



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

**RECEIVED**

*By Alameda County Environmental Health at 3:19 pm, Jun 14, 2013*

Re: Chevron Service Station No. 93600  
2200 Telegraph Avenue  
Oakland, CA

I have reviewed the attached report titled *Annual 2013 Groundwater Monitoring and Sampling Report*.

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 to the best of my knowledge.

Sincerely,

A handwritten signature in blue ink, appearing to read "Catalina Espino Devine".

Catalina Espino Devine  
Project Manager

Attachment: Report



**CONESTOGA-ROVERS  
& ASSOCIATES**

5900 Hollis Street, Suite A  
Emeryville, California 94608  
Telephone: (510) 420-0700 Fax: (510) 420-9170  
<http://www.craworld.com>

June 10, 2013

Reference No. 311965

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

Re: Annual 2013 Groundwater Monitoring and Sampling Report  
Chevron Service Station 93600  
2200 Telegraph Avenue  
Oakland, California  
Fuel Leak Case No. RO00002435

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Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA) is submitting this *Annual 2013 Groundwater Monitoring and Sampling Report* for the site referenced above (Figure 1) on behalf of Chevron Environmental Management Company (EMC). Groundwater monitoring and sampling was performed by Blaine Tech Services (Blaine Tech) of San Jose, California and their *Second Quarter 2013 Monitoring* report is included as Attachment A. Groundwater monitoring and sampling data are presented in Table 1. Eurofins Lancaster Laboratories' *Analytical Results* report is included as Attachment B.

### **RESULTS OF ANNUAL 2013 EVENT**

On May 1, 2013, Blaine Tech monitored and sampled the site wells per the established schedule. Results of the current monitoring event indicate the following:

- Groundwater Flow Direction Southeast
- Hydraulic Gradient 0.01
- Approximate Depth to Water 10.5 to 11.5 feet below grade

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Equal  
Employment Opportunity  
Employer

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June 10, 2013

Reference No. 311965

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Results of the current sampling event are presented below in Table A:

<i>Well ID</i>	<i>TPHg (<math>\mu\text{g/L}</math>)</i>	<i>Benzene (<math>\mu\text{g/L}</math>)</i>	<i>Toluene (<math>\mu\text{g/L}</math>)</i>	<i>Ethylbenzene (<math>\mu\text{g/L}</math>)</i>	<i>Total Xylenes (<math>\mu\text{g/L}</math>)</i>	<i>MTBE (<math>\mu\text{g/L}</math>)</i>
<b>WQOs/ESLs</b>	<b>100</b>	<b>1.0</b>	<b>40</b>	<b>30</b>	<b>20</b>	<b>5</b>
MW-1	<b>1,500</b>	<0.5	<0.5	<0.5	<0.5	<b>38</b>
MW-2	<50	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3	<50	<0.5	<0.5	<0.5	<0.5	<0.5

**Note:**  
< Indicates constituent was not detected at or above laboratory reporting limit.  
Bold indicates results above the drinking water environmental screening level (ESL).  
WQO Water Quality Objective (Regional Water Quality Control Board – San Francisco Bay Region, *Water Quality Control Plan (Basin Plan)*: dated December 31, 2011.)  
ESL Environmental Screening Level (Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final, November 2007, revised May 2013.)

## CONCLUSIONS AND RECOMMENDATIONS

The results of ongoing groundwater monitoring and sampling at the site indicate the following:

- Dissolved-phase petroleum hydrocarbon concentrations detected in well MW-1 are low and decreasing
- All concentrations are below historical maximums

## ANTICIPATED FUTURE ACTIVITIES

### *Groundwater Monitoring*

Blaine Tech will monitor and sample site wells per the established schedule. CRA will submit a groundwater monitoring and sampling report.

### *Closure Request*

EMC and CRA are awaiting a response to CRA's closure request that was submitted in the *Subsurface Investigation Report and Case Closure Request* report dated June 8, 2012.



**CONESTOGA-ROVERS  
& ASSOCIATES**

June 10, 2013

Reference No. 311965

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Please contact Nathan Lee at (925) 849-1003 if you have any questions or require additional information.

Regards,

CONESTOGA-ROVERS & ASSOCIATES

A handwritten signature in blue ink that reads "Nathan S. Lee".



Nathan S. Lee, PG 8486

NL/aa/12  
Encl.

Figure 1	Vicinity Map
Figure 2	Groundwater Elevation and Hydrocarbon Concentration Map
Table 1	Groundwater Monitoring and Sampling Data
Attachment A	Monitoring Data Package
Attachment B	Laboratory Analytical Report

cc: Ms. Catalina Espino Devine, Chevron (*electronic copy*)  
Mr. George Kim, Property Owner

## FIGURES

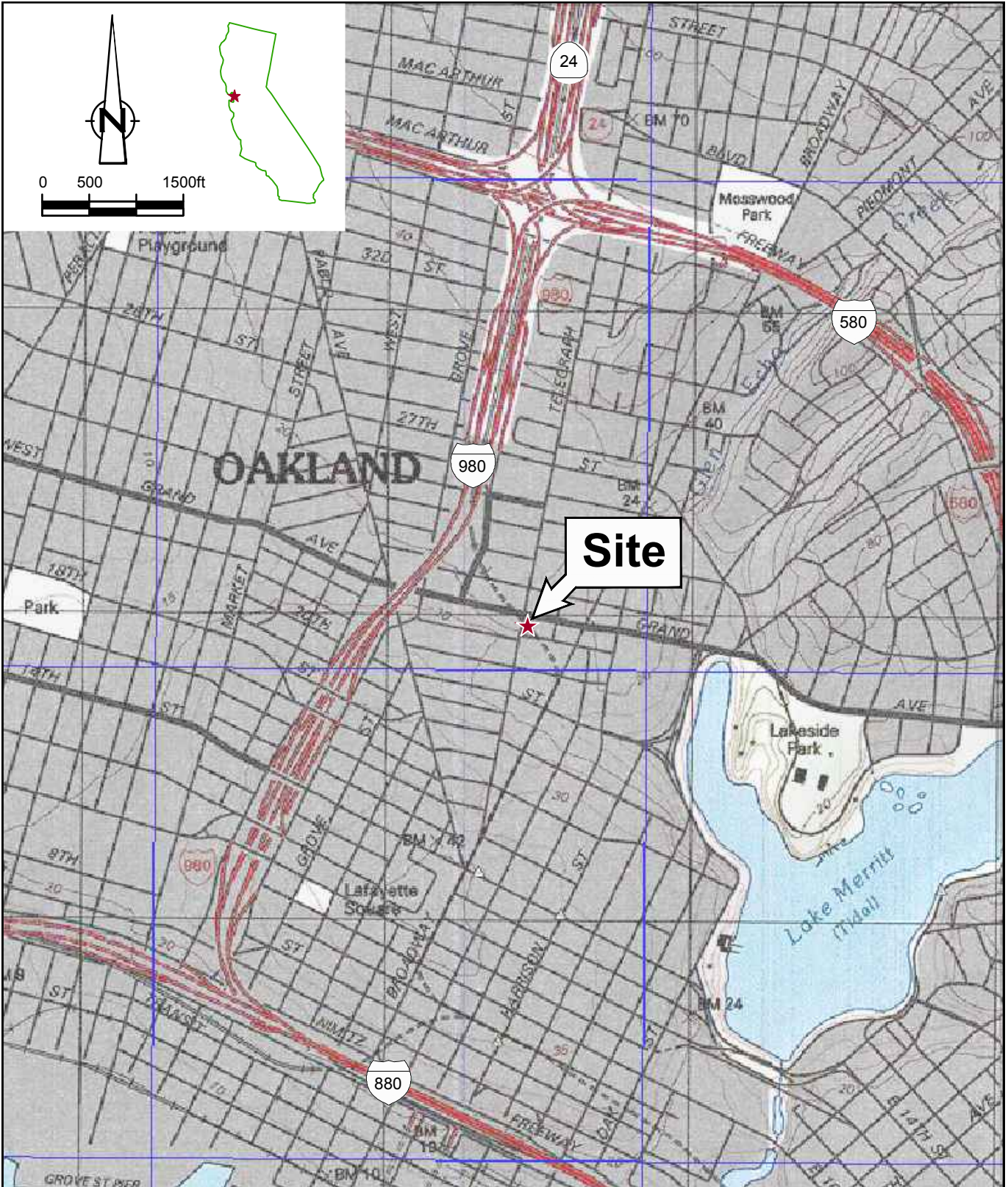
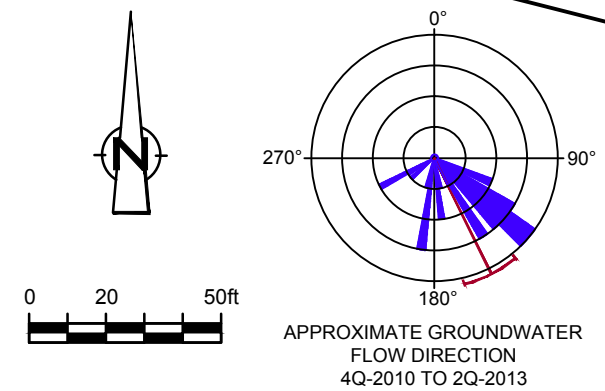


