

#### **RECEIVED**

2:09 pm, May 13, 2010

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

May 12, 2010 (date)

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

Re: Chevron Facility #\_9-1583\_\_\_\_\_

Address: 5509 Martin Luther King Jr. Way, Oakland, California

I have reviewed the attached report titled <u>Work Plan for Additional</u>

<u>Investigation</u> and dated <u>May 12, 2010</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,

Stacie H. Frerichs Project Manager

5H Frencho

**Enclosure: Report** 

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www.CRAworld.com

May 12, 2010

Reference No. 611960

Mr. Mark Detterman, P.G., C.E.G. Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Re:

Work Plan for Additional Investigation Former Chevron Service Station No. 9-1583 5509 Martin Luther King Jr. Way Oakland, California LOP Case RO0000002

Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA) has prepared this *Work Plan for Additional Investigation* (work plan) on behalf of Chevron Environmental Management Company (Chevron) for the site referenced above. CRA previously submitted to Alameda County Environmental Health (ACEH) the November 21, 2008 *Soil Vapor Assessment Report* (report), which presented the results of the installation and sampling of five soil vapor wells (VP-1 through VP-5) at the site to evaluate potential vapor intrusion concerns. Elevated concentrations of total petroleum hydrocarbons as gasoline (TPHg) were detected in three of the wells; however, significant concentrations of 2,2,4-Trimethylpentane (iso-octane) were also detected in two of these wells, indicating that at least a portion of the detected TPHg was due to a recent release or vapor leak(s) from existing underground storage tank (UST) equipment.

In order to confirm the previous results and to further evaluate soil vapor quality at the site, CRA plans to re-sample wells VP-1 through VP-5. In the report, updating the site conceptual model (SCM) was recommended. However, based on recent well survey data, incorrect well elevations have historically been used resulting in an incorrect calculated groundwater flow direction (southeast). The new calculated flow direction is to the northwest towards San Francisco Bay. Based on the updated flow direction, the downgradient extent of impacted groundwater has not been adequately evaluated. Therefore, CRA proposes to drill one downgradient exploratory boring to evaluate this data gap. Presented in the following sections are the site description and background and the proposed scope of work. We have also proposed some changes to the site groundwater monitoring program based on the recent results.



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#### SITE DESCRIPTION AND BACKGROUND

The site is located on the northwest corner of the intersection of Martin Luther King Jr. Way (formerly Grove Street) and 55th Street in Oakland, California (Figure 1), and is currently occupied by a Super Stop gas station. Current station facilities include three 10,000-gallon USTs containing gasoline and diesel, four dispenser islands, and a station building. The site was occupied by a Chevron service station from approximately 1968, when Chevron first leased the property, through 1998. Former station facilities included the station building, four dispenser islands, three 10,000-gallon gasoline USTs, a 1,000-gallon used-oil UST, three hydraulic hoists, and an oil-water clarifier. The four USTs reportedly were installed in 1984; no information regarding previous USTs is known. The used-oil UST was removed in 1995 and the hydraulic hoists and clarifier were removed in 1998. Chevron sold the station facilities in 1998. The station was de-branded in 2003, and has since been occupied by a Super Stop station. The USTs appear to have been reconfigured as currently three grades of gasoline and diesel are dispensed at the site. Locations of former and current site features are shown on Figure 2.

Land use in the vicinity of the site is mixed commercial and residential. The site is bounded by Martin Luther King, Jr. Way to the east-northeast, 55th Street to the south-southeast, a single-family residential property to the west-southwest, and single- and multi-family residential properties to the north and northwest. A 76 service station is present on the southwest corner of the intersection of Martin Luther King Jr. Way and 55th Street. This facility is also an open fuel release case (former BP service station #11127 at 5425 Martin Luther King, Jr. Way); however, case closure has been requested and it appears no environmental work is currently being performed.

Environmental work has been performed at the subject site since 1983. Previous work included drilling five borings (B-1 through B-5), installation of monitoring wells MW-1 through MW-8 both on- and offsite; and collection of confirmation soil samples during UST system removal/upgrade work. Groundwater monitoring has been performed since 1990. Remedial activities at the site included over-excavation of impacted soil during product piping upgrade work in 1989 (approximately 25 cubic yards) and the used-oil UST removal in 1995 (approximately 80 cubic yards); and light non-aqueous phase liquid (LNAPL) removal from well MW-3 in 1992. A summary of the environmental work performed at the site is included as Attachment A.

In late-2008, CRA installed and sampled soil vapor wells VP-1 through VP-5. TPHg was detected in samples VP-1 through VP-5 at concentrations of 550 micrograms per cubic meter ( $\mu g/m^3$ ), 330,000  $\mu g/m^3$ , 540  $\mu g/m^3$ , 38,000  $\mu g/m^3$ , and 46,000  $\mu g/m^3$ , respectively. TPH as diesel (TPHd) was detected in samples VP-2 (6,900  $\mu g/m^3$ ) and VP-4 (920  $\mu g/m^3$ ); however, the laboratory reported that the TPH pattern in the samples did not resemble that of diesel fuel.



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Iso-octane was detected in samples VP-2 (17,000  $\mu g/m^3$ ) and VP-4 (5,400  $\mu g/m^3$ ); the presence of iso-octane in the soil vapor samples suggested that at least a portion of the TPHg in soil vapor was due to a recent release or leak(s) from existing UST system equipment. Iso-octane is a significant constituent of California Reformulated Gasoline (CaRFG) Phase 3, which has been used in California since 2004 after the elimination of methyl tertiary butyl ether (MTBE) and CaRFG Phase 2. To confirm these results and further evaluate soil vapor quality at the site, CRA plans to re-sample the vapor wells.

The site wells were re-surveyed in November 2009 due to some discrepancy regarding the historical groundwater flow direction. The survey confirmed that when wells MW-7 and MW-8 were installed in the northwest portion of the site in 1994, only these two wells were surveyed and a different datum (several feet higher than the datum used for the previous wells) was used. Therefore, the top of casing (TOC) elevations for wells MW-7 and MW-8 were mistakenly indicated as several feet higher than the remaining wells, resulting in a general calculated groundwater flow direction to the southeast, whereas the flow direction would be expected to be to the northwest toward San Francisco Bay. Based on the corrected flow direction (northwest), the downgradient extent of impacted groundwater has not been adequately evaluated and additional investigation appears warranted. An updated rose diagram showing the historical groundwater flow direction is presented on Figure 2.

#### SOIL VAPOR WELL RE-SAMPLING

In order to confirm the previous results and to further evaluate potential soil vapor risk at the site, CRA will re-sample wells VP-1 through VP-5. Soil vapor samples will be collected from the wells in 1-liter SUMMA™ canisters for laboratory analysis in general accordance with the Department of Toxic Substances Control (DTSC) *Advisory-Active Soil Gas Investigations* guidance document dated January 28, 2003. CRA's standard field procedures for soil vapor sampling are included as Attachment B. A generalized schematic of the soil vapor sampling apparatus is presented on Figure B of Attachment B.

In accordance with the DTSC guidance, a field duplicate sample will also be collected and leak testing will be performed during sampling. Helium will be used as a leak check compound to evaluate if significant ambient air is entering the SUMMA<sup>TM</sup> canisters during sampling. To perform the leak testing, a plastic shroud will be placed over the sampling apparatus and well, and filled with helium during sample collection. The helium concentration within the shroud will be monitored using a helium detector for comparison with the sample results. Additionally, the samples will be analyzed for oxygen  $(O_2)$ , carbon dioxide  $(CO_2)$ , and methane  $(CH_4)$  to further evaluate the data quality.



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The soil vapor samples will be kept at ambient temperature and submitted under chain-of-custody to Air Toxics Ltd. in Folsom, California for analysis. The samples will be analyzed for the following constituents:

- TPHg by EPA Method TO-3
- Benzene, toluene, ethylbenzene, and xylenes (BTEX), MTBE, and 2,2,4-trimethylpentane by EPA Method TO-15
- Helium, O<sub>2</sub>, CO<sub>2</sub>, and CH<sub>4</sub> by ASTM D-1946

#### ADDITIONAL EXPLORATORY BORING

To further evaluate the extent of impacted groundwater, CRA proposes to drill one exploratory boring downgradient of the site. The proposed boring location is shown on Figure 2. The details of the proposed investigation are presented below.

#### Permits and Access Agreements

CRA will obtain all necessary permits and access agreements for the proposed boring prior to beginning field operations. A minimum of 72 hours written notification will be given to ACEH before initiation of drilling activities.

#### Site Health and Safety Plan

CRA will prepare a site-specific health and safety plan (HASP) to inform site workers of known hazards and to provide health and safety guidance. The plan will be reviewed and signed by all site workers and visitors and will be kept onsite during field activities.

#### **Underground Utility Location**

At least 48 hours prior to the start of drilling activities, CRA will notify Underground Service Alert to clear the proposed boring location with local public utility companies. Additionally, the upper 5 feet of the boring will be cleared for utilities using a hand auger in accordance with CRA safety protocols.

#### Drilling

Below approximately 5 fbg, the boring will be advanced using a truck-mounted drill rig with direct-push equipment to approximately 15 to 20 fbg. Groundwater is anticipated to be



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encountered at approximately 10 to 20 fbg. The final location and depth of the boring will be based on field conditions.

#### Soil Sampling and Laboratory Analysis

Soil samples will be continuously collected the entire length of the boring for logging and observation purposes. The soil encountered in the boring will be logged in accordance with American Society for Testing and Materials (ASTM) D-2488 protocols. Soil samples from the boring will be screened in the field for volatile organic vapors using a photo-ionization detector (PID). Samples that return PID readings of 100 parts per million by volume (ppmv) or greater, or those in which evidence of contamination is observed, may be retained for laboratory analysis.

Soil samples retained for laboratory analysis will be collected in acetate, brass, or stainless steel liners, capped using Teflon tape and plastic end caps, labeled, placed in an ice-chilled cooler, and transported under chain of custody to Lancaster Laboratories, Inc. (Lancaster) in Lancaster, Pennsylvania, for analysis. CRA's standard field procedures for direct-push borings including soil sampling are included in Attachment B. The soil samples will be analyzed for the following constituents:

- TPHg by EPA Method 8015M
- BTEX and MTBE by EPA Method 8260B

#### Groundwater Sampling and Laboratory Analysis

If encountered, a grab-groundwater sample will be collected from the boring and analyzed for the same constituents as the soil samples with the addition of TPH as motor oil (TPHmo). CRA's standard field procedures for groundwater sampling are included in Attachment B.

#### Soil and Water Disposal

Soil cuttings and decontamination rinsate generated during field activities will be temporarily stored onsite in 55-gallon steel drums and sampled for disposal purposes. Once profiled, the drums will be transported to a Chevron-approved facility for disposal.



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#### REPORTING

After receipt of the analytical results, CRA will prepare an investigation report that includes the following:

- A description of field activities
- A figure illustrating the boring location
- A copy of the boring log
- · Tabulated soil, groundwater, and soil vapor analytical results
- · Analytical reports and chain-of-custody forms
- Conclusions and recommendations

#### PROPOSED GROUNDWATER MONITORING PROGRAM CHANGES

Based on our review of the groundwater monitoring results, some changes to the sampling frequency and/or the analytical suite appear warranted, as discussed further below.

Wells MW-1 and MW-3 have been sampled since 1990 and historically contained elevated concentrations of TPHg, BTEX, and MTBE. However, concentrations in these wells have significantly decreased and only low concentrations of MTBE remain. TPHg and BTEX generally have not been detected in these wells since at least 2003. These wells are in close proximity to each other (approximately 25 feet) and the USTs, and contain similar concentrations of MTBE. Therefore, as they are providing similar data, we propose to discontinue sampling well MW-1; gauging will continue to evaluate the groundwater flow direction. With regards to well MW-3, we propose to eliminate TPHg and BTEX from the analytical suite.

Similarly, crossgradient well MW-4 has been sampled since 1990 and generally has not contained TPHg and BTEX with the exception of low concentrations during a few events; MTBE has never been detected. Therefore, we propose to also discontinue sampling this well (gauging will continue).

Well MW-5 located in 55th Street has been sampled since 1990, and generally has not contained TPHg and BTEX with the exception of low concentrations during a few events; MTBE has never been detected. Well MW-6 has also been sampled since 1990 and generally has not contained TPHg and BTEX with the exception of low concentrations during a few events. MTBE was consistently detected in well MW-6, but concentrations have decreased and it was not detected during the most recent event (January 2010). Additionally, based on the corrected groundwater



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flow direction, these wells are located upgradient of the site. Therefore, we propose to discontinue sampling wells MW-5 and MW-6 (gauging will continue).

TPHg and BTEX generally have not been detected in well MW-7 since the mid-1990s. Therefore, we propose to eliminate TPHg and BTEX from the analytical suite for well MW-7. Similarly, BTEX have not been detected in well MW-8 since 2003; therefore, we propose to eliminate BTEX from the analytical suite for this well.

In summary, the proposed changes are as follows:

- Discontinue sampling of wells MW-1, MW-4, MW-5, and MW-6
- Eliminate analysis for TPHg and BTEX in wells MW-3 and MW-7
- Eliminate analysis for BTEX in well MW-8

A copy of the first semi-annual 2010 groundwater monitoring report is included as Attachment C.

