RECEIVED



10:23 am, Dec 16, 2009

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

December 15, 2009 (date)

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

Re: Chevron Facility #_9-2029_____

Address: 890 West MacArthur Boulevard, Oakland, California_

I have reviewed the attached report titled <u>Fourth Quarter 2009 Groundwater Monitoring</u> <u>Report</u>_____ and dated <u>December 15, 2009</u>.

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

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

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

Sincerely,

SHFrencho

Stacie H. Frerichs Project Manager

Enclosure: Report



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

December 15, 2009

Reference No. 611974

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

Re: Fourth Quarter 2009 Groundwater Monitoring Report Former Chevron Service Station No. 9-2029 890 West MacArthur Boulevard Oakland, California LOP Case #RO0002438

Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA) is submitting the attached *Groundwater Monitoring and Sampling Report* (report) to Alameda County Environmental Health (ACEH) on behalf of Chevron Environmental Management Company (Chevron) for the site referenced above. The report (prepared by Gettler-Ryan Inc. and dated December 2, 2009) presents the results of the monitoring and sampling of wells MW-5 through MW-8 during fourth quarter 2009. Wells MW-5 through MW-8 are sampled on a semi-annual basis during the second and fourth quarters; please note this was mistakenly identified as first and third quarters in the September 30, 2009 *Third Quarter 2009 Groundwater Monitoring Report*. Also attached are Figure 1 (Vicinity Map) showing the site location, and Figure 2 (Concentration Map) presenting the fourth quarter 2009 analytical results along with a rose diagram. The monitoring results during 2009 are discussed below.

During 2009, elevated concentrations of total petroleum hydrocarbons as gasoline (TPHg) (ranging from 7,600 to 22,000 micrograms per liter [μ g/L]), benzene (ranging from 240 to 1,500 μ g/L) and methyl tertiary butyl ether (MTBE) (ranging from 38 to 330 μ g/L) were detected in well MW-6; low to elevated concentrations of toluene (up to 12 μ g/L), ethylbenzene (up to 1,400 μ g/L) and xylenes (up to 180 μ g/L) were also detected. The detected concentrations were generally consistent with fluctuations observed during 2008. In well MW-5, significant fluctuations in TPHg concentrations (ranging from 520 to 7,400 μ g/L) were observed during 2009; low concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) (up to 31 μ g/L), and MTBE (up to 6 μ g/L) were also detected. The TPHg fluctuations appear correlated with the depth to water. Concentrations in well MW-7 generally increased during 2009; TPHg and benzene increased from 630 to 12,000 μ g/L and 30 to 630 μ g/L, respectively. The ethylbenzene (up to 1,300 μ g/L) and xylenes (up to 420 μ g/L) concentrations in well MW-7 also increased during 2009; toluene generally was not detected and the MTBE concentrations (up to 8 μ g/L) remained stable and low. TPHg, BTEX, and MTBE were not





December 15, 2009

Reference No. 611974

- 2 -

detected in well MW-8 during 2009 and generally have not been detected in this well since it was installed.

Low concentrations of tertiary butyl alcohol (TBA) were detected in wells MW-5 (up to 7 μ g/L), MW-6 (up to 190 μ g/L), and MW-7 (up to 9 μ g/L) during one or more events in 2009; and low concentrations of tertiary amyl methyl ether (TAME) (up to 5 μ g/L) were detected in well MW-6. Other fuel oxygenates (except MTBE) were not detected. As TBA is a breakdown product of MTBE, the detections of TBA may indicate natural biodegradation of MTBE in the subsurface.

Based on the analytical results, impacted groundwater is present downgradient of the site in the area of wells MW-5, MW-6, and MW-7. Concentrations in wells MW-5 and MW-6 during 2009 were generally consistent with historical fluctuations; however, concentrations in well MW-7 generally increased. The increases in well MW-7 may be due to typical seasonal fluctuations; however, more data is needed. CRA recommends continued monitoring and sampling to further evaluate groundwater quality and concentration trends.

As furthest downgradient well MW-7 is impacted, additional investigation to further evaluate the extent of impacted groundwater appears warranted. Therefore, CRA prepared and submitted the August 25, 2009 *Work Plan for Additional Investigation* that proposed the drilling of two additional borings downgradient of MW-7 (Figure 2). We are currently awaiting concurrence from ACEH to implement the proposed scope of work.



December 15, 2009

Reference No. 611974

- 3 -

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

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Kelly M. Rider

K

James P. Kiernan, P.E. #C68498

KR/jt/8 Encl.

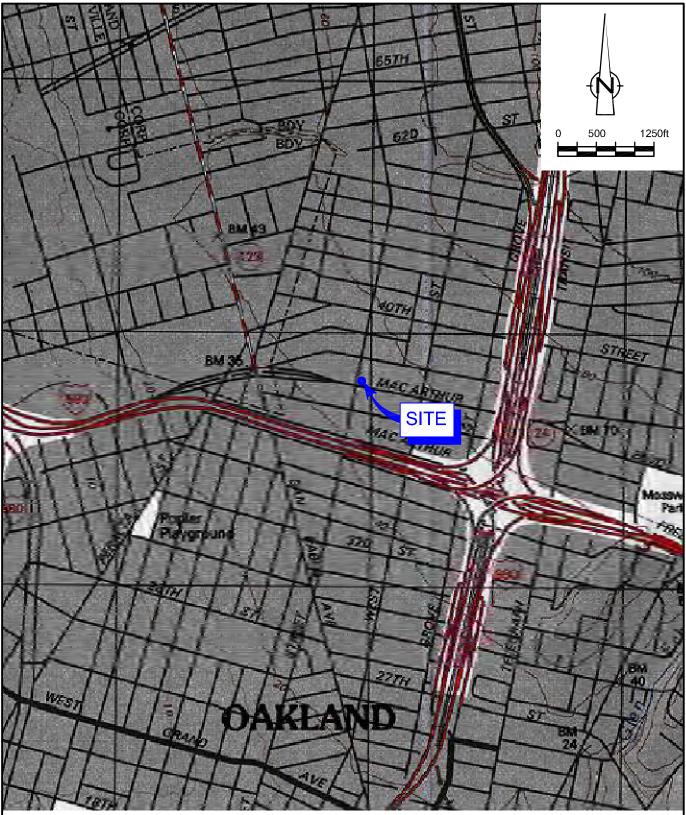
Figure 1Vicinity MapFigure 2Concentration Map - November 5, 2009

Attachment A Fourth Quarter 2009 Groundwater Monitoring and Sampling Report

cc: Ms. Stacie Frerichs, Chevron Environmental Management Company Mr. Stephen O'Kane



