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Fourth Quarter 2013 Semi-Annual Groundwater Monitoring Report

Former Chevron-branded Service Station 92029 890 West MacArthur Boulevard Oakland, California Case #: RO0002438



Prepared for: Chevron Environmental Management Company 6101 Bollinger Canyon Road San Ramon, CA 94583

Prepared by: Stantec Consulting Services Inc. 15575 Los Gatos Blvd., Building C Los Gatos, CA 95032



Carryl MacLeod Project Manager Marketing Business Unit Chevron Environmental Management Company 6101 Bollinger Canyon Road San Ramon, CA 94583 Tel (925) 790-6506 CMacleod@chevron.com

December 18, 2013

Mr. Mark Detterman Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

Dear Mr. Detterman:

Attached for your review is the *Fourth Quarter 2013 Semi-Annual Groundwater Monitoring Report* for former Chevron-branded service station 92029, located at 890 West MacArthur Boulevard in Oakland, California (**Case #:** RO0002438). This report was prepared by Stantec Consulting Services Inc. (Stantec), upon whose assistance and advice I have relied. I declare under penalty of perjury that the information and/or recommendations contained in the attached report are true and correct, to the best of my knowledge.

If you should have any further questions, please do not hesitate to contact me or the Stantec project manager, Travis Flora, at (408) 356-6124 ext. 238, or travis.flora@stantec.com.

Sincerely,

Carryl MacLeod Project Manager



December 18, 2013

Attention: Mr. Mark Detterman

Alameda County Environmental Health

1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502

Reference: Fourth Quarter 2013 Semi-Annual Groundwater Monitoring Report

Former Chevron-branded Service Station 92029 890 West MacArthur Boulevard, Oakland, California

Case #: RO0002438

Dear Mr. Detterman:

On behalf of Chevron Environmental Management Company (Chevron), Stantec Consulting Services Inc. (Stantec) is pleased to submit the Fourth Quarter 2013 Semi-Annual Groundwater Monitoring Report for former Chevron-branded service station 92029, which was located at 890 West MacArthur Boulevard, Oakland, Alameda County, California (the Site - shown on **Figure 1**). This report is presented in three sections: Site Background, Fourth Quarter 2013 Groundwater Monitoring and Sampling Program, and Conclusions and Recommendations.

SITE BACKGROUND

The Site is a former Chevron-branded service station located on the northeast corner at the intersection of West MacArthur Boulevard and Market Street in Oakland, California, The Site is currently a fenced vacant lot. A former Chevron-branded service station operated at the Site from approximately 1956 to 2004. Prior to 1970, Site features consisted of two 5,000-gallon and one 3,000-gallon gasoline underground storage tanks (USTs) located in the eastern portion of the Site, three fuel dispensers (one located in the northwestern portion of the Site and two located in the central portion of the Site), associated product piping, a station building with two hydraulic hoists, and a waste oil UST (unknown size) located in the northern portion of the Site. The product piping was replaced in 1970, and the 3,000-gallon UST was replaced with a 10,000-gallon UST sometime before 1978. In 1982, the two 5,000-gallon and one 10,000-gallon USTs were replaced with three 10,000-gallon fiberglass USTs. In 1984, the service station building was demolished, the hydraulic hoists were removed, and a kiosk was installed near the center of the Site. In addition, the three fuel dispensers were removed from the Site and replaced with five fuel dispensers (two located in the north-central portion of the Site and three located in the south-central portion of the Site). The fuel dispensers were replaced and the USTs were upgraded in 1997. The waste oil UST was removed from the Site sometime between 1984 and 1997. In 2005, the service station was closed and all Site structures, including the three 10,000-gallon fiberglass USTs and fuel dispensers, were removed. According to the Well Installation Report, prepared by Conestoga-Rovers & Associates (CRA) and dated November 18, 2008, extensive over-excavation was performed at this time and approximately 5,135 tons of impacted soil and 25,500 gallons of groundwater were removed and disposed off Site.

Land use near the Site consists of a mixture of commercial and residential properties. The Site is bounded to the north by a residential area, on the west by Market Street followed by a small

Former Chevron-branded Service Station 92029 December 18, 2013 Page 2 of 6

grocery store and associated parking, on the south by West MacArthur Boulevard followed by a tire sales and service shop, and to the east by a small hotel.

FOURTH QUARTER 2013 GROUNDWATER MONITORING AND SAMPLING PROGRAM

Gettler-Ryan Inc. (G-R) performed the Fourth Quarter 2013 groundwater monitoring and sampling event on November 6, 2013. G-R's standard operating procedures (SOPs) and field data sheets are included in **Attachment A**. G-R gauged depth-to-groundwater in four Site wells (MW-5, MW-6, MW-7, and MW-8) prior to collecting groundwater samples for laboratory analysis. All four wells, which are located down-gradient of the Site, were sampled this quarter.

Investigation-derived waste (IDW) generated during the Fourth Quarter 2013 groundwater monitoring and sampling event was transported by Clean Harbors Environmental Services to Seaport Environmental in Redwood City, California.

Groundwater Elevation and Gradient

Well construction details and an assessment of whether groundwater samples were collected when groundwater elevations were measured across the well screen intervals are presented in **Table 1**. All four Site wells are currently screened across the prevailing groundwater table. Current and historical groundwater elevation data are presented in **Table 2**. A groundwater elevation contour map (based on Fourth Quarter 2013 data) is shown on **Figure 2**. The direction of groundwater flow at the time of sampling was generally towards the southwest at an approximate hydraulic gradient of 0.025 feet per foot (ft/ft). This is generally consistent with the historical direction of groundwater flow, as shown by the Rose Diagram on **Figure 3** illustrating the direction of groundwater flow from Second Quarter 2011 to present.

Schedule of Laboratory Analysis

Groundwater samples were collected and analyzed for total petroleum hydrocarbons as gasoline range organics (TPH-GRO) using United States Environmental Protection Agency (US EPA) Method 8015B (SW-846). Benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds) and fuel oxygenates, including methyl tertiary-butyl ether (MtBE), di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (EtBE), tertiary-amyl methyl ether (TAME), and tertiary-butyl alcohol (TBA), were analyzed using US EPA Method 8260B (SW-846).

Groundwater Analytical Results

During Fourth Quarter 2013, groundwater samples were collected from four Site wells (MW-5, MW-6, MW-7, and MW-8). Current and historical groundwater analytical results are included in **Table 2** and **Table 3**. A figure showing the latest groundwater analytical data plotted on a Site map is included as **Figure 4**. A TPH-GRO isoconcentration map is shown on **Figure 5**. A benzene isoconcentration map is shown on **Figure 6**. A MtBE isoconcentration map is shown on **Figure 7**.

Certified laboratory analysis reports and chain-of-custody documents are presented as **Attachment B**. Hydrographs based on current and historical groundwater elevations and analytical results are included in **Attachment C**. A summary of Fourth Quarter 2013 groundwater analytical results follows:

Former Chevron-branded Service Station 92029 December 18, 2013 Page 3 of 6

- **TPH-GRO** was detected in three Site wells this quarter, at concentrations of 160 micrograms per liter (µg/L; well MW-5), 790 µg/L (well MW-7), and 5,300 µg/L (well MW-6), which are within historical limits for each respective well.
- **Benzene** was detected in one Site well this quarter, at a concentration of 330 µg/L (well MW-6), which is within historical limits for this well. In addition, the concentration in well MW-5 (below the laboratory reporting limit [LRL] of 0.5 µg/L) is a historical low.
- **Toluene** was detected in one Site well this quarter, at a concentration of 3 µg/L (well MW-6), which is within historical limits for this well.
- **Ethylbenzene** was detected in one Site well this quarter, at a concentration of 8 μg/L (well MW-6), which is within historical limits for this well.
- **Total Xylenes** were detected in one Site well this quarter, at a concentration of 1 µg/L (well MW-6), which is within historical limits for this well.
- MtBE was detected in two Site wells this quarter, at concentrations of 4 µg/L (well MW-7) and 78 µg/L (well MW-6). Concentrations are within historical limits for each respective well with the exception of well MW-7, which is equal to the lowest detected concentration for this well.
- **DIPE** was not detected above the LRLs (0.5 μ g/L and 1 μ g/L) in any Site well sampled this quarter.
- **EfBE** was not detected above the LRLs (0.5 μ g/L and 1 μ g/L) in any Site well sampled this quarter.
- **TAME** was detected in one Site well this quarter, at a concentration of 2 µg/L (well MW-6), which is within historical limits for this well.
- **TBA** was detected in one Site well this quarter, at a concentration of 60 µg/L (well MW-6), which is within historical limits for this well.

CONCLUSIONS AND RECOMMENDATIONS

Concentrations were conservatively compared to California Regional Water Quality Control Board – San Francisco Bay Region Environmental Screening Levels (ESLs) for groundwater that is a current or potential source of drinking water, and concentrations of TPH-GRO, benzene, MtBE, and TBA were observed above ESLs in select wells as follows:

- TPH-GRO concentrations exceed the ESL of 100 µg/L in wells MW-5, MW-6, and MW-7;
- The benzene concentration exceeds the ESL of 1 µg/L in well MW-6;
- The MtBE concentration exceeds the ESL of 5 µg/L in well MW-6; and
- The TBA concentration exceeds the ESL of 12 µg/L in well MW-6.

During Fourth Quarter 2013, maximum concentrations of petroleum hydrocarbons were observed in well MW-6, located down-gradient of former service station features (fuel dispensers and gasoline USTs) situated in the southern and eastern portions of the Site, and well MW-7, which is located approximately 95 feet down-gradient of well MW-6. TPH-GRO was also detected above the ESL in well MW-5, located down-gradient of former service station features

Former Chevron-branded Service Station 92029 December 18, 2013 Page 4 of 6

(fuel dispensers, hydraulic hoists, and waste oil UST) situated in the northern portion of the Site. The dissolved-phase petroleum hydrocarbon plume does not appear to extend to the furthest down-gradient well MW-8, which is approximately 190 feet southwest of the Site.

Current and historical groundwater quality data indicate that the dissolved-phase petroleum hydrocarbon plume is generally stable or decreasing in overall size and concentration. During Fourth Quarter 2013, the MtBE concentration in well MW-7 was equal to the historical low and a historical low concentration of benzene was observed in well MW-5. All other concentrations were within historical limits at all wells sampled.

Based on concentrations of TPH-GRO, benzene, MtBE, and TBA exceeding ESLs, Stantec recommends continuation of the semi-annual groundwater monitoring and sampling program. Reports will continue to be submitted to Alameda County Environmental Health (ACEH) within 60 days following groundwater monitoring and sampling events.

In correspondence dated May 21, 2013, ACEH requested a Site conceptual model, a work plan to address identified data gaps, and a path to closure schedule. Stantec submitted the Site Conceptual Model and Data Gap Work Plan to ACEH on August 16, 2013. In that report, Stantec included a scope of work for the advancement of three off-site soil borings to evaluate the lateral extent of petroleum hydrocarbons in soil and groundwater and determine if the Site meets the groundwater-specific and vapor intrusion to indoor air criteria set forth in the Low-Threat UST Case Closure Policy. Stantec will begin planning and scheduling the proposed investigation activities following approval of the scope of work by ACEH.

Please feel free to contact me if you have any questions regarding the contents of this report.

Sincerely,

Stantec Consulting Services Inc.

Associate Project Manager

Phone: (408)356-6124 Travis.Flora@stantec.com

Former Chevron-branded Service Station 92029 December 18, 2013 Page 5 of 6

Attachments:

Table 1 – Well Details / Screen Interval Assessment – Fourth Quarter 2013

Table 2 – Groundwater Monitoring Data and Analytical Results

Table 3 – Groundwater Analytical Results – Oxygenate Compounds

Figure 1 – Site Location Map

Figure 2 – Groundwater Elevation Contour Map – Fourth Quarter 2013

Figure 3 – Rose Diagram – Fourth Quarter 2013

Figure 4 – Site Plan Showing Groundwater Concentrations – Fourth Quarter 2013

Figure 5 – TPH-GRO Isoconcentration Map – Fourth Quarter 2013

Figure 6 – Benzene Isoconcentration Map – Fourth Quarter 2013

Figure 7 – MtBE Isoconcentration Map – Fourth Quarter 2013

Attachment A – Gettler-Ryan Inc. Field Data Sheets and Standard Operating Procedures – Fourth Quarter 2013

Attachment B – Certified Laboratory Analysis Reports and Chain-of-Custody Documents Attachment C – Hydrographs

cc:

Ms. Carryl MacLeod, Chevron Environmental Management Company, 6101 Bollinger Canyon Road, San Ramon, CA 94583 – Electronic Copy

Mr. Buyandalai Itgel, 787 Marlesta Road, Pinole, CA 94564 – Electronic Copy

Former Chevron-branded Service Station 92029 December 18, 2013 Page 6 of 6

This document entitled Fourth Quarter 2013 Semi-Annual Groundwater Monitoring Report was prepared by Stantec Consulting Services Inc. for the account of Chevron Environmental Management Company. The material in it reflects Stantec's best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Stantec Consulting Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

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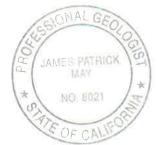




Table 1 Well Details / Screen Interval Assessment Fourth Quarter 2013

Former Chevron-Branded Service Station 92029 890 West MacArthur Boulevard, Oakland, California

| Well ID | Date Installed | Well Type | Casing Diameter (inches) | Top of Casing (feet above msl) | Construction Well Depth (feet bgs) | Current Well Depth ¹ (feet bgs) | Current Depth to Groundwater ¹ (feet below TOC) | Screen Interval (feet bgs) | Screen Interval Assessment |
|---------|-------------------|------------|--------------------------------|-----------------------------------|--|--|--|-------------------------------|--|
| MW-5 | 07/24/08 | Monitoring | 2 | 49.39 | 25.00 | 25.01 | 9.81 | 5-25 | Depth-to-groundwater within screen interval. |
| MW-6 | 07/24/08 | Monitoring | 2 | 49.07 | 25.00 | 24.96 | 9.27 | 5-25 | Depth-to-groundwater within screen interval. |
| MW-7 | 07/24/08 | Monitoring | 2 | 48.74 | 25.00 | 24.90 | 10.60 | 5-25 | Depth-to-groundwater within screen interval. |
| MW-8 | 07/24/08 | Monitoring | 2 | 47.61 | 25.00 | 24.99 | 12.63 | 5-25 | Depth-to-groundwater within screen interval. |

Notes:

bgs = below ground surface

msl = mean sea level

TOC = top of casing

¹ = As measured prior to groundwater sampling on November 6, 2013.