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#### SCHEDULE AND CLOSING

Please let us know if ACEH concurs with the proposed work and modifications to the groundwater monitoring program. CRA will perform this investigation upon receiving written approval from ACEH, or if at least 60 days have passed since submittal of this work plan.

We will submit our investigation report approximately six weeks after completion of field activities. If a response to the proposed groundwater monitoring changes is not received, we will assume concurrence and will implement the modifications beginning with the next scheduled event in third quarter 2010.

We appreciate your assistance on this project and look forward to your reply. Please contact Mr. James Kiernan at (916) 889-8917 if you have any questions or require additional information.

No. 68498

Exp. 9/30/11

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

James P. Kiernan, P.E. #C68498

JK/jt/7 Encl.

cc:

Figure 1 Vicinity Map Figure 2 Site Plan

Attachment A Summary of Previous Environmental Work

Attachment B Standard Field Procedures

Attachment C First Semi-Annual 2010 Groundwater Monitoring Report

Ms. Stacie Frerichs, Chevron (*electronic*) Mr. Ben Shimek, Petroleum Sales, Inc. **FIGURES** 

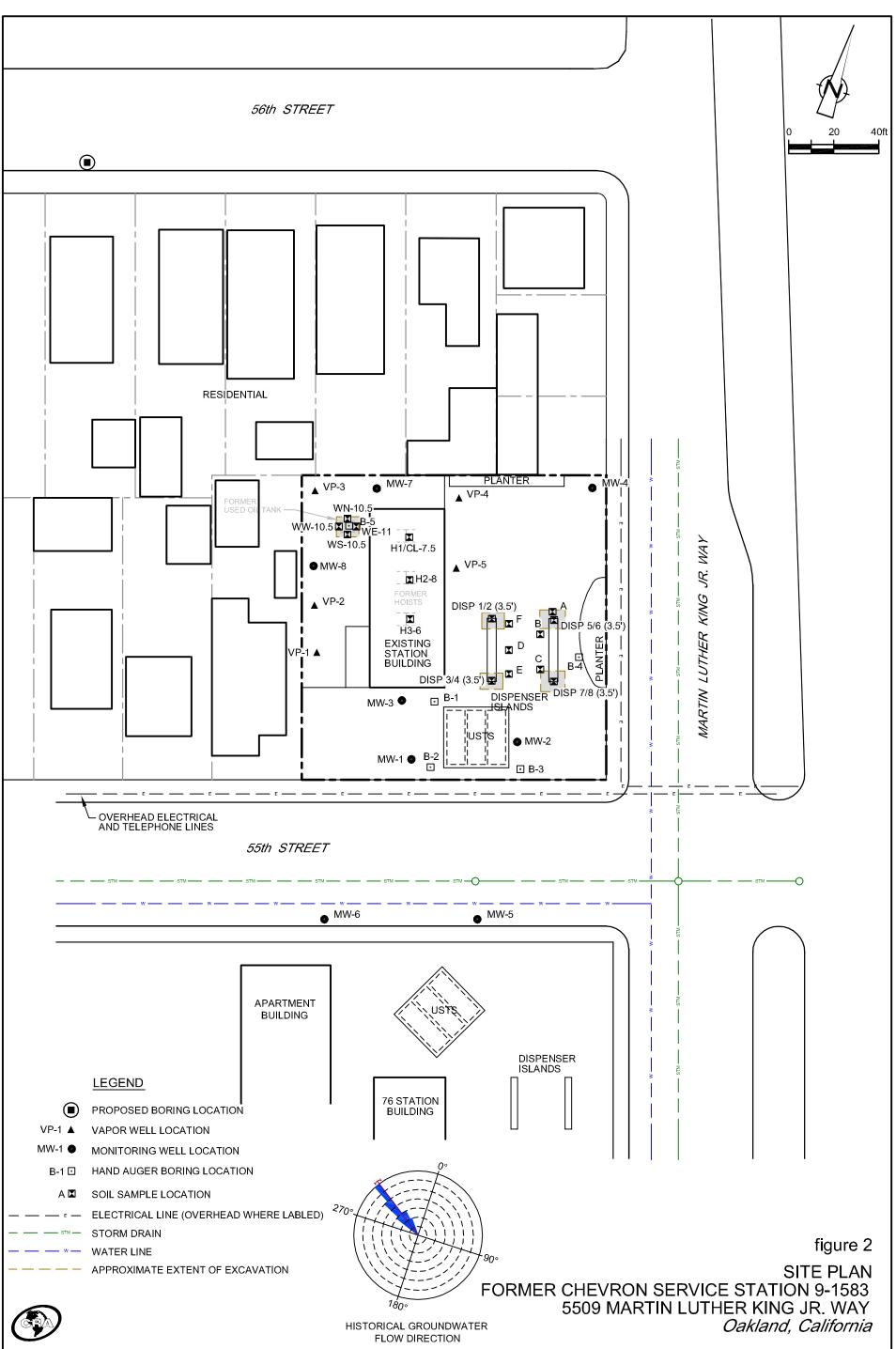


SOURCE: TOPO! MAPS.

figure 1

VICINITY MAP FORMER CHEVRON SERVICE STATION 9-1583 5509 MARTIN LUTHER KING JR. WAY Oakland, California





#### ATTACHMENT A

SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

#### SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

1983 Well Installations: In December 1983, Gettler-Ryan, Inc. (G-R) installed three onsite monitoring wells (MW-1 through MW-3). The wells were installed to a depth of 20 feet below grade (fbg). Groundwater was encountered at depths ranging from 16 to 18 fbg in the well borings. No soil samples were collected for laboratory analysis from the well borings. This investigation was documented in a letter from G-R to Chevron dated January 5, 1984.

1989 Product Piping Upgrade Sampling: In December 1989, Geotest collected six soil samples (A through F) at depths ranging from 2 to 4.5 fbg from the piping trenches in the vicinity of the dispenser islands during piping upgrade work. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and xylenes (BTEX). TPHg was only detected in sample B (1,700 milligrams per kilogram [mg/kg]), collected at a depth of 3 fbg adjacent to the northeast dispenser island. BTEX were also only detected in this sample (0.14 mg/kg, 9.7 mg/kg, 14 mg/kg, and 180 mg/kg, respectively). Limited over-excavation of impacted soil (approximately 25 cubic yards) reportedly was performed in the area of sample B. An additional soil sample (SS-1) was collected by EA Engineering, Science, and Technology, Inc. from the bottom of the excavation and analyzed for TPHg and BTEX. The depth at which this sample was collected is unknown; however, the sample reportedly was collected just above groundwater. TPHg was detected in the sample at 670 mg/kg and BTEX were detected at 0.7 mg/kg, 1.2 mg/kg, 0.96 mg/kg, and 1.5 mg/kg, respectively. A report documenting the details of this work was not available. However, the additional analytical data was provided to ACEH in a letter from Chevron dated July 30, 1993.

1990 Well Redevelopment and Sampling: In March 1990, Geraghty & Miller, Inc. (G&M) redeveloped and sampled wells MW-1 through MW-3. The groundwater samples collected from wells MW-1 through MW-3 contained TPHg at concentrations of 50,000 micrograms per liter ( $\mu$ g/L), 800  $\mu$ g/L, and 47,000  $\mu$ g/L, respectively; benzene was also detected at 3,000  $\mu$ g/L, 400  $\mu$ g/L, and 1,000  $\mu$ g/L, respectively. Concentrations of toluene (up to 9,900  $\mu$ g/L), ethylbenzene (up to 1,900  $\mu$ g/L), and xylenes (up to 18,000  $\mu$ g/L) were also detected in all three wells. Details of the investigation were presented in G&M's Results of Groundwater Sampling Activities letter report, dated April 2, 1990.

**1990** *Well Installations:* In October 1990, G&M installed monitoring wells MW-4 through MW-6 to further evaluate the extent of petroleum hydrocarbons in groundwater. Well MW-4 was installed in the northeast corner of the site, and wells MW-5 and MW-6 were installed on the south side of 55th Street. A total of six soil

samples were collected from the well borings at depths ranging from 10.5 to 20.5 fbg and analyzed for TPHg. TPHg was only detected in the samples collected at 10.5 fbg from borings MW-5 (190 mg/kg) and MW-6 (11 mg/kg). Details of the investigation were presented in G&M's *Site Assessment Report*, dated December 15, 1990.

1992 LNAPL Removal: During the October 1992 monitoring event, LNAPL (approximately 0.24 feet) was observed in well MW-3. LNAPL had previously not been observed in any of the site wells. The tanks and product lines reportedly tested tight in September 1992 and a 90-day inventory audit did not indicate any loss of product in the tanks. A weekly bailing program to remove the LNAPL was initiated in November 1992 by Groundwater Technology, Inc. (GTI). Approximately 270 milliliters (mL) of LNAPL were removed from well MW-3 in November and December 1992. The bailing was discontinued when only a sheen was observed in the well. Approximately 0.01 feet of LNAPL was observed in well MW-3 during the April and August 2003 monitoring events, but was not observed thereafter.

1994 Well Installations: In February 1994, GTI installed monitoring wells MW-7 and MW-8 to evaluate groundwater quality near the used-oil UST. Four soil samples were collected from the well borings at depths ranging from 5 to 15 fbg and analyzed for TPHg and BTEX; which were not detected in any of the samples. The initial groundwater samples collected from wells MW-7 and MW-8 contained TPHg at 1,200  $\mu$ g/L and 28,000  $\mu$ g/L, respectively; benzene was also detected at 440  $\mu$ g/L and 2,900  $\mu$ g/L, respectively. Concentrations of toluene (up to 1,300  $\mu$ g/L), ethylbenzene (up to 1,200  $\mu$ g/L), and xylenes (up to 6,800  $\mu$ g/L) were also detected in the two wells. The groundwater samples were also analyzed for TPH as diesel (TPHd) and motor oil (TPHmo); TPHd was not detected and the sample collected from well MW-7 contained TPHmo at 4,100  $\mu$ g/L. Details of the investigation were presented in GTI's *Additional Soil and Groundwater Assessment Report*, dated April 8, 1994.

1995 Used-Oil Tank Removal and Over-Excavation: In April 1995, the 1,000-gallon used-oil UST was removed from the northwest corner of the site. Touchstone Developments (TD) collected four soil samples from the base of the excavation at depths of 10.5 or 11 fbg. The four samples were analyzed for total recoverable petroleum hydrocarbons (TRPH). Two of the samples were additionally analyzed for TPHg, TPHd, BTEX, volatile organic compounds (VOCs), semi-VOCs, and the metals cadmium, chromium, lead, nickel, and zinc. TRPH was detected in all four of the samples at concentrations ranging from 76 to 2,700 mg/kg. TPHg, BTEX, VOCs, semi-VOCs, and lead were not detected in the two samples analyzed. TPHd was only detected in one of the samples analyzed (75 mg/kg). The metals cadmium (up to 0.60 mg/kg), chromium (up to 46 mg/kg), nickel (up to 61 mg/kg), and zinc (up to 72 mg/kg) were detected in

the two samples analyzed. The excavation was subsequently deepened to 12.5 fbg. Groundwater was encountered in the excavation at approximately 12 fbg. Approximately 80 cubic yards of impacted soil was removed and disposed offsite during the work. Details of the work were presented in TD's *Used Oil Tank Removal Report*, dated June 12, 1995.

1998 Hydraulic Hoist and Clarifier Removal and Excavation: In November 1998, the three hydraulic hoists and the oil-water clarifier were removed from the site. TD collected one soil sample beneath each of the hoists at a depth of 7.5 or 8 fbg. The sample collected beneath the hoist with clarifier was analyzed for TPHg, TPHd, TPH as hydraulic fluid (TPHhf), TRPH, VOCs, semi-VOCs, and the metals cadmium, chromium, lead, nickel, and zinc; only chromium, nickel, and zinc were detected in the sample (32.1 mg/kg, 40.8 mg/kg, and 44 mg/kg, respectively). The remaining two samples were only analyzed for TPHhf, which was not detected. Details of the work were presented in TD's Hoist/Clarifier Removal and Sampling Report, dated January 19, 1999.

1998 Dispenser Upgrade Soil Sampling: In December 1998, Geo-Logic collected a soil sample at approximately 3.5 fbg beneath each of the four dispensers during upgrade work. The four samples were analyzed for TPHg, BTEX, and methyl tertiary butyl ether (MTBE), which were not detected in any of the samples. This work was documented in Geo-logic's Report of Soil Sampling Below Fuel Dispensers dated December 7, 1998.

