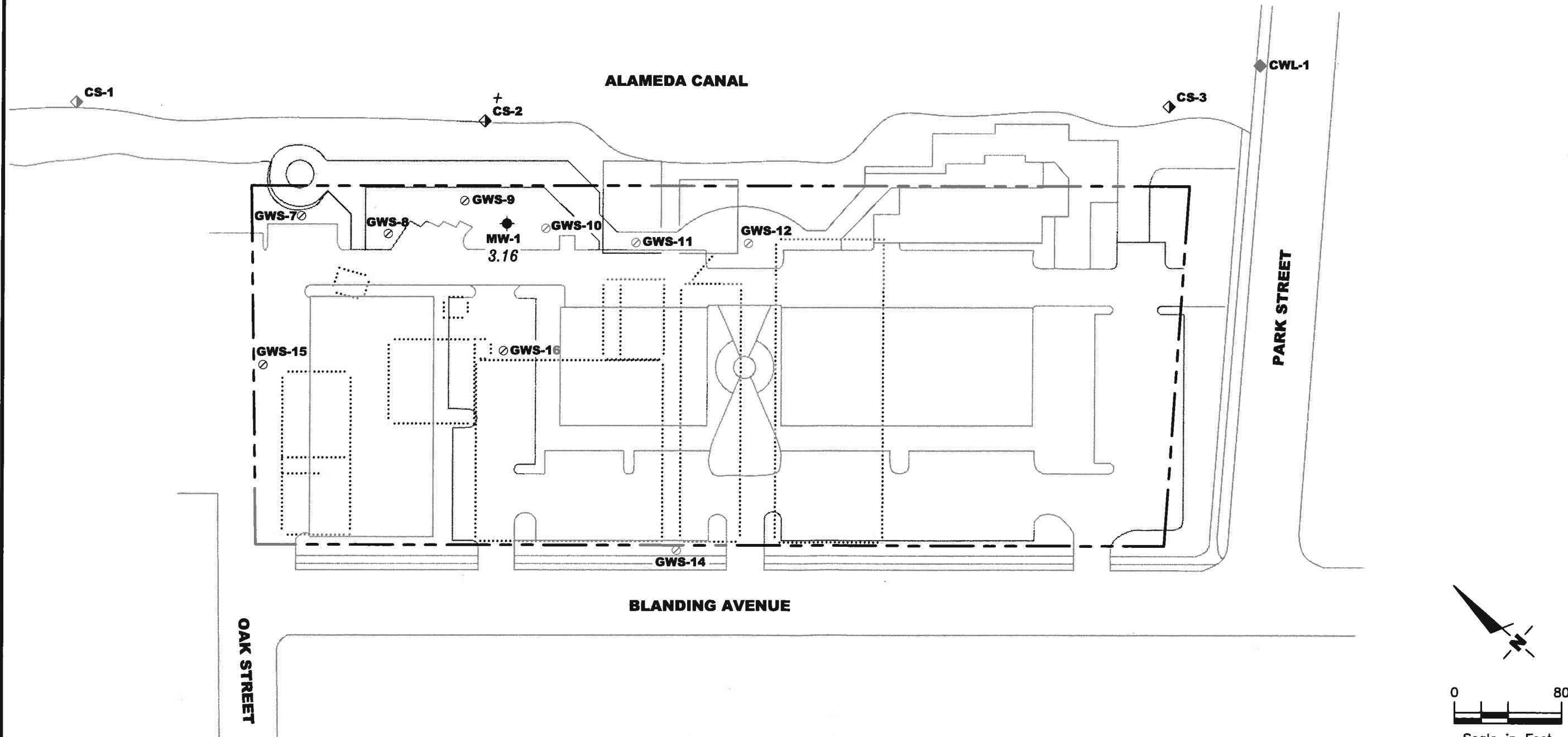


Figure 1: Groundwater Elevation Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and Laboratory Analytical Reports

**EXPLANATION**

- ◆ Groundwater monitoring well
  - ◆ Canal water level gauging station from Park Street Bridge (RRM, October 1998)
  - ◊ Canal grab surface water sample
  - Shallow groundwater survey point (Geomatrix, April 1995)
  - ⋈ Site features noted on Sanborn Fire Insurance map, dated 1932
- |       |  |
|-------|--|
| 99.99 | Groundwater elevation in feet referenced to Mean Sea Level |
| +     | TOC not available  |



**GROUNDWATER ELEVATION MAP**  
 Chevron #206127 (Former Signal Oil Marine Terminal)  
 2301-2337 Blanding Avenue  
 Alameda, California

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

PROJECT NUMBER: 386498  
 REVIEWED BY: [Signature]  
 DATE: October 15, 2008  
 REVISED DATE: [Blank]

Source: Figure modified from drawing provided by RRM engineering contracting firm.