FIGURES

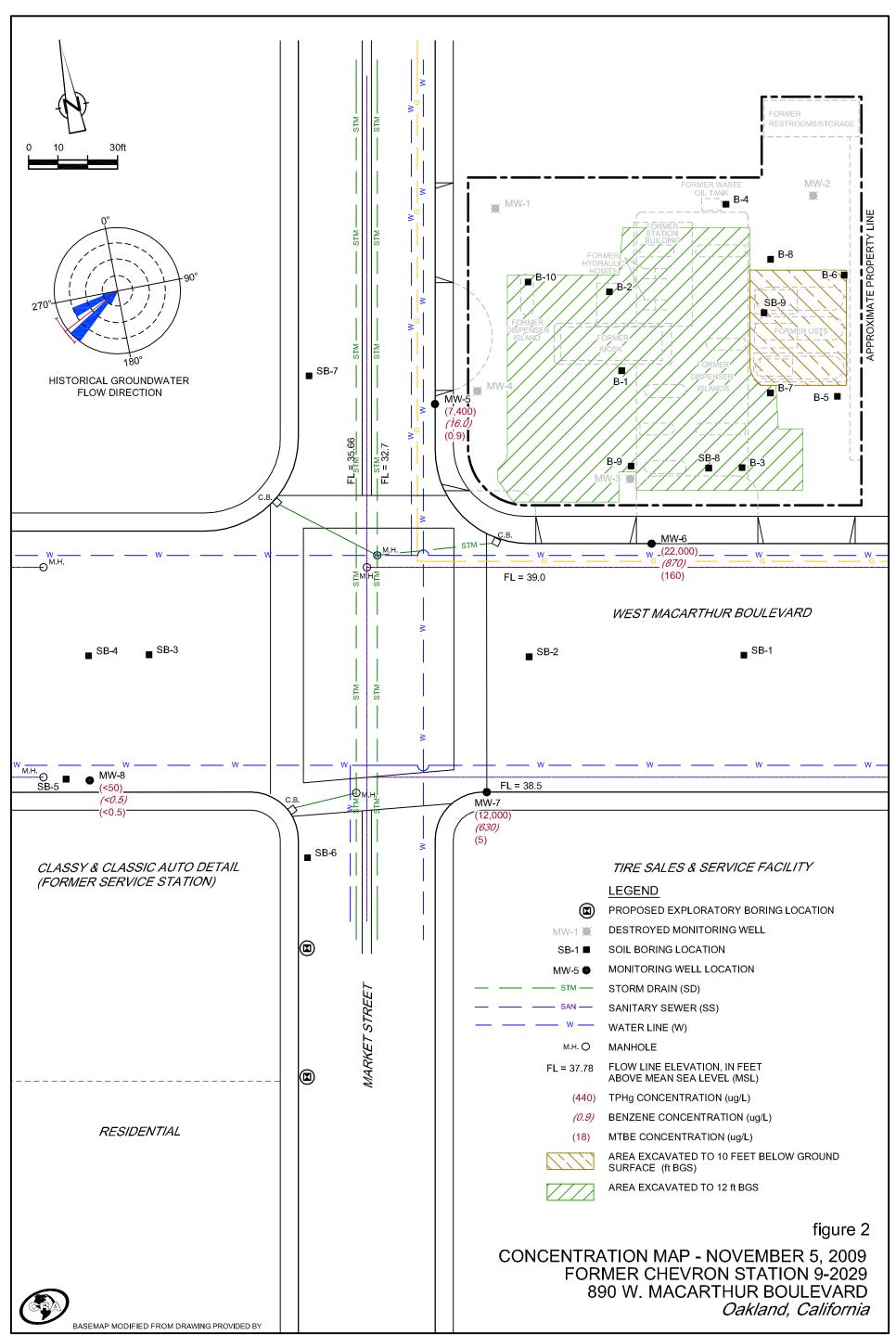


SOURCE: TOPO! MAPS.

figure 1



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



611974-2009(008)GN-WA001 DEC 15/2009

ATTACHMENT A

FOURTH QUARTER 2009 GROUNDWATER MONITORING AND SAMPLING REPORT



TRANSMITTAL

December 4, 2009 G-R #386911

- TO: Mr. James Kiernan Conestoga-Rovers & Associates 10969 Trade Center Drive, Suite 107 Rancho Cordova, CA 95670
- FROM: Deanna L. Harding Project Coordinator Gettler-Ryan Inc. 6747 Sierra Court, Suite J Dublin, California 94568

RE: Former Chevron Service Station #9-2029 (MTI) 890 West MacArthur Blvd. Oakland, California RO 0002438

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
2	December 2, 2009	Groundwater Monitoring and Sampling Report Second Semi-Annual Event of November 5, 2009

COMMENTS:

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

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

Please provide any comments/changes and propose any groundwater monitoring modifications for the next event prior to *December 18, 2009* at which time the final report will be distributed to the following:

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

Enclosures



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

December 4, 2009 (date)

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

Re: Chevron Facility #<u>9-2029</u>

Address: 890 West MacArthur Blvd., Oakland, California

) have reviewed the attached routine groundwater monitoring report dated December 4, 2009.

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

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

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

Sincerely,

Hencho

Stacie H. Frerichs Project Manager

Enclosure: Report

WELL CONDITION STATUS SHEET

Client/Facility #:	Chevron	#9-2029					Job #	38691	1						
Site Address:	890 Wes	t Macarth	nur Blvd.			•	Event Date:		11.5		25				•
City:	Oakland	, CA				•	Sampler:		FT	_	<u> </u>	.	<u>.</u>		•
WELL ID	Vault Frame Condition	Gasket/ O-Ring (M)missing	BOLTS (M) Missing (R) Replaced	Bolt Flanges B= Broken S= Stripped R=Retap	APRON Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) inches from TOC	Casing (Condition prevents tight cap seal)				Manufa	WELL VA	ULT # of	Bolts	Pictures Taken Yes No
MW.5	OK						>	1	T		Mon	yorn	6"	12	
MW-6	OK						\rightarrow					·····	1	(<u> </u>	
MW-7	DK	~					~~~>						1		
MW-8	OL							4				1	t		
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3.

Comments

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December 2, 2009 G-R Job #386911

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

RE: Second Semi-Annual Event of November 5, 2009 Groundwater Monitoring & Sampling Report Former Chevron Service Station #9-2029 890 West MacArthur Boulevard Oakland, California

Dear Ms. Frerichs:

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

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

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

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

Sincerely,

Deanna L. Harding Project Coordinator lo. 6882 glasV. Lee Do Senior Geologist, P.G. No. 6882 OFCALI Figure 1: Potentiometric Map Table 1: Groundwater Monitoring Data and Analytical Results Table 2: Groundwater Analytical Results - Oxygenate Compounds Attachments: Standard Operating Procedure - Groundwater Sampling Field Data Sheets

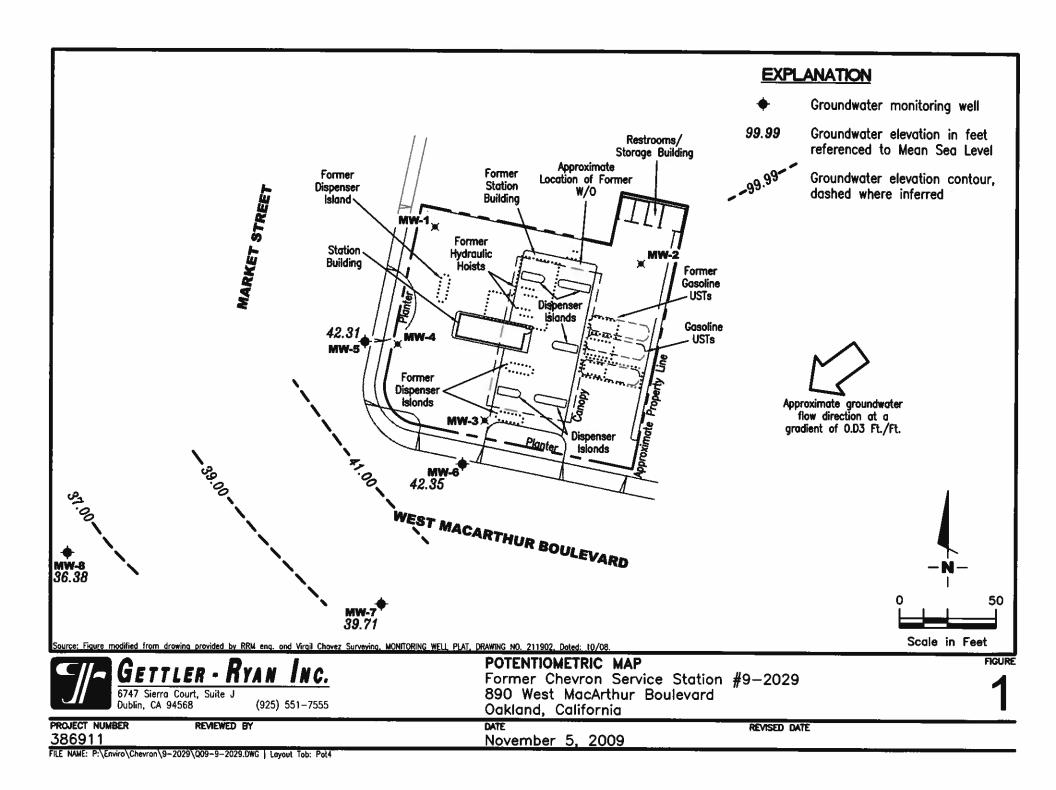


Table 1 Groundwater Monitoring Data and Analytical Results Former Chevron Service Station #9-2029 890 West MacArthur Blvd