2002 Sensitive Receptor Survey: In April 2002, Delta Environmental Consultants, Inc. (Delta) conducted a sensitive receptor survey for the site vicinity. It was determined that drinking water for the site area was supplied by the Alameda County Water District (ACWD) from three sources: treated surface water from the Sacramento/San Joaquin Delta and/or Lake Del Valle, purchased San Francisco water from Hetch Hetchy Reservoir or Calaveras or San Antonio Reservoirs, or blended water consisting of purchased San Francisco water and local groundwater. The groundwater supply came from the Niles Cone Groundwater Basin. No municipal wells were identified within 2,000 feet of the site. A search of Department of Water Resources (DWR) files was performed to evaluate the presence of domestic, municipal, or irrigation supply wells within 2,000 feet of the site. One industrial well and one cathodic protection well were identified approximately 1,200 feet northwest and 1,800 feet southeast of the site, respectively. Utilities identified adjacent to the site included storm drains, sanitary sewer, television cable, and water lines buried at depths of 4 to 22 fbg. Based on conversations with Alameda County Public Works Agency, the water-bearing materials beneath the site had not been classified as a potential drinking water source. No surface water bodies were located within a one-mile radius of the site. The nearest surface water body identified was Glen Echo Creek, located approximately 7,400 feet southeast

of the site. Details were presented in Delta's *Sensitive Receptor Survey*, dated August 1, 2002.

2007 Subsurface Investigation: In January 2007, Cambria advanced five hand-auger exploratory borings (B-1 through B-5) to further evaluate hydrocarbon impacts to soil and groundwater. Borings B-1 through B-3 were located near the existing USTs, boring B-4 was located to the east of the dispenser islands, and boring B-5 was located in the former used-oil UST excavation. Borings B-1 through B-4 were advanced to depths of 11 to 13 fbg; drilling refusal was encountered in boring B-5 at 5.5 fbg. A total of 14 soil samples were collected at various depths from the borings and analyzed for TPHg, BTEX, fuel oxygenates (methyl tertiary butyl ether [MTBE], ethyl tertiary butyl ether [ETBE], tertiary amyl methyl ether [TAME], di-isopropyl ether [DIPE], and tertiary butyl alcohol [TBA]), 1,2-dichloroethane (1,2-DCA), and ethylene dibromide (EDB). The analytes generally were not detected in the samples with the exception of toluene at 0.001 mg/kg in the sample collected at 3 fbg from boring B-1, and MTBE at 0.0006 mg/kg in the sample collected at 9 fbg from boring B-1. Grab-groundwater samples were collected from borings B-1 through B-4 and analyzed for the same constituents as the soil samples. TPHg was only detected in the groundwater samples collected from borings B-1 (2,600 μg/L) and B-2 (4,500 μg/L). The remaining constituents generally were not detected in the groundwater samples with the exception of ethylbenzene (0.9  $\mu g/L$ ) and MTBE (2  $\mu g/L$ ) in the sample collected from boring B-1, and MTBE (5  $\mu g/L$ ) in the sample collected from boring B-2. Details of the investigation were presented in Cambria's Subsurface Investigation Report, dated February 28, 2007.

2008 Soil Vapor Survey: In August 2008, CRA installed five soil vapor wells (VP-1 through VP-5) to 6 fbg at the site. The wells were screened from approximately 5 to 5.5 fbg. A soil sample was collected from each well boring at approximately 3 fbg and analyzed for TPHg, BTEX, MTBE, TBA, 1,2-DCA, and EDB; which were not detected in any of the soil samples. The wells were sampled in September 2008; the soil vapor samples were analyzed for TPHg, TPHd, BTEX, MTBE, TBA, 1,2-DCA, EDB, ethanol, and iso-octane (2,2,4-trimethylpentane). The samples were additionally analyzed for helium (leak check compound), oxygen, and carbon dioxide. TPHg was detected in samples VP-1 through VP-5 at concentrations of 550 micrograms per cubic meter ( $\mu$ g/m³), 330,000  $\mu$ g/m³, 540  $\mu$ g/m³, 38,000  $\mu$ g/m³, and 46,000  $\mu$ g/m³, respectively. TPHd was only detected in samples VP-2 (6,900  $\mu$ g/m³) and VP-4 (920  $\mu$ g/m³); however, the laboratory reported that the TPH pattern in the samples did not resemble that of diesel fuel. Iso-octane was only detected in samples VP-2 (17,000  $\mu$ g/m³) and VP-4 (5,400  $\mu$ g/m³); BTEX, MTBE, TBA, 1,2-DCA, EDB, and ethanol were not detected in any of the samples.

#### ATTACHMENT B

STANDARD FIELD PROCEDURES

### STANDARD FIELD PROCEDURES FOR SOIL VAPOR PROBE INSTALLATION AND SAMPLING

#### **VAPOR POINT METHODS**

This document describes Conestoga-Rovers & Associates' standard field methods for soil vapor sampling. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

#### **Objectives**

Soil vapor samples are collected and analyzed to assess whether vapor-phase subsurface contaminants pose a threat to human health or the environment.

#### **Shallow Soil Vapor Point Installation**

The shallow soil vapor point method for soil vapor sampling utilizes a hand auger or drill rig to advance a boring for the installation of a soil vapor sampling point. Once the boring is hand augered to the final depth, a probe, connected with Swagelok fittings to nylon or Teflon tubing of ¼-inch outer-diameter, is placed within 12-inches of number 2/16 filter sand (Figure A). A 12-inch layer of dry granular bentonite is placed on top of the filter pack. Pre-hydrated granular bentonite is then poured to fill the borehole. The tube is coiled and placed within a wellbox finished flush to the surface. Soil vapor samples will be collected no sooner than 48 hours after installation of the soil vapor points to allow adequate time for representative soil vapors to accumulate. Soil vapor sample collection will not be scheduled until after a minimum of three consecutive precipitation-free days and irrigation onsite has ceased. Figure B shows the soil vapor sampling apparatus. A measured volume of air will be purged from the tubing using a different Summa purge canister. Immediately after purging, soil vapor samples will be collected using the appropriate size Summa canister with attached flow regulator and sediment filter. The soil vapor points will be preserved until they are no longer needed for risk evaluation purposes. At that time, they will be destroyed by extracting the tubing, hand augering to remove the sand and bentonite, and backfilling the boring with neat cement. The boring will be patched with asphalt or concrete, as appropriate.

#### Sampling of Soil Vapor Points

Samples will be collected using a SUMMA<sup>TM</sup> canister connected to sampling tubing at each vapor point. Prior to collecting soil vapor samples, the initial vacuum of the canisters is measured and recorded on the chain-of-custody. The vacuum of the SUMMA<sup>TM</sup> canister is used to draw the soil vapor through the flow controller until a negative pressure of approximately 5-inches of Hg is observed on the vacuum gauge and recorded on

the chain-of-custody. The flow controllers should be set to 100-200 ml/minute. Field duplicates should be collected for every day of sampling and/or for every 10 samples collected.

Prior to sample collection, stagnant air in the sampling apparatus should be removed by purging approximately 3 purge volumes. The purge volume is defined as the amount of air within the probe and tubing.

In accordance with the DTSC Advisory-Active Soil Gas Investigations guidance document, dated January 28, 2003, leak testing needs to be performed during sampling. Helium is recommended, although shaving cream is acceptable.

#### Vapor Sample Storage, Handling, and Transport

Samples are stored and transported under chain-of-custody to a state-certified analytic laboratory. Samples should never be cooled due to the possibility of condensation within the canister.

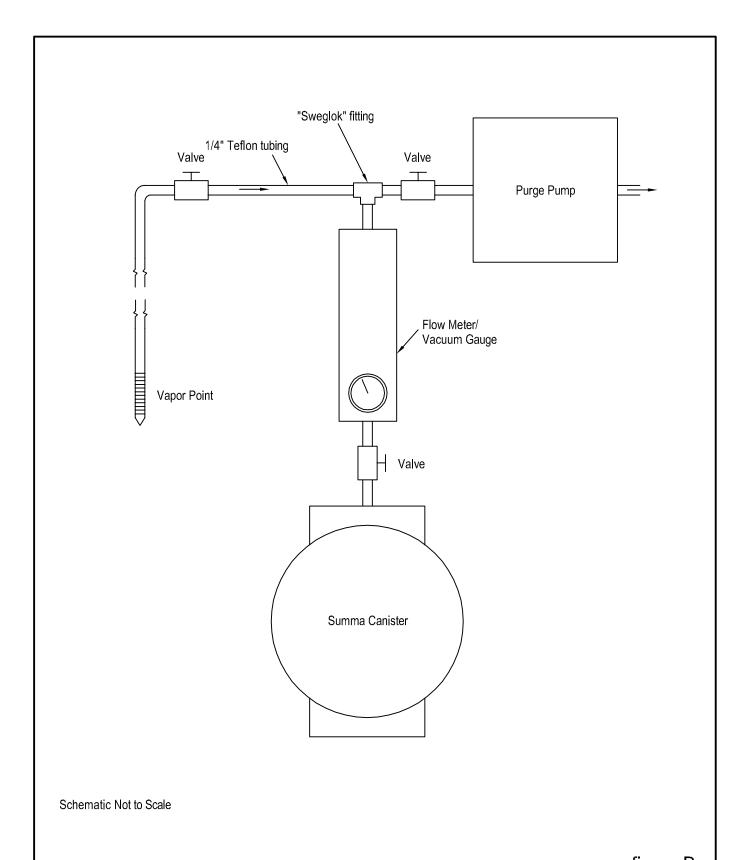


figure B SOIL VAPOR SAMPLING APPARATUS DIAGRAM



### STANDARD FIELD PROCEDURES FOR SOIL BORING AND MONITORING WELL INSTALLATION

This document presents standard field methods for drilling and sampling soil borings and installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

#### **SOIL BORINGS**

#### **Objectives**

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Professional Geologist (PG).

#### Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments at the bottom of the borehole.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

#### Sample Analysis

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4° C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

#### Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Volatile vapor analyzer measurements are used along with the field observations, odors, stratigraphy and groundwater depth to select soil samples for analysis.

#### **Water Sampling**

Water samples, if they are collected from the boring, are either collected using a driven Hydropunch® type sampler or are collected from the open borehole using bailers. The groundwater samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

#### Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

#### MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

#### **Well Construction and Surveying**

Groundwater monitoring wells are installed to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 feet below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two feet above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I, II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

#### **Well Development**

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

#### **Groundwater Sampling**

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

#### **Waste Handling and Disposal**

Soil cuttings from drilling activities are usually stockpiled onsite and covered by plastic sheeting. At least three individual soil samples are collected from the stockpiles and composited at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples in addition to any analytes required by the receiving disposal facility. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Groundwater removed during development and sampling is typically stored onsite in sealed 55-gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Upon receipt of analytic results, the water is either pumped out using a vacuum truck for transport to a licensed waste treatment/disposal facility or the individual drums are picked up and transported to the waste facility where the drum contents are removed and appropriately disposed.

#### ATTACHMENT C

FIRST SEMI-ANNUAL 2010 GROUNDWATER MONITORING REPORT





February 4, 2010 G-R #386506

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

#9-1583 (MTI)

5509 Martin Luther King Way

Oakland, California

RO 0000002

#### WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
2	January 28, 2010	Groundwater Monitoring and Sampling Report First Semi-Annual Event of January 12, 2010

#### COMMENTS:

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

Ms. Stacie H. Frerichs, Chevron EMC, 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 February 18, 2009, at which time this final report will be distributed to the following:

cc:

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.)

Mr. Ben Shimek, (Owner), 31 Industrial Way, Greenbrae, CA 94904

**Enclosures** 

trans/9-1583-SHF

#### **WELL CONDITION STATUS SHEET**

Client/Facility #: Site Address: City:	550		rtin Luthe			Job #: 386506  Event Date: 1 - 12 - 10  Sampler: 30 <												
WELL ID	F	/ault rame ndition	Gasket/ O-Ring (M)missing	BOLTS (M) Missing (R) Replaced	Bolt Flanges 8= Broken S= Stripped R=Retap	Cor C=0 B=E	PRON dition racked broken Gone	(Def	it Seal licient) os from OC	(Coi	sing ndition nts tight seal)	LC	LACE OCK / N	REPL CA Y /	\P	WELL VAULT Manufacture/Size/ # of Bolts		s Taken / No
mw-1	O	1. K	NIA	N/A	NK	0	.اد	0	IL	0	·K	1	J	1	J	Christy box	Λ'	0
mw-2			NIA	N/A	NIA				1				0		1	"		
mw-3			NIA		NIK											"		
mw-4			0.16	0.10	(1) of (2)											12"Universal/2		
MW-S			NIV	NA	NA						_					8"City monument (no solts)		<del>.</del>
mw-6			NIA	NA	NA						· .					11		
mw-7			0.16	0 = (	BOHL S		1		i						,	6" Morrison/2		
mw-8	1		0.10	0.10	804h S			Y		V		7		1		12" EMCO /2		
				M									_				-	
					·													<del></del>
														_				
													_			·		
	_								_									

Comments	 	



January 28, 2010 G-R Job #386506

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

RE: First Semi-Annual Event of January 12, 2010

Groundwater Monitoring & Sampling Report Former Chevron Service Station #9-1583 5509 Martin Luther King Way 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