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron #206127 (Former Signal Oil Marine Terminal)  
2301-2337 Blanding Avenue  
Alameda, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-D (µg/L)	TPH-C (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>MW-1</b>										
01/23/01 <sup>1</sup>	--	7.16	--	1,100 <sup>2,3</sup>	5,210 <sup>4</sup>	868	<50.0	<50.0	<50.0	<250
04/09/01	10.62	8.12	2.50	1,200 <sup>6</sup>	3,000 <sup>5</sup>	920	<20	<20	<20	<100
07/30/01	10.62	9.15	1.47	550 <sup>3,8</sup>	2,000 <sup>7</sup>	730	13	<5.0	<5.0	<25
10/08/01	10.62	7.86	2.76	2,200 <sup>9</sup>	1,200	120	2.4	5.9	6.4	<2.5
01/13/02	10.62	7.02	3.60	3,300 <sup>3</sup>	930	320	0.78	0.87	3.8	<2.5
04/08/02	10.62	9.60	1.02	1,200 <sup>3</sup>	960	50	1.4	2.6	9.0	<2.5
07/31/02	10.62	9.27	1.35	2,800 <sup>3</sup>	930	64	1.4	1.9	11	<5.0
10/15/02	10.62	8.00	2.62	1,000 <sup>3</sup>	620	25	0.78	1.4	4.3	<2.5
01/14/03	10.62	7.05	3.57	960 <sup>3</sup>	1,600	20	1.3	1.3	<1.5	<2.5
04/15/03	10.62	8.02	2.60	920 <sup>3</sup>	870	56	1	1.4	3.1	<2.5
07/16/03 <sup>10</sup>	10.62	10.08	0.54	1,400 <sup>3</sup>	780	85	1	0.8	0.7	<0.5
10/18/03 <sup>10</sup>	10.62	8.51	2.11	1,200 <sup>3</sup>	640	42	0.8	<0.5	0.5	<0.5
01/22/04 <sup>10</sup>	10.62	8.95	1.67	1,500 <sup>3</sup>	440	18	<0.5	<0.5	<0.5	<0.5
04/23/04 <sup>10</sup>	10.62	8.95	1.67	2,200 <sup>3</sup>	410	10	<0.5	<0.5	<0.5	<0.5
07/23/04 <sup>10</sup>	10.62	9.21	1.41	1,800 <sup>3</sup>	400	6	<0.5	<0.5	<0.5	<0.5
10/22/04 <sup>10</sup>	10.62	8.36	2.26	2,200 <sup>3</sup>	150	2	<0.5	<0.5	<0.5	<0.5
01/28/05 <sup>10</sup>	10.62	7.09	3.53	1,200 <sup>3</sup>	55	8	<0.5	<0.5	<0.5	<0.5
04/26/05 <sup>10</sup>	10.62	7.84	2.78	480 <sup>3</sup>	<50	5	<0.5	<0.5	<0.5	<0.5
07/15/05 <sup>10</sup>	10.62	8.12	2.50	610 <sup>3,11</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/14/05 <sup>10</sup>	10.62	8.07	2.55	920 <sup>3,12</sup>	<50	10	<0.5	<0.5	<0.5	<0.5
01/12/06 <sup>10</sup>	10.62	6.98	3.64	960 <sup>3,12</sup>	<50	6	<0.5	<0.5	<0.5	<0.5
04/13/06 <sup>10</sup>	10.62	7.04	3.58	1,200 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/13/06 <sup>10</sup>	10.62	7.13	3.49	1,200 <sup>3</sup>	92	14	<0.5	<0.5	<0.5	<0.5
10/17/06 <sup>10</sup>	10.62	7.64	2.98	990 <sup>3</sup>	<50	3	<0.5	<0.5	<0.5	<0.5
01/16/07 <sup>10</sup>	10.62	7.09	3.53	840 <sup>3</sup>	83	4	<0.5	<0.5	<0.5	<0.5
04/17/07 <sup>10</sup>	10.62	7.11	3.51	1,200 <sup>3</sup>	57	<0.5	<0.5	<0.5	<0.5	<0.5
07/17/07 <sup>10</sup>	10.62	7.41	3.21	1,100 <sup>3</sup>	120	8	<0.5	<0.5	<0.5	<0.5
10/16/07 <sup>10</sup>	10.62	7.55	3.07	750 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/16/08 <sup>10</sup>	10.62	6.98	3.64	1,700 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/16/08 <sup>10</sup>	10.62	7.36	3.26	1,100 <sup>3</sup>	62	<0.5	<0.5	<0.5	<0.5	<0.5
07/16/08 <sup>10</sup>	10.62	7.89	2.73	580 <sup>3</sup>	93	3	<0.5	<0.5	<0.5	<0.5
<b>10/15/08<sup>10</sup></b>	<b>10.62</b>	<b>7.46</b>	<b>3.16</b>	<b>740<sup>3</sup></b>	<b>56</b>	<b>0.7</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>0.8</b>	<b>&lt;0.5</b>