Figure 1  
 VICINITY MAP  
 CHEVRON SERVICE STATION 93600  
 2200 TELEGRAPH AVENUE  
 Oakland, California



**LEGEND**

- GROUNDWATER MONITORING WELL
- 6.00 — GROUNDWATER ELEVATION CONTOUR, IN FEET ABOVE MEAN SEA LEVEL (MSL), DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION AND GRADIENT
- |      |                              |
|------|------------------------------|
| WELL | WELL DESIGNATION             |
| ELEV | GROUNDWATER ELEVATION (MSL)  |
| TPHG | TPHg CONCENTRATION (µg/L)    |
| BENZ | BENZENE CONCENTRATION (µg/L) |
| MTBE | MTBE CONCENTRATION (µg/L)    |



TELEGRAPH AVENUE

22nd STREET

WEST GRAND AVENUE

Approximate BART right of way

driveway

planter

canopy

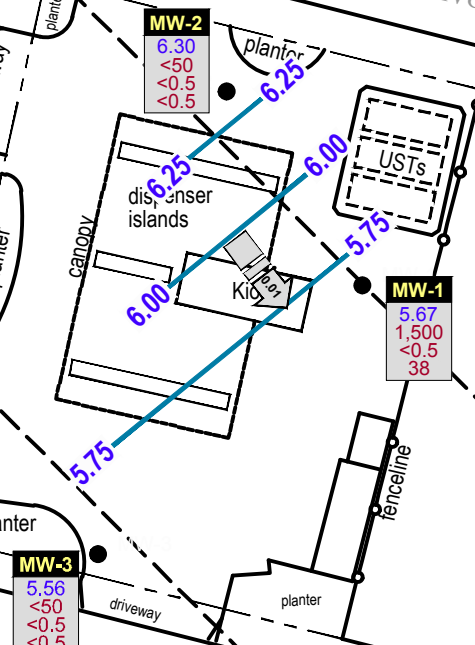
dispenser islands

Kiosk

USTs

fence line

Douglas Parking lot



Basemap modified from drawing provided by Gettler-Ryan Inc.

Figure 2  
 GROUNDWATER ELEVATION AND HYDROCARBON CONCENTRATION MAP  
 CHEVRON SERVICE STATION 93600  
 2200 TELEGRAPH AVENUE  
 Oakland, California  
 May 1, 2013



## TABLE



TABLE 1

GROUNDWATER MONITORING AND SAMPLING DATA  
 FORMER CHEVRON SERVICE STATION 93600  
 2200 TELEGRAPH AVE  
 OAKLAND, CALIFORNIA

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs					ADDITIONAL VOCs				
					TPH-GRO	B	T	E	X	MTBE by SW8260	ETHANOL	TBA	DIPE	ETBE	TAME	
	Units	ft	ft	ft-ansl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
MW-1	04/05/2002 <sup>1</sup>	17.07	11.68	5.39	2,000	5.0	<1.0	14	8.4	310/370	-	200	<2	<2	10	
MW-1	07/01/2002	17.07	12.01	5.06	2,000	8.9	<1.0	97	31	420/370	-	190	<2	<2	9	
MW-1	10/08/2002	17.07	12.20	4.87	1,400	9.2	<10	75	20	360/440	-	110	<2	<2	8	
MW-1	01/11/2003	17.07	11.13	5.94	1,600	7.1	0.51	53	13	280/270	-	<100	<2	<2	7	
MW-1	04/01/2003	17.07	11.53	5.54	1,800	5.2	0.6	25	9.1	210/210	-	22	<0.5	<0.5	5	
MW-1	07/01/2003 <sup>3</sup>	17.07	11.95	5.12	2,000	4	<0.5	31	12	170	<50	26	<0.5	<0.5	5	
MW-1	10/02/2003 <sup>3</sup>	17.07	12.25	4.82	480	<5	<5	<5	<5	9,800	<500	2,600	<5	<5	6	
MW-1	01/05/2004 <sup>3</sup>	17.07	11.05	6.02	1,700	3	<0.5	27	4	140	<50	21	<0.5	<0.5	3	
MW-1	04/05/2004 <sup>3</sup>	17.07	11.63	5.44	1,500	2	<0.5	21	0.6	120	<50	17	<0.5	<0.5	3	
MW-1	07/01/2004 <sup>3</sup>	17.07	12.08	4.99	1,500	1	<0.5	3	<0.5	130	<50	13	<0.5	<0.5	2	
MW-1	10/05/2004 <sup>3</sup>	17.07	12.21	4.86	1,400	<0.5	<0.5	1	0.5	130	<50	14	<0.5	<0.5	2	
MW-1	01/04/2005 <sup>3</sup>	17.07	11.15	5.92	1,500	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5	
MW-1	04/14/2005 <sup>3</sup>	17.07	11.20	5.87	2,100	<0.5	<0.5	4	0.5	61	<50	15	<0.5	<0.5	1	
MW-1	07/08/2005 <sup>3</sup>	17.07	11.38	5.69	1,800	<0.5	<0.5	0.8	<0.5	71	<50	15	<0.5	<0.5	1	
MW-1	10/27/2005 <sup>3</sup>	17.07	12.24	4.83	800	<0.5	<0.5	<0.5	<0.5	76	<50	10	<0.5	<0.5	1	
MW-1	01/12/2006 <sup>3</sup>	17.07	11.10	5.97	1,600	<0.5	<0.5	4	<0.5	47	<50	12	<0.5	<0.5	<0.5	
MW-1	04/13/2006 <sup>3</sup>	17.07	10.81	6.26	1,500	<0.5	<0.5	1	<0.5	36	<50	8	<0.5	<0.5	0.6	
MW-1	07/13/2006 <sup>3</sup>	17.07	11.18	5.89	990	<0.5	<0.5	<0.5	<0.5	44	<50	7	<0.5	<0.5	0.7	
MW-1	10/16/2006 <sup>3</sup>	17.07	12.18	4.89	780	<0.5	<0.5	<0.5	<0.5	59	<50	6	<0.5	<0.5	1	
MW-1	01/20/2007 <sup>3</sup>	17.07	11.91	5.16	890	<0.5	<0.5	<0.5	<0.5	47	<50	8	<0.5	<0.5	0.8	
MW-1	04/11/2007 <sup>3</sup>	17.07	11.87	5.20	1,900	<0.5	<0.5	4	<0.5	39	<50	9	<0.5	<0.5	0.7	
MW-1	07/27/2007 <sup>3</sup>	17.07	11.91	5.16	1,500	<0.5	<0.5	0.6	<0.5	56	<50	8	<0.5	<0.5	0.8	
MW-1	10/22/2007 <sup>3</sup>	17.07	-	-	610	<0.5	<0.5	<0.5	<0.5	65	<50	5	<0.5	<0.5	0.7	
MW-1	11/26/2007	17.07	11.96	5.11	-	-	-	-	-	-	-	-	-	-	-	
MW-1	01/21/2008 <sup>3</sup>	17.07	11.78	5.29	1,100	<0.5	<0.5	0.8	<0.5	48	<50	5	<0.5	<0.5	0.7	
MW-1	04/04/2008 <sup>3</sup>	17.07	11.83	5.24	1,600	<0.5	<0.5	<0.5	<0.5	53	<50	6	<0.5	<0.5	0.6	
MW-1	07/21/2008 <sup>3</sup>	17.07	12.10	4.97	950	<0.5	<0.5	<0.5	<0.5	72	<50	11	<0.5	<0.5	0.7	