| MW-5 08/22/08 ¹ 08/27/08 ³ 11/21/08 ³ 02/13/09 ³ | (ft.) 49.39 49.39 | (ff.) 9.97 | (msl) | (µg/L) | (µg/L) | (u~ /1) | (uc /1) | (/IX | (· · · · /1) |
|---|-------------------------|----------------------|-------|--------|------------------|----------------|----------------|--------|-----------------|
| 08/22/08 ¹ 08/27/08 ³ 11/21/08 ³ | 49.39 | 0.07 | | | (M9/-/ | (μg/L) | (μg/L) | (μg/L) | (μg/L) |
| 08/27/08 ³ 11/21/08 ³ | 49.39 | 0.07 | | | | | | | |
| 08/27/08 ³ 11/21/08 ³ | | 7.7/ | 39.42 | | | | | | |
| 11/21/08 ³ | | 10.03 | 39.36 | 54 | 0.5 | 0.8 | <0.5 | 0.7 | 10 |
| 02/13/09 ³ | 49.39 | 8.42 | 40.97 | 6,000 | 93 | 6 | 37 | 6 | 8 |
| | 49.39 | 7.11 | 42.28 | 5,100 | 31 | 5 | 20 | 3 | 6 |
| 05/08/09 ³ | 49.39 | 7.21 | 42.18 | 3,600 | 18 | 4 | 14 | 2 | 2 |
| 08/07/09 ³ | 49.39 | 9.60 | 39.79 | 520 | 0.7 | <0.5 | <0.5 | <0.5 | 2 |
| 11/05/09 ³ | 49.39 | 7.08 | 42.31 | 7,400 | 16 | 5 | 18 | 4 | 0.9 |
| 05/06/10 ³ | 49.39 | 6.08 | 43.31 | 3,500 | 4 | 2 | 3 | 0.9 | 0.9 |
| 11/03/10 ⁵ | 49.39 | 9.05 | 40.34 | 5,000 | 13 | 4 | 8 | 3 | 0.9 |
| 05/10/11 ⁵ | 49.39 | 7.26 | 42.13 | 3,200 | 6 | 4 | 7 | 0.9 | <0.5 |
| 11/10/11 ⁵ | 49.39 | 7.60 | 41.79 | 2,600 | 6 | 3 | 10 | 2 | <0.5 |
| 05/11/12 ⁵ | 49.39 | 6.48 | 42.91 | 3,300 | <3 | <3 | <3 | <3 | <3 |
| 11/14/12 ³ | 49.39 | 8.89 | 40.50 | 2,100 | 3 | 2 | 3 | 0.6 | <0.5 |
| 05/08/13 ³ | 49.39 | 8.41 | 40.98 | 2,100 | 2 | 0.9 | 2 | <0.5 | <0.5 |
| 11/06/13 ³ | 49.39 | 9.81 | 39.58 | 160 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| | | | | | | | | | |
| MW-6 | | | | | | | | | |
| 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 |
| 02/13/09 ³ | 49.07 | 5.84 | 43.23 | 9,700 | 630 | 4 | 510 | 36 | 180 |
| 05/08/09 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 |
| 05/06/10 ³ | 49.07 | 4.89 | 44.18 | 5,200 | 110 | 2 | 160 | 23 | 9 |
| 11/03/10 ⁵ | 49.07 | 8.05 | 41.02 | 13,000 | 1,100 | 8 | 670 | 58 | 160 |
| 05/10/11 ^{4,5} | 49.07 | 8.56 | 40.51 | <50 | 0.6 | <0.5 | <0.5 | <0.5 | <0.5 |
| 11/10/11 ⁵ | 49.07 | 7.59 | 41.48 | 5,700 | 260 | 7 | 180 | 13 | 37 |
| 05/11/12 ⁵ | 49.07 | 5.68 | 43.39 | 1,200 | 36 | 0.6 | 0.8 | <0.5 | 1 |
| 11/14/12 ³ | 49.07 | 9.83 | 39.24 | 6,400 | 290 | 9 | 180 | 6 | 36 |
| 05/08/13 ³ | 49.07 | 7.21 | 41.86 | 2,000 | 77 | 1 | 9 | <0.5 | 6 |
| 11/06/13 ³ | 49.07 | 9.27 | 39.80 | 5,300 | 330 ⁶ | 3 ⁶ | 8 ⁶ | 16 | 78 ⁶ |
| , , - | | | | | | | | | |
| MW-7 | | | | | | | | | |
| 08/22/08 ¹ | 48.74 | 10.20 | 38.54 | | | | | | |
| 08/27/08 ³ | 48.74 | 10.19 | 38.55 | <50 | <0.5 | 0.6 | <0.5 | 0.7 | 6 |
| 11/21/08 ³ | 48.74 | 9.51 | 39.23 | 1,100 | 80 | <0.5 | 65 | 0.7 | 6 |

| WELL ID/ | TOC* | DTW | GWE | TPH-GRO | В | T | E | Х | M†BE |
|-----------------------------------|----------------|--------------|-------|------------|----------------|--------|----------------|--------------|--|
| DATE | (ft.) | (ft.) | (msl) | (μg/L) | (µg/L) | (μg/L) | (μg/L) | (µg/L) | (μg/L) |
| MW-7 (cont) | | | | | | | | | |
| 02/13/09 ³ | 48.74 | 7.95 | 40.79 | 630 | 30 | <0.5 | 38 | 0.9 | 7 |
| 05/08/09 ³ | 48.74 | 8.04 | 40.70 | 1,200 | 83 | <0.5 | 190 | 2 | 8 |
| 08/07/09 ³ | 48.74 | 9.88 | 38.86 | 8,900 | 240 | 0.7 | 770 | 5 | 5 |
| 11/05/09 ³ | 48.74 | 9.03 | 39.71 | 12,000 | 630 | <1 | 1,300 | 420 | 5 |
| 05/06/10 ³ | 48.74 | 7.88 | 40.86 | 4,000 | 190 | <0.5 | 270 | 7 | 6 |
| 11/03/10 ⁵ | 48.74 | 9.48 | 39.26 | 5,700 | 150 | 0.7 | 45 | 2 | 4 |
| 05/10/11 ⁵ | 48.74 | 8.82 | 39.92 | 3,500 | 180 | <0.5 | 150 | 2 | 5 |
| 11/10/11 ⁵ | 48.74 | 9.68 | 39.06 | 1,500 | 2 | <0.5 | 2 | <0.5 | 5 |
| 05/11/12 ⁵ | 48.74 | 8.37 | 40.37 | 9,200 | 440 | <5 | 1,000 | 33 | <5 |
| 11/14/12 ³ | 48.74 | 9.79 | 38.95 | 5,000 | <3 | <3 | 6 | <3 | 4 |
| 05/08/13 ³ | 48.74 | 9.54 | 39.20 | 2,200 | 10 | <0.5 | 2 | <0.5 | 5 |
| 11/06/13 ³ | 48.74 | 10.60 | 38.14 | 790 | <0.5 | <0.5 | <0.5 | <0.5 | 4 |
| | | | | | | | | | |
| MW-8 | | | | | | | | | |
| 08/22/08 ¹ | 47.61 | 12.41 | 35.20 | | | | | | |
| 08/27/08 ³ | 47.61 | 12.42 | 35.19 | <50 | <0.5 | 0.7 | <0.5 | 0.6 | <0.5 |
| 11/21/08 ³ | 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 |
| 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 |
| 05/06/10 ³ | 47.61 | 10.28 | 37.33 | <50 | < 0.5 | <0.5 | <0.5 | < 0.5 | <0.5 |
| 11/03/10 ⁵ | 47.61 | 11.37 | 36.24 | <50 | < 0.5 | <0.5 | <0.5 | < 0.5 | <0.5 |
| 05/10/11 ⁵ | 47.61 | 11.55 | 36.06 | <50 | < 0.5 | <0.5 | <0.5 | < 0.5 | <0.5 |
| 11/10/11 ⁵ | 47.61 | 11.49 | 36.12 | <50 | < 0.5 | <0.5 | <0.5 | < 0.5 | <0.5 |
| 05/11/12 ⁵ | 47.61 | 10.89 | 36.72 | <50 | < 0.5 | <0.5 | <0.5 | < 0.5 | <0.5 |
| 11/14/12 ³ | 47.61 | 11.73 | 35.88 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 05/08/13 ³ | 47.61 | 12.03 | 35.58 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 11/06/13 ³ | 47.61 | 12.63 | 34.98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| AANA/ 1 | | | | | | | | | |
| MW-1 | EO 71 | 6.50 | 44.21 | <50 | <0.50 | <0.50 | <0.50 | <1.5 | -0.51-02 |
| 03/12/02 ¹ 06/07/02 | 50.71 50.71 | 6.50 8.69 | 42.02 | <50 <50 | <0.50 <0.50 | <0.50 | <0.50 <0.50 | <1.5 <1.5 | <2.5/<2 ² <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 |

| WELL ID/ DATE | TOC* (ft.) | DTW (ff.) | GWE (msl) | TPH-GRO (µg/L) | Β (μg/L) | Τ (μg/L) | Ε (μg/L) | Χ (μg/L) | M†BE (µg/L) |
|-----------------------|---------------|--------------|--------------|-------------------|-------------|-----------------|-------------|-------------|------------------------|
| | (11.) | (11.) | (11131) | (µg/L) | (μ9/τ) | (µg/ <i>L</i>) | (µg/L) | (µg/L) | (µg/L) |
| MW-1 (cont) | F0 7: | 10.17 | 10.51 | -50 | -0 = | 0.1 | -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 |
| 06/30/04 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 | | | | | | |
| 06/01/06 | 50.71 | 6.77 | 43.94 | | | | | | |
| 09/11/06 | 50.71 | 9.18 | 41.53 | | | | | | |
| 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 |
| 03/10/04 ³ | 52.57 | 6.05 | 46.52 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 06/30/04 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 |
| 12/29/04 ³ | 52.57 | 2.29 | 50.28 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 03/23/05 ³ | 52.57 | 2.44 | 50.13 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 06/22/05 ³ | 52.57 | 8.99 | 43.58 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 09/02/05 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 | | | | | | |
| 03/20/06 | 52.57 | 2.70 | 49.87 | | | | | | |
| 06/01/06 | 51.57 | 6.51 | 45.06 | | | | | | |
| 09/11/06 | 51.57 | 10.06 | 41.51 | | | | | | |
| DESTROYED | | | | | | | | | |

Table 2
Groundwater Monitoring Data and Analytical Results

| WELL ID/ | TOC* | DTW | GWE | TPH-GRO | В | T | E | Х | MtBE |
|---|----------------|--------------------------|----------------|---------|------------|---------|--------|--------|----------------------|
| DATE | (ft.) | (ft.) | (msl) | (μg/L) | (µg/L) | (μg/L) | (μg/L) | (μg/L) | (µg/L) |
| MW-3 | | | | | | | | | |
| 03/12/021 | 50.31 | 6.50 | 43.81 | 12,000 | 600 | 8.5 | 1,100 | 370 | 700/650 ² |
| 06/07/02 | 50.31 | 7.74 | 42.57 | 14,000 | 630 | 8.8 | 1,200 | 160 | 520/490 ² |
| 09/13/02 | 50.31 | 9.73 | 40.58 | 3,000 | 270 | 3.2 | 200 | 11 | 600/640 ² |
| 12/13/02 | 50.31 | 8.60 | 41.71 | 24,000 | 1,100 | 14 | 2,400 | 220 | 650/540 ² |
| 03/01/03 | 50.31 | 6.75 | 43.56 | 16,000 | 500 | 9.0 | 1,200 | 130 | 460/330 ² |
| 06/27/03 ³ | 50.31 | 9.25 | 41.06 | 9,500 | 390 | 6 | 450 | 30 | 470 |
| 09/30/03 ³ | 50.31 | 10.31 | 40.00 | 2,000 | 110 | 1 | 100 | 3 | 710 |
| 12/03/03 ³ | 50.31 | 8.18 | 42.13 | 19,000 | 970 | 8 | 2,100 | 85 | 420 |
| 03/10/04 ³ | 50.31 | 6.10 | 44.21 | 15,000 | 550 | 6 | 960 | 95 | 220 |
| 06/30/04 ³ | 50.31 | 9.80 | 40.51 | 3,200 | 150 | 1 | 100 | 3 | 660 |
| 09/30/04 ³ | 50.31 | 10.18 | 40.13 | 1,900 | 66 | 0.8 | 84 | 4 | 690 |
| 12/29/04 ³ | 50.31 | 4.58 | 45.73 | 16,000 | 470 | 7 | 820 | 47 | 170 |
| 03/23/05 ³ | 50.31 | 5.07 | 45.24 | 18,000 | 380 | 6 | 960 | 58 | 140 |
| 06/22/05 ³ | 50.31 | 8.12 | 42.19 | 16,000 | 700 | 6 | 950 | 62 | 300 |
| 09/02/05 ³ | 50.31 | 9.41 | 40.90 | 8,400 | 380 | 4 | 510 | 41 | 440 |
| 12/02/05 ³ | 50.31 | 7.97 | 42.34 | 16,000 | 490 | 6 | 1,200 | 32 | 170 |
| 03/20/06 ³ | 50.31 | 5.32 | 44.99 | 4,200 | 79 | 0.8 | 2 | 10 | 34 |
| 06/01/06 ³ | 50.31 | 7.07 | 43.24 | 5,400 | 67 | 1 | 26 | 3 | 28 |
| 09/11/06 ³ | 50.31 | 9.07 | 41.24 | 14,000 | 270 | 5 | 240 | 38 | 97 |
| DESTROYED | | | | | | | | | |
| | | | | | | | | | |
| 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 | 170/180 |
| 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 |
| 12/03/03 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 |
| 06/30/04 ³ | 49.93 | 10.33 | 39.60 | 7,700 | 59 | ە <1 | 78 | 17 | 110 |
| 09/30/04 ³ | 49.93 | 10.33 | 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 49.93 | 3.34 4.24 | 46.39 45.69 | 12,000 | 130 | 2 | 280 | 16 | 42 24 |
| 03/23/05 ³ | 49.93 49.93 | 4.2 4 7.95 | 45.69 41.98 | 6,400 | 290 | 2 | 11 | 11 | 2 4 18 |
| 06/22/05 ³ 09/02/05 ³ | 49.93 49.93 | 7.95 9.46 | 41.98 40.47 | 3,700 | 290 180 | 1 | 13 | 7 | 18 |
| | 49.93 49.93 | 7.46 7.60 | 42.33 | 11,000 | 840 | 5 | 480 | 24 | 34 |
| 12/02/05 ³ | 47.73 | 7.60 | 42.33 | 11,000 | 040 | 5 | 400 | ∠4 | 34 |