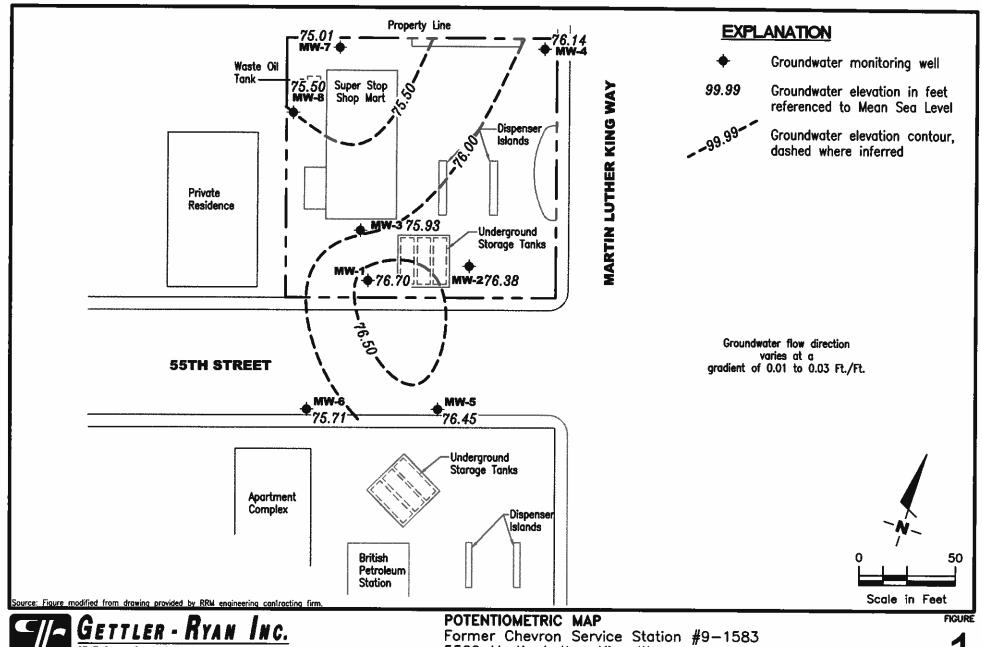
Douglas J. Lee Senior Geologist, P.G. No. 6882

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

Chain of Custody Document and Laboratory Analytical Reports



6747 Sierra Court, Suite J Dublin, CA 94568 (925) 551-7555

5509 Martin Luther King Way Oakland, California

REVISED DATE

PROJECT NUMBER 386506

REVIEWED BY

January 12, 2010

DATE

Oakland, California													
WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	SPHT (fl.)	TPH-DRO (µg/L)	TPH-MO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	Τ (μg/L)	E. (µg/L)	Χ (μg/L)	MTBE (µg/L)	TOG (μg/L)
MW-1										( .U, 2	1, 0		W-0
12/22/83	81.97	71.72	10.25										
12/30/83	81.97	72.80	9.17										
03/12/90	81.97	71.89	10.08				50.000	2 000	7 200	1 000	19.000		
03/25/90	82.42	71.51	10.46				50,000	3,000	7,300	1,900	18,000		
10/18/90	82.42												
10/10/90	82.42												
11/16/90	82.42	70.84	11.58										
02/08/91	82.42	72.31	10.11		<del></del>		100.000	4.200		16.000			
05/08/91	82.42	71.97	10.11				100,000	4,200	8,400	16,000	2,600		
08/12/91	82.42	71.19	11.23				31,000	200	66	670	2,000		
11/07/91	82.42	71.72	10.70				17,000	81	7.2	270	710		
02/05/92	82.42 82.42	72.05	10.70				7,100	24	6.0	130	170		
05/13/92	82.42 82.42	72.03	10.57	••			110,000	8,900	14,000	2,700	12,000		
07/17/92	82.42 82.42	71.37					19,000	450	85	480	870		
10/05/92	82.42 82.42		11.05				8,500	170	<10	360	600		
11/11/92	82.42 82.42	71.01	11.41				22,000	4,300	5,100	570	2,900		
11/17/92													
11/1//92	82.42												
12/01/92	82.42						••						
	82.42				-								
12/29/92	82.42		••										
01/05/93	82.42												
01/08/93	82.42	74.31	8.11				14,000,000	12,000	79,000	270,000	1,300,000		
02/02/93	82.42												
04/14/93	82.42	72.57	9.85				48,000	670	1,100	1,600	6,300		
08/06/93	82.42	71.59	10.83				44,000	660	990	1,600	6,100		
10/21/93	82.42	71.52	10.90				18,000	270	460	1,300	4,700		
01/05/94	82.42	72.09	10.33				22,000	160	160	630	2,300		
04/08/94	82.42	72.24	10.18				21,000	37	110	570	1,400		
07/06/94	82.42	71.78	10.64				28,000	210	100	540	1,200		
08/04/94	82.42	71.91	10.51										
10/05/94	82.42	71.51	10.91				120,000	39	22	320	900		••
01/18/95	82.42	73.80	8.62				12,000	<20	<20	130	160		
04/07/95	82.42	72.89	9.53				2,500	<2.5	<2.5	71	38	**	••
07/06/95	82.42	72.03	10.39				5,700	<0.5	<0.5	110	110	••	
10/11/95	82.42	70.54	11.88			••	2,700	13	<5.0	13	5.7	650	
01/17/96	82.42	73.14	9.28				4,200	12	<5.0	43	24	300	

Oakland, California													
WELL ID/	TOC	GWE	DTW	SPHT	TPH-DRO	TPH-MO	TPH-GRO	В	${f T}$		X	MTBE	TOG
DATE	(fl.)	(msl)	(ft.)	(ft)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)
MW-1 (cont)	)												
04/05/96	82.42	72.82	9.60			••	1,300	<1.2	<1.2	7.6	2.8	220	
07/23/96	82.42	72.19	10.23				700	<1.0	<1.0	7.0	4.8	240	••
10/02/96	82.42	71.67	10.75				1,700	<2.5	9.8	10	13	610	
01/23/97	82.42	74.75	7.67				1,300	21	<10	<10	<10	2,700	
04/01/97	82.42	72.22	10.20				670	<2.0	<2.0	4.1	3.6	1,200	
07/09/97	82.42	72.12	10.30				460	<1.0	<1.0	<1.0	<1.0	440	••
10/07/97	82.42	71.73	10.69				1,100	8.5	<2.0	<2.0	2.0	250	
01/22/98	82.42	74.20	8.22				460	1.4	5.8	<0.5	<0.5	150	
04/02/98	82.42	72.89	9.53				220	2.5	1.2	<1.0	1.9	260	
07/02/98	82.42	72.08	10.34				270	<0.5	0.82	<0.5	<0.5	140	
10/02/98	82.42	71.70	10.72				170	1.3	<0.5	<0.5	<1.5	320	
01/18/99	82.42	72.87	9.55	••	••		416	<2.5	<2.5	<2.5	<2.5	316/295 <sup>2</sup>	
07/22/99	82.42	71.61	10.81				186	<0.5	3.94	1.46	2.37	63.7	
01/17/00	82.42	72.21	10.21				248	1.6	<0.5	<0.5	<0.5	41.0	
07/05/00	82.42	72.12	10.30	0.00			76³	< 0.50	< 0.50	< 0.50	0.79	69	
01/15/01	82.42	73.01	9.41	0.00	••		66.6	< 0.500	< 0.500	< 0.500	0.585	22.5	
07/03/01	82.42	72.13	10.29	0.00			<50	< 0.50	< 0.50	<0.50	< 0.50	8.8	
02/28/02	82.42	72.74	9.68	0.00			58	< 0.50	< 0.50	< 0.50	<1.5	21	
07/08/02	82.42	72.14	10.28	0.00			<50	< 0.50	<0.50	<0.50	<1.5	23	
01/01/03	82.42	74.28	8.14	0.00			<50	<0.50	<0.50	<0.50	<1.5	15	
07/14/03 <sup>8</sup>	82.42	72.12	10.30	0.00		••	<50	<0.5	<0.5	<0.5	<0.5	5	
01/12/048	82.42	73.40	9.02	0.00			<50	<0.5	<0.5	<0.5	<0.5	61	
07/27/04 <sup>8</sup>	82.42	72.10	10.32	0.00			<50	<0.5	<0.5	<0.5	<0.5	54	
01/25/058	82.42	74.24	8.18	0.00	••		<50	<0.5	<0.5	<0.5	<0.5	5	
07/26/05 <sup>8</sup>	82.42	72.40	10.02	0.00			<50	<0.5	<0.5	<0.5	<0.5	25	
01/24/06 <sup>8</sup>	82.42	74.22	8.20	0.00			<50	<0.5	<0.5	<0.5	<0.5	25	
07/25/06 <sup>8</sup>	82.42	72.30	10.12	0.00			<50	<0.5	<0.5	<0.5	<0.5	14	
01/23/07 <sup>8</sup>	82.42	72.57	9.85	0.00			<50	<0.5	<0.5	<0.5	<0.5	17	
07/24/07 <sup>8</sup>	82.42	70.59	11.83	0.00			<50	< 0.5	<0.5	<0.5	<0.5	7	
01/22/088	82.42	73.12	9.30	0.00			<50	<0.5	<0.5	<0.5	<0.5	8	
07/22/08 <sup>8</sup>	82.42	71.69	10.73	0.00			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
01/13/09 <sup>8</sup>	82.42	72.41	10.01	0.00			<50	< 0.5	<0.5	<0.5	<0.5	2	••
07/14/09	82.42	71.52	10.90	0.00	SAMPLED A	NNUALLY					••		
01/12/10 <sup>8</sup>	85.41	76.70	8.71	0.00	_		<50	<0.5	<0.5	<0.5	<0.5	15	

Oakland, California													
WELL ID/	TOC	GWE	DTW	SPHT	TPH-DRO	ТРН-МО	TPH-GRO	B	Territoria (	E	X	MTBE	TOG
BATE	(ft)	(msl)	(ft,)	(P.)	(μg/L)	(µg/L)	(#8/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)
MW-2													
12/22/83	83.48	72.98	10.50	••	••		••						
12/30/83	83.48	73.56	9.92					••					
03/12/90	83.48	72.46	11.02			••	800	400	. 22	18	55		
03/25/90	83.48	72.15	11.33						. 22				••
10/18/90	83.48	71.17	12.31			••							
10/31/90	83.48		••					••					
11/16/90	83.48	••	••										
02/08/91	83.48	72.43	11.05	••		••	4,600	820	440	720	210		
05/08/91	83.48	72.12	11.36			••	<50	5.0	<0.5	< 0.5	<0.5		
08/12/91	83.48	71.51	11.97	••		••	<50	<0.5	<0.5	<0.5	<0.5		
11/07/91	83.48	71.98	11.50			••	<50	<0.5	<0.5	<0.5	<0.5		
02/05/92	83.48	72.29	11.19				1,700	390	170	60	200	••	
05/13/92	83.48	71.99	11.49	••		••	74	9.3	<0.5	<0.5	<0.5		
07/17/92	83.48	71.63	11.85				<50	2.0	<0.5	<0.5	<0.5		
10/05/92	83.48	71.48	12.00				3,500	1,200	530	86	220	••	
11/11/92	83.48											••	
11/17/92	83.48		••						••				
11/24/92	83.48												
12/01/92	83.48		••										
12/29/92	83.48								••				
01/05/93	83.48												
01/08/93	83.48	74.65	8.83				390	140	0.8	7.7	26		
02/02/93	83.48					••							
04/14/93	83.48	72.69	10.79				<50	5.0	<0.5	<0.5	<0.5		
08/06/93	83.48	71.77	11.71				<50	1.0	<0.5	<0.5	<0.5		
10/21/93	83.48	71.74	11.74				<50	1.0	<0.5	9.0	<0.5		
01/05/94	83.48	72.30	11.18				<50	0.7	<0.5	<0.5	0.9		
04/08/94	83.48	72.42	11.06				<50	<0.5	<0.5	<0.5	<0.5		
07/06/94	83.48	71.80	11.68		••		<50	<0.5	<0.5	<0.5	<0.5		••
08/04/94	83.48	72.29	11.19										••
10/05/94	83.48	71.79	11.69				<50	<0.5	<0.5	<0.5	<0.5	••	
01/18/95	83.48	74.26	9.22				<50	<0.5	<0.5	<0.5	<0.5		
04/07/95	83.48	73.62	9.86				<50	<0.5	<0.5	<0.5	<0.5		
07/06/95	83.48	72.74	10.74	••			<50	<0.5	<0.5	<0.5	<0.5		
10/11/95	83.48	72.26	11.22	••			<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/17/96	83.48	73.74	9.74				<50	<0.5	<0.5	<0.5	<0.5	<2.5	••