TABLE 1

**GROUNDWATER MONITORING AND SAMPLING DATA  
FORMER CHEVRON SERVICE STATION 93600  
2200 TELEGRAPH AVE  
OAKLAND, CALIFORNIA**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs					ADDITIONAL VOCs				
					TPH-GRO	B	T	E	X	MTBE by SW8260	ETHANOL	TBA	DIPE	ETBE	TAME	
	Units	ft	ft	ft-ansl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
MW-1	10/09/2008 <sup>3</sup>	17.07	12.17	4.90	960	<0.5	<0.5	<0.5	<0.5	59	<50	5	<0.5	<0.5	0.5	
MW-1	01/21/2009 <sup>3</sup>	17.07	12.15	4.92	840	<0.5	<0.5	<0.5	<0.5	31	<50	5	<0.5	<0.5	0.5	
MW-1	04/29/2009	17.07	11.68	5.39	1,800	<0.5	<0.5	3	<0.5	25	<50	5	<0.5	<0.5	<0.5	
MW-1	07/23/2009 <sup>3</sup>	17.07	11.85	5.22	1,900	<0.5	<0.5	<0.5	<0.5	30	<50	4 J	<0.5	<0.5	<0.5	
MW-1	01/28/2010	17.07	10.81	6.26	2,600	<0.5	<0.5	2	<0.5	31	<50	11	<0.5	<0.5	<0.5	
MW-1	07/22/2010	17.07	11.76	5.31	4,200	0.5 J	<0.5	3	<0.5	59	<50	9	<0.5	<0.5	0.6 J	
MW-1	01/20/2011	17.07	11.33	5.74	2,500	<0.5	<0.5	2	<0.5	30	<50	4 J	<0.5	<0.5	<0.5	
MW-1	07/18/2011	17.07	11.41	5.66	2,200	<0.5	<0.5	4	<0.5	55	<50	5	<0.5	<0.5	0.5 J	
MW-1	04/02/2012	17.07	10.76	6.31	1,600	<0.5	<0.5	2	<0.5	23	<50	3 J	<0.5	<0.5	<0.5	
<b>MW-1</b>	<b>05/01/2013</b>	<b>17.07</b>	<b>11.40</b>	<b>5.67</b>	<b>1,500</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>38</b>	<b>&lt;50</b>	<b>&lt;2</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	
MW-2	04/05/2002 <sup>1</sup>	16.82	11.17	5.65	<50	<0.50	<0.50	<0.50	<1.5	<2/<2.5	-	<100	<2	<2	<2	
MW-2	07/01/2002	16.82	11.36	5.46	<50	<0.50	0.57	0.52	<1.5	<2.5/<2	-	<100	<2	<2	<2	
MW-2	10/08/2002	16.82	11.57	5.25	<100	<2.0	<2.0	<2.0	<5.0	<10/<2	-	<100	<2	<2	<2	
MW-2	01/11/2003	16.82	10.94	5.88	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2	-	<100	<2	<2	<2	
MW-2	04/01/2003	16.82	11.03	5.79	<50	<0.5	<0.5	<0.5	<1.5	<0.5/<2.5	<50	<5	<0.5	<0.5	<0.5	
MW-2	07/01/2003 <sup>3</sup>	16.82	11.30	5.52	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5	
MW-2	10/02/2003 <sup>3</sup>	16.82	11.63	5.19	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5	
MW-2	01/05/2004 <sup>3</sup>	16.82	10.82	6.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5	
MW-2	04/05/2004 <sup>3</sup>	16.82	11.21	5.61	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5	
MW-2	07/01/2004 <sup>3</sup>	16.82	11.46	5.36	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5	
MW-2	10/05/2004 <sup>3</sup>	16.82	11.57	5.25	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5	
MW-2	01/04/2005 <sup>3</sup>	16.82	10.87	5.95	<50	0.5	<0.5	8	0.9	87	<50	14	<0.5	<0.5	2	
MW-2	04/14/2005 <sup>3</sup>	16.82	10.72	6.10	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5	
MW-2	07/08/2005 <sup>3</sup>	16.82	11.16	5.66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5	
MW-2	10/27/2005 <sup>3</sup>	16.82	11.59	5.23	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5	
MW-2	01/12/2006 <sup>3</sup>	16.82	10.68	6.14	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5	

TABLE 1

**GROUNDWATER MONITORING AND SAMPLING DATA  
FORMER CHEVRON SERVICE STATION 93600  
2200 TELEGRAPH AVE  
OAKLAND, CALIFORNIA**

Location	Date	TOC	DTW	GWE	HYDROCARBONS					PRIMARY VOCs					ADDITIONAL VOCs				
					TPH-GRO	B	T	E	X	MTBE by SW8260	ETHANOL	TBA	DIPE	ETBE	TAME				
	Units	ft	ft	ft-ansl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L			
MW-2	04/13/2006 <sup>3</sup>	16.82	10.37	6.45	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-2	07/13/2006 <sup>3</sup>	16.82	10.68	6.14	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-2	10/16/2006 <sup>3</sup>	16.82	11.48	5.34	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-2	01/20/2007 <sup>3</sup>	16.82	11.27	5.55	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	04/11/2007 <sup>3</sup>	16.82	11.20	5.62	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	07/25/2007 <sup>3</sup>	-	-	-	-	-	-	-	-	-	<50	<2	<0.5	<0.5	<0.5				
MW-2	07/27/2007 <sup>3</sup>	16.82	11.27	5.55	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-				
MW-2	10/22/2007 <sup>3</sup>	16.82	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	11/26/2007	16.82	11.31	5.51	-	-	-	-	-	-	-	-	-	-	-				
MW-2	01/21/2008 <sup>3</sup>	16.82	11.08	5.74	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	04/04/2008 <sup>3</sup>	16.82	11.12	5.70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	07/21/2008 <sup>3</sup>	16.82	11.56	5.26	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	10/09/2008 <sup>3</sup>	16.82	11.73	5.09	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	01/21/2009 <sup>3</sup>	16.82	11.55	5.27	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	04/29/2009	16.82	11.06	5.76	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	07/23/2009 <sup>3</sup>	16.82	11.30	5.52	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	01/28/2010	16.82	10.23	6.59	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	07/22/2010	16.82	11.03	5.79	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	01/20/2011	16.82	10.52	6.30	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	07/18/2011	16.82	10.61	6.21	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-2	04/02/2012	16.82	9.86	6.96	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
<b>MW-2</b>	<b>05/01/2013</b>	<b>16.82</b>	<b>10.52</b>	<b>6.30</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;50</b>	<b>&lt;2</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>				
MW-3	04/05/2002 <sup>1</sup>	16.52	11.29	5.23	<50	<0.50	0.59	<0.50	<1.5	<2.5/<2	-	<100	<2	<2	<2				
MW-3	07/01/2002	16.52	11.55	4.97	<50	<0.50	0.60	<0.50	<1.5	<2.5/<2	-	<100	<2	<2	<2				
MW-3	10/08/2002	16.52	11.62	4.90	<100	<2.0	<2.0	<2.0	<5.0	<2/<10	-	<100	<2	<2	<2				
MW-3	01/11/2003	16.52	11.09	5.43	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2	-	<100	<2	<2	<2				

TABLE 1

GROUNDWATER MONITORING AND SAMPLING DATA  
 FORMER CHEVRON SERVICE STATION 93600  
 2200 TELEGRAPH AVE  
 OAKLAND, CALIFORNIA