| WELL ID/ | TOC* | DTW | GWE | TPH-GRO | В | T | E | Х | MtBE |
|-----------------------|-------|-------|-------|-----------------------|--------|--------|--------|--------|--------|
| DATE | (ft.) | (ft.) | (msl) | (µg/L) | (μg/L) | (μg/L) | (μg/L) | (μg/L) | (µg/L) |
| ΛW-4 (cont) | | | | | | | | | |
| 03/20/06 ³ | 49.93 | 4.50 | 45.43 | 790 | 14 | <0.5 | 1 | 0.6 | 2 |
| 06/01/06 ³ | 49.93 | 7.30 | 42.63 | 5,100 | 48 | 0.8 | 42 | 4 | 2 |
| 09/11/06 ³ | 49.93 | 9.38 | 40.55 | 6,700 | 64 | 3 | 44 | 3 | 4 |
| DESTROYED | .,,,, | 7.00 | .0.00 | <i>5,</i> , <i>55</i> | 0. | Ŭ | | ŭ | • |
| | | | | | | | | | |
| TRIP BLANK | | | | | | | | | |
| QA | | | | | | | | | |
| 03/12/02 | | | | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5 |
| 06/07/02 | | | | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5 |
| 09/13/02 | | | | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5 |
| 12/13/02 | | | | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5 |
| 03/01/03 | | | | <50 | <0.50 | <0.50 | <0.50 | <1.5 | <2.5 |
| 06/27/03 ³ | | | | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 09/30/03 ³ | | | | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 12/03/03 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 |
| 06/30/04 ³ | | | | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 09/30/04 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 |
| 03/23/05 ³ | | | | <50 | < 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 06/22/05 ³ | | | | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 09/02/05 ³ | | | | <50 | < 0.5 | 14 | <0.5 | 14 | <0.5 |
| 12/02/05 ³ | | | | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 03/20/06 ³ | | | | <50 | <0.5 | <0.5 | <0.5 | <0.5 | < 0.5 |
| 06/01/06 ³ | | | | <50 | <0.5 | <0.5 | <0.5 | <0.5 | < 0.5 |
| 09/11/06 ³ | | | | <50 | < 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 08/27/08 ³ | | | | <50 | <0.5 | <0.5 | <0.5 | <0.5 | < 0.5 |
| 11/21/08 ⁵ | | | | <50 | <0.5 | <0.5 | <0.5 | <0.5 | |
| 02/13/09 ⁵ | | | | <50 | <0.5 | <0.5 | <0.5 | <0.5 | |
| 05/08/09 ⁵ | | | | <50 | < 0.5 | <0.5 | <0.5 | <0.5 | |
| 08/07/09 ⁵ | | | | <50 | < 0.5 | <0.5 | <0.5 | <0.5 | |
| 11/14/12 ³ | | | | <50 | <0.5 | <0.5 | <0.5 | <0.5 | < 0.5 |
| 05/08/13 ³ | | | | <50 | < 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 11/06/13 ³ | | | | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table 2

Groundwater Monitoring Data and Analytical Results

Former Chevron-Branded Service Station 92029 890 West MacArthur Boulevard, Oakland, California

EXPLANATIONS:

Current groundwater monitoring data was provided by Gettler-Ryan Inc. Current laboratory analytical results were provided by Eurofins Lancaster Laboratories.

TOC = Top of Casing

TPH-GRO = Total Petroleum Hydrocarbons as Gasoline Range Organics

-- = Not Measured/Not Analyzed

(ft.) = FeetB = BenzeneQA = Quality Assurance/Trip BlankDTW = Depth to WaterT = TolueneEPA = Environmental Protection Agency

GWE = Groundwater Elevation E = Ethylbenzene (msl) = Mean sea level X = Xylenes

(µg/L) = Micrograms per liter MtBE = Methyl tertiary-butyl ether

- * Current 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).
- Well development performed.
- ² MtBE by EPA Method 8260.
- BTEX and MtBE by EPA Method 8260.
- ⁴ Laboratory confirmed analytical result.
- ⁵ BTEX by EPA Method 8260.
- ⁶ Laboratory report indicates reporting limits were raised due to interference from the sample matrix.

Table 3 Groundwater Analytical Results - Oxgenate Compounds

| WELL ID/ | ETHANOL | TBA | MtBE | DIPE | E†BE | TAME | 1,2-DCA | 1,2-DBA |
|-----------------------|---------|--------|--------|--------|--------|--------|---------|---------|
| DATE | (µg/L) | (μg/L) | (µg/L) | (μg/L) | (μg/L) | (µg/L) | (μg/L) | (μg/L) |
| MW-5 | | | | | | | | |
| 08/27/08 | | 2 | 10 | <0.5 | <0.5 | <0.5 | | |
| 11/21/08 | | 4 | 8 | <0.5 | <0.5 | <0.5 | | |
| 02/13/09 | | 3 | 6 | <0.5 | <0.5 | <0.5 | | |
| 05/08/09 | | 7 | 2 | <0.5 | <0.5 | <0.5 | | |
| 08/07/09 | | <2 | 2 | <0.5 | <0.5 | <0.5 | | |
| 11/05/09 | | 2 | 0.9 | <0.5 | <0.5 | <0.5 | | |
| 05/06/10 | | <2 | 0.9 | <0.5 | <0.5 | <0.5 | | |
| 11/03/10 | | <2 | 0.9 | <0.5 | <0.5 | <0.5 | | |
| 05/10/11 | | <2 | < 0.5 | <0.5 | <0.5 | <0.5 | | |
| 11/10/11 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| 05/11/12 | | <10 | <3 | <3 | <3 | <3 | | |
| 11/14/12 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| 05/08/13 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| 11/06/13 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| | | | | | | | | |
| MW-6 | | | | | | | | |
| 08/27/08 | | 390 | 440 | <0.5 | <0.5 | 6 | | |
| 11/21/08 | | 320 | 300 | <13 | <13 | <13 | | |
| 02/13/09 | | 100 | 180 | <1 | <1 | 4 | | |
| 05/08/09 | | 16 | 38 | <0.5 | <0.5 | 0.9 | | |
| 08/07/09 | | 190 | 330 | <3 | <3 | 5 | | |
| 11/05/09 | | 86 | 160 | <1 | <1 | 4 | | |
| 05/06/10 | | 2 | 9 | <0.5 | <0.5 | <0.5 | | |
| 11/03/10 | | 98 | 160 | <3 | <3 | 3 | | |
| 05/10/11 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| 11/10/11 | | 19 | 37 | <1 | <1 | <1 | | |
| 05/11/12 | | <2 | 1 | <0.5 | <0.5 | <0.5 | | |
| 11/14/12 | | 16 | 36 | <0.5 | <0.5 | 0.7 | | |
| 05/08/13 | | 5 | 6 | <0.5 | <0.5 | <0.5 | | |
| 11/06/13 ² | | 60 | 78 | <1 | <1 | 2 | | |
| | | | | | | | | |
| MW-7 | | | | | | | | |
| 08/27/08 | | <2 | 6 | <0.5 | <0.5 | <0.5 | | |
| 11/21/08 | | 5 | 6 | <0.5 | <0.5 | <0.5 | | |
| 02/13/09 | | <2 | 7 | <0.5 | <0.5 | <0.5 | | |

Table 3 Groundwater Analytical Results - Oxgenate Compounds

| WELL ID/ | ETHANOL | TBA | MtBE | DIPE | EtBE | TAME | 1,2-DCA | 1,2-DBA |
|-------------|---------|--------|--------|--------|--------|--------|---------|---------|
| DATE | (μg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (μg/L) | (µg/L) |
| MW-7 (cont) | | | | | | | | |
| 05/08/09 | | <2 | 8 | <0.5 | <0.5 | <0.5 | | |
| 08/07/09 | | 4 | 5 | <0.5 | <0.5 | <0.5 | | |
| 11/05/09 | | 9 | 5 | <1 | <1 | <1 | | |
| 05/06/10 | | 3 | 6 | <0.5 | <0.5 | <0.5 | | |
| 11/03/10 | | 6 | 4 | <0.5 | <0.5 | <0.5 | | |
| 05/10/11 | | 3 | 5 | <0.5 | <0.5 | <0.5 | | |
| 11/10/11 | | 4 | 5 | <0.5 | <0.5 | <0.5 | | |
| 05/11/12 | | <20 | <5 | <5 | <5 | <5 | | |
| 11/14/12 | | <10 | 4 | <3 | <3 | <3 | | |
| 05/08/13 | | <2 | 5 | <0.5 | <0.5 | <0.5 | | |
| 11/06/13 | | <2 | 4 | <0.5 | <0.5 | <0.5 | | |
| MW-8 | | | | | | | | |
| 08/27/08 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| 11/21/08 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| 02/13/09 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| 05/08/09 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| 08/07/09 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| 11/05/09 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| 05/06/10 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| 11/03/10 | | <2 | <0.5 | <0.5 | <0.5 | < 0.5 | | |
| 05/10/11 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| 11/10/11 | | <2 | <0.5 | <0.5 | <0.5 | < 0.5 | | |
| 05/11/12 | | <2 | <0.5 | <0.5 | <0.5 | < 0.5 | | |
| 11/14/12 | | <2 | <0.5 | <0.5 | <0.5 | < 0.5 | | |
| 05/08/13 | | <2 | <0.5 | <0.5 | <0.5 | < 0.5 | | |
| 11/06/13 | | <2 | <0.5 | <0.5 | <0.5 | <0.5 | | |
| MW-1 | | | | | | | | |
| 03/12/02 | | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| 06/07/02 | | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| 09/13/02 | | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| 12/13/02 | | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| 03/01/03 | | <5 | < 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 06/27/03 | | <5 | <0.5 | <0.5 | <0.5 | < 0.5 | <0.5 | < 0.5 |
| 09/30/03 | <50 | <5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | < 0.5 |
| 12/03/03 | <50 | <5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table 3 Groundwater Analytical Results - Oxgenate Compounds

| WELL ID/ | ETHANOL | TBA | MtBE | DIPE | E†BE | TAME | 1,2-DCA | 1,2-DBA |
|-------------|---------|--------|--------|--------|--------|--------|---------|---------|
| DATE | (μg/L) | (µg/L) | (μg/L) | (μg/L) | (μg/L) | (μg/L) | (μg/L) | (μg/L) |
| MW-1 (cont) | | | | | | | | |
| 03/10/04 | <50 | <5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 06/30/04 | <50 | <5 | < 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 09/30/04 | <50 | <5 | < 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 12/31/04 | <50 | <5 | < 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | < 0.5 |
| 03/23/05 | <50 | <5 | < 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | < 0.5 |
| 06/22/05 | <50 | <5 | < 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 09/02/05 | <50 | <5 | < 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| DESTROYED | | | | | | | | |
| MW-2 | | | | | | | | |
| 03/12/02 | | <100 | 3 | <2 | <2 | <2 | <2 | <2 |
| 06/07/02 | | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| 09/13/02 | | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| 12/13/02 | | <100 | <2 | <2 | <2 | <2 | <2 | <2 |
| 03/01/03 | | <5 | <0.5 | <0.5 | <0.5 | < 0.5 | <0.5 | <0.5 |
| 06/27/03 | | <5 | <0.5 | <0.5 | <0.5 | < 0.5 | <0.5 | < 0.5 |
| 09/30/03 | <50 | <5 | 0.7 | <0.5 | <0.5 | < 0.5 | <0.5 | < 0.5 |
| 12/03/03 | <50 | <5 | <0.5 | <0.5 | <0.5 | < 0.5 | <0.5 | < 0.5 |
| 03/10/04 | <50 | <5 | <0.5 | <0.5 | <0.5 | < 0.5 | <0.5 | < 0.5 |
| 06/30/04 | <50 | <5 | <0.5 | <0.5 | <0.5 | < 0.5 | <0.5 | < 0.5 |
| 09/30/04 | <50 | <5 | <0.5 | <0.5 | <0.5 | < 0.5 | <0.5 | < 0.5 |
| 12/31/04 | <50 | <5 | <0.5 | <0.5 | <0.5 | < 0.5 | <0.5 | < 0.5 |
| 03/23/05 | <50 | <5 | <0.5 | <0.5 | <0.5 | < 0.5 | <0.5 | <0.5 |
| 06/22/05 | <50 | <5 | <0.5 | <0.5 | <0.5 | < 0.5 | <0.5 | <0.5 |
| 09/02/05 | <50 | <5 | <0.5 | <0.5 | <0.5 | < 0.5 | <0.5 | <0.5 |
| DESTROYED | | | | | | | | |
| MW-3 | | | | | | | | |
| 03/12/02 | | <100 | 650 | <2 | <2 | 18 | <2 | <2 |
| 06/07/02 | | 230 | 490 | <5.0 | <5.0 | 11 | <5.0 | <5.0 |
| 09/13/02 | | 170 | 640 | <2 | <2 | 8 | <2 | <2 |
| 12/13/02 | | 240 | 540 | <2 | <2 | 29 | 31 | <2 |
| 03/01/03 | | 160 | 330 | <0.5 | <0.5 | 10 | <0.5 | <0.5 |
| 06/27/03 | | 200 | 470 | <0.5 | <0.5 | 11 | <0.5 | <0.5 |
| 09/30/03 | <50 | 120 | 710 | <0.5 | <0.5 | 6 | 0.7 | <0.5 |
| 12/03/03 | <250 | 200 | 420 | <3 | <3 | 14 | <3 | <3 |
| 03/10/04 | <50 | 140 | 220 | <0.5 | <0.5 | 5 | <0.5 | < 0.5 |

Table 3
Groundwater Analytical Results - Oxgenate Compounds

| WELL ID/ | ETHANOL | TBA | MtBE | DIPE | EtBE | TAME | 1,2-DCA | 1,2-DBA |
|-------------|---------|--------|--------|--------|--------|--------|---------|---------|
| DATE | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) |
| MW-3 (cont) | | | | | | | | |
| 06/30/04 | <50 | 100 | 660 | <0.5 | <0.5 | 5 | <0.5 | <0.5 |
| 09/30/04 | <50 | 72 | 690 | <0.5 | <0.5 | 4 | 0.5 | <0.5 |
| 12/31/04 | <50 | 77 | 170 | <0.5 | <0.5 | 5 | <0.5 | <0.5 |
| 03/23/05 | <50 | <5 | 140 | <0.5 | <0.5 | 4 | <0.5 | 3 |
| 06/22/05 | <250 | 150 | 300 | <3 | <3 | 6 | <3 | <3 |
| 09/02/05 | <100 | 99 | 440 | <1 | <1 | <1 | <1 | <1 |
| 12/02/05 | <100 | 66 | 170 | <1 | <1 | 5 | <1 | <1 |
| 03/20/06 | <50 | 14 | 34 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 06/01/06 | <50 | 12 | 28 | <0.5 | <0.5 | 0.8 | <0.5 | <0.5 |
| 09/11/06 | <50 | 47 | 97 | <0.5 | <0.5 | 2 | <0.5 | <0.5 |
| DESTROYED | | | | | | | | |
| | | | | | | | | |
| MW-4 | | | | | | | | |
| 03/12/02 | | <100 | 170 | <2 | <2 | 13 | <2 | <2 |
| 06/07/02 | | <100 | 120 | <2 | <2 | 14 | <2 | <2 |
| 09/13/02 | | <100 | 160 | <2 | <2 | 14 | <2 | <2 |
| 12/13/02 | | <100 | 200 | <2 | <2 | 17 | <2 | <2 |
| 03/01/03 | | 19 | 100 | <0.5 | <0.5 | 8 | <0.5 | <0.5 |
| 06/27/03 | | 22 | 130 | <0.5 | <0.5 | 11 | <0.5 | <0.5 |
| 09/30/03 | <100 | <10 | 520 | <1 | <1 | 9 | <1 | <1 |
| 12/03/03 | <50 | 18 | 73 | <0.5 | <0.5 | 5 | <0.5 | <0.5 |
| 03/10/04 | <50 | 11 | 55 | <0.5 | <0.5 | 4 | <0.5 | <0.5 |
| 06/30/04 | <100 | <10 | 110 | <1 | <1 | 6 | <1 | <1 |
| 09/30/04 | <50 | 17 | 400 | <0.5 | <0.5 | 7 | <0.5 | <0.5 |
| 12/31/04 | <50 | 11 | 42 | <0.5 | <0.5 | 2 | <0.5 | <0.5 |
| 03/23/05 | <50 | <5 | 24 | <0.5 | <0.5 | 1 | <0.5 | 0.9 |
| 06/22/05 | <50 | 15 | 18 | <0.5 | <0.5 | 1 | <0.5 | <0.5 |
| 09/02/05 | <50 | 6 | 18 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 12/02/05 | <50 | 11 | 34 | <0.5 | <0.5 | 1 | <0.5 | <0.5 |
| 03/20/06 | <50 | <5 | 2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 06/01/06 | <50 | <5 | 2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 09/11/06 | <50 | <5 | 4 | <0.5 | <0.5 | <0.5 | <0.5 | < 0.5 |
| DESTROYED | | | | | | | | |

Table 3

Groundwater Analytical Results - Oxgenate Compounds

Former Chevron-Branded Service Station 92029 890 West MacArthur Boulevard, Oakland, California

EXPLANATIONS:

Current groundwater monitoring data was provided by Gettler-Ryan Inc. Current laboratory analytical results were provided by Eurofins Lancaster Laboratories.

