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.

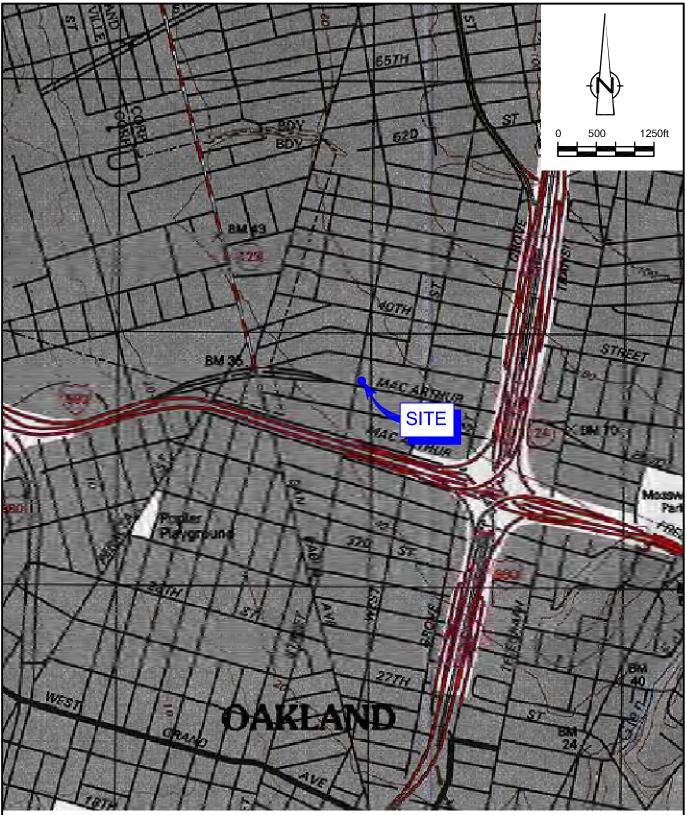
Figure 1Vicinity MapFigure 2Concentration Map - November 5, 2009