Location	Date	TOC	DTW	GWE	HYDROCARBONS					PRIMARY VOCs					ADDITIONAL VOCs				
					TPH-GRO	B	T	E	X	MTBE by SW8260	ETHANOL	TBA	DIPE	ETBE	TAME				
	Units	ft	ft	ft-ansl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L			
MW-3	04/01/2003	16.52	11.25	5.27	<50	<0.5	<0.5	<0.5	<1.5	<0.5/<2.5	-	<5	<0.5	<0.5	<0.5				
MW-3	07/01/2003 <sup>3</sup>	16.52	11.42	5.10	<50	<0.5	<0.5	<0.5	<0.5	2	<50	<5	<0.5	<0.5	<0.5				
MW-3	10/02/2003 <sup>3</sup>	16.52	11.74	4.78	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-3	01/05/2004 <sup>3</sup>	16.52	11.06	5.46	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-3	04/05/2004 <sup>3</sup>	16.52	11.40	5.12	<50	<0.5	<0.5	<0.5	<0.5	0.6	<50	<5	<0.5	<0.5	<0.5				
MW-3	07/01/2004 <sup>3</sup>	16.52	11.58	4.94	<50	<0.5	<0.5	<0.5	<0.5	0.8	<50	<5	<0.5	<0.5	<0.5				
MW-3	10/05/2004 <sup>3</sup>	16.52	11.60	4.92	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-3	01/04/2005 <sup>3</sup>	16.52	10.95	5.57	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-3	04/14/2005 <sup>3</sup>	16.52	11.10	5.42	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-3	07/08/2005 <sup>3</sup>	16.52	11.29	5.23	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-3	10/27/2005 <sup>3</sup>	16.52	11.68	4.84	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-3	01/12/2006 <sup>3</sup>	16.52	10.83	5.69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-3	04/13/2006 <sup>3</sup>	16.52	10.65	5.87	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-3	07/13/2006 <sup>3</sup>	16.52	11.03	5.49	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-3	10/16/2006 <sup>3</sup>	16.52	11.46	5.06	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<0.5	<0.5				
MW-3	01/20/2007 <sup>3</sup>	16.52	11.39	5.13	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-3	04/11/2007 <sup>3</sup>	16.52	11.27	5.25	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-3	07/27/2007 <sup>3</sup>	16.52	11.38	5.14	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-3	10/22/2007 <sup>3</sup>	16.52	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-3	11/26/2007	16.52	11.35	5.17	-	-	-	-	-	-	-	-	-	-	-				
MW-3	01/21/2008 <sup>3</sup>	16.52	11.16	5.36	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-3	04/04/2008 <sup>3</sup>	16.52	11.15	5.37	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-3	07/21/2008 <sup>3</sup>	16.52	11.38	5.14	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-3	10/09/2008 <sup>3</sup>	16.52	11.49	5.03	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-3	01/21/2009 <sup>3</sup>	16.52	11.52	5.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-3	04/29/2009	16.52	11.10	5.42	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				
MW-3	07/23/2009 <sup>3</sup>	16.52	11.20	5.32	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5				

TABLE 1

GROUNDWATER MONITORING AND SAMPLING DATA  
 FORMER CHEVRON SERVICE STATION 93600  
 2200 TELEGRAPH AVE  
 OAKLAND, CALIFORNIA

Location	Date	TOC	DTW	GWE	HYDROCARBONS						PRIMARY VOCs					ADDITIONAL VOCs				
					TPH-GRO	B	T	E	X	MTBE by SWS260	ETHANOL	TBA	DIPE	ETBE	TAME					
	Units	ft	ft	ft-ansl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L			
MW-3	01/28/2010	16.52	10.41	6.11	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5					
MW-3	07/22/2010	16.52	10.91	5.61	<50	<0.5	<0.5	<0.5	<0.5	1	<50	<2	<0.5	<0.5	<0.5					
MW-3	01/20/2011	16.52	10.55	5.97	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5					
MW-3	07/18/2011	16.52	10.43	6.09	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5					
MW-3	04/02/2012	16.52	10.22	6.30	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<2	<0.5	<0.5	<0.5					
<b>MW-3</b>	<b>05/01/2013</b>	<b>16.52</b>	<b>10.96</b>	<b>5.56</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;50</b>	<b>&lt;2</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>					
Trip Blank	04/05/2002	-	-	-	<50	<0.50	<0.50	<0.50	<1.5	<2.5	-	-	-	-	-	-	-			
Trip Blank	07/01/2002	-	-	-	<50	<0.50	<0.50	<0.50	<1.5	<2.5	-	-	-	-	-	-	-			
Trip Blank	10/08/2002	-	-	-	<100	<2.0	<2.0	<2.0	<5.0	<10	-	-	-	-	-	-	-			
Trip Blank	01/11/2003	-	-	-	<50	<0.50	<0.50	<0.50	<1.5	<2.5	-	-	-	-	-	-	-			
Trip Blank	04/01/2003	-	-	-	<50	<0.5	<0.5	<0.5	<1.5	<2.5	-	-	-	-	-	-	-			
Trip Blank	07/01/2003 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	10/02/2003 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	01/05/2004 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	04/05/2004 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	07/01/2004 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	10/05/2004 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	01/04/2005 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	04/14/2005 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	07/08/2005 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	10/27/2005 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	01/12/2006 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	04/13/2006 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	07/13/2006 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	10/16/2006 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			
Trip Blank	01/20/2007 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-			

TABLE 1

GROUNDWATER MONITORING AND SAMPLING DATA  
 FORMER CHEVRON SERVICE STATION 93600  
 2200 TELEGRAPH AVE  
 OAKLAND, CALIFORNIA

Location	Date	TOC	DTW	GWE	HYDROCARBONS						PRIMARY VOCs					ADDITIONAL VOCs				
					TPH-GRO	B	T	E	X	MTBE by SWS260	ETHANOL	TBA	DIPE	ETBE	TAME					
	Units	ft	ft	ft-amsl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
Trip Blank	04/11/2007 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	07/27/2007 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	10/22/2007 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	01/21/2008 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	04/04/2008 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	07/21/2008 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	10/09/2008 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	01/21/2009 <sup>3</sup>	-	-	-	<50 <sup>5</sup>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	04/29/2009	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	07/23/2009 <sup>3</sup>	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	01/28/2010	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	07/22/2010	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	01/20/2011	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	07/18/2011	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-		
Trip Blank	04/02/2012	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	<0.5	<0.5	<0.5	<0.5	<0.5		
Trip Blank	05/01/2013	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	<0.5	<0.5	<0.5	<0.5	<0.5		

**Abbreviations and Notes:**

- TOC = Top of casing
- DTW = Depth to water
- GWE = Groundwater elevation
- (ft-amsl) = Feet above mean sea level
- ft = Feet
- µg/L = Micrograms per liter
- TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
- VOCs = Volatile organic compounds
- B = Benzene

**GROUNDWATER MONITORING AND SAMPLING DATA  
FORMER CHEVRON SERVICE STATION 93600  
2200 TELEGRAPH AVE  
OAKLAND, CALIFORNIA**

Location	Date	TOC	DTW	GWE	HYDROCARBONS					PRIMARY VOCS					ADDITIONAL VOCS				
					TPH-GRO	B	T	E	X	MTBE by SW8260	ETHANOL	TBA	DIPE	ETBE	TAME				
	Units	ft	ft	ft-amsl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		

T = Toluene  
 E = Ethylbenzene  
 X = Xylenes (Total)  
 MTBE = Methyl tert butyl ether  
 TBA = Tert-butyl alcohol  
 DIPE = Diisopropyl ether  
 ETBE = Tert-butyl ethyl ether  
 TAME = Tert-amyl methyl ether  
 -- = Not available / not applicable  
 <x = Not detected above laboratory method detection limit  
 J = Estimated concentration

- 3 BTEX and MTBE by EPA Method 8260.
- 5 Laboratory report indicates the original analysis was performed on an instrument where the ending calibration standard failed the method criteria. The sample was originally analyzed approximately 30 minutes after the LCS/LCSD. The LCS/LCSD showed good GRO recovery and the surrogate recovery for this sample was 85%. The sample was reanalyzed from a vial with headspace since only 1 vial was submitted. The results for the original and the reanalysis were similar. The reanalysis was reported.