0.20	AA COL TAN	acti unu	DIVU.	
	Dakland	Californ	via	

Oakland, California										
WELL ID/	TOC*	DTW	GWE	TPH-GRO	B	T	E	x	MTBE	
DATE	(fl.)	(ft.)	(msl)	(µg/L)	(pg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
MW-5										
08/22/081	49.39	9.97	39.42	-	-	-	-	54	-	
08/27/083	49.39	10.03	39.36	54	0.5	0.8	<0.5	0.7	10	
11/21/083	49.39	8.42	40.97	6,000	93	6	37	6	8	
02/13/09 ³	49.39	7.11	42.28	5,100	31	5	20	3		
05/08/093	49.39	7.21	42.18	3,600	18	4	14	2	6 2	
08/07/09 ³	49.39	9.60	39.79	520	0.7	<0.5	<0.5	<0.5	2	
11/05/093	49.39	7.08	42.31	7,400	16	5	18	4	0.9	
MW-6	40.07	0.00	10.00							
08/22/08 ¹	49.07	8.98	40.09							
08/27/08 ³	49.07	8.98	40.09	6,000	990	4	350	530	440	
11/21/08 ³	49.07	8.12	40.95	14,000	1,000	15	1,300	550	300	
)2/13/09 ³	49.07	5.84	43.23	9,700	630	4	510	36	180	
)5/08/09 ³	49.07	5.77	43.30	7,600	240	4	470	67	38	
08/07/09 ³	49.07	8.49	40.58	14,000	1,500	12	1,400	180	330	
11/05/09 ³	49.07	6.72	42.35	22,000	870	8	1,300	130	160	
MW-7										
08/22/08 ¹	48.74	10.20	38.54							
)8/22/08)8/27/08 ³	48.74	10.20	38.55	 <50						
1/21/08	48.74	9.51	39.23		<0.5	0.6	<0.5	0.7	6	
)2/13/09 ³	48.74	7.95	40.79	1,100 630	80	<0.5	65	0.7	6	
)2/13/09)5/08/09 ³	48.74	8.04	40.79		30	<0.5	38	0.9	7	
)5/08/09)8/07/09 ³	48.74	8.04 9.88		1,200	83	<0.5	190	2	8	
			38.86	8,900	240	0.7	770	5	5	
1/05/09 ³	48.74	9.03	39.71	12,000	630	<1	1,300	420	5	
MW-8										
0 8/22/08¹	47.61	12.41	35.20							
)8/27/08 ³	47.61	12.42	35.19	<50	<0.5	0.7	<0.5	0.6	<0.5	
1/21/083	47.61	11.42	36.19	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/13/09 ³	47.61	8.87	38.74	<50	<0.5	<0.5	<0.5	<0.5	<0.5	

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

	890 West MacArthur Blvd.										
					Dakland, California						
WELL ID/	TOC*	DTW	GWE	TPH-GRO	B	Ť	E	x	MTBE		
DATE	(fi.)	(ft.)	(msl)	(µg/L)	(pg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)		
MW-8 (cont)											
05/08/09 ³	47.61	10.79	36.82	<50	<0.5	<0.5	<0.5	<0.5	<0.5		
08/07/09 ³	47.61	12.33	35.28	<50	<0.5	<0.5	<0.5	<0.5	<0.5		
11/05/09 ³	47.61	11.23	36.38	<50	<0.5	<0.5	<0.5	<0.5	<0.5		
MW-1											
03/12/021	50.71	6.50	44.21	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 ²		
06/07/02	50.71	8.69	42.02	<50	<0.50	< 0.50	< 0.50	<1.5	<2.5/<2 ²		
09/13/02	50.71	9.28	41.43	<50	<0.50	<0.50	< 0.50	<1.5	<2.5/<2 ²		
12/13/02	50.71	8.48	42.23	<50	<0.50	<0.50	< 0.50	<1.5	<2.5/<2 ²		
03/01/03	50.71	7.34	43.37	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<0.5 ²		
06/27/03 ³	50.71	9.29	41.42	<50	<0.5	0.6	<0.5	<0.5	<0.5		
09/30/03 ³	50.71	10.17	40.54	<50	<0.5	0.6	<0.5	<0.5	<0.5		
12/03/03 ³	50.71	7.82	42.89	<50	<0.5	<0.5	<0.5	<0.5	<0.5		
03/10/04 ³	50.71	6.57	44.14	<50	<0.5	<0.5	<0.5	<0.5	<0.5		
0 6 /30/04 ³	50.71	9.78	40.93	<50	<0.5	<0.5	<0.5	<0.5	<0.5		
09/30/04 ³	50.71	9.91	40.80	<50	<0.5	<0.5	<0.5	<0.5	<0.5		
12/29/04 ³	50.71	2.90	47.81	<50	<0.5	<0.5	<0.5	<0.5	<0.5		
03/23/05 ³	50.71	2.90	47.81	<50	<0.5	<0.5	<0.5	<0.5	<0.5		
06/22/05 ³	50.71	8.59	42.12	<50	<0.5	<0.5	<0.5	<0.5	<0.5		
09/02/05 ³	50.71	9.38	41.33	<50	<0.5	<0.5	<0.5	<0.5	<0.5		
12/02/05	50.71	8.44	42.27				-				
03/20/06	50.71	3.05	47.66	-	1 C 44		-	-	-		
06/01/06	50.71	6.77	43.94						-		
09/11/06	50.71	9.18	41.53	-	1.000	-	C	-	-		
DESTROYED											
MW-2											
03/12/02 ¹	52.57	6.09	46.48	<50	<0.50	<0.50	<0.50	<1.5	<2.5/3 ²		
06/07/02	52.57	8.65	43.92	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 ²		
09/13/02	52.57	9.58	42.99	<50	<0.50	<0.50	<0.50	<1.5	$<2.5/<2^{2}$		
12/13/02	52.57	8.50	44.07	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 ²		
03/01/03	52.57	7.00	45.57	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<0.5 ²		
06/27/03 ³	52.57	9.59	42.98	<50	<0.5	<0.5	<0.5	<0.5	<0.5		
09/30/03 ³	52.57	10.64	41.93	<50	<0.5	<0.5	<0.5	<0.5	0.7		
12/03/03 ³	52.57	7.54	45.03	<50	<0.5	<0.5	<0.5	<0.5	<0.5		

Table 1Groundwater Monitoring Data and Analytical ResultsFormer Chevron Service Station #9-2029890 West MacArthur Blvd.

Oakland,	California
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WELL ID/	TOC*	DTW	GWE	TPH-GRO	Bakland, California	T	Ē	x	MTBE
DATE	(fL)		(msl)	(µg/L)	(pg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-2 (cont)									
03/10/04 ³	52.57	6.05	46.52	<50	<0.5	<0.5	<0.5	<0.5	<0.5
)6/30/04 ³	52.57	10.15	42.42	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/04 ³	52.57	10.14	42.43	<50	<0.5	<0.5	<0.5	<0.5	<0.5
2/29/04 ³	52.57	2.29	50.28	<50	<0.5	<0.5	<0.5	<0.5	<0.5
)3/23/05 ³	52.57	2.44	50.13	<50	<0.5	<0.5	<0.5	<0.5	<0.5
)6/22/05 ³	52.57	8.99	43.58	<50	<0.5	<0.5	<0.5	<0.5	<0.5
)9/02/05 ³	52.57	10.17	42.40	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/02/05	52.57	8.99	43.58						
)3/20/06	52.57	2.70	49.87						
6/01/06	51.57	6.51	45.06						
09/11/06	51.57	10.06	41.51						
DESTROYED									
MW-3									
)3/12/02 ¹	50.31	6.50	43.81	12,000	600	8.5	1,100	370	700/650 ²
6/07/02	50.31	7.74	42.57	14,000	630	8.8	1,200	160	520/490 ²
9/13/02	50.31	9.73	40.58	3,000	270	3.2	200	11	600/640 ²
2/13/02	50.31	8.60	41.71	24,000	1,100	14	2,400	220	650/540 ²
)3/01/03	50.31	6.75	43.56	16,000	500	9.0	1,200	130	460/330 ²
6/27/03 ³	50.31	9.25	41.06	9,500	390	6	450	30	470
)9/30/03 ³	50.31	10.31	40.00	2,000	110	1	100	3	710
2/03/03 ³	50.31	8.18	42.13	19,000	970	8	2,100	85	420
3/10/04 ³	50.31	6.10	44.21	15,000	550	6	960	95	220
6/30/04 ³	50.31	9.80	40.51	3,200	150	1	100	3	660
9/30/04 ³	50.31	10.18	40.13	1,900	66	0.8	84	4	690
2/29/04 ³	50.31	4.58	45.73	16,000	470	7	820	47	170
3/23/053	50.31	5.07	45.24	18,000	380	6	960	58	140
6/22/05 ³	50.31	8.12	42.19	16,000	700	6	950	62	300
9/02/05 ³	50.31	9.41	40.90	8,400	380	4	510	41	440
2/02/05 ³	50.31	7.97	42.34	16,000	490	6	1,200	32	170
3/20/06 ³	50.31	5.32	44.99	4,200	79	0.8	2	10	34
6/01/06 ³	50.31	7.07	43.24	5,400	67	1	26	3	28
9/11/06 ³	50.31	9.07	41.24	14,000	270	5	240	38	97
DESTROYED				•		-			