Former Chevron Service Station #9-1583 5509 Martin Luther King Way

Oakland, California

Oakland, California													
WELL ID/	TOC	GWE	DTW	SPHT	TPH-DRO	трн-мо	TPH-GRO	В	${f T}$	<b>(1)</b>	X	MTBE	TOG
DATE	(ft)	(msl)	(ft.)	(ft.)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-2 (cont)	1												
04/05/96	83.48	73.52	9.96	••	••		<50	<0.5	<0.5	<0.5	<0.5	<2.5	••
07/23/96	83.48	72.57	10.91				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/02/96	83.48	72.41	11.07				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/23/97	83.48	75.18	8.30				<50	<0.5	<0.5	<0.5	<0.5	3.4	
04/01/97	83.48	72.90	10.58				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
07/09/97	83.48	72.58	10.90				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/07/97	83.48	72.52	10.96		••		<50	<0.5	<0.5	<0.5	<0.5	<2.5	••
01/22/98	83.48	74.73	8.75				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
04/02/98	83.48	73.66	9.82				89	3.0	5.4	4.1	21	<2.5	
07/02/98	83.48	72.74	10.74				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/02/98	83.48	72.43	11.05				<50	<0.5	<0.5	<0.5	<1.5	<2.5	
01/18/99	83.48	73.09	10.39	••			<50	<0.5	<0.5	<0.5	<0.5	<2.0	
07/22/99	83.48	72.61	10.87	**			<50	<0.5	<0.5	<0.5	<0.5	<2.0	
01/17/00	83.48	72.89	10.59	••			<50	<0.5	<0.5	<0.5	<0.5	<2.5	
07/05/00	83.48	72.84	10.64	0.00			<50	<0.50	< 0.50	<0.50	< 0.50	<2.5	
01/15/01	83.48	73.77	9.71	0.00			555 <sup>6</sup>	< 0.500	< 0.500	< 0.500	< 0.500	<2.50	
07/03/01	83.48	73.02	10.46	0.00			<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5	
02/28/02	83.48	73.49	9.99	0.00		**	<50	< 0.50	< 0.50	<0.50	<1.5	<2.5	
07/08/02	83.48	72.98	10.50	0.00		••	<50	< 0.50	< 0.50	< 0.50	<1.5	<2.5	
01/01/03	83.48	75.33	8.15	0.00		••	<50	<0.50	< 0.50	< 0.50	<1.5	<2.5	
07/14/03 <sup>8</sup>	83.48	72.96	10.52	0.00			<50	<0.5	<0.5	<0.5	<0.5	< 0.5	
01/12/048	83.48	74.31	9.17	0.00			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/27/04 <sup>8</sup>	83.48	72.85	10.63	0.00			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
01/25/058	83.48	74.36	9.12	0.00		••	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/26/05 <sup>8</sup>	83.48	73.56	9.92	0.00			<50	<0.5	<0.5	<0.5	<0.5	< 0.5	
01/24/06 <sup>8</sup>	83.48	74.33	9.15	0.00			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/25/06 <sup>8</sup>	83.48	73.03	10.45	0.00			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
01/23/078	83.48	73.37	10.11	0.00			<50	<0.5	<0.5	< 0.5	<0.5	< 0.5	
07/24/07 <sup>8</sup>	83.48	72.90	10.58	0.00		••	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
01/22/088	83.48	73.85	9.63	0.00	••		<50	<0.5	<0.5	<0.5	<0.5	< 0.5	
07/22/088	83.48	73.08	10.40	0.00			<50	< 0.5	<0.5	< 0.5	<0.5	2	
01/13/09 <sup>8</sup>	83.48	73.10	10.38	0.00			<50	<0.5	<0.5	< 0.5	<0.5	<0.5	••
07/14/09	83.48	72.93	10.55	0.00	SAMPLED A	NNUALLY							••
01/12/108	86.04	76.38	9 <b>.6</b> 6	0.00	-	_	<50	<0.5	<0.5	<0.5	<0.5	<0.5	

Oakland, California													
WELL ID/	TOC	GWE	DTW	SPHT	TPH-DRO	трн-мо	TPH-GRO	В	Т	E	X	MTBE	TOG
DATE	(ft.)	(msl)	(ft.)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)
MW-3													
12/22/83	84.36	72.78	11.58				••						
12/30/83	84.36	73.19	11.17										
03/12/90	84.36	72.22	12.14				47,000	1,000	9,900	1,700	9,800		
03/25/90	84.38	71.81	12.55										
10/18/90	84.38						••						
10/31/90	84.38												
11/16/90	84.38	70.76	13.62										
02/08/91	84.38	72.20	12.18				58,000	4,900	5,200	9,500	2,000		
05/08/91	84.38	71.86	12.52				50,000	2,100	1,400	2,000	9,400		
08/12/91	84.38	71.11	13.27				15,000	1,300	160	920	1,900		
11/07/91	84.38	71.57	12.81				26,000	1,000	310	1,900	5,900		
02/05/92	84.38	71.91	12.47				35,000	2,800	1,300	1,500	4,700		
05/13/92	84.38	71.76	12.62				47,000	1,500	1,200	1,100	4,800		
07/17/92	84.38	71.25	13.13				15,000	120	11	88	140		
10/05/92	84.38	70.95	13.62	0.24									
11/11/92	84.38	71.63	12.89	0.17					••			••	
11/17/92	84.38	71.54	12.89	0.06									••
11/24/92	84.38	71.56	12.86	0.05					••		••		••
12/01/92	84.38	71.48	12.92	0.03									••
12/29/92	84.38	73.14	11.24	Sheen		••							
01/05/93	84.38	73.23	11.15	Sheen									
01/08/93	84.38	74.28	10.10				250,000	5,000	17,000	5,500	28,000		
02/02/93	84.38												••
04/14/93	84.38	72.48	11.91	0.01					••				••
08/06/93	84.38	71.49	12.90	0.01			150,000	3,800	6,600	3,700	17,000		
10/21/93	84.38	71.41	12.97				22,000	2,300	1,700	1,400	5,100		
01/05/94	84.38	71.96	12.42				37,000	1,600	1,100	1,300	6,500		
04/08/94	84.38	72.51	11.87				16,000	250	310	500	2,500		
07/06/94	84.38	71.64	12.74				43,000	660	320	1,900	6,400	-	
08/04/94	84.38	71.71	12.67										
10/05/94	84.38	71.43	12.95				12,000	280	90	480	370		
01/18/95	84.38	73.72	10.66				20,000	200	230	700	3,500		
04/07/95	84.38	72.84	11.54				22,000	120	120	810	4,400		
07/06/95	84.38	71.99	12.39				15,000	110	<50	630	2,100		
10/11/95	84.38	72.07	12.31				8,600	24	<10	360	560	1,100	
01/17/96	84.38	73.68	10.70				9,300	<50	<50	230	1,100	2,300	

							and, California	<u> </u>					
WELL ID/	TOC	GWE	DTW	SPHT	TPH-DRO	трн-мо	TPH-GRO	В		E	X	MTBE	TOG
DATE	(ft)	(msl)	(ft.)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-3 (cont)													
04/05/96	84.38	73.35	11.03				8,700	16	<10	110	650	990	
07/23/96	84.38	72.38	12.00				5,400	20	<5.0	190	480	2,300	
10/02/96	84.38	72.20	12.18				6,200	43	<20	130	140	2,800	
01/23/97	84.38	75.12	9.26				5,600	<5.0	<5.0	39	160	550	••
04/01/97	84.38	72.75	11.63				6,900	17	<10	150	330	3,900	
07/09/97	84.38	72.38	12.00				5,300	31	<5.0	100	180	2,300	••
10/07/97	84.38	72.27	12.11				2,400	15	<2.0	30	15	900	
01/22/98	84.38	74.73	9.65				3,200	2.5	7.9	70	220	660	
04/02/98	84.38	73.49	10.89				1,300	14	9.7	25	63	430	
07/02/98	84.38	72.69	11.69				750	6.9	<5.0	18	9.1	370	
10/02/98	84.38	72.23	12.15				1,400	5.3	0.73	18	6.6	900	
01/18/99	84.38	74.05	10.33				1,270	<1.0	<1.0	7.95	<1.0	100/99.72	
07/22/99	84.38	72.08	12.30				2,240	<1.0	<1.0	29.4	13.7	189	
01/17/00	84.38	72.78	11.60				848	6.72	2.53	5.02	2.49	90	
07/05/00	84.38	72.67	11.71	0.00			90 <sup>3</sup>	5.3	<0.50	0.70	<0.50	770	
01/15/01	84.38	73.93	10.45	0.00			206	<0.500	<0.500	<0.500	1.09	4.04	
07/03/01	84.38	72.62	11.76	0.00			<50	0.53	< 0.50	<0.50	1.1	20	
02/28/02	84.38	73.29	11.09	0.00			170	<1.0	<1.0	<1.0	1.6	45	
07/08/02	84.38	71.38	13.00	0.00			430	0.60	<0.50	0.79	<1.5	42	
01/01/03	84.38	74.89	9.49	0.00			140	<0.50	<0.50	<0.50	<1.5	6.1	••
07/14/03 <sup>8</sup>	84.38	71.36	13.02	0.00			<50	<0.5	<0.5	<0.5	<0.5	43	
01/12/048	84.38	74.00	10.38	0.00			<50	<0.5	<0.5	<0.5	<0.5	2	
07/27/04 <sup>8</sup>	84.38	72.60	11.78	0.00			<50	<0.5	<0.5	<0.5	<0.5	41	••
01/25/058	84.38	73.96	10.42	0.00	••		<50	< 0.5	< 0.5	<0.5	<0.5	27	••
07/26/05 <sup>8</sup>	84.38	72.17	12.21	0.00			<50	<0.5	< 0.5	<0.5	<0.5	12	••
01/24/068	84.38	73.99	10.39	0.00			<50	<0.5	<0.5	<0.5	<0.5	0.8	••
07/25/06 <sup>8</sup>	84.38	72.76	11.62	0.00			<50	<0.5	<0.5	< 0.5	<0.5	23	
01/23/078	84.38	73.44	10.94	0.00			130	< 0.5	<0.5	<0.5	<0.5	2	••
07/24/078	84.38	74.10	10.28	0.00			210	< 0.5	<0.5	<0.5	<0.5	20	
01/22/088	84.38	73.83	10.55	0.00	••		<50	<0.5	< 0.5	<0.5	<0.5	<0.5	
07/22/088	84.38	72.40	11.98	0.00			<50	<0.5	<0.5	<0.5	<0.5	7	
01/13/09 <sup>8</sup>	84.38	72.82	11.56	0.00			<50	<0.5	<0.5	<0.5	<0.5	10	
07/14/09	84.38	72.25	12.13	0.00	SAMPLED A	NNUALLY					••		
01/12/108	<b>86.8</b> 0	75.93	10.87	0.00	_	••	<50	<0.5	<0.5	<0.5	<0.5	14	

Oakland, California													
WELL ID/	TOC	GWE	WEG	SPHT	TPH-DRO	ТРН-МО	TPH-GRO	В	resident <b>T</b> estito		X	MTBE	TOG
DATE	(ft.)	(msl)	(ft.)	(ft.)	(μg/L)	(µg/L)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)
MW-4													
10/18/90	84.25	68.50	15.75					••				••	
10/31/90	84.25	70.35	13.90				<50	<0.5	<0.5	<0.5	1.0		
11/16/90	84.25	70.00	14.25								••		
02/08/91	84.25	71.93	12.32				60	17	2.0	12	<0.5	••	
05/08/91	84.25	72.02	12.23				65	<0.5	<0.5	<0.5	<0.5	••	
08/12/91	84.25	70.32	13.93				<50	<0.5	<0.5	<0.5	<0.5	••	••
11/07/91	84.25	70.83	13.42				<50	<0.5	<0.5	<0.5	<0.5		
02/05/92	84.25	71.42	12.83			••	<50	<0.5	<0.5	<0.5	<0.5		
05/13/92	84.25	70.97	13.28				<50	<0.5	<0.5	<0.5	<0.5	••	
07/17/92	84.25	70.27	13.98				<50	<0.5	<0.5	<0.5	<0.5		••
10/05/92	84.25	70.02	14.23			••	<50	<0.5	<0.5	<0.5	<0.5		
11/11/92	84.25	••	••										
11/17/92	84.25	••											_
11/24/92	84.25								••		••	••	••
12/01/92	84.25												
12/29/92	84.25						••						
01/05/93	84.25		••	••		••							
01/08/93	84.25	74.09	10.16				<50	< 0.5	<0.5	<0.5	< 0.5		
02/02/93	84.25		••										••
04/14/93	84.25	72.21	12.04				<50	<0.5	<0.5	< 0.5	<0.5		_
08/06/93	84.25	70.34	13.91				<50	<0.5	<0.5	<0.5	<0.5		
10/21/93	84.25	70.26	13.99				<50	<0.5	<0.5	<0.5	1.0		
01/05/94	84.25	71.30	12.95				<50	<0.5	<0.5	<0.5	<0.5		
04/08/94	84.25	71.31	12.94				<50	<0.5	<0.5	<0.5	<0.5	••	
07/06/94	84.25	70.57	13.68			••	<50	<0.5	<0.5	<0.5	<0.5	••	
08/04/94	84.25	70.71	13.54										
10/05/94	84.25	70.65	13.60				<50	<0.5	<0.5	<0.5	<0.5		
01/18/95	84.25	74.77	9.48				<50	<0.5	<0.5	<0.5	<0.5		
04/07/95	84.25	72.70	11.55				<50	<0.5	<0.5	<0.5	<0.5		
07/06/95	84.25	71.25	13.00				<50	<0.5	<0.5	<0.5	<0.5		
10/11/95	84.25	70.27	13.98				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/17/96	84.25	73.17	11.08			••	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
04/05/96	84.25	72.65	11.60				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
07/23/96	84.25	70.86	13.39	••			<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/02/96	84.25	70.27	13.98				<50	<0.5	<0.5	<0.5	<0.5	<2.5	••
01/23/97	84.25	74.72	9.53				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
										- · <del>-</del>		<b></b>	