Attachment A Fourth Quarter 2009 Groundwater Monitoring and Sampling Report

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



FIGURES

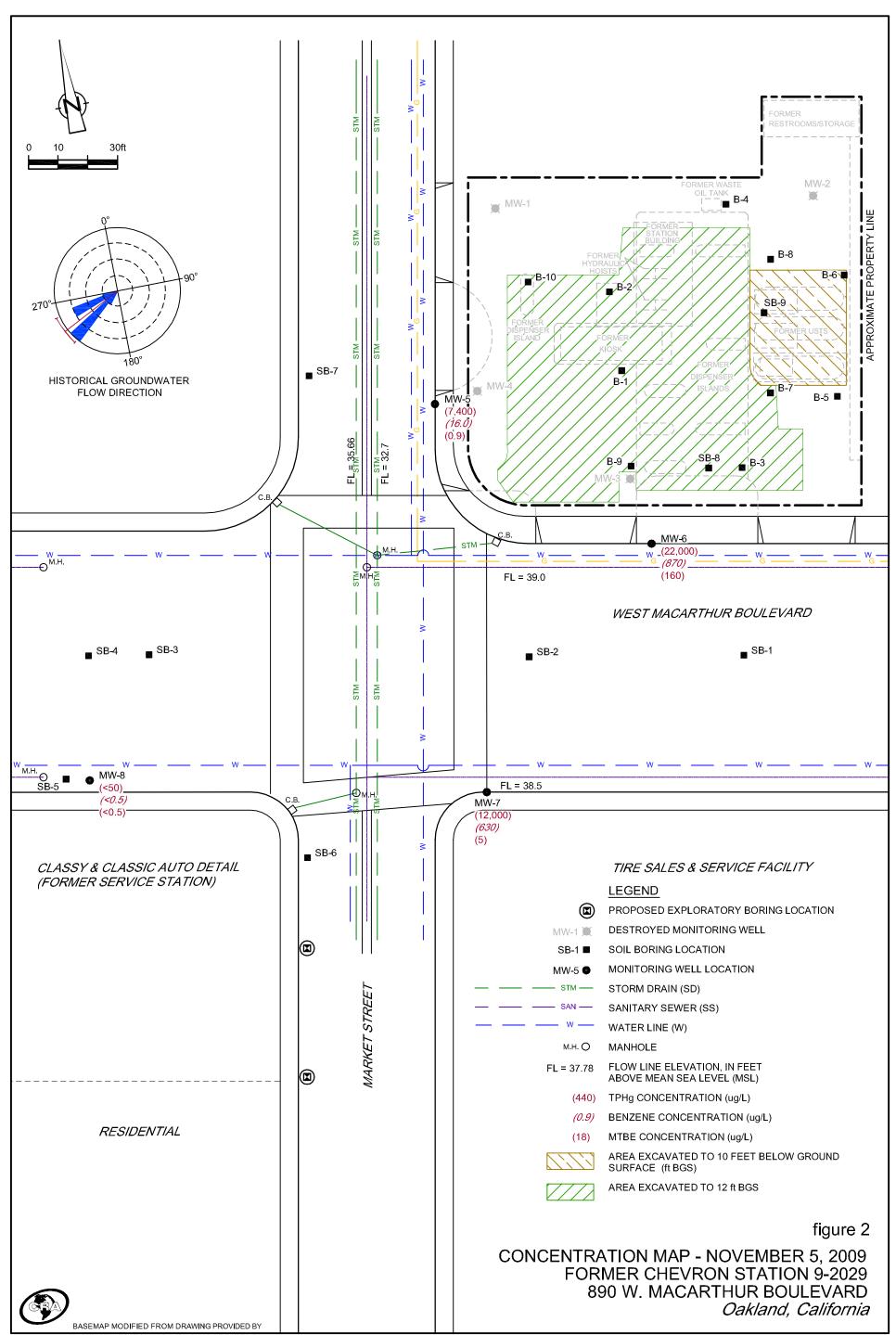


SOURCE: TOPO! MAPS.