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

Oakland.	California
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	CONTROL INTO

	Oakland, California											
WELL ID/ DATE	TOC*	DTW	GWE	TPH-GRO	В	T	E	x	MTBE			
	(ft.)	(ft.)	(msl)	(µg/L)	(pg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)			
MW-4												
03/12/02 ¹	49.93	5.34	44.59	9,700	360	5.3	1,100	150	170/170 ²			
06/07/02	49.93	8.52	41.41	7,300	170	2.7	280	21	200/120 ²			
09/13/02	49.93	9.86	40.07	5,800	92	4.5	80	14	190/160 ²			
12/13/02	49.93	9.42	40.51	10,000	250	2.2	330	19	$170/200^2$			
03/01/03	49.93	7.33	42.60	12,000	300	4.6	900	110	$160/100^2$			
06/27/03 ³	49.93	9.62	40.31	7,500	110	2	200	58	130			
09/30/03 ³	49.93	11.13	38.80	3,600	18	<1	16	7	520			
2/03/03 ³	49.93	7.80	42.13	16,000	1,000	6	720	52	73			
03/10/04 ³	49.93	6.69	43.24	2,200	230	3	610	71	55			
)6/30/04 ³	49.93	10.33	39.60	7,700	59	<1	78	17	110			
09/30/04 ³	49.93	10.75	39.18	4,800	100	1	33	10	400			
12/29/04 ³	49.93	3.34	46.59	13,000	250	3	480	27	42			
03/23/05 ³	49.93	4.24	45.69	12,000	130	2	280	16	24			
)6/22/05 ³	49.93	7.95	41.98	6,400	290	2	11	11	18			
)9/02/05 ³	49.93	9.46	40.47	3,700	180	1	13	7	18			
2/02/053	49.93	7.60	42.33	11,000	840	5	480	24	34			
3/20/06 ³	49.93	4.50	45.43	790	14	<0.5	1	0.6	2			
)6/01/06 ³	49.93	7.30	42.63	5,100	48	0.8	42	4	2			
<b>)9/11/06³</b>	49.93	9.38	40.55	6,700	64	3	44	3	4			
DESTROYED												
<b>FRIP BLANK</b>												
QA												
3/12/02		-	-	<50	<0.50	<0.50	<0.50	<1.5	<2.5			
6/07/02			-	<50	<0.50	<0.50	<0.50	<1.5	<2.5			
9/13/02			-	<50	<0.50	<0.50	<0.50	<1.5	<2.5			
2/13/02				<50	<0.50	<0.50	<0.50	<1.5	<2.5			
)3/01/03			-	<50	<0.50	<0.50	<0.50	<1.5	<2.5			
06/27/03 ³			-	<50	<0.5	<0.5	<0.5	<0.5	<0.5			
9/30/03 ³		-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5			
2/03/03 ³				<50	<0.5	<0.5	<0.5	<0.5	<0.5			
03/10/04 ³			-	<50	<0.5	<0.5	<0.5	<0.5	<0.5			
)6/30/04 ³			-	<50	<0.5	<0.5	<0.5	<0.5	<0.5			
9/30/04 ³			-	<50	<0.5	<0.7	<0.8	<0.8	<0.5			
12/29/04 ³				<50	<0.5	<0.5	<0.5	<0.5	<0.5			

# Table 1 Groundwater Monitoring Data and Analytical Results Former Chevron Service Station #9-2029

890 West MacArthur Blvd.

WELL ID/	TOC*	DTW	GWE	TPH-GRO	B	Ť	E	x	MTBE
DATE	(fi.)	(ft.)	(msl)	(ug/L)	(pg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
QA (cont)									
03/23/053	-	14	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/22/051	1-12	-		<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/02/053	-	-		<50	<0.5	1.0	<0.5	14	<0.5
12/02/053	-			<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/20/063		+	+	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/01/063		34.	1. A. I.	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/11/063	-	24.71	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/27/081	-	-	(#J. 7	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/21/085		-		<50	<0.5	<0.5	<0.5	<0.5	
02/13/095	-	÷	-	<50	<0.5	<0.5	<0.5	<0.5	-
05/08/095		-		<50	<0.5	<0.5	<0.5	<0.5	-
08/07/09 ⁵ DISCONTINUE		-	-	<50	<0.5	<0.5	<0.5	<0.5	

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

## EXPLANATIONS:

TOC = Top of CasingTPH = Total Petroleum HydrocarbonsX = Xylenes(ft.) = FeetGRO = Gasoline Range OrganicsMTBE = Methyl Tertiary Butyl EtherDTW = Depth to WaterB = Benzene(µg/L) = Micrograms per literGWE = Groundwater ElevationT = Toluene- = Not Measured/Not Analyzed(msl) = Mean sea levelE = EthylbenzeneQA = Quality Assurance/Trip Blank

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

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

¹ Well development performed.

- ² MTBE by EPA Method 8260.
- ³ BTEX and MTBE by EPA Method 8260.

⁴ Analytical result confirmed.

⁵ BTEX by EPA Method 8260.

Table 2
Groundwater Analytical Results - Oxygenate Compounds
Former Chevron Service Station #9-2029

1

890 West	MacArthur	Blvd.
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Oakland, California									
WELL ID	DATE	ETHANOL	тва	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(pg/L)	(µg/L)	(µg/L)	(µg/L)
WW-5	08/27/08	-	2	10	<0.5	<0.5	<0.5	-	-
	11/21/08	-	4	8	<0.5	<0.5	<0.5		-
	02/13/09		3	6	<0.5	<0.5	<0.5	-	-
	05/08/09	-	7	2	<0.5	<0.5	<0.5	-	-
	08/07/09	-	<2	2	<0.5	<0.5	<0.5	-	-
	11/05/09	e -	2	0.9	<0.5	<0.5	<0.5	-	
NW-6	08/27/08		200	440	-0.5				
VI VV -0	11/21/08	-	390	440	<0.5	<0.5	6	~	-
	02/13/09	-	320	300	<13	<13	<13	-	
	02/13/09 05/08/09	-	100	180	<1	<1	4	-	*
	03/08/09 08/07/09	5	16	38	<0.5	<0.5	0.9		-
	11/05/09	-	190	330	<3	<3	5	-	~
	11/05/09	7	86	160	<1	<1	4		π
<b>/</b> W-7	08/27/08	-	<2	6	<0.5	<0.5	<0.5	-	1.1
	11/21/08	-	5	6	<0.5	<0.5	<0.5	-	-
	02/13/09	14 T	<2	7	<0.5	<0.5	<0.5		-
	05/08/09	-	<2	8	<0.5	<0.5	<0.5		
	08/07/09	φ÷	4	5	<0.5	<0.5	<0.5	-	*
	11/05/09	7	9	5	<1	<1	<1	÷	÷
1W-8	08/27/08	-	<2	<0.5	<0.5	<0.5	<0.5	14	-
	11/21/08	-	<2	<0.5	<0.5	<0.5	<0.5	-	-
	02/13/09	-	<2	<0.5	<0.5	<0.5	<0.5	-	
	05/08/09	÷	<2	<0.5	<0.5	<0.5	<0.5	-	-
	08/07/09	-	<2	<0.5	<0.5	<0.5	<0.5	1.2	()
	11/05/09	-	<2	<0.5	<0.5	<0.5	<0.5	-	(
<b>fW-1</b>	03/12/02	<del></del>	<100	<2	<2	<2	<2	<2	<2
	06/07/02		<100	<2	<2	<2	<2	<2	<2
	09/13/02		<100	<2	<2	<2	<2	<2	<2
	12/13/02	-	<100	<2	<2	<2	<2	<2	<2
	03/01/03	-	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