TBA = Tertiary-Butyl Alcohol

MtBE = Methyl tertiary-butyl ether

DIPE = Di-Isopropyl Ether

EtBE = Ethyl Tertiary-Butyl Ether

TAME = Tertiary-Amyl Methyl Ether

1,2-DCA = 1,2-Dichloroethane

1,2-DBA = 1,2-Dibromoethane

(µg/L) = Micrograms per liter

-- = Not Analyzed

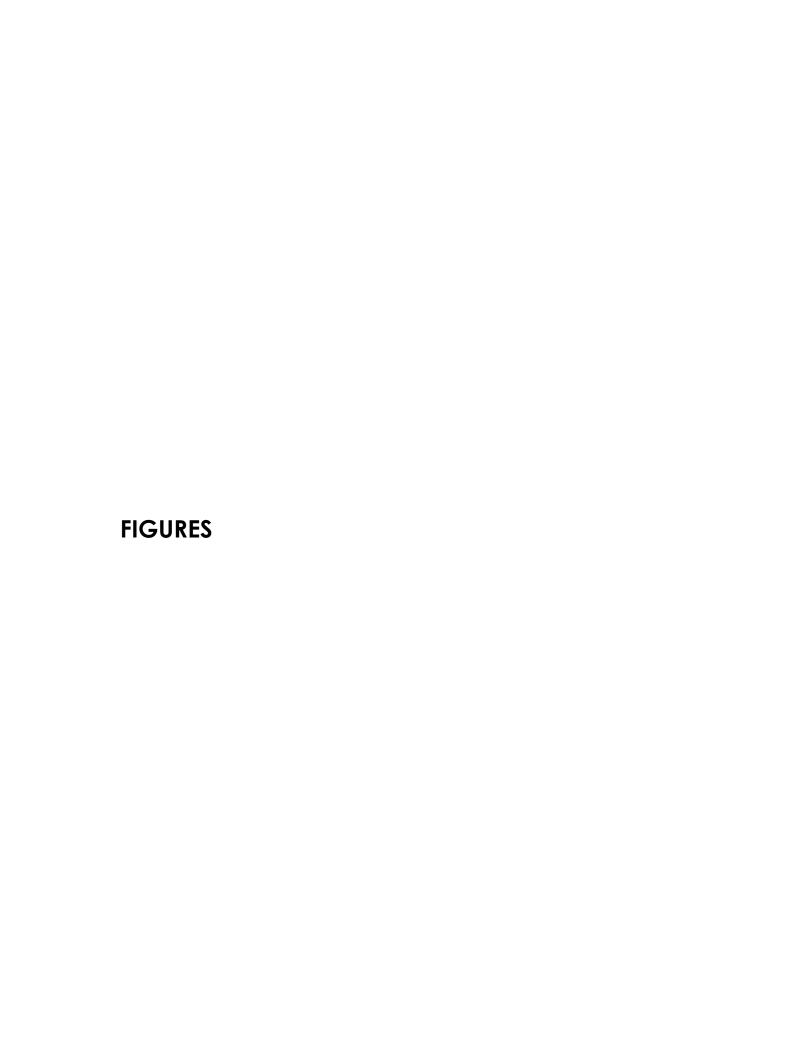
EPA = Environmental Protection Agency

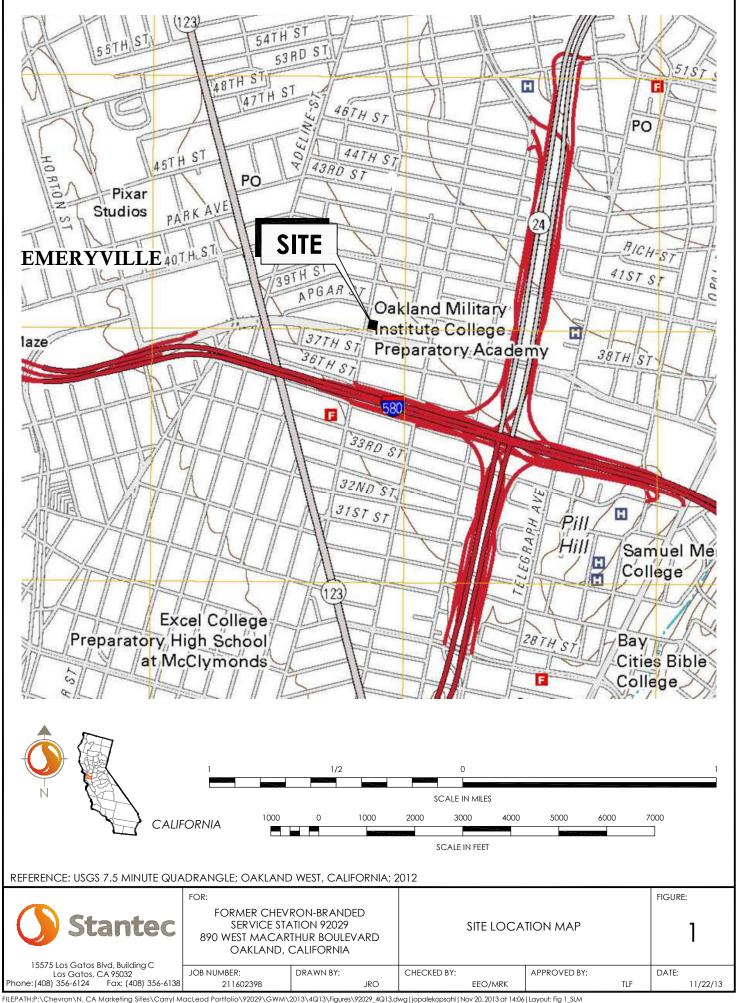
ANALYTICAL METHOD:

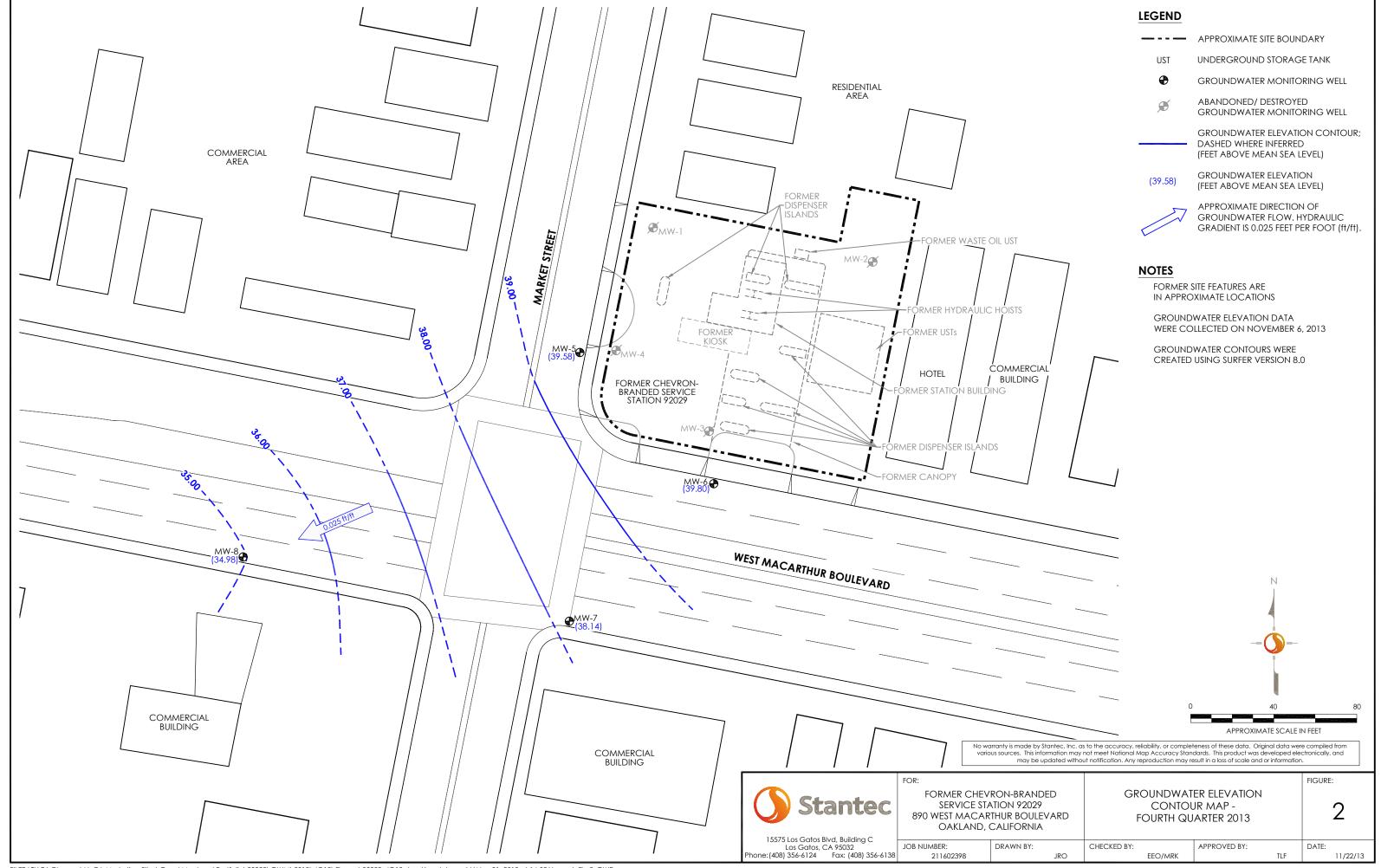
EPA Method 8260 for Oxygenate Compounds

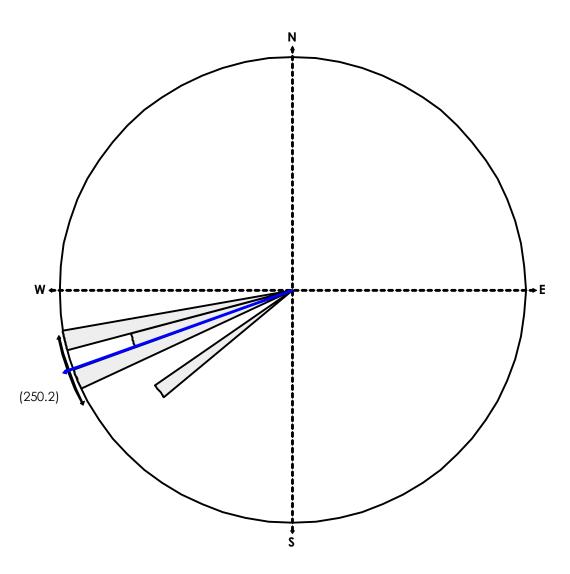
¹ Laboratory confirmed analytical result.

² Laboratory report indicates reporting limits were raised due to interference from the sample matrix.









EQUAL AREA PLOT

Number of Points 6 5 Class Size

Vector Mean 250.18 Vector Magnitude 5.93 Consistency Ratio 0.99

NOTE: ROSE DIAGRAM IS BASED ON THE DIRECTION OF GROUNDWATER FLOW BEGINNING SECOND QUARTER 2011.