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron #206127 (Former Signal Oil Marine Terminal)  
2301-2337 Blanding Avenue  
Alameda, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-D (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
CS-2										
07/30/01	--	--	--	140 <sup>3,5</sup>	<50	<0.50	<0.50	<0.50	<0.50	<2.5
10/08/01	--	--	--	53 <sup>9</sup>	<50	<0.50	<0.50	<0.50	<1.5	<2.5
01/13/02	--	--	--	<50 <sup>3</sup>	<50	<0.50	<0.50	<0.50	<1.5	<2.5
04/08/02	--	--	--	77 <sup>3</sup>	<50	<0.50	<0.50	<0.50	<1.5	<2.5
07/31/02	--	--	--	<50 <sup>3</sup>	<50	<0.50	<0.50	<0.50	<1.5	<2.5
10/15/02	--	--	--	<50 <sup>3</sup>	<50	<0.50	<0.50	<0.50	<1.5	<2.5
01/14/03	--	--	--	<50 <sup>3</sup>	<50	<0.50	<0.50	<0.50	<1.5	<2.5
04/15/03	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<1.5	<2.5
07/16/03 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	0.7	<0.5	0.6	<0.5
10/18/03 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/22/04 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/23/04 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/23/04 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/22/04 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/28/05 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/26/05 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/15/05 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/14/05 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/12/06 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/13/06 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/13/06 <sup>10</sup>	--	--	--	140 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/17/06 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/16/07 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/17/07 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/17/07 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/16/07 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/16/08 <sup>10</sup>	--	--	--	85 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/16/08 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/16/08 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/15/08 <sup>10</sup>	--	--	--	<50 <sup>3</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Chevron #206127 (Former Signal Oil Marine Terminal)  
 2301-2337 Blanding Avenue  
 Alameda, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-D (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>TRIP BLANK</b>										
<b>TB-LB</b>										
01/23/01	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50
04/09/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
07/30/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
<b>QA</b>										
10/08/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
01/13/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
04/08/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
07/31/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
10/15/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
01/14/03	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
04/15/03	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5
07/16/03 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/18/03 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/22/04 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/23/04 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/23/04 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/22/04 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/28/05 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/26/05 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/15/05 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/14/05 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/12/06 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/13/06 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/13/06 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/17/06 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/16/07 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/17/07 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/17/07 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/16/07 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Chevron #206127 (Former Signal Oil Marine Terminal)  
 2301-2337 Blanding Avenue  
 Alameda, California

WELL ID/ DATE	TOC* (fl.)	DTW (ft.)	GWE (msl)	TPH-D (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>QA (cont)</b>										
01/16/08 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/16/08 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/16/08 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/15/08 <sup>10</sup>	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5

Table 1  
 Groundwater Monitoring Data and Analytical Results  
 Chevron #206127 (Former Signal Oil Marine Terminal)  
 2301-2337 Blanding Avenue  
 Alameda, California

**EXPLANATIONS:**

TOC = Top of Casing (ft.) = Feet	TPH-G = Total Petroleum Hydrocarbons as Gasoline B = Benzene	(µg/L) = Micrograms per liters -- = Not Measured/Not Analyzed
DTW = Depth to Water	T = Toluene	CS-2 = Creek Sample
GWE = Groundwater Elevation (msl) = Mean sea level	E = Ethylbenzene X = Xylenes	QA = Quality Assurance/Trip Blank
TPH-D = Total Petroleum Hydrocarbons as Diesel	MTBE = Methyl Tertiary Butyl Ether	

\* TOC elevations were surveyed on January 25, 2001, by Virgil Chavez Land Surveying. The benchmark used for the survey was a City of Alameda benchmark being a cut square at the centerline return, south corner of Oak and Blanding, (Benchmark Elevation = 8.236 feet, NGVD 29).