# Table 2 Groundwater Analytical Results - Oxygenate Compounds Former Chevron Service Station #9-2029

890 West MacArthur Blvd.

					kland, California				
WELL ID	DATE	ETHANOL	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-1 (cont)	06/27/03	-	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	09/30/03	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	12/03/03	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	03/10/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/30/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	09/30/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	12/31/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	03/23/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/22/05	<50	<5	<0.5	<0,5	<0.5	<0.5	<0.5	<0.5
	09/02/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	DESTROYED								
WW-2	03/12/02	2.	<100	3	~2	~	<2	~2	<2
	06/07/02	-	<100	<2	~2	2	<2	2	~2
	09/13/02	-	<100	~2	<2	<2	<2	2	<2
	12/13/02		<100	2	~2	<2	<2	2	~2
	03/01/03	-	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/27/03	-	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	09/30/03	<50	<5	0.7	<0.5	<0,5	<0.5	<0.5	<0.5
	12/03/03	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	03/10/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/30/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	09/30/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	12/31/04	<50	<5	<0.5	<0,5	<0.5	<0.5	<0.5	<0.5
	03/23/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/22/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	09/02/05	<50	<5	<0,5	<0.5	<0.5	<0.5	<0.5	<0.5
	DESTROYED								Sec.
W-3	03/12/02	÷.	<100	650	<2	~	18	2	2
	06/07/02	-	230	490	<5.0	<5.0	11	<5.0	<5.0
	09/13/02	~	170	640	2	<2	8	~2	<2
	12/13/02		240	540	<2	2	29	31	2
	03/01/03		160	330	<0.5	<0.5	10	<0.5	<0.5
	06/27/03	-	200	470	<0.5	<0.5	11	<0.5	<0.5
	09/30/03	<50	120	710	<0.5	<0.5	6	0.7	<0.5
	12/03/03	<250	200	420	<3	<	14	<3	<3
9-2029 x1s/#3	6011								

# Table 2 Groundwater Analytical Results - Oxygenate Compounds Former Chevron Service Station #9-2029

	890 West MacArthur Blvd.									
WELLIN	Oakland, California WELL ID DATE ETHANOL TBA MTBE DIPE ETBE TAME 1,2-DCA EDB									
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		(µg/L)	(µg/L)	(µg/L)	(µg/L)	( <i>ag/L</i> )	(µg/L)	1,2-DCA (μg/L)	шъ (µg/L)	
MW-3 (cont)	03/10/04	<50	140	220	<0.5	≪0.5	5	<0.5	<0.5	
Sec Cours	06/30/04	<50	100	660	<0.5	<0.5	5	<0.5	<0.5	
	09/30/04	<50	72	690	<0.5	<0.5	4	0.5	<0.5	
	12/31/04	<50	77	170	<0.5	<0.5	ŝ	<0.5	<0.5	
	03/23/05	<50	<5	140	<0.5	<0.5	4	<0.5	3	
	06/22/05	<250	150	300	<	<3	6	3	3	
	09/02/05	<100	99	440	<1	4	<1	<1	<1	
	12/02/05	<100	66	170	<1	<1	5	<1	<1	
	03/20/06	<50	14	34	<0.5	<0.5	<0.5	<0.5	<0.5	
	06/01/06	<50	12	28	<0.5	<0.5	0.8	<0.5	<0.5	
	09/11/06	<50	47	97	<0.5	<0.5	2	<0.5	<0.5	
	DESTROYED			-	-0.5	-0.3	2	-40.5	6.0	
MW-4	03/12/02	4	<100	170	~	~	13	4	~2	
	06/07/02	-	<100	120	<2	2	14	2	2	
	09/13/02	4	<100	160	2	4	14	~2	~2	
	12/13/02	-	<100	200	~	~	17	4	~2	
	03/01/03		19	100	<0.5	<0.5	8	<0.5	<0.5	
	06/27/03	-	22	130	<0.5	<0.5	n	<0.5	<0.5	
	09/30/03	<100	<10	520	<1	<1	9	<1	<	
	12/03/03	<50	18	73	<0.5	<0.5	5	<0.5	<0.5	
	03/10/04	<50	11	55	<0.5	<0.5	4	<0.5	<0.5	
	06/30/04	<100	<10	110	<i< td=""><td>&lt;1</td><td>6</td><td>&lt;1</td><td>&lt;1</td></i<>	<1	6	<1	<1	
	09/30/04	<50	17	400	<0.5	<0.5	7	<0.5	<0.5	
	12/31/04	<50	11	42	<0.5	<0.5	2	<0.5	<0.5	
	03/23/05	<50	<	24	<0.5	<0.5	1	<0.5	0.9	
	06/22/05	<50	15	18	<0.5	<0.5	i.	<0.5	<0.5	
	09/02/05	<50	6	18	<0.5	<0.5	<0.5	<0.5	<0.5	
	12/02/05	<50	11	34	<0.5	<0.5	1	<0.5	<0.5	
	03/20/06	<50	<5	2	<0.5	<0.5	<0.5	<0.5	<0.5	
	06/01/06	<50	<5	2	<0.5	<0.5	<0.5	<0.5	<0.5	
1	09/11/06 DESTROYED	<50	<5	4	<0.5	<0.5	<0,5	<0.5	<0.5	

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

## **EXPLANATIONS:**

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

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

# **ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

# STANDARD OPERATING PROCEDURE -GROUNDWATER SAMPLING

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

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

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

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

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

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

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



Client/Facility#:	Chevron #9-2029		Job N	lumber:	386911			
Site Address:	890 West Macarth	ur Bivd.	Eveni	Date:	11.5	ે. જ	(inclu	usive)
City:	Oakland, CA		Samp	ler:	F1			
Well ID	MW- 5							
Well Diameter	<u>2</u> in.	F	Date Mo	nitored:	<u> </u>	5.09		
Total Depth	24.95 A		Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02		3"= 0.38	
Depth to Water	<u></u> η.08 ft []	Check if water c				6*= 1.50 1	2"= 5.80	
	and the second	17 = 3.0				G. Mahuman G.		
Depth to Water w	// 80% Recharge [(Height c	of Water Column x 0	).20) + DTWI:	10.65	sumated Purg	e volume:	gai.	_
Purge Equipment: Disposable Bailer Stainless Steel Bailer Stack Pump Suction Pump Grundfos Peristaltic Pump QED Bladder Pump Other:		Sampling Equipm Disposable Bailer Pressure Bailer Discrete Bailer Peristaltic Pump QED Bladder Pump Other:	<b>*</b>		Depth to Depth to Hydrocar Visual Co Skimmer Amt Rem Water Re	mpleted: Product: Water: bon Thickness onfirmation Oese / Absorbant Son foved from Skim boved from Well	cription: ck (circle one) mer:	400 hrs) 400 hrs) ft ft ft gal gal
Start Time (purge)			Conditions:		CLO	האסע		
	1005/11.5-0		olor: CHE		ldor: 🕑 i	N	PDENATS	2
Approx. Flow Rate			t Description					
Did well de-water	<u>No</u> If yes, Tim	e: V	/olume:	ga	i. DTW @	Sampling: _	8.06	
Time (2400 hr.)	Volume (gal.) pH	Conductivity (µmhos/cm - µS	Temper 6) (©/		D.O. (mg/L)	ORF (mV		
0947	30 7.20	438	18-	7				
0949	60 7.17	444	- 18-					
0952	9.9 0.13	452	18.	<u> </u>			<u> </u>	
							<u> </u>	
		LABORATOR						
SAMPLE ID	(#) CONTAINER REFRIG.	I PRESERV. TY	PE LABOR	ATORY I				