Former Chevron Service Station #9-1583 5509 Martin Luther King Way

Oakland.	California
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WELL ID/	TOC	GWE	DTW	SPHT	TPH-DRO	трн-мо	TPH-GRO	B	Ţ	E	X	MTBE	TOG
DATE	(ft)	(msl)	(ft.)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)
MW-4 (cont)													
04/01/97	84.25	71.68	12.57				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
07/09/97	84.25	70.64	13.61		••		<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/07/97	84.25	70.51	13.74				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/22/98	84.25	74.90	9.35				<50	<0.5	<0.5	<0.5	<0.5	<2.5	••
04/02/98	84.25	73.00	11.25				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
07/02/98	84.25	71.84	12.41			••	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/02/98	84.25	71.00	13.25				<50	<0.5	< 0.5	<0.5	<1.5	<2.5	
01/18/99	84.25	72.65	11.60				<50	<0.5	<0.5	<0.5	< 0.5	<2.0	
07/22/99	84.25	70.70	13.55				<50	<0.5	<0.5	<0.5	<0.5	<2.0	••
01/17/00	84.25	71.32	12.93				<50	< 0.50	< 0.50	<0.50	< 0.50	<2.5	
07/05/00	84.25		ED/SAMPLEI	ANNUALLY	7	••					••		
01/15/01	84.25	72.73	11.52	0.00		••	<50.0	< 0.500	< 0.500	< 0.500	< 0.500	<2.50	
07/03/01	84.25	71.30	12.95	0.00									
02/28/02	84.25	72.54	11.71	0.00			<50	< 0.50	< 0.50	<0.50	<1.5	<2.5	
07/08/02	84.24			ANNUALLY									
01/01/03	84.24			CLE PARKED		,							
07/14/03	84.24			ANNUALLY	<i>r</i>								
01/12/048	84.24	73.23	11.01	0.00	••		<50	<0.5	<0.5	<0.5	<0.5	< 0.5	
01/25/05 <sup>8</sup>	84.24	73.28	10.96	0.00			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/26/05	84.24			ANNUALLY	7								
01/24/06 <sup>8</sup>	84.24	73.36	10.88	0.00			<50	<0.5	< 0.5	<0.5	< 0.5	< 0.5	
07/25/06	84.24			ANNUALLY	7								
01/23/07 <sup>8</sup>	84.24	71.85	12.39	0.00			<50	<0.5	<0.5	<0.5	<0.5	< 0.5	
07/24/07	84.24			ANNUALLY	•								
01/22/088	84.24	72.77	11.47	0.00		••	<50	<0.5	<0.5	<0.5	<0.5	< 0.5	
07/22/08	84.24			ANNUALLY	•					••		••	
01/13/09 <sup>8</sup>	84.24	71.56	12.68	0.00	••	••	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/14/09	84.24			ANNUALLY	•		••						
01/12/10 <sup>8</sup>	<b>87.2</b> 9	76.14	11.15	0.00	••	_	<50	<0.5	<0.5	<0.5	<0.5	< 0.5	_
MW-5													
10/18/90	81.95	71.17	10.78		••	••							
10/31/90	81.95	71.32	10.63	••			110	<0.5	<0.5	<0.5	<0.5	••	••
11/16/90	81.95	71.27	10.68			••	••						
02/08/91	81.95	72.78	9.17				<50	<0.5	<0.5	< 0.5	<0.5		

							and, California						
WELL ID/	TOC	GWE	DTW	SPHT	TPH-DRO	ТРН-МО	TPH-GRO	В	•	<b>E</b>	X	MTBE	TOG
DATE	(ft.)	(msl)	(ft.)	(ft.)	(μg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(μg/L)
MW-5 (cont)													
05/08/91	81.95	73.27	8.68				<50	<0.5	<0.5	<0.5	<0.5		
08/12/91	81.95	71.62	10.33				<50	<0.5	<0.5	<0.5	<0.5		
11/07/91	81.95	72.19	9.76				<50	<0.5	< 0.5	<0.5	<0.5		
02/05/92	81.95	72.48	9.47				69	< 0.5	<0.5	<0.5	<0.5		
05/13/92	81.95	72.25	9.70				74	<0.5	<0.5	<0.5	<0.5		
07/17/92	81.95	71.74	10.21				880	2.6	<1.2	4.6	11		
10/05/92	81.95	71.34	10.61				120	<0.5	<0.5	0.6	4.9		
11/11/92	81.95												
11/17/92	81.95												
11/24/92	81.95												
12/01/92	81.95												
12/29/92	81.95												
01/05/93	81.95												
01/08/93	81.95	74.61	7.34				61	<0.5	<0.5	<0.5	<0.5		
02/02/93	81.95												
04/14/93	81.95												
08/06/93	81.95	71.99	9.96			••	<50	< 0.5	<0.5	<0.5	<0.5		
10/21/93	81.95	71.89	10.06	**		••	<50	<0.5	<0.5	2.0	4.0		
01/05/94	81.95	72.52	9.43	**			<50	<0.5	<0.5	<0.5	<0.5		
04/08/94	81.95	72.56	9.39			••	<50	<0.5	<0.5	< 0.5	<0.5		
07/06/94	81.95	72.19	9.76				<50	0.6	<0.5	<0.5	< 0.5		
08/04/94	81.95	72.13	9.82										
10/05/94	81.95	71.89	10.06				<50	<0.5	<0.5	<0.5	<0.5		
01/18/95	81.95	INACCESS	IBLE										
04/07/95	81.95	73.31	8.64				<50	< 0.5	<0.5	<0.5	<0.5		
07/06/95	81.95	72.52	9.43				<50	<0.5	<0.5	<0.5	<0.5		
10/11/95	81.95	72.12	9.83				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/17/96	81.95	73.63	8.32				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
04/05/96	81.95	73.23	8.72				<50	<0.5	< 0.5	<0.5	<0.5	<2.5	
07/23/96	81.95	72.25	9.70				<50	< 0.5	<0.5	< 0.5	<0.5	<2.5	
10/02/96	81.95	72.06	9.89				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/23/97	81.95	74.72	7.23				<50	<0.5	<0.5	< 0.5	<0.5	<2.5	
04/01/97	81.95	INACCESSI											
07/09/97	81.95	72.27	9.68				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/07/97	81.95	72.14	9.81				<50	< 0.5	<0.5	<0.5	<0.5	<2.5	
01/22/98	81.95	74.80	7.15				<50	<0.5	<0.5	<0.5	<0.5	<2.5	

							and, California	<u> </u>					
WELL ID/	TOC	GWE	DTW	SPHT	TPH-DRO	трн-мо	TPH-GRO	В	1	E	X	MTBE	TOG
DATE	(ft.)	(msl)	(ft.)	(ft.)	(μg/L)	(µg/L)	(#8/1)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-5 (cont)													
04/02/98	81.95	INACCESS	IBLE										
07/02/98	81.95	72.43	9.52				<50	<0.5	< 0.5	<0.5	<0.5	<2.5	
10/02/98	81.95	72.14	9.81				<50	< 0.5	<0.5	<0.5	<1.5	<2.5	
01/18/99	81.95	73.11	8.84				<50	<0.5	<0.5	<0.5	<0.5	<2.0	
07/22/99	81.95	72.01	9.94				<50	<0.5	<0.5	<0.5	<0.5	<2.0	
01/17/00	81.95	72.70	9.25				<50	< 0.5	<0.5	<0.5	<0.5	<2.5	
07/05/00	81.95	MONITORI	ED/SAMPLE	D ANNUALL	Y		••						
01/15/01	81.95	73.41	8.54	0.00			423 <sup>6</sup>	< 0.500	< 0.500	< 0.500	< 0.500	<2.50	
07/03/01	81.95	72.62	9.33	0.00									
02/28/02	81.95	73.24	8.71	0.00			270	< 0.50	< 0.50	< 0.50	<1.5	<2.5	
07/08/02	81.95	MONITORI	ED/SAMPLE	D ANNUALL	Y								
01/01/03	81.95	INACCESS	IBLE - VEHI	ICLE PARKEI	OVER WELL			••			••		
07/14/03	81.95	MONITORE	ED/SAMPLE	D ANNUALL	Y		••						
01/12/04 <sup>8</sup>	81.95	73.91	8.04	0.00			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
01/25/05 <sup>8</sup>	81.95	73.94	8.01	0.00			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/26/05	81.95	MONITORE	ED/SAMPLE	D ANNUALL	Y		••						
01/24/068	81.95	73.89	8.06	0.00			<50	<0.5	<0.5	< 0.5	<0.5	< 0.5	
07/25/06	81.95	MONITORE	ED/SAMPLE	D ANNUALL	Y								
01/23/07	81.95	INACCESS	IBLE - VEHI	CLE PARKEI	OVER WELL	,							
07/24/07	81.95	MONITORE	ED/SAMPLE	D ANNUALL	Y								
01/22/088	81.95	73.50	8.45	0.00	••		<50	<0.5	<0.5	< 0.5	<0.5	<0.5	
07/22/08	81.95	MONITORE	D/SAMPLE	D ANNUALL	Y								
01/13/09 <sup>8</sup>	81.95	71.69	10.26	0.00		••	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/14/09	81.95	MONITORE	ED/SAMPLE	D ANNUALL	Y								
01/12/10 <sup>8</sup>	84.93	76.45	8.48	0.00	-		<50	<0.5	<0.5	<0.5	<0.5	<0.5	-
MW-6													
10/18/90	80.60	70.81	9.79										
10/31/90	80.60	70.91	9.69				 <50	-0.6	 -0.5	-0.5	2.0		
11/16/90	80.60	70.86	9.74					<0.5	<0.5	<0.5	3.0		
02/08/91	80.60	70.00											
05/08/91	80.60	71.06	9.54				 56	<0.5		 -0.6	-0.5		••
08/12/91	80.60	71.10	9.50				<50		<0.5	<0.5	<0.5	••	
11/07/91	80.60	71.71	8.89				<50 <50	<0.5 <0.5	<0.5	<0.5	<0.5		
02/05/92	80.60	72.01	8.59						<0.5	<0.5	<0.5		
	00.00	/2.01	0.37	••			<50	<0.5	<0.5	<0.5	<0.5		

							and, California						
WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	SPHT (fl.)	TPH-DRO	TPH-MO (µg/L)	TPH-GRO	B	T.	E	X	MTBE	TOG
		(mai)	<u></u>	( <b>44)</b>	(µg/L)	(bg/r)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-6 (cont)													
05/13/92	80.60									••			
07/17/92	80.60					••							
10/05/92	80.60						••		•				
11/11/92	80.60												
11/17/92	80.60												
11/24/92	80.60												**
12/01/92	80.60												
12/29/92	80.60												
01/05/93	80.60											••	
01/08/93	80.60												
02/02/93	80.60	72.89	7.71				<50	2.1	<0.5	<0.5	2.2		
04/14/93	80.60	72.41	8.19				<50	1.0	<0.5	<0.5	<0.5		
08/06/93	80.60	71.52	9.08				<50	<0.5	<0.5	<0.5	<0.5		
10/21/93	80.60	71.46	9.14				<50	<0.5	<0.5	<0.5	<0.5	••	
01/05/94	80.60	72.06	8.54				<50	4.0	<0.5	<0.5	<0.5	••	
04/08/94	80.60						••						
07/06/94	80.60	INACCESS	IBLE				••				••		
08/04/94	80.60	71.66	8.94				<50	<0.5	<0.5	< 0.5	<0.5		
10/05/94	80.60	INACCESS			••				••				
01/18/95	80.60	73.50	7.10		••		<50	0.69	<0.5	<0.5	0.57		
04/07/95	80.60	72.77	7.83				<50	1.8	<0.5	<0.5	<0.5		
07/06/95	80.60	72.03	8.57				<50	<0.5	<0.5	<0.5	<0.5		
10/11/95	80.60	71.54	9.06				<125	<1.2	<1.2	<1.2	<1.2	540	
01/17/96	80.60	73.20	7.40				<50	<0.5	<0.5	<0.5	<0.5	180	
04/05/96	80.60	72.70	7.90				<125	1.4	<1.2	<1.2	<1.2	700	
07/23/96	80.60	71.86	8.74				<500	<5.0	<5.0	<5.0	<5.0	540	
10/02/96	80.60	71.62	8.98				<100	<1.0	<1.0	<1.0	1.8	910	
01/23/97	80.60	INACCESS				••							
04/01/97	80.60	72.22	8.38				<250	<2.5	<2.5	<2.5	<2.5	640	
07/09/97	80.60	INACCESS											
10/07/97	80.60	71.71	8.89			••	<50	<0.5	<0.5	<0.5	<0.5	640	
01/22/98	80.60	73.90	6.70				<50	<0.5	<0.5 <0.5	<0.5	<0.5	200	
04/02/98	80.60	72.79	7.81				<250	<2.5	<0.5 <2.5	<0.5 <2.5	<0.5 <2.5	480	
07/02/98	80.60	71.62	8.98		_		<50						
10/02/98	80.60	71.68	8.92			••	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5	<0.5	420	
01/18/99	80.60	INACCESSI								<0.5	<1.5	270	
V 1/ 1 U/ / /	<b>40.00</b>	HALCCEGO!	THE STATE										