- 1 Well development performed.
- 2 Laboratory report indicates unidentified hydrocarbons <C16.
- 3 TPH-D with silica gel cleanup.
- 4 Laboratory report indicates weathered gasoline C6-C12.
- 5 Laboratory report indicates discrete peaks.
- 6 Laboratory report indicates diesel C9-C24 + unidentified hydrocarbons <C16.
- 7 Laboratory report indicates gasoline C6-C12.
- 8 Laboratory report indicates unidentified hydrocarbons C9-C24.
- 9 Analysis performed without silica gel cleanup although was requested on the Chain of Custody.
- 10 BTEX and MTBE by EPA Method 8260.
- 11 Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It elutes in the DRO range later than #2 fuel.
- 12 Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes later in the DRO range.

## 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 #206127  
 Site Address: 2301-2337 Blanding Avenue  
 City: Alameda, CA

Job Number: 386498  
 Event Date: 10-15-08 (inclusive)  
 Sampler: Joe

Well ID: MW-1  
 Well Diameter: 2 in.  
 Total Depth: 17.15 ft.  
 Depth to Water: 7.46 ft.

Date Monitored: 10-15-08

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

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.69 xVF 0.17 = 1.65 x3 case volume = Estimated Purge Volume: 5 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: 0 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): 1035 Weather Conditions: clear  
 Sample Time/Date: 1115 10-15-08 Water Color: clear Odor: Y 1 (N)  
 Approx. Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal. DTW @ Sampling: 7.58

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - <u>18</u> )	Temperature (°C / °F)	D.O. (mg/L)	ORP (mV)
<u>1043</u>	<u>1.5</u>	<u>6.84</u>	<u>2583</u>	<u>16.9</u>	_____	_____
<u>1048</u>	<u>3</u>	<u>6.86</u>	<u>2587</u>	<u>16.6</u>	_____	_____
<u>1053</u>	<u>5</u>	<u>6.80</u>	<u>2575</u>	<u>17.2</u>	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	<u>6</u> x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)
	<u>2</u> x 500ml ambers	YES	NP	LANCASTER	TPH-D 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 #206127 Job Number: 386498  
 Site Address: 2301-2337 Blanding Avenue Event Date: 10-15-08 (inclusive)  
 City: Alameda, CA Sampler: Joe

Well ID: CS-2 Date Monitored: 10-15-08  
 Well Diameter: \_\_\_\_\_ in.  
 Total Depth: \_\_\_\_\_ ft.  
 Depth to Water: \_\_\_\_\_ ft.  Check if water column is less than 0.50 ft.  
 \_\_\_\_\_ xVF \_\_\_\_\_ = \_\_\_\_\_ x3 case volume = Estimated Purge Volume: \_\_\_\_\_ gal.

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

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: 0 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): \_\_\_\_\_ Weather Conditions: clear  
 Sample Time/Date: 1210 10-15-08 Water Color: clear Odor: YIM  
 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
CS-2	<u>6</u> x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTX+MTBE(8260)
	<u>2</u> x 500ml ambers	YES	NP	LANCASTER	TPH-D w/sg (8015)

COMMENTS: CREEK SAMPLE  
construction activity near creek/harbor.

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

# Chevron California Region Analysis Request/Chain of Custody



161708-16

For Lancaster Laboratories use only  
 Acct. #: 12099 Sample # 5502336-38 Group #: 004307

C# 1115762

CRA MTI Project #: 63H-1915 Analyses Requested

Facility #: SS#206127 G-R#386498 Global ID#T0600101574 Site Address: 2301-2337 BLANDING AVENUE, ALAMEDA, CA Chevron PM: MTI Lead Consultant: CRAKJ 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: JOE ASEMIAN			Matrix <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air		Preservation Codes HX BTEX + MTBE 8260 <input type="checkbox"/> 8021 <input type="checkbox"/> TPH 8015 MOD GRO TPH 8015 MOD DRO <input checked="" type="checkbox"/> Silica Gel Cleanup 8260 full scan Oxygenates 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	Air	Total Number of Containers	BTEX + MTBE 8260	8021	TPH 8015 MOD GRO	TPH 8015 MOD DRO	8260 full scan	Oxygenates	Total Lead Method	Dissolved Lead Method	Comments / Remarks
BA			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
MW-1	10-15-08	1115	<input type="checkbox"/>			<input type="checkbox"/>			8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
CS-2	"	1210	<input type="checkbox"/>			<input type="checkbox"/>			8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						