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

## COMMENTS:

Add/Replaced Lock: _____



Client/Facility#:	Chevron #9-2029		Job Number:	386911		
Site Address:	890 West Macarthur	Blvd.	Event Date:	11.50		 (inclusive)
City:	Oakland, CA		Sampler:	Fr	f	_(*******)
Well ID Well Diameter Total Depth Depth to Water Depth to Water v Purge Equipment:	18,25 xVF	Volume Factor ( heck if water column	ate Monitored: 3/4*= 0.02 VF) 4*= 0.66 is less then 0.50 f x3 case volume = E	1"= 0.04 2"= ( 5"= 1.02 6"= 1 ft. :stimated Purge Volur Time Started: Time Completed	0.17 3"= 0.34 1.50 12"= 5.80 ne: <b>9.9</b>	
Disposable Bailer Stainless Steel Bailer Stack Pump Suction Pump Grundfos Peristaltic Pump QED Bladder Pump Other:	Pr Di: Pe QE	sposable Bailer essure Bailer screte Bailer ristaltic Pump ED Bladder Pump her:		Depth to Produc Depth to Water: Hydrocarbon Th Visual Confirmat Skimmer / Absor Amt Removed fr Amt Removed fr Water Removed Product Transfer	ickness: ion/Bescription: bant Sock (circ om Skimmer: om Well:	e one) gal
Start Time (purge)		Weather Cond		CLOUDY		
Sample Time/Dat Approx. Flow Rate	e: 1036 / 11.5.00)	Water Color:		Ddor: ON N	STROP	6
Did well de-water		Sediment Desc	·	al. DTW @ Samp	ling: 7	20
Time (2400 hr.) 1019 1021 1024	Volume (gal.) pH <u>3.0</u> <u>7.08</u> <u>7.08</u> <u>7.01</u> <u>7.01</u>	Conductivity $(\mu mhos/cm - \mu S)$ 455 463 471	Temperature $(\bigcirc F)$ 21.2 22.2 262.9	D.O. (mg/L)	ORP (mV)	
	Ĺ	ABORATORY INFO	ORMATION			
SAMPLEID	(#) CONTAINER REFRIG.		LABORATORY	AN	ALYSES	

(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
🖉 x voa vial	YES	HCL		TPH-GRO(80 t5)/BTEX(8260)/ 5 OXYS (8260)
<b></b>				
<b>├</b> ───				
<u> </u>				
				·

## **COMMENTS:**

_

Add/Replaced Lock: _____

Add/Replaced Bolt: _____



Client/Facility#:	Chevron #9-2029	Job Number:	386911	
Site Address:	890 West Macarthur Blvd.	Event Date:	11-5.09	- (inclusive)
City:	Oakland, CA	Sampler:	FT	<b>-</b>
Well ID	MW-7-	Date Monitored:	11-5-09	
Well Diameter	$\frac{2}{2}$ in.	Volume 3/4"= 0.02	1"= 0.04 2"= 0.17 3"= 0.3	-
Total Depth Depth to Water	24.96 ft. 9.03 ft. Check if water	Factor (VF) 4"= 0.66	5"= 1.02 6"= 1.50 12"= 5.8	0
		r column is less then 0.50 f	t. stimated Purge Volume: <b>8.</b> 5	
Depth to Water w	v/ 80% Recharge [(Height of Water Column	x 0.20) + DTWI: 12.21	sunated Purge Volume:	_ gal.
Purge Equipment:	Sampling Equi	pment:	Time Started: Time Completed: Depth to Product:	(2400 hrs) (2400 hrs) ft
Disposable Bailer Stainless Steel Bailer	Disposable Baile Pressure Bailer	er	Depth to Water:	<b>1</b>
Stack Pump	Discrete Bailer	·	Hydrocarbon Thickness: Visual Confirmation/Description	f
Suction Pump	Peristaltic Pump	)		
Grundfos	QED Bladder Pu		Skimmer (Absorbant Sock (circ Amt Removed from Skimmer:	le one)
Peristaltic Pump QED Bladder Pump	Other:		Amt Removed from Well:	gal
Other:	<u> </u>		Water Removed:	
			Product Transferred to:	
Start Time (purge)	: 105° Weath	er Conditions:	Sunny	
Sample Time/Dat			dor: ON MODER	
Approx. Flow Rate		ent Description:		
Did well de-water	? If yes, Time:	Volume: ga	I. DTW @ Sampling: 9	54
Time (2400 hr.)	Volume (gal.) pH Conductivi (µmhos/cm -		D.O. ORP (mg/L) (mV)	
1055	25 7.11 480	21.2		
1100	5.0 7.08 490	20 2		
1106	80 7.06 497	20 7		

(#) CONTAINER	REFRIG.	ABORATORY IN PRESERV. TYPE	LABORATORY	ANALYSES
Le x voa v	al YES			
		HCL	LANCASTER	TPH-GRO(80 t5)/BTEX(8260)/ 5 OXYS (8260)
·			ļ	
			<u> </u>	
				· · · · · · · · · · · · · · · · · · ·

## COMMENTS:

Add/Replaced Boit: _____



Client/Facility#:	Chevron #9-2029	Job Number: 3	86911	
Site Address:	890 West Macarthur Blvd.	Event Date:	11.5.09	- (inclusive)
City:	Oakland, CA	Sampler:	FT	_
Well ID	MW- 8	Date Monitored:	11.5.09	
Well Diameter	<b>2</b> in.	Volume 3/4"= 0.02	1"= 0.04 2"= 0.17 3"= 0.38	-
Total Depth	24-96 A	Factor (VF) 4"= 0.66	5"= 1.02 6"= 1.50 12"= 5.80	
Depth to Water		ter column is less then 0.50 ft.		
Depth to Water v Purge Equipment: Disposable Bailer Stalnless Steel Bailer Stack Pump Suction Pump Grundfos Peristaltic Pump QED Bladder Pump Other:	V/80% Recharge [(Height of Water Colum Sampling Eq Disposable B	2.33 x3 case volume = Esti nn x 0.20) + DTW]: <u>13.97</u> <b>julpment:</b> ailer er er mp Pump	imated Purge Volume:       ?         Time Started:	e one) gal
Start Time (purge)		ther Conditions:	CLOUDY	
Sample Time/Dat		er Color: Ber Oo	lor: Y / 🔊	
Approx. Flow Rate	V/	ment Description:	S. SILTY	
Did well de-water	? <u>20</u> If yes, Time:	Volume: gal.	DTW @ Sampling:	30
Time (2400 hr.) 1135 1140 1148	Volume (gal.) pH Conduct ( $\mu$ mhos/cr $\overline{Z.5}$ $\underline{7.18}$ $\underline{37}$ $\underline{5.e}$ $\underline{7.15}$ $\underline{385}$ $\underline{7.e}$ $\underline{7.12}$ $\underline{395}$	$1-\mu S$ (C/F) $\frac{1}{2}$ $\frac{21.5}{24}$ $\frac{21.2}{24}$	D.O. ORP (mg/L) (mV)	

LABORATORY INFORMATION SAMPLE ID (#) CONTAINER   REFRIG.   PRESERV. TYPE   LABORATORY   ANALYSES									
(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES					
le x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)/ 5 OXYS (8260)					
+									
	(#) CONTAINER	(#) CONTAINER REFRIG.	(#) CONTAINER REFRIG. PRESERV. TYPE	(#) CONTAINER REFRIG. PRESERV. TYPE LABORATORY					

## COMMENTS:

=

Add/Replaced Lock: _____

Add/Replaced Bolt: _____

	Chevr	on C	alifc	orr	nic	' Re	ec		n	Ar	าต	lvs	sis	Re	a	Je	st/	'Chain	ofC	listo
Lancaster Laboratories	11,85,			ſ	1	1				-							15 LISC	only Group		
		CRA N	ITI Pro	ject	# 6	1-19	74	Γ	_	_	Ai	alys	es F	equ	ested			7 G# 11	69868	3
Facility #: SS#9-2029 G-R#386911 GI Site Address: 890 WEST MACARTHUR BL				-	Mat	rix		H	14			H	vatio		odes				rvative C	_
Chevron PM: MTI Lead Consultant/Office: G-R, Inc., 6747 Sierra Co	Consultent.	RAKJ Dublin Ca	A 0456			0	g			ol Cleanup		a						$N = HNO_3$ $S = H_2SO_4$		her
Consultant Prj. Mgr.: Deanna L. Harding (d				-	Potable	NPDE	Contain	260 X 8021	,	Silica Gel		8260)						J value re Must mea possible fr		ection limits
Consultant Phone #: 925-551-7555 Fax #: 925-551-7899 Sampler:				-			Total Number of Containe	8200			– r	penates (	1					8021 M7BE Confirm hi Confirm al	ghest hit by	8260
Sample Identification	Date Collected	Time Collected	Grab	No.	Mater		Total N	<b>NEX</b>	TPH BOIS MOD	TPH BOIS MOD	E20028	2	There and					Run     Run	oxy's on hig	hest hit
	11.5.09	1005	Ŕ				6	XXX	X X X			Š				-+		Comments	/ Remark	8
		1154		╂─			6		X		2 	<b>(</b>		-	┝╌┦	+				
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Turnaround Time Requested (TAT) (please circ STD_TAT 72 hour 48 hour 24 hour 4 day 5 day		Relinqui	ished by	ł				<u> </u>		De	29	Time <u>F4</u> 44 Time	5	A. lecei	/ed by	al	0	n g	Date	Time 9 1 445 Time
ata Package Options (please circle if required)		Relinqui	ished by:		<u>د</u>				151	Da	8	Time	<b>7</b>	F	ED red by	EA	$\leq$		Date	Тіле
IC Summary Type i - Fuli ype VI (Raw Data) Coelt Deliverable not need /IP (RWQCB)		<b>Relinqui</b> UPS	ished by Fa	Com			nier: Other						ſ	lecei	red by	;	1		Date	Time
Xsk		Tempen	ature Up	Ζ.				.20	6					usto	y See	is int	ect?	Yes - No	hlbby	09,00