| | | FOR: |
|---|---------|------|
| 0 | Stantec | 89 |

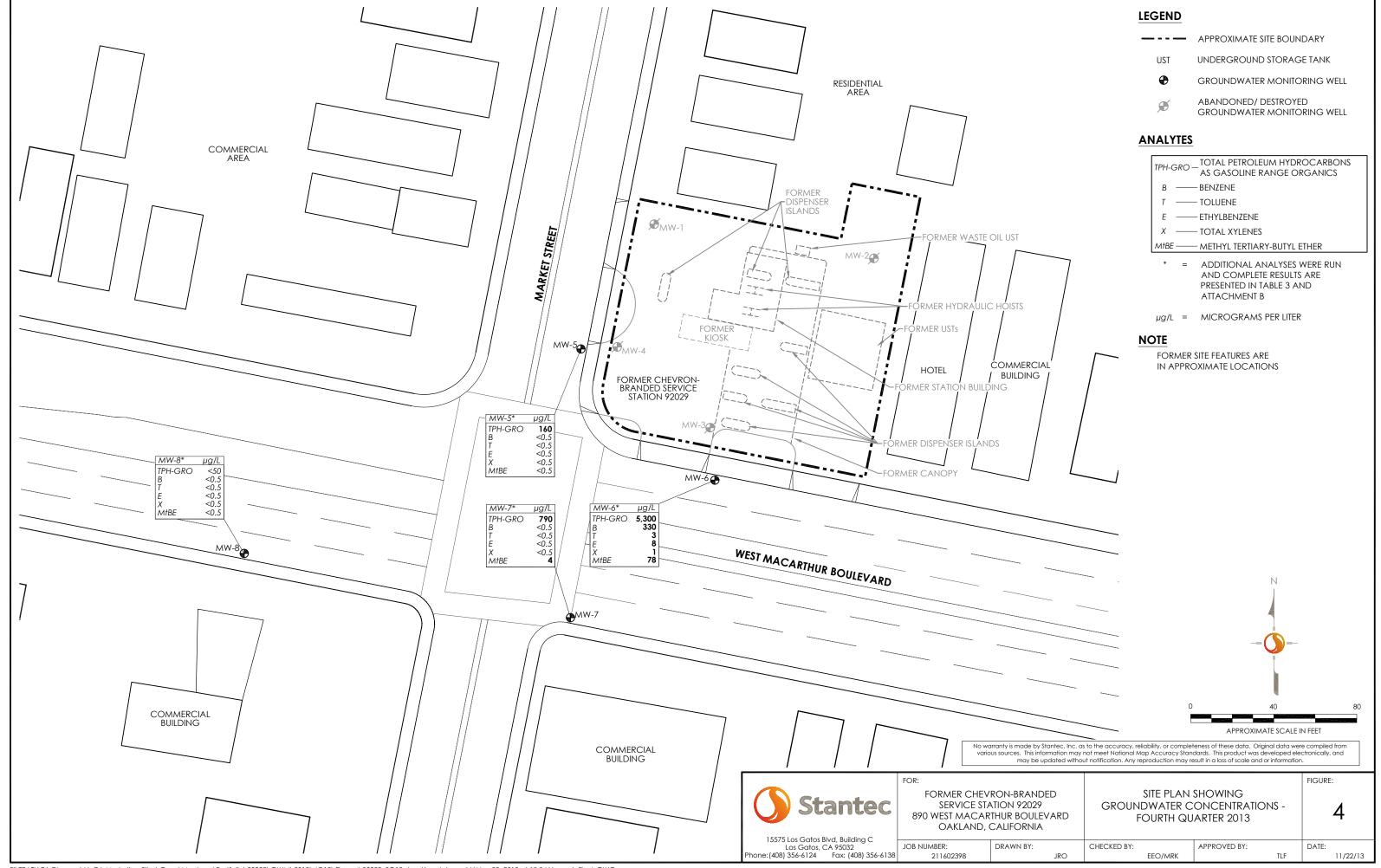
FORMER CHEVRON-BRANDED SERVICE STATION 92029 890 WEST MACARTHUR BOULEVARD

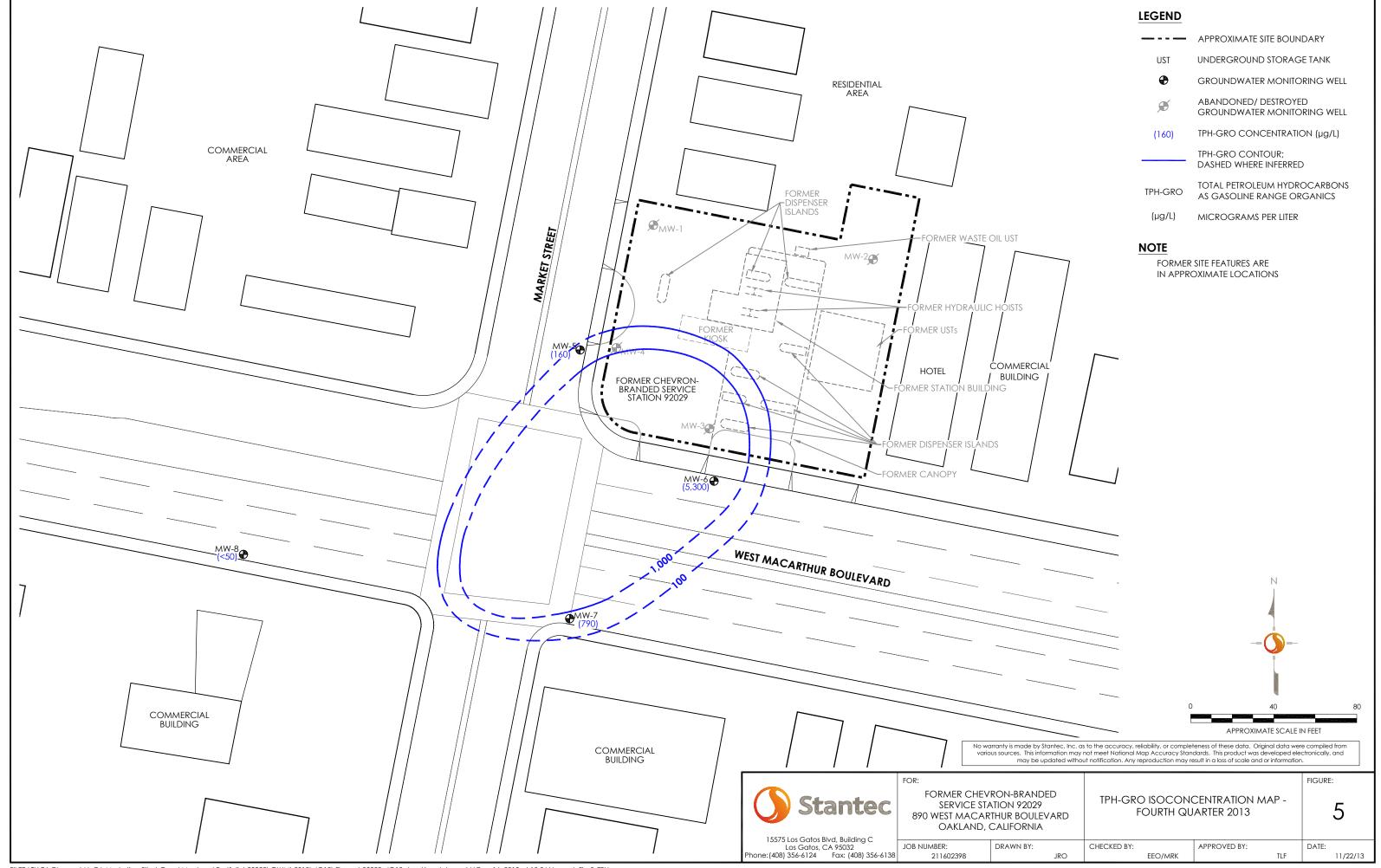
ROSE DIAGRAM -

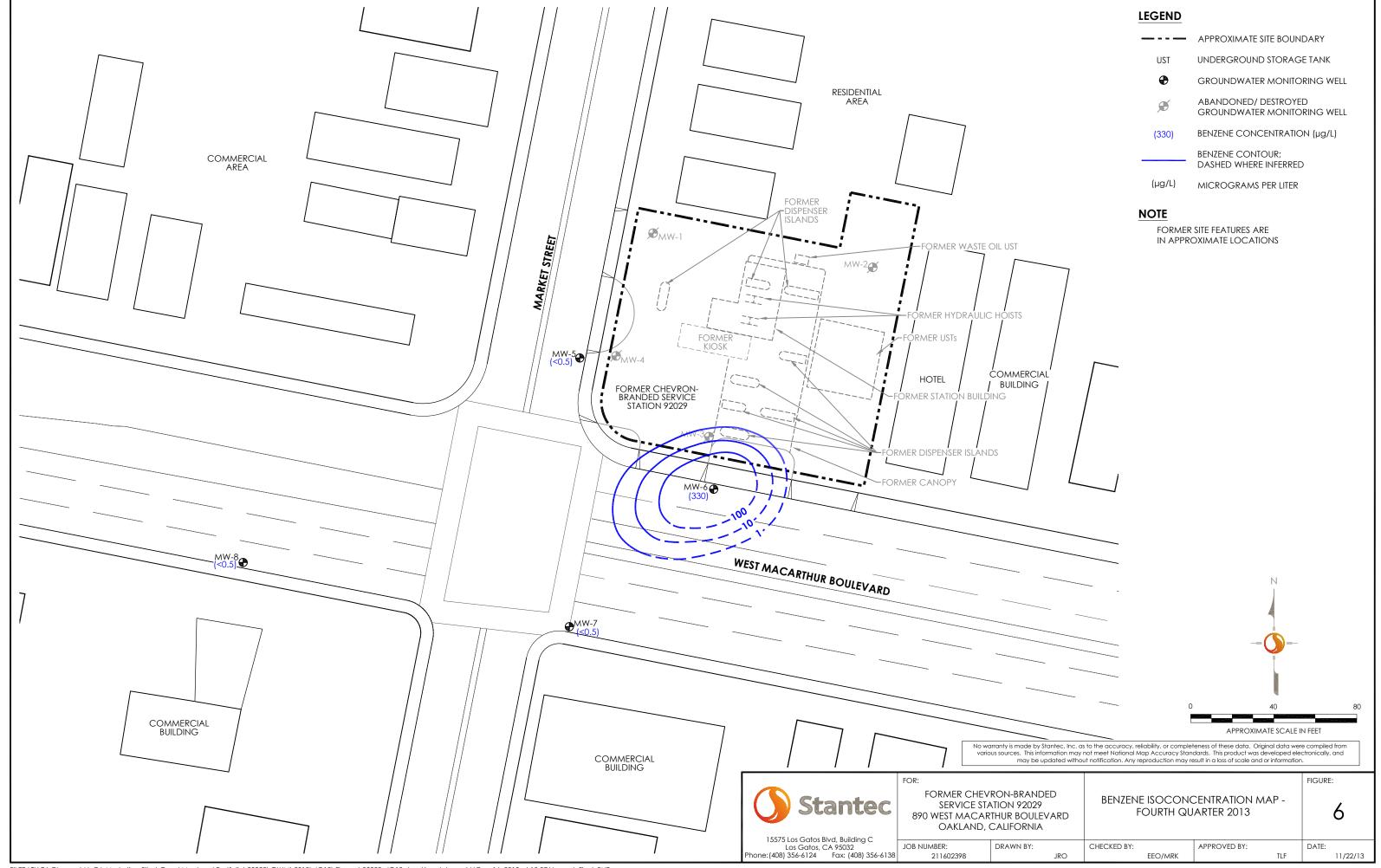
FIGURE:

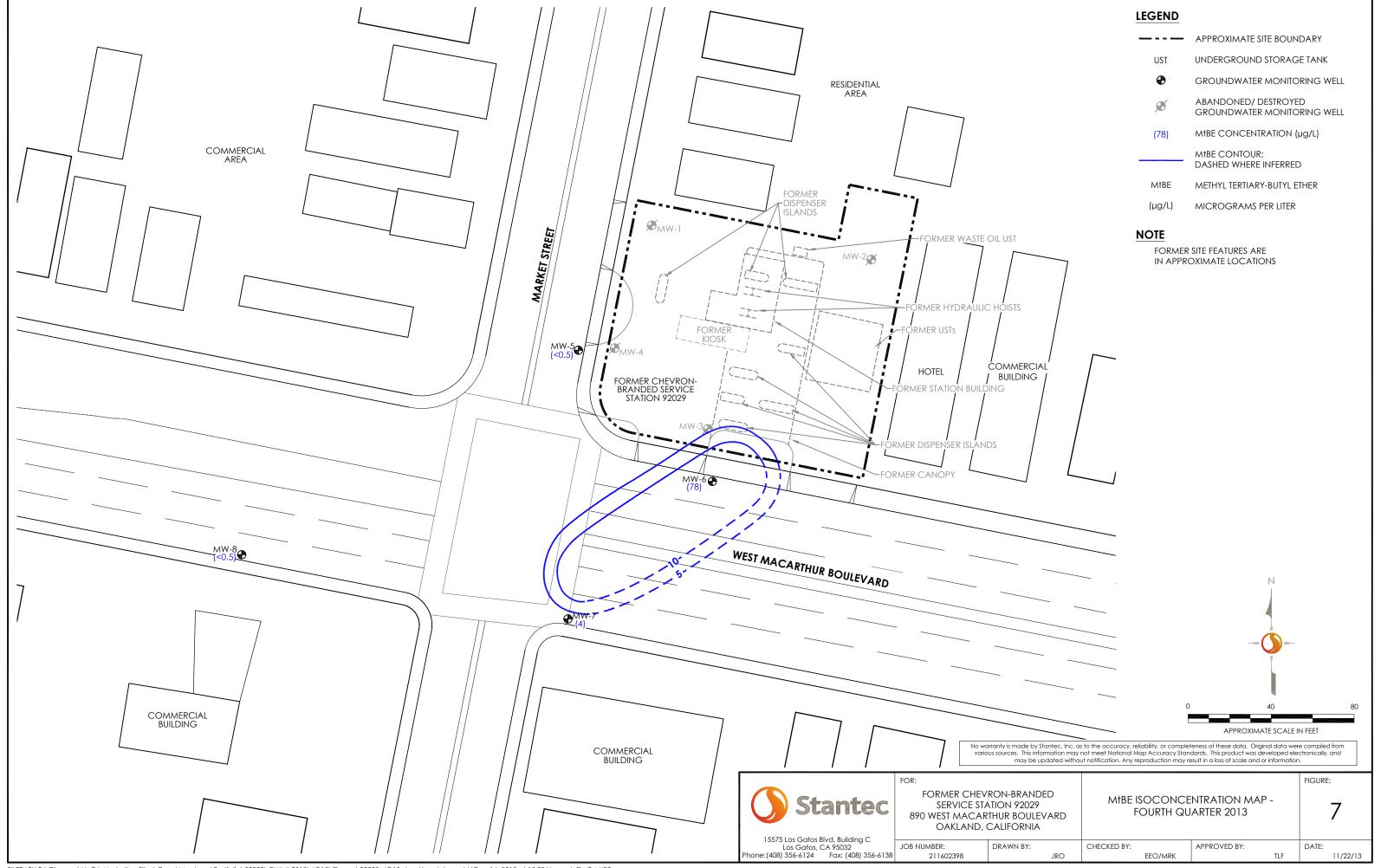
15575 Los Gatos Blvd, Building C Los Gatos, CA 95032 Phone:(408) 356-6124 Fax: (408) 356-6138

FOURTH QUARTER 2013 OAKLAND, CALIFORNIA JOB NUMBER: DRAWN BY: CHECKED BY: APPROVED BY: DATE: 11/22/13 TLF









ATTACHMENT A
Gettler-Ryan Inc. Field Data Sheets and Standard
Operating Procedures – Fourth Quarter 2013



TRANSMITTAL

November 15, 2013 G-R #386911

TO:

Mr. Travis Flora

Stantec

15575 Los Gatos Blvd., Building C Los Gatos, California 95032

FROM:

Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6805 Sierra Court, Suite G Dublin, California 94568 RE:

Former Chevron Service Station

#9-2029

890 West MacArthur Blvd.

Oakland, California

RO 0002438

WE HAVE ENCLOSED THE FOLLOWING:

| COPIES | 1.1 | DESCRIPTION |
|---------|-----|--|
| VIA PDF | | Groundwater Monitoring and Sampling Data Package Second Semi-Annual Event of November 6, 2013 |

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/9-2029

WELL CONDITION STATUS SHEET

| Client/Facility #: Site Address: City: | Chevron #9-2029 890 West Macarthur Blvd. Oakland, CA | | | | | | Job# Event Date: Sampler: | 386911 - 6.13 FT | | | |
|--|--|---------------------------------|--------------------------------------|---|---|---|---|---------------------------|-----------------------|--|---------------------------|
| 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) | REPLACE LOCK Y/N | REPLACE CAP Y/N | WELL VAULT Manufacture/Size/ # of Bolts | Pictures Taken Yes /No |
| MW-5 | DK | _ | | | | | -> | 4 | 7 | Monnison 6"/2 | |
| MW-L | OL | | | | | | > | Υ | γ | 1 (0)00(300) 6 (12 | |
| Mw-7 | OK | ~ | | | | | → > | 4 | 4 | | |
| MW-8 | OL | - | | | | | \rightarrow | 2 | 7 | 4 | |
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| Comments | | INST | ALLED | 3 NE | س س | Eu c | ovens | ····· | | | |
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STANDARD OPERATING PROCEDURE -GROUNDWATER SAMPLING

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

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

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

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

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

A laboratory supplied trip blank accompanies each sampling set. 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 Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.