Turnaround Time Requested (TAT) (please circle) STD TAT: 24 hour, 72 hour, 48 hour, 4 day, 5 day			Relinquished by: <i>[Signature]</i> Date: 10-16-08 Time: 0700		Received by: <i>[Signature]</i> Date: 10-17-08 Time: 1130	
Data Package Options (please circle if required) QC Summary Type I - Full Type VI (Raw Data) <input type="checkbox"/> Coelt Deliverable not needed EDF/EDD WIP (RWQCB) Disk			Relinquished by: <i>[Signature]</i> Date: 10-17-08 Time: 1130		Received by: <i>[Signature]</i> Date: 17 OCT 08 Time: 1400	
Relinquished by Commercial Carrier: UPS FedEx Other <i>DHL</i>			Relinquished by: <i>[Signature]</i> Date: 17 OCT 08 Time: 1634		Received by: <i>[Signature]</i> Date: 17 OCT 08 Time: 0900	
Temperature Upon Receipt: 0-3-33 C°			Custody Seals Intact? Yes <input checked="" type="checkbox"/> No			



**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**RECEIVED**

OCT 30 2008

**GETTLER-RYAN INC.**  
**GENERAL CONTRACTORS****SAMPLE GROUP**

The sample group for this submittal is 1115762. Samples arrived at the laboratory on Saturday, October 18, 2008. The PO# for this group is 206127 and the release number is MTI.

**Client Description**QA-T-081015 NA Water  
MW-1-W-081015 Grab Water  
CS-2-W-081015 Grab Water**Lancaster Labs Number**5502336  
5502337  
5502338ELECTRONIC      Gettler-Ryan, Inc.  
COPY TO

Attn: Cheryl Hansen



## ***Analysis Report***

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • 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 "Susan M. Goshert".

**Susan M. Goshert**  
**Group Leader**



# Analysis Report

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Page 1 of 1

Lancaster Laboratories Sample No. WW5502336

Group No. 1115762

QA-T-081015 NA Water

Facility# 206127 Job# 386498 MTI# 63H-1916 GRD

2301-2337 Blanding-Alameda T0600101574 QA

Collected: 10/15/2008

Account Number: 12099

Submitted: 10/18/2008 09:40

Reported: 10/29/2008 at 16:04

Discard: 11/29/2008

Chevron c/o CRA

Suite 110

2000 Opportunity Drive

Roseville CA 95678

BAAQA

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

State of California Lab Certification No. 2116

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

## Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis		Analyst	Dilution Factor
				Date and Time			
01728	TPH-GRO - Waters	SW-846 8015B modified	1	10/24/2008	19:40	Martha L Seidel	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/25/2008	04:21	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/24/2008	19:40	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/25/2008	04:21	Michael A Ziegler	1



# Analysis Report

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Page 1 of 1

Lancaster Laboratories Sample No. WW5502337

Group No. 1115762

MW-1-W-081015 Grab Water

Facility# 206127 Job# 386498 MTI# 63H-1916 GRD

2301-2337 Blanding-Alameda T0600101574 MW-1

Collected: 10/15/2008 11:15 by JA

Account Number: 12099

Submitted: 10/18/2008 09:40

Reported: 10/29/2008 at 16:04

Discard: 11/29/2008

Chevron c/o CRA

Suite 110

2000 Opportunity Drive

Roseville CA 95678

BAA01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Dilution Factor
				Method	Units	
01728	TPH-GRO - Waters	n.a.	56	Detection Limit	ug/l	1
06610	DRO (C10-C28) w/ SiGel Cleanup	n.a.	740	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	0.7	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	0.8	0.5	ug/l	1

State of California Lab Certification No. 2116

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

## Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis		Analyst	Dilution Factor
				Date	Time		
01728	TPH-GRO - Waters	SW-846 8015B modified	1	10/24/2008	22:55	Martha L Seidel	1
06610	DRO (C10-C28) w/ SiGel Cleanup	SW-846 8015B	1	10/22/2008	09:27	Lisa A Reinert	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/23/2008	23:30	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/24/2008	22:55	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/23/2008	23:30	Michael A Ziegler	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	10/21/2008	01:15	Olivia I Santiago	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. WW5502338