ATTACHMENT A

MONITORING DATA PACKAGE





May 7, 2013

Chevron Environmental Management Company  
Catalina Devine  
6111 Bollinger Canyon Rd.  
San Ramon, CA 94583

Second Quarter 2013 Monitoring at  
Chevron Service Station 93600  
2200 Telgraph Ave.  
Oakland, CA

Monitoring performed on May 1, 2013

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**Blaine Tech Services, Inc. Groundwater Monitoring Event 130501-JO2**

This submission covers the routine monitoring of groundwater wells conducted on May 1, 2013 at this location. Three monitoring wells were measured for depth to groundwater (DTW). Three monitoring wells were sampled. All sampling activities were performed in accordance with local, state and federal guidelines.

Water levels measurements were collected using an electronic slope indicator. All sampled wells were purged of three case volumes, depending on well recovery, or until water temperature, pH and conductivity stabilized. Purging was accomplished using electric submersible pumps, positive air displacement pumps, or stainless steel, Teflon, or disposable bailers. Subsequent sample collection and sample handling was performed in accordance with EPA protocols. Alternately, where applicable, wells were sampled utilizing no-purge methodology. All reused equipment was decontaminated in an integrated stainless steel sink with de-ionized water supplied Hotsy pressure washer and Liquinox or equivalent.

Second Quarter Groundwater Monitoring at Chevron 93600, 2200 Telgraph Ave., Oakland, CA

SAN JOSE

SACRAMENTO

LOS ANGELES

SAN DIEGO

1680 ROGERS AVENUE

SAN JOSE, CA 95112-1105

(408) 573-0555

FAX (408) 573-7771

LIC. 746684

[www.blainetech.com](http://www.blainetech.com)

Samples were delivered under chain-of-custody to Lancaster Laboratories of Lancaster, Pennsylvania, for analysis. Monitoring well purgewater and equipment rinsate water was collected and transported under bill-of-lading to Blaine Tech of San Jose, California.

Enclosed documentation from this event includes copies of the Well Gauging Sheet, Well Monitoring Data Sheets, and Chain-of-Custody.

Blaine Tech Services, Inc.'s activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrogeologic conditions or formulation of recommendations was performed.

Please call if you have any questions.

Sincerely,



Dustin Becker  
Blaine Tech Services, Inc.  
Senior Project Manager

attachments: SOP  
Well Gauging Sheet  
Individual Well Monitoring Data Sheets  
Chain of Custody  
Wellhead Inspection Form  
Bill of Lading

cc: CRA  
Attn: Nathan Lee  
5900 Hollis St. Suite A  
Emeryville, CA 94608

Second Quarter Groundwater Monitoring at Chevron 93600, 2200 Telegraph Ave., Oakland, CA

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# BLAINE TECH SERVICES, INC. METHODS AND PROCEDURES FOR THE ROUTINE MONITORING OF GROUNDWATER WELLS AT CHEVRON SITES

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. We specialize in groundwater monitoring assignments and intentionally limit the scope of our services to those centered on the generation of objective information.

To avoid conflicts of interest, Blaine Tech Services, Inc. personnel do not evaluate or interpret the information we collect. As a state licensed contractor (C-57 well drilling –water – 746684) performing strictly technical services, we do not make any professional recommendations and perform no consulting of any kind.

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## **SAMPLING PROCEDURES OVERVIEW**

### **SAFETY**

All groundwater monitoring assignments performed for Chevron comply with Chevron's safety guidelines, 29 CFR 1910.120 and SB-198 Injury and Illness Prevention Program (IIPP). All Field Technicians receive the full 40-hour 29CFR 1910.120 OSHA SARA HAZWOPER course, medical clearance and on-the-job training prior to commencing any work on any Chevron site.

### **INSPECTION AND GAUGING**

Wells are inspected prior to evacuation and sampling. The condition of the wellhead is checked and noted according to a wellhead inspection checklist.

Standard measurements include the depth to water (DTW) and the total well depth (TD) obtained with industry standard electronic water level indicators that are graduated in increments of hundredths of a foot.

The water in each well is inspected for the presence of immiscibles. When free product is suspected, its presence is confirmed using an electronic interface probe (e.g. GeoTech). No samples are collected from a well containing product.

### **TRADITIONAL PURGING & SAMPLING**

#### **Evacuation**

Depth to water measurements are collected by our personnel prior to purging and minimum purge volumes are calculated anew for each well based on the height of the water column and the diameter of the well. Expected purge volumes are never less than three case volumes and are set at no less than four case volumes in some jurisdictions.

Well purging devices are selected on the basis of the well diameter and the total volume to be evacuated. In most cases the well will be purged using an electric submersible pump (i.e. Grundfos) suspended near (but not touching) the bottom of the well.

### **Parameter Stabilization**

Well purging completion standards include minimum purge volumes, but additionally require stabilization of specific groundwater parameters prior to sample collection. Typical groundwater parameters used to measure stability are electrical conductivity, pH, and temperature. Instrument readings are obtained at regular intervals during the evacuation process (no less than once per case volume).

Stabilization standards for routine quarterly monitoring of fuel sites include the following: Temperature is considered to have stabilized when successive readings do not fluctuate more than +/- 1 degree Celsius. Electrical conductivity is considered stable when successive readings are within 10%. pH is considered to be stable when successive readings remain constant or vary no more than 0.2 of a pH unit.

### **Sample Collection**

All samples are collected using disposable bailers.

### **Sample Containers**

Sample material is decanted directly from the sampling bailer into sample containers provided by the laboratory that will analyze the samples. The transfer of sample material from the bailer to the sample container conforms to specifications contained in the USEPA T.E.G.D. The type of sample container, material of construction, method of closure and filling requirements are specific to the intended analysis. Chemicals needed to preserve the sample material are commonly placed inside the sample containers by the laboratory or glassware vendor prior to delivery of the bottle to our personnel. The laboratory sets the number of replicate containers.

### **Dewatered Wells**

Normal evacuation removes no less than three case volumes of water from the well. However, less water may be removed in cases where the well dewateres and does not immediately recharge.

### **Measuring Recharge**

Upon completion of well purging, a depth to water measurement is collected and notated to ensure that the well has recharged to within 80% of its static, pre-purge level prior to sampling.

Wells that do not immediately show 80% recharge or dewatered wells will be allowed approximately 2 hours to recharge prior to sampling or will be sampled at site departure. All wells requiring off-site traffic control in the public right-of-way, the 80% recharge rule may be disregarded in the interests of Health and Safety. The sample may be collected as soon as there is sufficient water. The water level at time of sampling will be noted.

### **Dissolved Oxygen Measurements**

Dissolved Oxygen readings are taken pre- and/or post-purge using YSI meters (e.g. YSI Model 550) or HACH field test kits.

The YSI meters are able to collect accurate in-situ readings. The probe allows downhole measurements to be taken from wells with diameters as small as two inches. The probe and reel is decontaminated between wells as described above. The meter is calibrated

as per the instructions in the operating manual. The probe is lowered into the water column and the reading is allowed to stabilize prior to collection.

### **Oxidation Reduction Potential Measurements (ORP)**

All readings are obtained with either Corning or Myron-L meters (e.g. Corning ORP-65 or a Myron-L Ultrameter). The meter is cleaned between wells as described above. The meter is calibrated at the start of each day according to the instruction manual.

## **LOW FLOW SAMPLING USING SAMPLE-PRO BLADDER PUMP**

### **Calibration**

Calibrate YSI Flow Cell as per manufacturer's specifications. Thoroughly rinse probe and cup between parameters. Calibration order as follows:

1. pH (use 3-point calibration of 7, 4, 10)
2. Oxygen Reduction Potential (ORP)
3. Specific Conductance
4. Dissolved Oxygen (DO) (calibrate simulating 100% oxygen saturation)

### **Purging & Sampling Collection**

1. Insert new bladder into Sample-Pro pump housing.
2. Remove dedicated PE tubing from the well or start with new PE tubing cut to the required length.
3. Attach the PE tubing to the Sample-Pro Bladder Pump.
4. Gently lower the Sample-Pro Bladder Pump, and PE tubing into the well, placing the Sample-Pro Bladder Pump intake at the center of the screened interval. Take care to minimize disturbance to the water column.
5. Direct effluent line into YSI 556 Flow Cell.
6. Set Sample-Pro Bladder Pump speed at 100 - 500 ml/min.
7. Collect water quality parameter measurements for temperature, pH, conductivity, turbidity, DO and ORP every 3-5 minutes.
8. Monitor drawdown during purging with electronic water level meter. Record water level with each parameter measurement. **MAXIMUM DRAWDOWN IS 0.33 FEET.**
9. Collect parameter measurements until stability is achieved. Stability is defined as three consecutive measurements where:

Temp	± 1 ° Celsius
pH	± 0.1
Conductivity	± 3%
Turbidity	± 10% NTU
DO	± 0.3 mg/l
ORP	± 10 Mv

10. Sample may be collected once stability is achieved and at least one system volume of water removed from the well.
11. Disconnect effluent line from YSI 556 Flow Cell.
12. Sample through effluent line while maintaining constant flow rate.
13. Remove Sample-Pro Bladder Pump, and PE tubing from well.
14. Detach and reinstall dedicated PE tubing in well.