WELL MONITORING/SAMPLING FIELD DATA SHEET

| Client/Facility#: | Chevron #9-2029 | | Job Number: | 386911 | |
|---|------------------------|-------------------|-------------------------|--|--------------------------|
| Site Address: | 890 West Macar | thur Blvd. | Event Date: | 11-6-13 | (inclusive) |
| City: | Oakland, CA | | Sampler: | FT | |
| Well ID | MW- '5 | | Date Monitored: | 11.6.13 | |
| Well Diameter | 2 in. | [\bar{\chi} | /olume 3/4"= 0.02 | | 3"= 0.38 |
| Total Depth | 25.01 ft. | 1 | Factor (VF) 4"= 0.66 | | 12"= 5.80 |
| Depth to Water | 9.81 ft. | Check if water co | olumn is less then 0.50 |) ft. | |
| | 15.20 XVF | 17 = 2.5 | x3 case volume = | Estimated Purge Volume: | 8.0 gal. |
| Depth to Water | w/ 80% Recharge [(Heig | | | | |
| Purge Equipment: | _ | Sampling Equipm | ent: | Time Completed: | (2400 hrs) (2400 hrs) |
| Disposable Bailer | | Disposable Bailer | | Depth to Product: | ft |
| Stainless Steel Baile | r | Pressure Bailer | | Depth to Water: | ft |
| Stack Pump | | Discrete Bailer | | Hydrocarbon Thicknes Visual Confirmation/D | |
| Suction Pump | | Peristaltic Pump | | | |
| Grundfos | | QED Bladder Pum | 0 | Skimmer / Absorbant | Sock (circle one) |
| Penstaltic Pump | | Other: | | Amt Removed from V | kimmer: gal /ell: gal |
| QED Bladder Pump | | | | Water Removed: | |
| Other: | | | | Product Transferred to | D: |
| Approx. Flow Ra Did well de-wate Time (2400 hr.) 1035 | | Sedimen Time:V | Temperature | gal. DTW @ Sampling | DRP mV) |
| | | | Y INFORMATION | | |
| SAMPLE ID | | RIG. PRESERV. T | | ANALY | |
| MW- 5 | 💪 x voa vial Y | ES HCL | LANCASTER | TPH-GRO(8015)/BTEX(826 | U)/ 5 OXYS (8260) |
| | | | | | |
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| | | | | | |
| COMMENTS: | | INSTALL ED | NEW WELL | COVE | |
| Add/Replaced L | -ock: | Add/Replaced Plug | 1 : | Add/Replaced Bolt: | |

WELL MONITORING/SAMPLING FIELD DATA SHEET

| Client/Facility#: Ch | nevron #9-2029 | Job Number: | 386911 | |
|------------------------|---|--------------------------|--|-----------------|
| Site Address: 89 | 0 West Macarthur Blvd. | Event Date: | 11.6.13 | (inclusive) |
| City: Oa | ıkland, CA | Sampler: | Fr | |
| Mall ID | ANA! / | | | |
| Well ID | MW- 6 2 in. | Date Monitored: | 11.6.13 | |
| Well Diameter | | Volume 3/4"= 0.02 | |)"= 0.38 |
| | 4.96 ft | Factor (VF) 4"= 0.66 | | ."= 5.80 |
| · | | column is less then 0.50 | | |
| | % Recharge [(Height of Water Column) | | Estimated Purge Volume: 8.4 | gal. |
| | 77 TOSTILLING [(FIGINITY OF TVALE) COMMINITY | (0.20) + D1VVJ. 12.795 | Time Started: | (2400 hrs) |
| Purge Equipment: | Sampling Equi | pment: | Time Completed: | (2400 hrs) |
| Disposable Bailer | Disposable Baile | er | Depth to Product: Depth to Water: | |
| Stainless Steel Bailer | Pressure Bailer | | Hydrocarbon Thickness: | ft |
| Stack Pump | Discrete Bailer | | Visual Confirmation/Desc | |
| Suction Pump | Peristaltic Pump | | Shimman / Ab / hand 0 | 1.77.1 |
| Grundfos | QED Bladder Pu | | Skimmer / Absorbant Soc Amt Removed from Skim | ox (circle one) |
| Peristaltic Pump | Other: | | Amt Removed from Well: | gal |
| QED Bladder Pump | | | Water Removed: | |
| Other: | | | Product Transferred to: | |
| Start Time (purge): | IIIO Weath | er Conditions: | SUNYL | |
| | | | | DENATE |
| Approx. Flow Rate: | | ent Description: | | OZNATE |
| Did well de-water? | | | NONE | 100 4 |
| Did Well de-Water: | ii yes, Tillie. | _ volume g | gal. DTW @ Sampling: _ | 10. [] |
| Time (2400 hr.) | olume (gal.) pH Conductiv (µmhos/cm - | | D.O. ORF | |
| 1115 | 770 | | (mg/L) (mV) |) |
| 1(13 | 3.5 1.38 1215 5.0 7.35 1209 | <u>20.3</u> | | _ |
| 1124 | $\frac{9.0}{8.0}$ $\frac{1.33}{7.33}$ $\frac{1209}{1201}$ | 20.7 | | <u> </u> |
| | 7. 33 1201 | | | <u> </u> |
| | | | | |
| | | RY INFORMATION | | |
| SAMPLE ID (#) | CONTAINER REFRIG. PRESERV. Le x voa vial YES HCL | | ANALYSES | |
| IVIV- | 💪 x voa vial YES HCL | LANCASTER | TPH-GRO(8015)/BTEX(8260)/ | 5 OXYS (8260) |
| | | | | |
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| | | | | |
| | | | | |
| COMMENTS: | | | | |
| COMMENTS: | Installed | HEW WELL CON | 1en | |



WELL MONITORING/SAMPLING FIELD DATA SHEET

| Client/Facility#: | Chevron #9-202 | 9 | Job Number: | 386911 | |
|------------------------|-----------------------|------------------------------|-----------------------|---|---------------------------------------|
| Site Address: | 890 West Maca | rthur Blvd. | Event Date: | 11.6.13 | (inclusive) |
| City: | Oakland, CA | | Sampler: | FT | · · · · · · · · · · · · · · · · · · · |
| Well ID | MW- 7 | | Date Monitored: | 11.6.13 | |
| Well Diameter | 2 in. | [Vo | lume 3/4"≈ 0.02 | | 211. 0.20 |
| Total Depth | 24.90 ft. | 4 | ctor (VF) 4"= 0.66 | | 3"= 0.38 12"= 5.80 |
| Depth to Water | 10.60 ft. | Check if water col | umn is less then 0.50 |) ft. | |
| • | 14.30 XVF | | | Estimated Purge Volume: | J.o gal. |
| Depth to Water v | | ight of Water Column x 0.2 | | | (2400 hrs) |
| Purge Equipment: | | Sampling Equipme | nt: | Time Completed: | (2400 hrs) |
| Disposable Bailer | | Disposable Bailer | | Depth to Product: | ft |
| Stainless Steel Bailer | | Pressure Bailer | | Depth to Water: Hydrocarbon Thickness | |
| Stack Pump | | Discrete Bailer | | Visual Confirmation/De | |
| Suction Pump | | Peristaltic Pump | | | |
| Grundfos | | QED Bladder Pump | | Skimmer / Absorbant S Amt Removed from Ski | ock (circle one) |
| Peristaltic Pump | | Other: | | Amt Removed from We | ill:gai |
| QED Bladder Pump | | | | Water Removed: | |
| Other: | | | | Product Transferred to: | |
| Start Time (purge) | : 1150 | Weather (| Conditions: | 54024 | |
| Sample Time/Dat | e: 1215 /11.6 | · 13 Water Col | or: CLEM | Odor: Ø/ N F | 100 EMATE |
| Approx. Flow Rate | e:gpn | n. Sediment | Description: | Hore | |
| Did well de-water | ? No If yes, | Time: Vo | olume:g | gal. DTW @ Sampling: | 11.06 |
| Time (2400 hr.) | Volume (gal.) p | H Conductivity (μmhos/cm - 🔊 | Temperature | D.O. Of (mg/L) (m | |
| 1155 | 2.5 | 24 115L | 20.7 | (| •, |
| 1200 | 5.0 7. | 21 1150 | 20 9 | | -/- |
| 1205 | 7.0 | 18 1144 | 21.1 | - | |
| | | | | | |
| | | | | | |
| | | | INFORMATION | | |
| SAMPLE ID | | FRIG. PRESERV. TYP | | ANALYSI | |
| MW- 7 | x voa vial | ES HCL | LANCASTER | TPH-GRO(8015)/BTEX(8260 | / 5 OXYS (8260) |
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| COMMENTS: | | INSTALLS | > NEW WEL | L COVER | |
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WELL MONITORING/SAMPLING FIELD DATA SHEET

| Client/Facility#: | Chevron #9-202 | 9 | Job Number: | 386911 | |
|--|-----------------|-----------------------------|--------------------|--|---|
| Site Address: | 890 West Maca | rthur Bivd. | Event Date: | 11.6.13 | (inclusive) |
| City: | Oakland, CA | | Sampler: | FT | |
| W-1115 | BANA/ C | | | 48 | |
| Well ID | <u>MW-8</u> | | Date Monitored: | 11.6.13 | |
| Well Diameter | 2 in. | | lume 3/4"= 0.0 | | |
| Total Depth | 24.99 ft. | | ctor (VF) 4"= 0.66 | | 0 12"= 5.80 |
| Depth to Water | | Check if water col | | | 100 |
| Depth to Water | | eight of Water Column x 0.2 | | | gal. |
| • | . | | | Time Started: | (2400 hrs) |
| Purge Equipment: | | Sampling Equipme | nt: | Time Completed:_ Depth to Product:_ | |
| Disposable Bailer | | Disposable Bailer | | Depth to Water: | |
| Stainless Steel Baile | er | Pressure Bailer | | Hydrocarbon Thick | |
| Stack Pump | | Discrete Bailer | | Visual Confirmation | |
| Suction Pump | | Peristaltic Pump | | Okinama / Abanda | 100-11 (100-100-100) |
| Grundfos | | QED Bladder Pump | | Amt Removed from | int Sock (circle one) n Skimmer: gal |
| Peristaltic Pump | | Other: | | Amt Removed from | n Well: gal |
| QED Bladder Pump | | | | Water Removed:_ | ~ |
| Other: | | | | Product Transferre | d to: |
| Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.) 1234 | Volume (gal.) | | Temperature | SUTY gal. DTW @ Sampli D.O. (mg/L) | ng: 12.71 ORP (mV) |
| 1242 | b.o 7. | | 21.0 | | |
| | | | | | |
| | | LABORATORY | INFORMATION | | |
| SAMPLE ID | (#) CONTAINER R | EFRIG. PRESERV. TY | | ANA | LYSES |
| MW- & | x voa vial | YES HCL | LANCASTER | TPH-GRO(8015)/BTEX(| 8260)/ 5 OXYS (8260) |
| | | | | | |
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| | | | | | |
| COMMENTS: | | | | | |
| | | | | | |
| Add/Replaced | Lock: | Add/Replaced Plug | · | Add/Replaced Bolt: | |

Chevron California Region Analysis Request/Chain of Custody

| eurofins Lancaster Laboratori | ies | 1106 | Ac 13~8 | cct. # _ | | | | e | Group |) # | | | | Sar | mple : | # | e only | | | | | - | iof | 1 |
|---|---|---------------------|---------------|----------|-----------|----------|----------|---------|-----------------|--|---------------|------------|---------------------|-------------------------|----------------|--------------------------------|------------|----------------|-----------|-------------------|-------|-----------------|---|------------|
| 1) Client Info | ormatio | n | | | | 4 | Mat | trix | | | (5) | | | Ar | nalys | ses | Requ | uest | ed | | | (A) | SCR.#:_ | i 1 |
| Facility 5#9-2029-OML G-R#386911 | Globa | IMB#T06 | 0017388 | 87 | | | | | | | | | | | | | | | | | | | | |
| Site AND SEVEST MACARTHUR BLV | | | | | - 1 | | ` | | | | | | 유 | | | | | | | | | | Results in Dry Weight | ∍d |
| Cheven STANTECTF | | Lead-Consu | | | | Sediment | Ground | Surface | | စ္ပ | 8260 🖾 | 8260 | Gel Cleanup | eanup | | (0) | | | | | | | Must meet lowest detection limits possible for 8260 | |
| | Consultan/Office Getter-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568 | | | | - 1 | Se | Ō | S | | Containers | 8 | 85 | | Gel Ci | | 97 | | | | | | | compounds 8021 MTBE Confirmation | on : |
| Consultant Project Mor. Deanna L. Harding, (deanna@g | jrinc.co | m), (925 |) 551-74 | 144 x1 | 180 | | | - 1 | | Cont | <u></u> | 15 🕅 | out Sili | with Silica Gel Cleanup | | 8 | ا و ا | Method | 160 | | | | Confirm highest hit by 8 | |
| Consultant Phone # (408) 356-6124 x238 | | | | | \Box | | Potable | NPDES | Air | 6 | 8021 | 8015 | 8015 without Silica | 5 with | _ | Oxygenates | | | 8 | 1 I | | | Run oxy's on hi | ighest hit |
| Sampler FRANT TENLINON | | | | 3 | osite | | 1 | - 1 | | Total Number | No. | <u>۾</u> | | 3O 8015 | 8260 Full Scan | ő | ad | Dissolved Lead | MTBE | | | | | : |
| 2 | Soil Depth | Colle Date | ected Time | Grab | Composite | Soil | Water | Vaic | ō | rotal | втех | TPH-GRO | TPH-DRO | TPH-DRO | 260 Ft | N | Total Lead |)issolv | Ī | | | | (6) Remarks | |
| QA | | 11.6.13 | | | Ĭ | | W | | | 2 | Ž | Ż | | <u> </u> | 80 | | | | X | | | | (b) Homanic | |
| | | | | | \Box | | | 1 | | | | | | | | | \square | | | | | | | |
| MW-5 | | | 1056 | X | H | | + | | \sqcup | 6 | \times | X | | | | \bowtie | \vdash | | \square | \square | | \square | | - 1 |
| MW-6 MW-7 | | | 1136 | X | \vdash | | 1 | - | $\vdash \vdash$ | 6 | \Rightarrow | \Diamond | $\mid - \mid$ | $\mid - \mid$ | $\mid - \mid$ | \bigotimes | \vdash | H | H | \longrightarrow | | \vdash | | |
| Mw-8 | | 4 | 1252 | X | 口 | | 4 | , | | ي <i>ه</i> ا | Ŕ | Ŕ | | | | $\stackrel{\frown}{\boxtimes}$ | \square | \Box | \Box | | | | | |
| | | | * * * * | + | - | | <u> </u> | _ | | $\vdash\vdash$ | | | | \vdash | \vdash | $\vdash \vdash$ | \square | \square | H | \vdash | | $\vdash\vdash$ | | |
| | | | | | | | | | | | | | | | | | \Box | | \square | \sqcap | | $\vdash \vdash$ | | |
| | | - 0 | | | | | | | | | | | | | | \square | \square | | \Box | \square | | | | |
| | | | | \Box | | | | | | | | | | | | | | | | | | | | |
| Turnara d Time Perusated /T/ | - T\ (alaa) | -1-1-1 | | Poline | quished | l bui | | | | | Date | | | Time | | | Paggi | id bi | | | | | ID-4- | |
| 7 Turnaround Time Requested (TA Standard 5 day | | se circle) 4 day | | 4 | · | Į, | 7 | | | , | | 6.1 | 3 | | фф | | a | | fals | for | | | Date Time | 166 |
| 72 hour 48 hour | | 24 hour | | Relijhqi | quished | by | | | | | Date | | | Time | | | Receiv | ived by | V | | | | Date Time | |
| 8 Data Package (circle if required) | EDD | (circle if re | required) | Relin | nquishe | ed by | Comr | nercia | al Ca | rrier: | | | | | | \rightarrow | Recei | ived by | , | | | | Date Time | |
| Type I - Full | EDFF | FLAT (defa | | U | JPS_ | | | Fe | dEx | <u>. </u> | | Oth | her_ | | |] | _ | | | | | | | |
| Type VI (Raw Data) | Other | r: | | | Te | .mpe | eratuı | re U | pon | Rec | eipt | | | ° | °C | | Cı | Jotec | dy Se | als! | Intac | xt? | Yes | No |