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

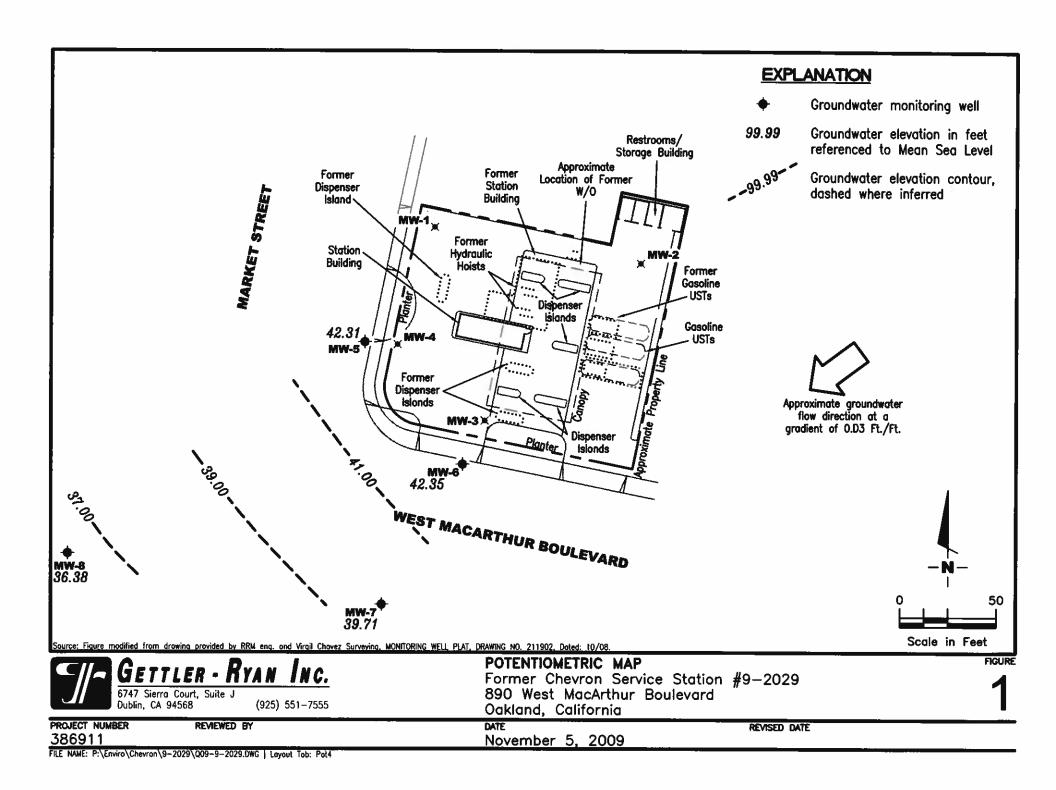


Table 1 Groundwater Monitoring Data and Analytical Results Former Chevron Service Station #9-2029 890 West MacArthur Blvd

| 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 |
|----------|------------|
|----------|------------|

| 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 | | | |
|)9/11/06³ | 49.93 | 9.38 | 40.55 | 6,700 | 64 | 3 | 44 | 3 | 4 | | | |
| DESTROYED | | | | | | | | | | | | |
| FRIP BLANK | | | | | | | | | | | | |
| 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. |
|----------|-----------|-------|
|----------|-----------|-------|

| 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 |
| / 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 | - | (|
| | | | | | | | | | |
| fW-1 | 03/12/02 | | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| | 06/07/02 | | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| | 09/13/02 | | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| | 12/13/02 | - | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| | 03/01/03 | - | <5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

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><1</td><td>6</td><td><1</td><td><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 | |

9

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: | * | | 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) |
| | | | | | | |
| | | | | | | |
| - | | | | | | |
| | | | | | | |
| | | _ | | | | <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: 9.9 | |
| 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) |
| | | | | |
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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 | - |
| 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: 8. 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: | 1 |
| 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> | |
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| | | | | |

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 | 2 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> julpment: 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 (μ 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) | | | | | |
| + | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |
| | (#) CONTAINER | (#) CONTAINER REFRIG. | (#) CONTAINER REFRIG. PRESERV. TYPE | (#) CONTAINER REFRIG. PRESERV. TYPE LABORATORY | | | | | |

COMMENTS:

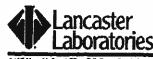
=

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 | NEX | 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 | (| | - | ┝╌┦ | + | | | | |
| | | · | | | Cardina Card | | | | | -+ | | ╈ | | | | | | | | |
| | | | | | | | | | | | - | | | | | | |] | | |
| | | | ┠╌┼╴ | | | | | | | - | | +- | | | _ | | | | | I |
| 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 | 7 | F | ED red by | EA | \leq | | Date | Тіле |
| IC Summary Type i - Fuli ype VI (Raw Data) Coelt Deliverable not need /IP (RWQCB) | | Relinqui 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.

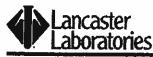
Client Sample Description MW-5-W-091105 Grab Water MW-6-W-091105 Grab Water MW-7-W-091105 Grab Water MW-8-W-091105 Grab Water

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 | LLI Sample # WW 5828929 |
|---------------------|--|--------------------------------|
| | 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 | LLI Sample # WW 5828930 |
|---------------------|--|--------------------------------|
| | 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 |





2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 * 717-856-2300 Fax: 717-656-2681 * www.lancasterlabs.com

| 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 |





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

| Page | 1 | of | 1 |
|------|---|----|---|
|------|---|----|---|

| 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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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 UP <u>Conc</u> | DUP <u>RPD</u> | Dup RPD Max |
|-----------------------------|-------------------|--------------------|------------------|--------|-------------------|--------------------|----------------------------|-------------------|----------------|
| Batch number: D093151AA | Sample | number(s) | : 5828929 | -58289 | 31 UNSP | K: P827203 | | | |
| 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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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 | RBC | %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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