## **PURGEWATER CONTAINMENT**

All non-hazardous purgewater evacuated from each groundwater monitoring well is captured and contained in on-board storage tanks on the Sampling Vehicle and/or special water hauling trailers. Effluent from the decontamination of reusable apparatus (sounders, electric pumps and hoses etc.), consisting of groundwater combined with deionized water and non-phosphate soap, is also captured and pumped into effluent tanks.

Non-hazardous purgewater is transported under standard Bill of Lading or Non-Hazardous Waste Manifest to a Blaine Tech Services, Inc. facility before being transported to a Chevron approved disposal facility

## **TRIP BLANKS**

Trip Blanks, if requested, are taken to the site and kept inside the sample cooler for the duration of the event. They are turned over to the laboratory for analysis with the samples from that site.

## **DUPLICATES**

Duplicates, if requested, may be collected at a site.

## **SAMPLE STORAGE**

All sample containers are promptly placed in food grade ice chests for storage in the field and transport (direct or via our facility) to the designated analytical laboratory. These ice chests contain quantities of restaurant grade ice as a refrigerant material. The samples are maintained in either an ice chest or a refrigerator until relinquished into the custody of the laboratory or laboratory courier.

## **DOCUMENTATION CONVENTIONS**

A label must be affixed to all sample containers. In most cases these labels are generated by our office personnel and are partially preprinted. Labels can also be hand written by our field personnel. The site is identified with the store number and site address, as is the particular groundwater well from which the sample is drawn (e.g. MW-1, MW-2, S-1 etc.). The time and date of sample collection along with the initials of the person who collects the sample are handwritten onto the label. Field documentation is contemporaneous.

## **DECONTAMINATION**

All equipment is brought to the site in clean and serviceable condition and is cleaned after use in each well and before subsequent use in any other well. Equipment such as hose reels, pumps and bailers is decontaminated before leaving the site.

The primary decontamination device is a commercial steam cleaner. The steam cleaner is de-tuned to function as a hot pressure washer that is then operated with high quality deionized water that is produced at our facility and stored onboard our sampling vehicle. Cleaning is

facilitated by the use of proprietary fixtures and devices included in the patented workstation (U.S. Patent 5,535,775) that is incorporated in each sampling vehicle.

Any sensitive equipment or parts (i.e. Dissolved Oxygen sensor membrane, water level indicator, etc.) that cannot be washed using the high pressure water, will be sprayed with a non-phosphate soap and deionized water solution and rinsed with deionized water.

## **FERROUS IRON MEASUREMENTS**

All field measurements are collected at time of sampling with a HACH test kit.

## WELL GAUGING DATA

Project # 130501-502 Date 5-1-13 Client Chevron

Site 2200 Telegraph Ave Oakland ca.

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-1	1342	2					11.46	20.02	↓	
MW-2	1339	2				10.52	20.07			
MW-3	1335	2				10.96	20.00	0		



## CHEVRON WELL MONITORING DATA SHEET

Project #: 130501-50	Station #: 9-3600
Sampler: Jo	Date: 5-1-13
Weather: clear	Ambient Air Temperature: 73°F
Well I.D.: MW-1	Well Diameter: <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8
Total Well Depth: 20.02	Depth to Water: 11.40
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <input checked="" type="radio"/> V.C. Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.12	

Purge Method:

- Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible  
 Waterra  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:

- Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

1.4 (Gals.) X	3	= 4.2 Gals.
I Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or <input checked="" type="radio"/> $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
1422	68.1	7.13	893	71000	1.4	
1424	68.0	7.11	897	>1000	2.8	
1426	68.0	7.10	894	71000	4.2	

Did well dewater? Yes  No  Gallons actually evacuated: 4.2

Sampling Date: 5-1-13 Sampling Time: 1430 Depth to Water: 12.07

Sample I.D.: MW-1 Laboratory:  Lancaster Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE OXYS Other: See coc

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE OXYS Other:

D.O. (if req'd): Pre-purge: \_\_\_\_\_ mg/L Post-purge: \_\_\_\_\_ mg/L

O.R.P. (if req'd): Pre-purge: \_\_\_\_\_ mV Post-purge: \_\_\_\_\_ mV

## CHEVRON WELL MONITORING DATA SHEET

Project #: 130501-J02	Station #: 9-3600
Sampler: JO	Date: 5-1-13
Weather: clear	Ambient Air Temperature: 73°F
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8 _____
Total Well Depth: 20.01	Depth to Water: 10.52
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (VVO) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.41	

Purge Method:

- Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible
- Waterra  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:

- Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

1.5 (Gals.) X	3	= 4.5 Gals.
I Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or (μS))	Turbidity (NTUs)	Gals. Removed	Observations
1409	68.2	6.93	1104	>1000	1.5	
1411	68.1	6.94	1107	>1000	3.0	
1413	68.6	6.94	1102	>1000	4.5	

Did well dewater? Yes  No  Gallons actually evacuated: 4.5

Sampling Date: 5-1-13 Sampling Time: 1415 Depth to Water: 10.66

Sample I.D.: MW-2 Laboratory: (Lancaster) Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE OXYS Other: see Cox

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE OXYS Other:

D.O. (if req'd): Pre-purge: \_\_\_\_\_ mg/L Post-purge: \_\_\_\_\_ mg/L

O.R.P. (if req'd): Pre-purge: \_\_\_\_\_ mV Post-purge: \_\_\_\_\_ mV

## CHEVRON WELL MONITORING DATA SHEET

Project #: <u>130501-J02</u>	Station #: <u>9-3600</u>
Sampler: <u>Jo</u>	Date: <u>5-1-13</u>
Weather: <u>clear</u>	Ambient Air Temperature: <u>72°F</u>
Well I.D.: <u>MW-3</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth: <u>20.00</u>	Depth to Water: <u>10.96</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>12.76</u>	

Purge Method:

- Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible  
 Waterra  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method:

- Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

<u>1.4</u>	(Gals.) X	<u>3</u>	=	<u>4.2</u>	Gals.
I Case Volume		Specified Volumes		Calculated Volume	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or <u>μS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
1345	68.1	6.99	802	>1000	1.4	
1347	68.0	7.00	797	>1000	2.8	
1349	68.0	7.02	791	>1000	4.2	

Did well dewater? Yes  No Gallons actually evacuated: 4.2

Sampling Date: 5-1-13 Sampling Time: 1355 Depth to Water: 11.47

Sample I.D.: MW-3 Laboratory: Lancaster Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE OXYS Other: See COC

Duplicate I.D.: \_\_\_\_\_ Analyzed for: TPH-G BTEX MTBE OXYS Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
	O.R.P. (if req'd):	mV	Post-purge:	mV

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
	O.R.P. (if req'd):	mV	Post-purge:	mV

*050113-05*  
**CHAIN OF CUSTODY FORM**  
 Chevron Environmental Management Company ■ 6111 Bollinger Canyon Rd. ■ San Ramon, CA 94583 COC 1 of 1