ATTACHMENT B
Certified Laboratory Analysis Reports and
Chain-of-Custody Documents

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

November 15, 2013

Project: 92029

Submittal Date: 11/07/2013 Group Number: 1432155 PO Number: 0015116151 Release Number: SHRILL HOPKINS State of Sample Origin: CA

| Client Sample Description | <u>Lancaster Labs (LL) #</u> |
|--------------------------------|------------------------------|
| QA-T-131106 NA Water | 7267536 |
| MW-5-W-131106 Grab Groundwater | 7267537 |
| MW-6-W-131106 Grab Groundwater | 7267538 |
| MW-7-W-131106 Grab Groundwater | 7267539 |
| MW-8-W-131106 Grab Groundwater | 7267540 |

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

| ELECTRONIC COPY TO | Gettler-Ryan Inc. | Attn: Gettler Ryan |
|----------------------------------|-----------------------|---------------------------|
| ELECTRONIC COPY TO | Stantec | Attn: Laura Viesselman |
| ELECTRONIC COPY TO | Stantec International | Attn: Travis Flora |
| ELECTRONIC | Stantec | Attn: Erin O'Malley |
| COPY TO ELECTRONIC COPY TO | Stantec | Attn: Marisa Kaffenberger |

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: QA-T-131106 NA Water

QA-T-131106 NA Water LL Sample # WW 7267536 Facility# 92029 Job# 386911 GRD LL Group # 1432155 890 W MacArthur-Oakland T0600173887 Account # 10906

Project Name: 92029

Collected: 11/06/2013 Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 11/07/2013 09:35 Reported: 11/15/2013 22:48

WMOQA

| 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 | |
| 10943 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 10943 | Ethylbenzene | 100-41-4 | N.D. | 0.5 | 1 |
| 10943 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.5 | 1 |
| 10943 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 10943 | Xylene (Total) | 1330-20-7 | N.D. | 0.5 | 1 |
| GC Vo | Latiles SW-846 | 8015B | ug/l | ug/l | |
| 01728 | TPH-GRO N. CA water C6-C12 | n.a. | N.D. | 50 | 1 |

General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

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 Tim | ne | Analyst | Dilution Factor |
|------------|-------------------------|--------------|--------|-----------|--------------------------|-------|-------------------------|--------------------|
| 10943 | BTEX/MTBE 8260 Water | SW-846 8260B | 1 | D133162AA | 11/12/2013 | 13:25 | Daniel H Heller | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | D133162AA | 11/12/2013 | 13:25 | Daniel H Heller | 1 |
| 01728 | TPH-GRO N. CA water C6- | SW-846 8015B | 1 | 13317B20A | 11/14/2013 | 12:41 | Marie D | 1 |
| | C12 | | | | | | Beamenderfer | |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13317B20A | 11/14/2013 | 12:41 | Marie D Reamenderfer | 1 |



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-5-W-131106 Grab Groundwater

Facility# 92029 Job# 386911 GRD 890 W MacArthur-Oakland T0600173887

LL Group # 1432155 Account # 10906

LL Sample # WW 7267537

Project Name: 92029

Collected: 11/06/2013 10:56 by FT Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 11/07/2013 09:35 Reported: 11/15/2013 22:48

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/l | |
| 10943 | t-Amyl methyl ether | 994-05-8 | N.D. | 0.5 | 1 |
| 10943 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 10943 | t-Butyl alcohol | 75-65-0 | N.D. | 2 | 1 |
| 10943 | Ethyl t-butyl ether | 637-92-3 | N.D. | 0.5 | 1 |
| 10943 | Ethylbenzene | 100-41-4 | N.D. | 0.5 | 1 |
| 10943 | di-Isopropyl ether | 108-20-3 | N.D. | 0.5 | 1 |
| 10943 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.5 | 1 |
| 10943 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 10943 | Xylene (Total) | 1330-20-7 | N.D. | 0.5 | 1 |
| GC Vol | latiles SW-846 | 8015B | ug/l | ug/l | |
| 01728 | TPH-GRO N. CA water C6-C12 | n.a. | 160 | 50 | 1 |

General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

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 |
|------------|-----------------------------------|--------------|--------|-----------|---------------------------|-------------------------|--------------------|
| 10943 | BTEX + 5 Oxygenates 8260 Water | SW-846 8260B | 1 | D133162AA | 11/12/2013 17:44 | Daniel H Heller | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | D133162AA | 11/12/2013 17:44 | Daniel H Heller | 1 |
| 01728 | TPH-GRO N. CA water C6-C12 | SW-846 8015B | 1 | 13317B20A | 11/14/2013 14:10 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13317B20A | 11/14/2013 14:10 | Marie D Beamenderfer | 1 |



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-6-W-131106 Grab Groundwater

Facility# 92029 Job# 386911 GRD 890 W MacArthur-Oakland T0600173887

LL Group # 1432155 Account # 10906

LL Sample # WW 7267538

Project Name: 92029

Collected: 11/06/2013 11:36 by FT Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 11/07/2013 09:35 Reported: 11/15/2013 22:48

WMO06

| 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 | |
| 10943 | t-Amyl methyl ether | | 994-05-8 | 2 | 1 | 2 |
| 10943 | Benzene | | 71-43-2 | 330 | 1 | 2 |
| 10943 | t-Butyl alcohol | | 75-65-0 | 60 | 4 | 2 |
| 10943 | Ethyl t-butyl ether | | 637-92-3 | N.D. | 1 | 2 |
| 10943 | Ethylbenzene | | 100-41-4 | 8 | 1 | 2 |
| 10943 | di-Isopropyl ether | | 108-20-3 | N.D. | 1 | 2 |
| 10943 | Methyl Tertiary Buty | yl Ether | 1634-04-4 | 78 | 1 | 2 |
| 10943 | Toluene | | 108-88-3 | 3 | 1 | 2 |
| 10943 | Xylene (Total) | | 1330-20-7 | 1 | 1 | 2 |
| Repo | rting limits were rai | sed due t | o interference fro | m the sample matrix. | | |
| GC Vol | latiles | SW-846 | 8015B | ug/l | ug/l | |
| 01728 | TPH-GRO N. CA water | C6-C12 | n.a. | 5,300 | 250 | 5 |
| | | | | | | |

General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

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 Ti | me | Analyst | Dilution Factor |
|------------|-----------------------------------|--------------|--------|-----------|-------------------------|-------|-------------------------|--------------------|
| 10943 | BTEX + 5 Oxygenates 8260 Water | SW-846 8260B | 1 | D133162AA | 11/12/2013 | 18:08 | Daniel H Heller | 2 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | D133162AA | 11/12/2013 | 18:08 | Daniel H Heller | 2 |
| 01728 | TPH-GRO N. CA water C6- C12 | SW-846 8015B | 1 | 13317B20A | 11/14/2013 | 21:08 | Marie D Beamenderfer | 5 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13317B20A | 11/14/2013 | 21:08 | Marie D Beamenderfer | 5 |



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-7-W-131106 Grab Groundwater

Facility# 92029 Job# 386911 GRD 890 W MacArthur-Oakland T0600173887

LL Group # 1432155 Account # 10906

LL Sample # WW 7267539

Project Name: 92029

Collected: 11/06/2013 12:15 by FT Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 11/07/2013 09:35 Reported: 11/15/2013 22:48

WMO07

| 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 | |
| 10943 | t-Amyl methyl ether | 994-05-8 | N.D. | 0.5 | 1 |
| 10943 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 10943 | t-Butyl alcohol | 75-65-0 | N.D. | 2 | 1 |
| 10943 | Ethyl t-butyl ether | 637-92-3 | N.D. | 0.5 | 1 |
| 10943 | Ethylbenzene | 100-41-4 | N.D. | 0.5 | 1 |
| 10943 | di-Isopropyl ether | 108-20-3 | N.D. | 0.5 | 1 |
| 10943 | Methyl Tertiary Butyl Ether | 1634-04-4 | 4 | 0.5 | 1 |
| 10943 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 10943 | Xylene (Total) | 1330-20-7 | N.D. | 0.5 | 1 |
| GC Vo | latiles SW-846 | 8015B | ug/l | ug/l | |
| 01728 | TPH-GRO N. CA water C6-C12 | n.a. | 790 | 50 | 1 |

General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

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 | e | Analyst | Dilution Factor |
|------------|-----------------------------------|--------------|--------|-----------|---------------------------|-------|-------------------------|--------------------|
| 10943 | BTEX + 5 Oxygenates 8260 Water | SW-846 8260B | 1 | D133162AA | 11/12/2013 | 18:54 | Daniel H Heller | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | D133162AA | 11/12/2013 | 18:54 | Daniel H Heller | 1 |
| 01728 | TPH-GRO N. CA water C6- C12 | SW-846 8015B | 1 | 13317B20A | 11/14/2013 | 20:46 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13317B20A | 11/14/2013 | 20:46 | Marie D Beamenderfer | 1 |



Analysis Report

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Sample Description: MW-8-W-131106 Grab Groundwater

Facility# 92029 Job# 386911 GRD 890 W MacArthur-Oakland T0600173887

LL Group # 1432155 Account # 10906

LL Sample # WW 7267540

Project Name: 92029

Collected: 11/06/2013 12:52 by FT Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 11/07/2013 09:35 Reported: 11/15/2013 22:48

800MW

| 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 | |
| 10943 | t-Amyl methyl ether | 994-05-8 | N.D. | 0.5 | 1 |
| 10943 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 10943 | t-Butyl alcohol | 75-65-0 | N.D. | 2 | 1 |
| 10943 | Ethyl t-butyl ether | 637-92-3 | N.D. | 0.5 | 1 |
| 10943 | Ethylbenzene | 100-41-4 | N.D. | 0.5 | 1 |
| 10943 | di-Isopropyl ether | 108-20-3 | N.D. | 0.5 | 1 |
| 10943 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.5 | 1 |
| 10943 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 10943 | Xylene (Total) | 1330-20-7 | N.D. | 0.5 | 1 |
| GC Vol | Latiles SW-846 | 8015B | ug/l | ug/l | |
| 01728 | TPH-GRO N. CA water C6-C12 | n.a. | N.D. | 50 | 1 |
| | | | | | |

General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

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 |
|------------|-----------------------------------|--------------|--------|-----------|---------------------------|----------------------------|--------------------|
| 10943 | BTEX + 5 Oxygenates 8260 Water | SW-846 8260B | 1 | D133162AA | 11/12/2013 19 | 16 Daniel H Heller | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | D133162AA | 11/12/2013 19 | 16 Daniel H Heller | 1 |
| 01728 | TPH-GRO N. CA water C6- C12 | SW-846 8015B | 1 | 13317B20A | 11/14/2013 15 | 16 Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13317B20A | 11/14/2013 15 | 16 Marie D Beamenderfer | 1 |

Analysis Report

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Page 1 of 2

Quality Control Summary

Client Name: Chevron Group Number: 1432155

Reported: 11/15/13 at 10:48 PM

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

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

Laboratory Compliance Quality Control

| Analysis Name | Blank <u>Result</u> | Blank <u>MDL</u> | Report <u>Units</u> | LCS <u>%REC</u> | LCSD %REC | LCS/LCSD <u>Limits</u> | RPD | RPD Max |
|-----------------------------|------------------------|---------------------|------------------------|--------------------|--------------|---------------------------|-----|---------|
| Batch number: D133162AA | Sample numbe | er(s): 726 | 7536-7267 | 540 | | | | |
| t-Amyl methyl ether | N.D. | 0.5 | uq/l | 98 | | 75-120 | | |
| Benzene | N.D. | 0.5 | ug/l | 102 | | 78-120 | | |
| t-Butyl alcohol | N.D. | 2. | ug/l | 105 | | 75-120 | | |
| Ethyl t-butyl ether | N.D. | 0.5 | ug/l | 98 | | 74-120 | | |
| Ethylbenzene | N.D. | 0.5 | ug/l | 100 | | 79-120 | | |
| di-Isopropyl ether | N.D. | 0.5 | ug/l | 104 | | 65-120 | | |
| Methyl Tertiary Butyl Ether | N.D. | 0.5 | ug/l | 103 | | 75-120 | | |
| Toluene | N.D. | 0.5 | ug/l | 102 | | 80-120 | | |
| Xylene (Total) | N.D. | 0.5 | ug/l | 103 | | 80-120 | | |
| Batch number: 13317B20A | Sample numbe | er(s): 726 | 7536-7267 | 540 | | | | |
| TPH-GRO N. CA water C6-C12 | N.D. | 50. | ug/l | 119 | 117 | 75-135 | 2 | 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 <u>Limits</u> | <u>RPD</u> | RPD <u>MAX</u> | BKG <u>Conc</u> | DUP <u>Conc</u> | DUP <u>RPD</u> | Dup RPD <u>Max</u> |
|-----------------------------|-------------------|--------------------|-------------------------|------------|-------------------|--------------------|--------------------|-------------------|-----------------------|
| Batch number: D133162AA | Sample | number(s) | : 7267536 | -726754 | 10 UNSP | K: P268725 | | | |
| t-Amyl methyl ether | 104 | 96 | 65-117 | 9 | 30 | | | | |
| Benzene | 113 | 96 | 72-134 | 10 | 30 | | | | |
| t-Butyl alcohol | 106 | 96 | 67-119 | 10 | 30 | | | | |
| Ethyl t-butyl ether | 100 | 94 | 74-122 | 6 | 30 | | | | |
| Ethylbenzene | 109 | 96 | 71-134 | 11 | 30 | | | | |
| di-Isopropyl ether | 108 | 100 | 70-129 | 8 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 106 | 96 | 72-126 | 7 | 30 | | | | |
| Toluene | 109 | 100 | 80-125 | 8 | 30 | | | | |
| Xylene (Total) | 111 | 101 | 79-125 | 10 | 30 | | | | |

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water

*- 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.