						Oakl	and, California						
WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	SPHT (fl.)	TPH-DRO (µg/L)	TPH-MO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)
MW-6 (cont)	-											7 45 (01 ) \$	
07/22/99	80.60	INACCESS	BRLE										
01/17/00	80.60	INACCESS						_			-		
07/05/00	80.60			D ANNUALL	Y			••					
01/15/01	80.60			PARKED OVI									
07/03/01	80.60			PARKED OVI									_
02/28/02	80.60	72.70	7.90	0.00			<50	<0.50	< 0.50	< 0.50	<1.5	55	
07/08/02	80.60			D ANNUALL	Y					-0.50			
01/01/03	80.60			CLE PARKED		L							
07/14/03	80.60			D ANNUALL									
)1/12/04 <sup>8</sup>	80.60	73.23	7.37	0.00			<50	<0.5	<0.5	<0.5	<0.5	25	
)1/25/05 <sup>8</sup>	80.60	73.17	7.43	0.00			<50	<0.5	<0.5	<0.5	<0.5	3	
7/26/05	80.60	MONITORI	ED/SAMPLE	D ANNUALL	Y								
)1/24/06 <sup>8</sup>	80.60	73.20	7.40	0.00			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/25/06	80.60	MONITORI	ED/SAMPLE	D ANNUALLY	Y								
)1/23/07 <sup>8</sup>	80.60	72.53	8.07	0.00			<50	<0.5	<0.5	<0.5	<0.5	8	
7/24/07	80.60	MONITORI	ED/SAMPLE	D ANNUALLY	Y								
)1/22/08 <sup>8</sup>	80.60	73.07	7.53	0.00			<50	<0.5	<0.5	1	2	4	
7/22/08	80.60	MONITORI	ED/SAMPLE	D ANNUALLY	<i>Y</i>								
01/13/09 <sup>8</sup>	80.60	70.73	9.87	0.00			<50	<0.5	<0.5	<0.5	<0.5	6	
7/14/09	80.60	MONITORI	ED/SAMPLE	D ANNUALLY	ď							••	
)1/12/10 <sup>2</sup>	83.63	75.71	7.92	0.00			<50	<0.5	<0.5	<0.5	<0.5	<0.5	-
AGIS/ 2													
MW-7 03/08/94	86.36	74.99	11.37		210	4.100	1 200	440			***		
7/06/94	86.36			-	<10	4,100	1,200	440	31	73	200		-
8/04/94	86.36	73.86	12.50	-	-	-	120	16				-	-
0/05/94	86.36	73.99	12.37	-	**	-	120 150	15	<0.5	3.8	1.8	-	
1/18/95	86.36	74.82	11.54	2		•	260	1.2	<0.5	1,2	1.7	-	
4/07/95	86.36	75.63	10.73		_	-	230	11	<1.0	17	6.8	-	
7/06/95	86.36	74.36	12.00	_	-	**		<0.5	<0.5	25	0.93	-	
0/11/95	86.36	73.56	12.80	_	-	2 200	320 <50	<1.0	<1.0	<1.0	<1.0	120	6,900
1/17/96	86.36	75.90	10.46	-	-	2,300 <sup>1</sup> 1,700		<0.5	<0.5	<0.5	<0.5	120	
4/05/96	86.36	76.56	9.80	-		1,700 590	<50	<0.5	<0.5	<0.5	<0.5	460	
7/23/96	86.36	74.57	11.79		-	390 820	130	<0.5	<0.5	<0.5	<0.5	120	
10/02/96	86.36	73.10	13.26		-		<500	<5.0	<5.0	<5.0	<0.5	1,200	
V. V21 70	00.50	73.10	15.20		-	1,500	<100	<1.0	<1.0	<1.0	<1.0	360	

							and, California	1					
WELL ID/	TOC	GWE	DTW	SPHT	TPH-DRO	TPH-MO	TPH-GRO	<b>B</b>	$\mathbf{T}$	<b>E</b>	X	MTBE	TOG
DATE	(ft.)	(msl)	(ft.)	(ft.)	(μg/L)	(µg/L)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-7 (cont)													
01/23/97	86.36	77.64	8.72			<500	<100	<1.0	<1.0	<1.0	<1.0	490	
04/01/97	86.36	75.09	11.27			1,600	<250	<2.5	<2.5	<2.5	<2.5	1,200	
07/09/97	86.36	73.92	12.44			5,700	<250	5.9	<2.5	<2.5	<2.5	1,200	
10/07/97	86.36	73.44	12.92			<500	<50	<0.5	<0.5	<0.5	<0.5	240	
01/22/98	86.36	75.14	11.22			<500	<50	<0.5	<0.5	<0.5	<0.5	400	
04/02/98	86.36	75.67	10.69			<500	56	<0.5	<0.5	<0.5	<0.5	290	
07/02/98	86.36	75.94	10.42			<500	<50	< 0.5	<0.5	<0.5	<0.5	380	
10/02/98	86.36	74.14	12.22			1,700	<50	<0.5	<0.5	<0.5	<1.5	660	
01/18/99	86.36	75.36	11.00			543	<100	<1.0	<1.0	<1.0	<1.0	281/296 <sup>2</sup>	
07/22/99	86.36	74.06	12.30				<50	<0.5	<0.5	<0.5	<0.5	155	
01/17/00	86.36	75.84	10.52		256 <sup>1</sup>	1,040	<50	<0.5	<0.5	<0.5	<0.5	104	
07/05/00	86.36	74.23	12.13	0.00		1,4004	<50	< 0.50	< 0.50	< 0.50	<0.50	110	
01/15/01	86.36	75.23	11.13	0.00		2,700	<50.0	< 0.500	< 0.500	< 0.500	<0.500	84.3	
07/03/01	86.36	74.47	11.89	0.00		760 <sup>7</sup>	<50	< 0.50	< 0.50	<0.50	< 0.50	27	
02/28/02	86.36	75.26	11.10	0.00		<1,000	<50	< 0.50	< 0.50	< 0.50	<1.5	66	
07/08/02	86.36	74.05	12.31	0.00		1,400	<50	< 0.50	< 0.50	< 0.50	<1.5	49	
01/01/03	86.36	76.65	9.71	0.00		1,300	<50	< 0.50	< 0.50	< 0.50	<1.5	35	
07/14/03 <sup>8</sup>	86.36	74.01	12.35	0.00		130	<50	< 0.5	<0.5	<0.5	< 0.5	20	••
01/12/04 <sup>8</sup>	86.36	75.66	10.70	0.00		250	<50	<0.5	<0.5	< 0.5	<0.5	27	
07/27/04 <sup>8</sup>	86.36	74.08	12.28	0.00		730	<50	< 0.5	<0.5	<0.5	< 0.5	44	••
01/25/05 <sup>8</sup>	86.36	75.56	10.80	0.00		980	<50	< 0.5	<0.5	<0.5	< 0.5	34	••
07/26/058	86.36	73.69	12.67	0.00		1,100	<50	<0.5	<0.5	< 0.5	< 0.5	19	_
01/24/06 <sup>8</sup>	86.36	75.60	10.76	0.00		230	<50	<0.5	<0.5	< 0.5	< 0.5	18	
07/25/06 <sup>8</sup>	86.36	74.17	12.19	0.00		160	<50	<0.5	<0.5	<0.5	< 0.5	19	
01/23/07 <sup>8</sup>	86.36	74.60	11.76	0.00		2,100	<50	<0.5	<0.5	< 0.5	< 0.5	15	
07/24/07 <sup>8</sup>	86.36	73.91	12.45	0.00		3,100	<50	<0.5	<0.5	<0.5	< 0.5	24	
01/22/08 <sup>8</sup>	86.36	75.36	11.00	0.00		4,400	<50	<0.5	<0.5	< 0.5	<0.5	12	
07/22/088	86.36	73.38	12.98	0.00		200	<50	<0.5	<0.5	< 0.5	< 0.5	25	
01/13/09 <sup>8</sup>	86.36	73.85	12.51	0.00		1,400	<50	<0.5	<0.5	<0.5	<0.5	7	
07/14/09 <sup>8</sup>	86.36	73.18	13.18	0.00		1,000	<50	<0.5	<0.5	<0.5	< 0.5	10	
01/12/10 <sup>8</sup>	86.36	75.01	11.35	0.00		1,500	<50	<0.5	<0.5	<0.5	< 0.5	5	

WELL ID/ TOC BATE         GWE (ft.)         DTW (ft.)         SPHT TPH-DRO TPH-MO (µg/L)         TPH-GRO (µg/L)         B         T         E           BATE (ft.)         (ft.)         (ft.)         (ft.)         (µg/L)         (µg/L	6,800  4,400 890 3,500 1,700 2,600 280 1,400 480	MTBE (μg/L)  1,200 1,100	ΤΟG (μg/L)
MW-8 03/08/94 85.93 75.06 10.87 <10 <100 28,000 2,900 1,300 1,200 07/06/94 85.93 22,000 3,000 260 870 10/05/94 85.93 72.71 13.22 12,000 1,800 34 4.6 01/18/95 85.93 75.51 10.42 19,000 1,000 65 1,100 04/07/95 85.93 75.48 10.45 14,000 310 <25 720	6,800  4,400 890 3,500 1,700 2,600 280 1,400 480	     1,200	
03/08/94         85.93         75.06         10.87          <10         <100         28,000         2,900         1,300         1,200           07/06/94         85.93   22,000         3,000         260         870         870         85.93         75.51         13.22            12,000         1,800         34         4.6         4.6         61/18/95         85.93         75.51         10.42            19,000         1,000         65         1,100         40/10/95         85.93	4,400 890 3,500 1,700 2,600 280 1,400 480	   1,200	
03/08/94         85.93         75.06         10.87          <10	4,400 890 3,500 1,700 2,600 280 1,400 480	   1,200	
07/06/94     85.93 </td <td>4,400 890 3,500 1,700 2,600 280 1,400 480</td> <td>   1,200</td> <td></td>	4,400 890 3,500 1,700 2,600 280 1,400 480	   1,200	
08/04/94     85.93     73.77     12.16        22,000     3,000     260     870       10/05/94     85.93     72.71     13.22        12,000     1,800     34     4.6       01/18/95     85.93     75.51     10.42        19,000     1,000     65     1,100       04/07/95     85.93     75.48     10.45       14,000     310     <25	890 3,500 1,700 2,600 280 1,400 480	   1,200	
10/05/94     85.93     72.71     13.22       12,000     1,800     34     4.6       01/18/95     85.93     75.51     10.42       19,000     1,000     65     1,100       04/07/95     85.93     75.48     10.45       14,000     310     <25	890 3,500 1,700 2,600 280 1,400 480	   1,200	
01/18/95 85.93 75.51 10.42 19,000 1,000 65 1,100 04/07/95 85.93 75.48 10.45 14,000 310 <25 720	3,500 1,700 2,600 280 1,400 480	   1,200	
04/07/95 85.93 75.48 10.45 14,000 310 <25 720	1,700 2,600 280 1,400 480	  1,200	
- 7	2,600 280 1,400 480	 1,200	
07/06/95 85.93 74.30 11.63 19,000 280 <50 1,200	280 1,400 480	1,200	
10/11/95 85.93 73.51 12.42 6,100 140 5.5 320	1,400 480		
01/17/96 85.93 75.95 9.98 <500 12,000 86 <20 590	480	4 4 4 0 0 3	
04/05/96 85.93 75.60 10.33 <500 7,500 180 23 410		560	
07/23/96 85.93 74.56 11.37 <500 3,800 47 <5.0 350	84	1,800	
10/02/96 85.93 73.90 12.03 <500 4,400 65 <5.0 140	28	1,500	
01/23/97 85.93 77.73 8.20 <500 3,800 36 5.9 140	36	910	
04/01/97 85.93 75.80 10.13 <500 6,100 43 <20 380	76	1,800	
07/09/97 85.93 73.77 12.16 <500 7,300 48 <25 120	<25	2,400	
10/07/97 85.93 73.77 12.16 <500 3,100 <10 <10 67	<10	1,400	
01/22/98 85.93 75.83 10.10 <500 1,900 5.5 8.3 120	17	780	
04/02/98 85.93 75.55 10.38 <500 2,900 43 19 110	<10	800	
07/02/98 85.93 74.78 11.15 <500 5,000 31 <10 120	15	780	
10/02/98 85.93 74.03 11.90 1,200 <sup>1</sup> 2,200 6.5 <0.5 21	2.6	140	
01/18/99 85.93 75.12 10.81 554 <250 2,870 <5.0 <5.0 9.02	<5.0	476/478 <sup>2</sup>	
07/22/99 85.93 74.38 11.55 2,190 <1.0 <1.0 3.51	1.61	228	
01/17/00 85.93 75.06 10.87 9551 <500 1,220 1.3 1.56 1.56	1.87	344	
$07/05/00$ 85.93 74.55 11.38 $0.00$ $260^5$ $1,900^3$ 15 6.6 <5.0	<5.0	170	
01/15/01 85.93 75.59 10.34 0.00 <250 2,820 <1.00 <1.00 5.13	3.90	110	
$07/03/01$ 85.93 74.77 11.16 0.00 - $<250$ $1,900^3$ 6.0 $<5.0$ $<5.0$	<5.0	46	
02/28/02 85.93 75.26 10.67 0.00 <1,000 1,500 4.6 <2.0 0.80	2.2	56	
07/08/02 85.93 74.30 11.63 0.00 <400 2,500 4.2 0.85 0.68	2.5	46	
01/01/03 85.93 76.01 9.92 0.00 <400 1,300 2.1 0.66 1.1	2.1	45	
07/14/03 <sup>8</sup> 85.93 74.27 11.66 0.00 160 1,900 <0.5 <0.5 <0.5	<0.5	58	
$01/12/04^8$ 85.93 75.92 10.01 0.00 <40 1,400 <0.5 <0.5 <0.5	<0.5	110	
07/27/04 <sup>8</sup> 85.93 74.33 11.60 0.00 <40 1,100 <0.5 <0.5	<0.5	89	
01/25/05 <sup>8</sup> 85.93 75.96 9.97 0.00 130 900 <0.5 <0.5	<0.5	52	
07/26/05 <sup>8</sup> 85.93 74.08 11.85 0.00 99 580 <0.5 <0.5	<0.5	23	
01/24/06 <sup>8</sup> 85.93 76.06 9.87 0.00 69 620 <0.5 <0.5 <0.5	<0.5	31	