Chevron Site Number: 93800      Chevron Consultant: CRA  
 Chevron Site Global ID: T0600161613      Address: 5900 Hollis St. Suite A Emeryville  
 Chevron Site Address: 2200 Telegraph Ave.      CA Consultant Contact: Nathan Lee  
Oakland, CA      Consultant Phone No. 510-420-3333  
 Chevron PM: CATALINA DEVINE      Consultant Project No. 130501-502  
 Chevron PM Phone No.: (925)790-3949      Sampling Company: Blaine Tech Services  
 Retail and Terminal Business Unit (RTBU) Job      Sampled By (Print): [Signature]  
 Construction/Retail Job      Sampler Signature: [Signature]

ANALYSES REQUIRED		Preservation Codes
HVOIC <input type="checkbox"/> HC SCREEN <input type="checkbox"/> GROB <input checked="" type="checkbox"/> DRO <input type="checkbox"/> ORO <input type="checkbox"/> HC SCREEN <input type="checkbox"/> MTBE <input type="checkbox"/> DRO <input type="checkbox"/> ORO <input type="checkbox"/> HC SCREEN <input type="checkbox"/> EPA 8260B/GC/MS <input type="checkbox"/> EPA 8015B <input type="checkbox"/> EPA 8021B BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> EPA 6010 Ca, Fe, K, Mg, Mn, Na <input type="checkbox"/> EPA 6010/7000 TITLE 22 METALS <input type="checkbox"/> TLIC <input type="checkbox"/> STLC <input type="checkbox"/> EPA 150.1 PH <input type="checkbox"/> EPA 310.1 ALKALINITY <input type="checkbox"/> SM 2510B SPECIFIC CONDUCTIVITY <input type="checkbox"/> EPA 418.1 TRPH <input type="checkbox"/> EPA 413.1 OIL & GREASE <input type="checkbox"/> EPA 8260 ETHANOL <input type="checkbox"/> EPA 8015 TPH-P <input type="checkbox"/>		H = HCL, T = Tributylate N = HNO <sub>3</sub> , B = NaOH S = H <sub>2</sub> SO <sub>4</sub> , O = Other  Special Instructions Must meet lowest detection limits possible for 8260 Compounds

Charge Code: NWRTB-0093600-0-OML  
 NWRTB OOSITE NUMBER-0-WBS  
**(WBS ELEMENTS:**  
 SITE ASSESSMENT: A1L    REMEDIATION IMPLEMENTATION: R5L  
 SITE MONITORING: OML    OPERATION MAINTENANCE & MONITORING: M1L  
**THIS IS A LEGAL DOCUMENT. ALL FIELDS MUST BE FILLED OUT CORRECTLY AND COMPLETELY.**

**Lancaster Laboratories**  
 Other Lab: \_\_\_\_\_      Temp. Blank Check Time: \_\_\_\_\_  
 Lancaster, PA      Lab Contact: Jill Parker  
 2425 New Holland Pike, Lancaster, PA 17601  
 Phone No: (717)658-2300

SAMPLE ID				Sample Time	# of Containers	Container Type	ANALYSES REQUIRED												Notes/Comments							
Field Point Name	Matrix	Top Depth	Date (yy/mm/dd)				EPA 8260B/GC/MS	EPA 8015B	EPA 8021B BTEX	MTBE	EPA 6010 Ca, Fe, K, Mg, Mn, Na	EPA 6010/7000 TITLE 22 METALS	TLIC	STLC	EPA 150.1 PH	EPA 310.1 ALKALINITY	SM 2510B SPECIFIC CONDUCTIVITY	EPA 418.1 TRPH		EPA 413.1 OIL & GREASE	EPA 8260 ETHANOL	EPA 8015 TPH-P				
MLW-1	W		130501	1430	6	6 VOLS															X					
MLW-2	W			1415	1																		X			
MLW-3	W			1355	1																	X				
QA	T			1345	2	1 VOL																				

Relinquished By: [Signature] Company: PIS Date/Time: 5/13/14 5:00  
 Relinquished To: [Signature] Company: LLI Date/Time: 5/13/14 5:00  
 Turnaround Time: Standard  24 Hours  48 hours  72 hours  
 Sample Integrity: (Check by lab on arrival)  
 Intact: \_\_\_\_\_ On Ice: \_\_\_\_\_ Temp: \_\_\_\_\_ COC # \_\_\_\_\_

P.002  
PAGE 01/02

15102324913  
BASC

15.46

05/01/2013  
15102324913

09:06

RX Date/Time  
06/01/2009 09:06

# WELLHEAD INSPECTION CHECKLIST

Client Chevron Date 5-1-13

Site Address 2200 Telegraph Ave Oakland CA.

Job Number 130501-JR Technician JD

Well ID	Well Inspected - No Corrective Action Required	WELL IS SECURABLE BY DESIGN (12" or less)	WELL IS CLEARLY MARKED WITH THE WORDS "MONITORING WELL" (12" or less)	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
Mw-1		X	X					X		
Mw-2	X	X	X							
Mw-3	X	X	X							

NOTES: Mw-1 1/2 tubes Broken.

SOURCE RECORD **BILL OF LADING**  
 FOR PURGEWATER RECOVERED FROM  
 GROUNDWATER WELLS AT CHEVRON FACILITIES IN  
 THE STATE OF CALIFORNIA. THE PURGE- WATER  
 WHICH HAS BEEN RECOVERED FROM GROUND-  
 WATER WELLS IS COLLECTED BY THE CONTRACTOR  
 AND HAULED TO THEIR FACILITY IN SAN JOSE,  
 CALIFORNIA FOR TEMPORARILY HOLDING PENDING  
 TRANSPORT BY OTHERS TO FINAL DESTINATION.

The contractor performing this work is BLAINE TECH SERVICES,  
 INC. (BLAINE TECH), 1680 Rogers Ave. San Jose CA (408) 573-  
 0555). BLAINE TECH. is authorized by Chevron Environmental  
 Management Company (CHEVRON EMC) to recover, collect,  
 apportion into loads, and haul the purgewater that is drawn from  
 wells at the CHEVRON EMC facility indicated below and to  
 deliver that purgewater to BLAINE TECH for temporarily holding.  
 Transport routing of the purgewater may be direct from one  
 CHEVRON EMC facility to BLAINE TECH; from one CHEVRON  
 EMC facility to BLAINE TECH via another CHEVRON EMC  
 facility; or any combination thereof. The well purgewater is and  
 remains the property of CHEVRON EMC.

This Source Record **BILL OF LADING** was  
 initiated to cover the recovery of Non-Hazardous Well  
 Purgewater from wells at the Chevron facility described  
 below:

9-3600 CHEVRON # Catalina Dennis Chevron Engineer

2200 street number Telegraph Ave street name Oakland city CA. state

WELL I.D.	GALS.	WELL I.D.	GALS.
MW-1	4.2	/	/
MW-2	4.5	/	/
MW-3	4.2	/	/
/	/	/	/
/	/	/	/
/	/	/	/
/	/	/	/
/	/	/	/
added equip.		any other	
rinse water	1.0	adjustments	/
	1.1		
<b>TOTAL GALS.</b>	<b>14</b>	loaded onto	
<b>RECOVERED</b>	<b>13.9</b>	BTS vehicle #	<b>85</b>
BTS event #	time	date	
<u>130501-502</u>	<u>1450</u>	<u>5/1/13</u>	
Transporter signature	<u>[Signature]</u>		
*****			
<b>REC'D AT</b>	time	date	
<u>BTS</u>	<u>1550</u>	<u>5/1/13</u>	
Unloaded/received by	<u>[Signature]</u>		
signature			



ATTACHMENT B

LABORATORY ANALYTICAL REPORT



## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

Chevron  
6001 Bollinger Canyon Rd L4310  
San Ramon CA 94583

May 10, 2013

Project: 93600

Submittal Date: 05/02/2013

Group Number: 1387286

PO Number: 0015119899

Release Number: ESPINO DEVINE

State of Sample Origin: CA

Client Sample Description

MW-1-W-130501 NA Water  
MW-2-W-130501 NA Water  
MW-3-W-130501 NA Water  
QA-T-130501 NA Water

Lancaster Labs (LLI) #

7043475  
7043476  
7043477  
7043478

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

ELECTRONIC COPY TO	Chevron c/o CRA	Attn: Report Contact
ELECTRONIC COPY TO	Blaine Tech Services, Inc.	Attn: Dustin Becker
ELECTRONIC COPY TO	Chevron	Attn: Anna Avina
ELECTRONIC COPY TO	CRA	Attn: Ian Hull
ELECTRONIC COPY TO	CRA	Attn: Nathan Lee