Group No. 1115762

CS-2-W-081015 Grab Water

Facility# 206127 Job# 386498 MTI# 63H-1916 GRD

2301-2337 Blanding-Alameda T0600101574 CS-2

Collected: 10/15/2008 12:10 by JA

Account Number: 12099

Submitted: 10/18/2008 09:40

Reported: 10/29/2008 at 16:04

Discard: 11/29/2008

Chevron c/o CRA

Suite 110

2000 Opportunity Drive

Roseville CA 95678

BAA02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Dilution Factor
				Method	Units	
01728	TPH-GRO - Waters	n.a.	N.D.	Detection Limit	ug/l	1
06610	DRO (C10-C28) w/ SiGel Cleanup	n.a.	N.D.	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

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

## Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis		Analyst	Dilution Factor
				Date	Time		
01728	TPH-GRO - Waters	SW-846 8015B modified	1	10/24/2008	23:20	Martha L Seidel	1
06610	DRO (C10-C28) w/ SiGel Cleanup	SW-846 8015B	1	10/22/2008	09:47	Lisa A Reinert	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/23/2008	22:18	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/24/2008	23:20	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/23/2008	22:18	Michael A Ziegler	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	10/21/2008	01:15	Olivia I Santiago	1

## Quality Control Summary

 Client Name: Chevron c/o CRA  
 Reported: 10/29/08 at 04:04 PM

Group Number: 1115762

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

<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: 082940007A DRO (C10-C28) w/ SiGel Cleanup	N.D.	32.	ug/l	93	96	60-124	4	20
Batch number: 08298A07A TPH-GRO - Waters	N.D.	50.	ug/l	100	109	75-135	9	30
Batch number: D082974AA Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	98		73-119		
Benzene	N.D.	0.5	ug/l	107		78-119		
Toluene	N.D.	0.5	ug/l	99		85-115		
Ethylbenzene	N.D.	0.5	ug/l	94		82-119		
Xylene (Total)	N.D.	0.5	ug/l	100		83-113		
Batch number: D082984AA Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	93		73-119		
Benzene	N.D.	0.5	ug/l	100		78-119		
Toluene	N.D.	0.5	ug/l	94		85-115		
Ethylbenzene	N.D.	0.5	ug/l	89		82-119		
Xylene (Total)	N.D.	0.5	ug/l	93		83-113		

### Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 08298A07A TPH-GRO - Waters	72		63-154			UNSPK: P502333			
Batch number: D082974AA Methyl Tertiary Butyl Ether	101	96	69-127	5	30	UNSPK: 5502338			
Benzene	101	99	83-128	2	30				
Toluene	95	91	83-127	4	30				
Ethylbenzene	89	86	82-129	4	30				
Xylene (Total)	94	91	82-130	4	30				
Batch number: D082984AA Methyl Tertiary Butyl Ether	98	104	69-127	5	30	UNSPK: P502437			
Benzene	107	107	83-128	1	30				
Toluene	97	100	83-127	2	30				
Ethylbenzene	92	94	82-129	2	30				
Xylene (Total)	96	98	82-130	2	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: 10/29/08 at 04:04 PM

Group Number: 1115762

### Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
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### 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: DRO (C10-C28) w/ SiGel Cleanup  
 Batch number: 082940007A  
 Orthoterphenyl

5502337	89
5502338	70
Blank	85
LCS	97
LCSD	100

Limits: 59-131

 Analysis Name: TPH-GRO - Waters  
 Batch number: 08298A07A  
 Trifluorotoluene-F

5502336	122
5502337	126
5502338	122
Blank	123
LCS	132
LCSD	134
MS	127

Limits: 63-135

 Analysis Name: BTEX+MTBE by 8260B  
 Batch number: D082974AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5502337	94	101	86	95
5502338	97	106	86	90
Blank	93	100	83	88
LCS	96	103	87	97
MS	97	103	87	98
MSD	93	100	84	95

Limits: 80-116      77-113      80-113      78-113

 Analysis Name: BTEX+MTBE by 8260B  
 Batch number: D082984AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5502336	96	103	86	91

\*- 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: 10/29/08 at 04:04 PM

Group Number: 1115762

### Surrogate Quality Control

Blank	95	102	84	89
LCS	94	103	84	97
MS	94	103	83	93
MSD	95	102	86	97
Limits:	80-116	77-113	80-113	78-113

\*- 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>	milliequivalents	<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

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

#### Inorganic Qualifiers

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

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

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

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