Lancaster Laboratories, Inc., 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 (717) 656-2300 Copies: White and yellow should accompany samples to Langaster Laboratories. The pink copy should be retained by the client. 1



**Analysis Report** 

2425 New Holland Piles, PO Box 12425, Lancaster, PA 17605-2425 • 717-686-2300 Feb: 717-656-2861 • www.lancesteriabs.com

## ANALYTICAL RESULTS

Prepared for:

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



NOV 1 9 2009

GETTLER-RYAN INC. GENERAL CONTRACTORS

916-677-3407

Prepared by:

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

November 18, 2009

Project: 92029

Samples arrived at the laboratory on Friday, November 06, 2009. The PO# for this group is 92029 and the release number is MTI. The group number for this submittal is 1169868.

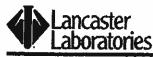
Client Sample Description MW-5-W-091105 Grab Water MW-6-W-091105 Grab Water MW-7-W-091105 Grab Water MW-8-W-091105 Grab Water

Lancaster Labs (LL1) # 5828929 5828930 5828931 5828932

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

ELECTRONIC Gettler-Ryan, Inc. COPY TO

Attn: Cheryl Hansen





2425 New Holland Pille, PO Box 12425, Lancaster, PA 17605-2425 +717-656-2300 Fex: 717-656-2861 + www.lancesterlabs.com

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

Respectfully Submitted,

Roha Chim

Robin C. Runkle Senior Specialist





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

Sample Description:	MW-5-W-091105 Grab Water	<b>LLI Sample # WW 5828929</b>
	Facility# 92029 Job# 386911 MTI# 61-1974 GRD	LLI Group # 1169868
	890 West MacArthur-Oakland T0600173887 MW-5	CA

## Project Name: 92029

Collected: 11/05/2009 10:05 by FT

Submitted: 11/06/2009 09:00 Reported: 11/18/2009 at 14:51 Discard: 12/19/2009

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

Account Number: 12099

#### WMO05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/1	
06056	t-Amyl methyl ether	994-05-8	N.D.	0.5	1
06056	Benzene	71-43-2	16	0.5	1
06056	t-Butyl alcohol	75-65-0	2	2	1
06056	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1
06056	Ethylbenzene	100-41-4	18	0.5	1
06056	di-Isopropyl ether	108-20-3	N.D.	0.5	1
06056	Methyl Tertiary Butyl Ether	1634-04-4	0.9	0.5	1
06056	Toluene	108-88-3	5	0.5	1
06056	Xylene (Total)	1330-20-7	4	0.5	1
GC Vol	latiles SW-846	8015B	ug/l	ug/1	
01728	TPH-GRO N. CA water C6-C12	n.a.	7,400	250	5

#### General Sample Comments

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

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06056 01146	GC/MS VOA Water Prep BTEX+5 Oxygenates by 8260B GC VOA Water Prep TPH-GRO N. CA water C6-C12	SW-846 5030B SW-846 8260B SW-846 5030B SW-846 8015B	1 1 1	D093151AA D093151AA 09314B20A 09314B20A	11/11/2009 17:04 11/11/2009 17:04 11/11/2009 09:05 11/11/2009 09:05	Ginelle L Peister Ginelle L Fcister Matthew S Woods Matthew S Woods	1





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

Sample Description:	MW-6-W-091105 Grab Water	<b>LLI Sample # WW 5828930</b>
	Facility# 92029 Job# 386911 MTI# 61-1974 GRD	LLI Group # 1169868
	890 West MacArthur-Oakland T0600173887 MW-6	CA

Account Number: 12099

2000 Opportunity Drive Roseville CA 95678

Chevron c/o CRA

Suite 110

#### Project Name: 92029

Collected: 11/05/2009 10:36 by FT

Submitted: 11/06/2009 09:00 Reported: 11/18/2009 at 14:51 Discard: 12/19/2009

#### WM006

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
06056	t-Amyl methyl ether	994-05-8	4	1	2
06056	Benzene	71-43-2	870	10	20
06056	t-Butyl alcohol	75-65-0	86	4	2
06056	Ethyl t-butyl ether	637-92-3	N.D.	1	2
06056	Ethylbenzene	100-41-4	1,300	10	20
06056	di-Isopropyl ether	108-20-3	N.D.	1	2
06056	Methyl Tertiary Butyl Ether	1634-04-4	160	1	2
06056	Toluene	108-88-3	8	1	2
06056	Xylene (Total)	1330-20-7	130	1	2
GC Vol	latiles SW-846	8015B	ug/l	ug/1	
01728	TPH-GRO N. CA water C6-C12	n.a.	22,000	500	10

## General Sample Comments

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

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D093151AA	11/11/2009 17:51	Ginelle L Feister	
	GC/MS VOA Water Prep	SW-846 5030B	2	D093151AA	11/11/2009 18:14	Ginelle L Feister	
	BTEX+5 Oxygenates by 8260B	SW-846 8260B	1	D093151AA	11/11/2009 17:51	Ginelle L Feister	
06056	BTEX+5 Oxygenates by 8260B	SW-846 8260B	1	D093151AA	11/11/2009 18:14	Ginelle L Feister	20
01146	GC VOA Water Prep	SW-846 5030B	1	09314B20A	11/10/2009 19:40	Matthew S Woods	10
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09314B20A	11/10/2009 19:40	Matthew S Woods	10





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Sample Description:	MW-7-W-091105 Grab Water	LLI	Sample # WW 5828931
	Facility# 92029 Job# 386911 MTI# 61-1974 GRD		Group # 1169868
	890 West MacArthur-Oakland T0600173887 MW-7		CA

Account Number: 12099

2000 Opportunity Drive Roseville CA 95678

Chevron c/o CRA

Suite 110

#### Project Name: 92029

Collected: 11/05/2009 11:16 by FT

Submitted: 11/06/2009 09:00 Reported: 11/18/2009 at 14:51 Discard: 12/19/2009

#### WMO07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection <u>Limi</u> t	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/1	ug/l	
06056	t-Amyl methyl ether	994-05-8	N.D.	1	2
06056	Benzene	71-43-2	630	10	20
06056	t-Butyl alcohol	75-65-0	9	4	20
06056	Ethyl t-butyl ether	637-92-3	N.D.	1	2
06056	Ethylbenzene	100-41-4	1,300	10	20
06056	di-Isopropyl ether	108-20-3	N.D.	1	2
06056	Methyl Tertiary Butyl Ether	1634-04-4	5	1	4
06056	Toluene	108-88-3	N.D.	1	4
06056	Xylene (Total)	1330-20-7	420	1	2
GC Vol	atiles SW-846	8015B	ug/l	ug/1	
01728	TPH-GRO N. CA water C6-C12	n.a.	12,000	500	10

## General Sample Comments

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

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
		SW-846 5030B	1	D093151AA	11/11/2009 18:37	Ginelle L Peister	
	GC/MS VOA Water Prep	SW-846 5030B	2	D093151AA	11/11/2009 19:01	Ginelle L Peister	
	BTEX+5 Oxygenates by 8260B	SW-846 8260B	1	D093151AA	11/11/2009 18:37	Ginelle L Feister	
		SW-846 8260B	1	D093151AA	11/11/2009 19:01	Ginelle L Feister	-
01146	GC VOA Water Prep	SW-846 5030B	1	09314B20A	11/10/2009 20:02	Matthew S Woods	10
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09314B20A	11/10/2009 20:02	Matthew S Woods	10