Respectfully Submitted,



Jill M. Parker  
Senior Specialist

(717) 556-7262

Sample Description: MW-1-W-130501 NA Water  
Facility# 93600 BTST  
2200 Telegraph Ave-Oakland T0600161613

LLI Sample # WW 7043475  
LLI Group # 1387286  
Account # 10991

Project Name: 93600

Collected: 05/01/2013 14:30 by JO

Chevron

6001 Bollinger Canyon Rd L4310

Submitted: 05/02/2013 22:00

San Ramon CA 94583

Reported: 05/10/2013 18:23

TAO01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			ug/l	ug/l	ug/l	
10943	t-Amyl methyl ether	994-05-8	N.D.	0.5	1	1
10943	Benzene	71-43-2	N.D.	0.5	1	1
10943	t-Butyl alcohol	75-65-0	N.D.	2	5	1
10943	Ethanol	64-17-5	N.D.	50	250	1
10943	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10943	di-Isopropyl ether	108-20-3	N.D.	0.5	1	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	38	0.5	1	1
10943	Toluene	108-88-3	N.D.	0.5	1	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
<b>GC Volatiles SW-846 8015B</b>			ug/l	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	1,500	50	100	1

### General Sample Comments

State of California Lab Certification No. 2501

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	UST VOCs by 8260B - Water	SW-846 8260B	1	D131292AA	05/09/2013 15:32	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D131292AA	05/09/2013 15:32	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13127A20A	05/07/2013 13:56	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	13127A20A	05/07/2013 13:56	Laura M Krieger	1

\*=This limit was used in the evaluation of the final result

Sample Description: MW-2-W-130501 NA Water  
 Facility# 93600 BTST  
 2200 Telegraph Ave-Oakland T0600161613

LLI Sample # WW 7043476  
 LLI Group # 1387286  
 Account # 10991

Project Name: 93600

Collected: 05/01/2013 14:15 by JO

Chevron

6001 Bollinger Canyon Rd L4310

Submitted: 05/02/2013 22:00

San Ramon CA 94583

Reported: 05/10/2013 18:23

TAO02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			ug/l	ug/l	ug/l	
10943	t-Amyl methyl ether	994-05-8	N.D.	0.5	1	1
10943	Benzene	71-43-2	N.D.	0.5	1	1
10943	t-Butyl alcohol	75-65-0	N.D.	2	5	1
10943	Ethanol	64-17-5	N.D.	50	250	1
10943	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10943	di-Isopropyl ether	108-20-3	N.D.	0.5	1	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
10943	Toluene	108-88-3	N.D.	0.5	1	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
<b>GC Volatiles SW-846 8015B</b>			ug/l	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1

### General Sample Comments

State of California Lab Certification No. 2501

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	UST VOCs by 8260B - Water	SW-846 8260B	1	D131292AA	05/09/2013 15:54	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D131292AA	05/09/2013 15:54	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13123A07A	05/03/2013 22:06	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13123A07A	05/03/2013 22:06	Catherine J Schwarz	1

\*=This limit was used in the evaluation of the final result

Sample Description: MW-3-W-130501 NA Water  
Facility# 93600 BTST  
2200 Telegraph Ave-Oakland T0600161613

LLI Sample # WW 7043477  
LLI Group # 1387286  
Account # 10991

Project Name: 93600

Collected: 05/01/2013 13:55 by JO

Chevron

6001 Bollinger Canyon Rd L4310

Submitted: 05/02/2013 22:00

San Ramon CA 94583

Reported: 05/10/2013 18:23

TAO03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			ug/l	ug/l	ug/l	
10943	t-Amyl methyl ether	994-05-8	N.D.	0.5	1	1
10943	Benzene	71-43-2	N.D.	0.5	1	1
10943	t-Butyl alcohol	75-65-0	N.D.	2	5	1
10943	Ethanol	64-17-5	N.D.	50	250	1
10943	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10943	di-Isopropyl ether	108-20-3	N.D.	0.5	1	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
10943	Toluene	108-88-3	N.D.	0.5	1	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
<b>GC Volatiles SW-846 8015B</b>			ug/l	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1

### General Sample Comments

State of California Lab Certification No. 2501

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	UST VOCs by 8260B - Water	SW-846 8260B	1	D131292AA	05/09/2013 16:17	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D131292AA	05/09/2013 16:17	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13123A07A	05/03/2013 22:32	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13123A07A	05/03/2013 22:32	Catherine J Schwarz	1

\*=This limit was used in the evaluation of the final result

Sample Description: QA-T-130501 NA Water  
Facility# 93600 BTST  
2200 Telegraph Ave-Oakland T0600161613

LLI Sample # WW 7043478  
LLI Group # 1387286  
Account # 10991

Project Name: 93600

Collected: 05/01/2013 13:45

Chevron

Submitted: 05/02/2013 22:00

6001 Bollinger Canyon Rd L4310

Reported: 05/10/2013 18:23

San Ramon CA 94583

TAOQA

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

### General Sample Comments

State of California Lab Certification No. 2501

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

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX + 5 Oxygenates Water	SW-846 8260B	1	D131292AA	05/09/2013 12:52	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D131292AA	05/09/2013 12:52	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13123A07A	05/03/2013 18:44	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13123A07A	05/03/2013 18:44	Catherine J Schwarz	1

\*=This limit was used in the evaluation of the final result

## Quality Control Summary

Client Name: Chevron  
Reported: 05/10/13 at 06:23 PM

Group Number: 1387286

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>Blank LOQ</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: D131292AA Sample number(s): 7043475-7043478									
t-Amyl methyl ether	N.D.	0.5	1	ug/l	91		66-120		
Benzene	N.D.	0.5	1	ug/l	93		77-121		
t-Butyl alcohol	N.D.	2.	5	ug/l	100		75-120		
Ethanol	N.D.	50.	250	ug/l	100		54-149		
Ethyl t-butyl ether	N.D.	0.5	1	ug/l	91		66-120		
Ethylbenzene	N.D.	0.5	1	ug/l	96		79-120		
di-Isopropyl ether	N.D.	0.5	1	ug/l	93		65-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	92		68-121		
Toluene	N.D.	0.5	1	ug/l	94		79-120		
Xylene (Total)	N.D.	0.5	1	ug/l	96		77-120		
Batch number: 13123A07A Sample number(s): 7043476-7043478									
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	106	115	75-135	8	30
Batch number: 13127A20A Sample number(s): 7043475									
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	87	85	75-135	3	30

### 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: D131292AA Sample number(s): 7043475-7043478 UNSPK: P043466									
t-Amyl methyl ether	105	104	65-117	1	30				
Benzene	149 (2)	147 (2)	72-134	0	30				
t-Butyl alcohol	102	100	67-119	2	30				
Ethanol	101	96	53-146	6	30				
Ethyl t-butyl ether	101	102	74-122	2	30				
Ethylbenzene	117	116	71-134	1	30				
di-Isopropyl ether	109	109	70-129	0	30				
Methyl Tertiary Butyl Ether	99	99	72-126	0	30				
Toluene	111	110	80-125	1	30				
Xylene (Total)	115	112	79-125	2	30				

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

- (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  
Reported: 05/10/13 at 06:23 PM

Group Number: 1387286

### 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: D131292AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7043475	100	93	97	107
7043476	99	95	98	99
7043477	100	98	98	96
7043478	101	96	98	100
Blank	100	101	98	99
LCS	100	100	99	99
MS	102	98	96	107
MSD	100	103	97	106

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

Analysis Name: TPH-GRO N. CA water C6-C12

Batch number: 13123A07A

Trifluorotoluene-F

7043476	74
7043477	92
7043478	81
Blank	83
LCS	92
LCSD	75

Limits: 63-135

Analysis Name: TPH-GRO N. CA water C6-C12

Batch number: 13127A20A

Trifluorotoluene-F

7043475	115
Blank	89
LCS	104
LCSD	103

Limits: 63-135

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

- (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>µg</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>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter
<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.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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