Analysis Report

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Page 2 of 2

Quality Control Summary

Client Name: Chevron Group Number: 1432155

Reported: 11/15/13 at 10:48 PM

Surrogate Quality Control

| Batch nu | mber: D133162AA | | | 2 |
|----------|----------------------|-----------------------|------------|----------------------|
| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
| 7267536 | 101 | 97 | 99 | 97 |
| 7267537 | 97 | 92 | 99 | 96 |
| 7267538 | 98 | 97 | 99 | 104 |
| 7267539 | 97 | 95 | 99 | 99 |
| 7267540 | 101 | 97 | 99 | 97 |
| Blank | 101 | 98 | 98 | 94 |
| LCS | 98 | 98 | 99 | 100 |
| MS | 98 | 99 | 100 | 103 |
| MSD | 98 | 99 | 99 | 104 |
| Limits: | 80-116 | 77-113 | 80-113 | 78-113 |

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

Batch number: 13317B20A

Trifluorotoluene-F

| 7267536 | 84 |
|---------|----|
| 7267537 | 85 |
| 7267538 | 90 |
| 7267539 | 92 |
| 7267540 | 83 |
| Blank | 85 |
| LCS | 89 |
| LCSD | 88 |
| | |

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.

Chevron California Region Analysis Request/Chain of Custody

| eurofins Lancaste Laborate | er ories | 1106 | Ac 13-81 | .cct. # _ | 100 | 10(| 6 | | F Group In: | For Eu | urofins | Land 215 reverse | ncaster 55 e side cor | : Labo Sa orrespor | ratorie ample ad with c | es us # <u>1 c</u> circled r | e only umber | , 15. | 36 | -40 | 2 | | 10f1 | |
|--|---------------|--------------------------|------------------|--|--|----------|-------------------------------------|---|-------------------|--------------|--------------------------------------|------------------------|-----------------------------|------------------------------|-------------------------------|------------------------------------|-----------------|----------------|----------|----------|-----------------|----------|---|-----------|
| | nformatio | on | | | 10 | 4) | Mi | atrix | | | (5) | | | Aı | nalys | ses | Req | uest | .ed | | | | SCR #: | |
| Facility # SS#9-2029-OML G-R#38691 | 11 Globa | WBS I ID#TO€ | 30017388 | 37 | | | | | Γ' | | | | | | | | | | | | | | | |
| Site Address WEST MACARTHUR BL | | | | No. 10 Miles Miles Commission Commission | | | | | | | | | e | | | | | | | | | | ☐ Results in Dry Weiq | |
| Chevron PM STANTECTF | | Lead Consu Flora | ultant i | | | diment | Ground | Surface | | ,s | 8260 🔀 | 8260 | Gel Cleanup | eanup | | 6 | | | | | | | Must meet lowest of limits possible for 8 | detection |
| Consultant/Office Getter-Ryan, Inc., 6747 Sierra | a Court, S | iuite J, D | ublin, C/ | A 945 | 568 | Sec | Ö | હ | ' | Containers | 826 | 826 | ica Gel | Gel Clé | ! | (8260) | | ا ا | | | | | compounds 8021 MTBE Confire | mation |
| Consultant Project Mgr. Deanna L. Harding, (deanna@ | ⊉grinc.cc | m), (925 | 5) 551-74 | 144 x | 180 | | | | | f Cont | 8021 | | without Silica | Silica | | 1 1 | <u>e</u> | Method | 260 | | | | Confirm highest hit | 8260 |
| Consultant Phone # (408) 356-6124 x238 | | | | | | | Potable | NPDES |] Air | | 80 | 80 | LC. | 8015 with Silica Gel Cleanup | _E | Oxygenates | | ad | 00 | <u> </u> | | | Run oxy's o | |
| Sampler FRANK TEMMINO | | | | 3 | Composite | | 1 | | | Total Number | | 3RO | JRO 801 | JRO 8C | 8260 Full Scan | | Lead | Dissolved Lead | MTBE | | | | | |
| ② Sample Identification | Soil Depth | | lected Time | Grab | Com | Soil | | Water | li O | | ВТЕХ | TPH-GRO | TPH-DRO | TPH-DRO | 8260 [| W | Total Lead | Disso | 7 | | | | 6 Remark | ks |
| QA | | 11.6.13 | , | | | | 1 | ON A STATE OF THE PARTY OF THE | | 2 | X | X | 工 | | | | | | X | | | | | |
| 1.11.2 | | | 1 | ₩, | igsqcup | — | ++ | | | | | + | _ | <u> </u> | <u> </u> ! | | <u> </u> | <u> </u> | \sqcup | | $\vdash \vdash$ | — | | |
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| MW-6 MW-7 | - | +- | 1136 | 校 | 4-1 | | +- | + | +- | Ce | | 杸 | 十 | +- | — | 父 | | | \vdash | | \vdash | | | |
| Mw-8 | | | 1252 | 校 | 1 | | + | 1 | + | 6 | | \Diamond | 十一 | | \vdash | 文 | \vdash | | \vdash | | | | | |
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| 7 Turnaround Time Requested (| (TAT) (plea | se circle) | , | Relin | nquished | d by | | | | <u> </u> | Date | <u></u> | | Time | | | Rece | l ived by | <u> </u> | | | | Date ¹ | Time 9 |
| Standard 5 day | | 4 day | | 4 | <u> </u> | 2 | 7 | <i>。</i> | | <u>ٽ</u> | ļ | . 6.1 | 3 | | 100 | | | | Sal | per | _ | | 66NOUI3 | |
| 72 hour 48 hour | | 24 hour | | Heijno | nquished | Ha | la | N | energy. | | Date | e GNOV | 113 | Time |) 33 C | , | Hecei | ived by | ' 'PS | - | | | Date | Time * |
| 8 Data Package (circle if required) | EDI | D (circle if r | | 8 | | ~ _ | y Cor | mmerc | ial Ca | arrier: | <u>*</u> | | | 1 | - | | Recei | ived by | / | ħ. | 14 | | | Time |
| Type I - Full | EDF | ED FFLAT (defa | OF/EDD fault) | | UPS FedEx Other \(\) \(| | | | | | $ ^{\prime\prime}$ $^{\prime\prime}$ | | 935 | | | | | | | | | | | |
| Type VI (Raw Data) | Oth | Other: | | | | | Temperature Upon Receipt O.3-0.9 °C | | | | | | | | C | Custody Seals Intact? (Yes No | | | | | | | | |



Explanation of Symbols and Abbreviations

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

| RL | Reporting Limit | BMQL | Below Minimum Quantitation Level |
|----------|-----------------------|----------|----------------------------------|
| N.D. | none detected | MPN | Most Probable Number |
| TNTC | Too Numerous To Count | CP Units | cobalt-chloroplatinate units |
| IU | International Units | NTU | nephelometric turbidity units |
| umhos/cm | micromhos/cm | ng | nanogram(s) |
| С | degrees Celsius | F | degrees Fahrenheit |
| meq | milliequivalents | lb. | pound(s) |
| g | gram(s) | kg | kilogram(s) |
| μg | microgram(s) | mg | milligram(s) |
| mĹ | milliliter(s) | Ĺ | liter(s) |
| m3 | cubic meter(s) | μL | microliter(s) |
| | | pg/L | picogram/liter |

- < 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 per liter of gas.

ppb parts per billion

Dry weightbasis
Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C - result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers Inorganic Qualifiers TIC is a possible aldol-condensation product В Value is <CRDL. but ≥IDL Α В Analyte was also detected in the blank Ε Estimated due to interference C Pesticide result confirmed by GC/MS М Duplicate injection precision not met D Compound quantitated on a diluted sample Ν Spike sample not within control limits Concentration exceeds the calibration range of Method of standard additions (MSA) used Е S for calculation the instrument U Ν Presumptive evidence of a compound (TICs only) Compound was not detected Concentration difference between primary and Post digestion spike out of control limits W Duplicate analysis not within control limits confirmation columns >25% U Compound was not detected Correlation coefficient for MSA < 0.995 X,Y,ZDefined in case narrative

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

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

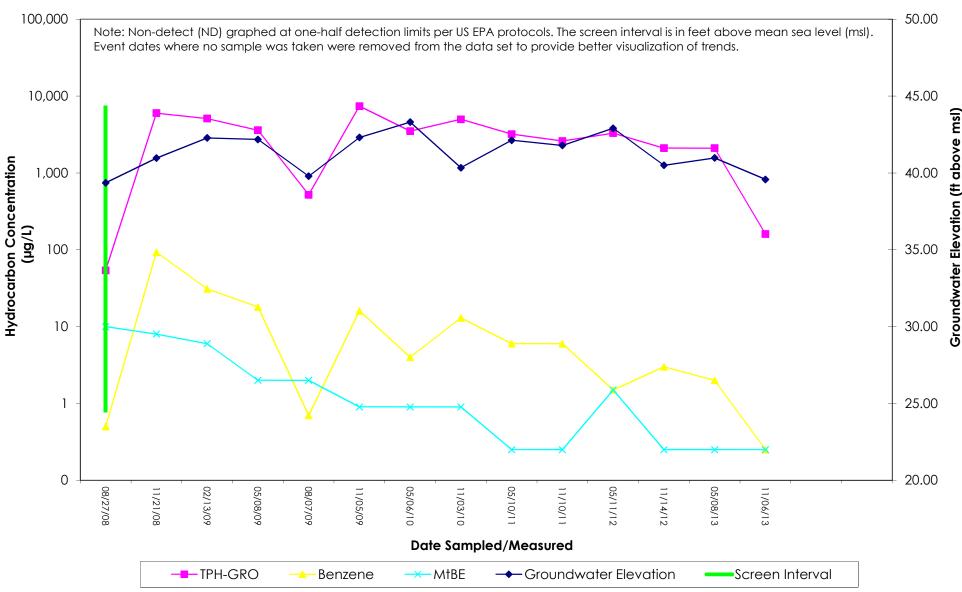
Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have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

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

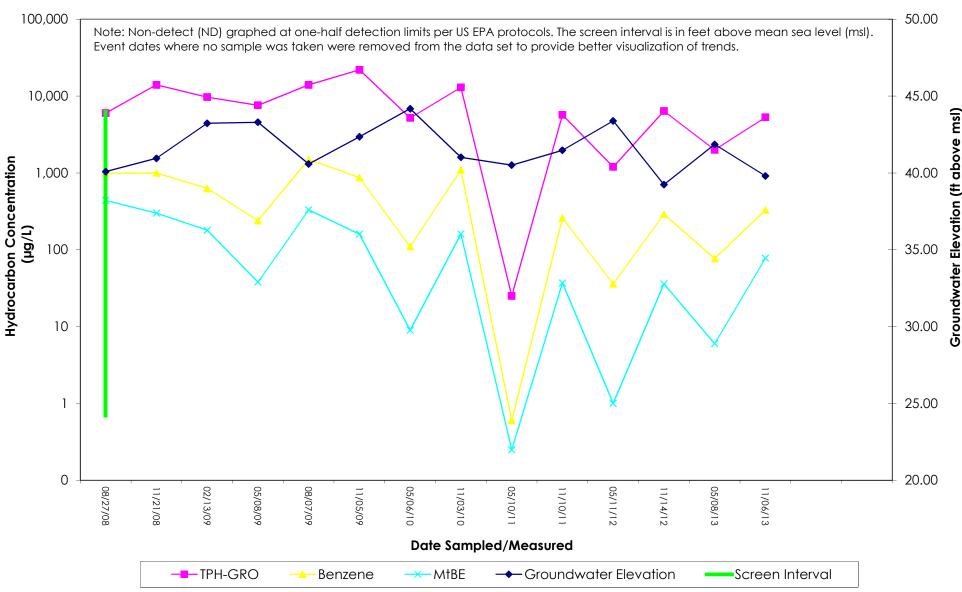
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ATTACHMENT C Hydrographs

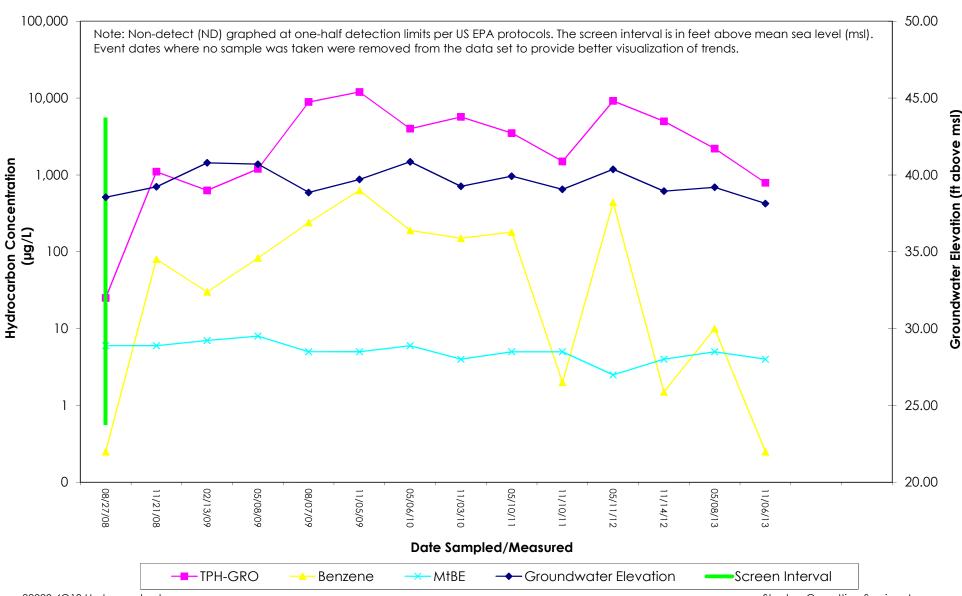
MW-5 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



MW-6 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



MW-7 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



MW-8 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time