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Page	1	of	1
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Sample Description:	MW-8-W-091105 Grab Water	LLI	Sample	# 1	WW 5828932
	Facility# 92029 Job# 386911 MTI# 61-1974 GRD		Group		
	890 West MacArthur-Oakland T0600173887 MW-8		-		CA

## Project Name: 92029

Collected: 11/05/2009 11:54 by FT

Submitted: 11/06/2009 09:00 Reported: 11/18/2009 at 14:51 Discard: 12/19/2009

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

Account Number: 12099

#### WMO08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
06056	t-Amyl methyl ether	994-05-8	N.D.	0.5	1
06056	Benzene	71-43-2	N.D.	0.5	1
06056	t-Butyl alcohol	75-65-0	N.D.	2	1
06056	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1
06056	Ethylbenzene	100-41-4	N.D.	0.5	1
06056	di-Isopropyl ether	108-20-3	N.D.	0.5	1
06056	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
06056	Toluene	108-88-3	N.D.	0.5	1
06056	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Vol	latiles SW-846	8015B	ug/1	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

#### General Sample Comments

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

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

CAT No.	Analysis Name	Nethod	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06056 01146	GC/MS VOA Water Prep BTEX+5 Oxygenates by 8260B GC VOA Water Prep TPH-GRO N. CA water C6-C12	SW-846 5030B SW-846 8260B SW-846 5030B SW-846 8015B	-	F093152AA F093152AA 09314B20A 09314B20A	11/11/2009 11:14 11/11/2009 11:14 11/10/2009 14:37 11/10/2009 14:37	Daniel H Heller Daniel H Heller Matthew S Woods Matthew S Woods	1 1 1 1





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Page 1 of 3

# Quality Control Summary

Client Name: Chevron c/o CRA Reported: 11/18/09 at 02:51 PM

Group Number: 1169868

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

# Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank MDL	Report <u>Units</u>	LCS <u>%REC</u>	LCSD SREC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D093151AA	Sample num	aber(s): 58	28929-5828	1931				
t-Amyl methyl ether	N.D.	0.5	ug/1	99		77-120		
Benzene	N.D.	0.5	ug/1	96		79-120		
t-Butyl alcohol	N.D.	2.	ug/l	110		73-120		
Ethyl t-butyl ether	N.D.	0.5	ug/1	95		76-120		
Ethylbenzene	N.D.	0.5	ug/l	98		79-120		
di-Isopropyl ether	N.D.	0.5	ug/1	97		71-124		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	91		76-120		
Toluene	N.D.	0.5	ug/l	101		79-120		
Xylene (Total)	N.D.	0.5	ug/l	103		80-120		
Batch number: F093152AA	Sample num	ber(s): 58	28932					
t-Amyl methyl ether	N.D.	0.5	ug/l	81		77-120		
Benzene	N.D.	0.5	ug/1	85		79-120		
t-Butyl alcohol	N.D.	2.	ug/1	103		73-120		
Ethyl t-butyl ether	N.D.	0.5	ug/1	77		76-120		
Ethylbenzene	N.D.	0.5	ug/l	85		79-120		
di-Isopropyl ether	N.D.	0.5	ug/l	75		71-124		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	79		76-120		
Toluene	N.D.	0.5	ug/l	90		79-120		
Xylene (Total)	N.D.	0.5	ug/l	89		80-120		
Batch number: 09314B20A	Sample num	ber(s): 582	8929-5828	932				
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/1	118	118	75-135	0	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

Analysis Name	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD Limits	RPD	RPD <u>MAX</u>	BKG <u>Conc</u>	D <b>UP</b> <u>Conc</u>	DUP <u>RPD</u>	Dup RPD Max
Batch number: D093151AA	Sample	number(s)	: 5828929	-58289	31 UNSP	K: <b>P827203</b>			
t-Amyl methyl ether	102	90	75-122	12	30				
Benzene	103	95	80-126	9	30				
t-Butyl alcohol	98	95	67-119	4	30				
Ethyl t-butyl ether	98	88	74-122	11	30				
Bthylbenzene	107	97	71-134	10	30				
di-Isopropyl ether	100	92	70-129	9	30				
Methyl Tertiary Butyl Ether	91	84	72-126	9	30				
Toluene	109	101	80-125	8	30				
Xylene (Total)	110	101	79-125	8	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.





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Page 2 of 3

# Quality Control Summary

Client Name: Chevron c/o CRA Reported: 11/18/09 at 02:51 PM

Group Number: 1169868

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

	MS	MSD	MS/MSD		RPD	BKG	DUP	DUP	Dup RPD
Analysis Name	<b>RBC</b>	%REC	Limits	RPD	MAX	Conc	Conc	RPD	Max
Batch number: F093152AA	Sample	number(e)	: 5828932		P82942				
t-Amyl methyl ether	77 -	73*	75-122	5	30				
Benzene	90	88	80-126	2	30				
t-Butyl alcohol	96	102	67-119	6	30				
Ethyl t-butyl ether	77	72*	74-122	6	30				
Ethylbenzene	90	89	71-134	1	30				
di-Isopropyl ether	76	77	70-129	1	30				
Methyl Tertiary Butyl Ether	80	78	72-126	2	30				
Toluene	93	95	80-125	1	30				
Xylene (Total)	92	92	79-125	1	30				
Batch number: 09314B20A TPH-GRO N. CA water C6-C12	Sample 127	number(s)	: 5828929- 63-154	582893	2 UNSPR	C: P82883:	3		

## Surrogate Quality Control

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

Analysis Name: BTEX+5 Oxygenates by 8260B Batch number: D093151AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzen
5828929	91	87	94	95
5828930	92	90	93	94
5828931	91	90	95	94
Blank	94	96	92	90
LCS	92	92	92	97
MS	93	94	94	98
MSD	93	94	94	100
Limits:	80-116	77-113	80-113	78-113
Batch num	Der: F093152AA Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzen
Batch num		1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzen
5828932	Dibromofluoromethane	101	97	4-Bromofluorobenzen
5828932 31ank	Dibromofluoromethane	101 97	97 97	
828932 31ank CS	Dibromofluoromethane 100 99 100	101 97 100	97	101
5828932 31ank JCS 45	Dibromofluoromethane 100 99 100 103	101 97 100 103	97 97	101 102
5828932 Blank LCS 4S	Dibromofluoromethane 100 99 100	101 97 100	97 97 98	101 102 108
Batch num 5828932 Blank LCS MS MSD Limits:	Dibromofluoromethane 100 99 100 103	101 97 100 103	97 97 98 97	101 102 108 107
5828932 Blank LCS MS MSD Mimits:	Dibromofluoromethane 100 99 100 103 100 80-116	101 97 100 103 98 77-113	97 97 98 97 95	101 102 108 107 104
5828932 3lank CS 4S 4S MSD .imits: malysis N	Dibromofluoromethane 100 99 100 103 100 80-116 Name: TPH-GRO N. CA water (	101 97 100 103 98 77-113	97 97 98 97 95	101 102 108 107 104
5828932 Blank LCS MS MSD Limits: Analysis N	Dibromofluoromethane 100 99 100 103 100 80-116	101 97 100 103 98 77-113	97 97 98 97 95	101 102 108 107 104

*- 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.





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# Quality Control Summary

Client M Reported	Name: Chevron c/o CRA 1: 11/18/09 at 02:51 PM	Group Number: 1169868
-		Surrogate Quality Control
5828930	128	
5828931	120	
5828932	105	
Blank	103	
LCS	120	
LCSD	117	
MS	121	
Limits:	63-135	

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

# Lancaster Laboratories Explanation of Symbols and Abbreviations

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

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	i	liter(s)
ug	milliliter(s)	ui	microliter(s)
m3	cubic meter(s)	fib >5 um/mi	fibers greater than 5 microns in length per ml

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

> greater than

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

ppb parts per billion

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

U.S. EPA data qualifiers:

## **Organic Qualifiers**

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

# Inorganic Qualifiers

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

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

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

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