Former Chevron Service Station #9-1583 5509 Martin Luther King Way

0.00						Oakl	and, California						
WELL ID/	TOC	GWE	DTW	SPHT	TPH-DRO	TPH-MO	TPH-GRO	В	T	E .	X	MTBE	TOG
DATE	(ft)	(msl)	(ft.)	(ft.)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)
MW-8 (cont)													
07/25/068	85.93	74.77	11.16	0.00	-	<40	420	<0.5	< 0.5	<0.5	<0.5	20	-
01/23/078	85.93	74.78	11.15	0.00	-	200	710	< 0.5	<0.5	<0.5	<0.5	26	-
07/24/078	85.93	74.15	11.78	0.00	-	730	560	<0.5	<0.5	<0.5	<0.5	30	
01/22/088	85.93	75.59	10.34	0.00	74-1	500	520	<0.5	<0.5	<0.5	<0.5	27	-
07/22/088	85.93	73.86	12.07	0.00	1400	90	330	<0.5	<0.5	<0.5	<0.5	21	-
01/13/098	85.93	74.35	11.58	0.00	-	62	360	<0.5	<0.5	<0.5	<0.5	14	14
07/14/09 <sup>8</sup>	85.93	73.68	12.25	0.00	-	90	500	<0.5	<0.5	<0.5	<0.5	10	_
01/12/108	85.95	75.50	10.45	0.00	_	100	370	<0.5	<0.5	<0.5	<0.5	8	
(			42.00			,	-,-	-0.0		-0.0	30.5	· ·	
TRIP BLAN	K												
03/12/90		-	144	-	-	**	<50	< 0.3	<0.3	< 0.3	<0.6	2	1 2
02/08/91	••	-	-	-		-	<50	<0.5	<0.5	<0.5	<0.5	-	_
05/08/91		**	**	-	-		<50	<0.5	<0.5	<0.5	<0.5	-	-
08/12/91		1.2	-		-	-	<50	<0.5	<0.5	<0.5	<0.5	_	122
11/07/91		9	-	-		**	<50	<0.5	<0.5	<0.5	<0.5		**
02/05/92		340	-	22	-	-	<50	<0.5	<0.5	<0.5	<0.5	-	-
05/13/92		-	5-	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	-	
07/17/92			£2.	-	-		<50	<0.5	<0.5	<0.5	<0.5	-	-
10/05/92		-	-	- 2		144	<50	<0.5	<0.5	<0.5	<0.5	14.	-
11/11/92		-	-	-		-						-	**
11/17/92		12		14.	-	-		-				4	24
11/29/92		-		-				-	140	-	-	_	-
12/01/92			-	44	- 22		-	-	_	-	-	-	-
12/29/92			-	-	-			-		_	_	-	
01/05/93		-	**	-	-	-		••		-	••		-
01/08/93		**	-	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	-	
02/02/93		**	44.		-								4
04/14/93		4	**	-	-	- 4	<50	<0.5	<0.5	<0.5	<0.5	-	_
08/06/93			**	Q.,	44		<50	<0.5	<0.5	<0.5	<0.5	-	
10/21/93		12.	44		-	_	<50	<0.5	<0.5	<0.5	<0.5	_	-
01/05/94		-	-	-	-	-	<50	<0.5	<0.5	<0.5	<0.5 <0.5		
04/08/94		_	-	-	-	-	<50	<0.5	<0.5	<0.5	<0.5 <0.5		
7/06/94		-	44	-			<50	<0.5	<0.5	<0.5	<0.5	-	-
08/04/94		44	-44		-	Q.	<50	<0.5	<0.5	<0.5	<0.5	- 67	140
10/05/94		4	22		-	-	<50	<0.5	<0.5	<0.5	<0.5		-
					-		<b>~</b> 50	~0.3	~0.5	<0.5	<0.5	-	-

Transaction							and, California	1					
WELL ID/	TOC	GWE	DTW	SPHT	TPH-DRO	ТРН-МО	TPH-GRO	В	T	<b>E</b>	×	MTBE	TOG
DATE	(ft.)	(msl)	(ft.)	(ft.)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(μg/ <b>L</b> )
TRIP BLANI	K (cont)												
01/18/95							<50	<0.5	<0.5	<0.5	<0.5		
04/07/95							<50	<0.5	<0.5	<0.5	<0.5		
07/06/95			••				<50	< 0.5	<0.5	<0.5	<0.5		
10/11/95							<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/17/96		**					<50	<0.5	<0.5	<0.5	<0.5		
04/05/96			••				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
07/23/96							<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/02/96							<50	<0.5	<0.5	<0.5	<0.5		
01/23/97						••	<50	<0.5	<0.5	<0.5	<0.5	<2.5	••
04/01/97			••				<50	<0.5	<0.5	<0.5	<0.5	<2.5	
07/09/97							<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/07/97						••	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/22/98							<50	<0.5	<0.5	<0.5	<0.5	<2.5 <2.5	
04/02/98							<50	<0.5	<0.5	<0.5	<0.5	<2.5	••
07/02/98							<50	<0.5	<0.5	<0.5	<0.5	<2.5 <2.5	
10/02/98							<50	<0.5	<0.5	<0.5	<0.5 <1.5	<2.5	
01/18/99			••				<50	<0.5	<0.5	<0.5	<0.5	<2.0	
07/05/00							<50	<0.50	<0.50	<0.50	<0.50	<2.5	
01/15/01							<50.0	< 0.500	< 0.500	<0.500	<0.500	<2.50	
07/03/01							<50	<0.50	<0.50	<0.50	<0.50	<2.50 <2.5	**
QA							-50	10.50	10.50	₹0.50	<b>~0.50</b>	~2.3	••
02/28/02							<50	<0.50	< 0.50	<0.50	<1.5	<2.5	
07/08/02	••						<50	<0.50	<0.50	<0.50	<1.5 <1.5	<2.5 <2.5	••
01/01/03							<50	< 0.50	<0.50	<0.50	<1.5 <1.5	<2.5 <2.5	••
07/14/03 <sup>8</sup>							<50	<0.5	<0.5	<0.5	<0.5	<0.5	
01/12/048						••	<50	<0.5	<0.5	<0.5	<0.5	<0.5 <0.5	
07/27/048					••		<50	<0.5	<0.5	<0.5	<0.5	<0.5	
01/25/058							<50	<0.5	<0.5	<0.5	<0.5	<0.5 <0.5	
07/26/058							<50	<0.5	<0.5	<0.5	<0.5		
01/24/068							<50	<0.5	<0.5	<0.5	<0.5	<0.5 <0.5	
07/25/06 <sup>8</sup>			••			••	<50	<0.5	<0.5	<0.5	<0.5		
01/23/078	••					••	<50	<0.5 <0.5	<0.5 <0.5	<0.5	<0.5 <0.5	<0.5 <0.5	
07/24/078				••			< <b>50</b>	<0.5	<0.5	<0.5	<0.5 <0.5		••
01/22/088				••			<50	<0.5	<0.5	<0.5	<0.5 <0.5	<0.5	••
07/22/088				••		••	<50	<0.5	<0.5	<0.5		<0.5	
							<b>~30</b>	~0.5	~0.5	<b>~</b> ∪.⊃	<0.5	< 0.5	

### Table 1

## Groundwater Monitoring Data and Analytical Results Former Chevron Service Station #9-1583

5509 Martin Luther King Way Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (mal)	DTW (化)	SPHT (fl.)	TPH-DRO (ug/L)	TPH-MO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	Τ (μg/L)	E (ug/L)	Χ (ρg/L)	MTBE (µg/L)	TOG (µg/L)
QA (cont)													
01/13/098	d	-	-	-	-	-	<50	<0.5	< 0.5	<0.5	< 0.5	< 0.5	-
07/14/09" DESTROYED	-	-	17	-	-	7	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-

#### Table 1

#### Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-1583 5509 Martin Luther King Way Oakland, California

#### **EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to July 5, 2000, were compiled from reports prepared by Blaine Tech Services, Inc.

TOC = Top of Casing DRO = Diesel Range Organics MTBE = Methyl Tertiary Butyl Ether (ft.) = FeetMO = Motor OilTOG = Total Oil & Grease GWE = Groundwater Elevation GRO = Gasoline Range Organics  $(\mu g/L)$  = Micrograms per liter (msl) = Mean sea level B = Benzene -- = Not Measured/Not Analyzed DTW = Depth to Water T = TolueneQA = Quality Assurance/Trip Blank SPHT = Separate Phase Hydrocarbon Thickness E = Ethylbenzene

\* TOC elevations were surveyed on October 27, 2009, by Virgil Chavez Land Surveying. The benchmark for this survey was a cut square on top of easterly curb of Broadway, opposite 5718 Broadway. Benchmark Elevation = 180.06 feet. Vertical Datum is NGVD 29 from GPS observations.

Laboratory report indicates an unidentified hydrocarbon.

- <sup>2</sup> Confirmation run.
- Laboratory report indicates gasoline C6-C12.

TPH = Total Petroleum Hydrocarbons

- Laboratory report indicates motor oil C16-C36.
- Laboratory report indicates unidentified hydrocarbons C9-C24.
- Laboratory report indicates hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.

  The pattern more closely resembles that of a heavier fuel.

X = Xylenes

- <sup>7</sup> Laboratory report indicates unidentified hydrocarbons >C16.
- 8 BTEX and MTBE by EPA Method 8260.

# Table 2 Groundwater Analytical Results - Oxygenate Compounds Former Chevron Service Station #9-1583

former Chevron Service Station #9-158 5509 Martin Luther King Way

	Oak	land,	Cal	lifor	mia
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WELLID	DATE	ETHANOL	TBA	MTBE	DIPE	ETBE	TAME	
		(ug/L)	(pg/L)	(µg/t)	(µg/L)	(µg/L)	(ug/L)	
MW-1	07/14/03	<50	<b>Sec.</b> (	5	_	-		
	01/12/04	<50	-	61	-		2	
	07/27/04	<50	2	54	-			
	01/25/05	<50	_	5		2		
	07/26/05	<50	-	25	-			
	01/24/06	<50	-	25		-	120	
	07/25/06	<50	#	14	- 4		12.	
	01/23/07	<50		17	-		101	
	07/24/07	<50	-	7	-	0	-	
	01/22/08	<50	-	8			_	
	07/22/08	<50	**	<0.5	-		-	
	01/13/09	<50	- 4	2		-	-	
	01/12/10		C+ 1	15	-	2	12	
MW-2	07/14/03	<50	-	<0.5	_	-	-	
MW-2	01/12/04	<50	24	<0.5	+			
	07/27/04	<50	=	<0.5	**	-	-	
	01/25/05	<50	-	<0.5	+	- 4	- 2	
	07/26/05	<50	1.50	<0.5	-	- 2	- 2	
	01/24/06	<50	-	<0.5		_	-	
	07/25/06	<50	4	<0.5	-	2	-	
	01/23/07	<50		<0.5		-	4	
	07/24/07	<50	2	<0.5	-	_	1.2	
	01/22/08	<50	-	<0.5	-	-	2	
	07/22/08	<50	-	2	-	-	-	
	01/13/09	<50	-	<0.5	-		e	
	01/12/10	_	5	<0.5			-	
/W-3	07/14/03	<50	-	43	-	-	1.20	
	01/12/04	<50	-	2		4	-	
	07/27/04	<50	0-11	41	<u> </u>	-		
	01/25/05	<50	-	27	-	-		
	07/26/05	<50	-	12	-	-		
	01/24/06	<50	(A)	0.8	-	-	-	
	07/25/06	<50	12	23				

## Table 2 Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-1583 5509 Martin Luther King Way

Oakland, California

50120 to 100 to				cland, California			
WELL ID	DATE	ETHANOL (µg/L)	TBA (ug/L)	MTBE (ug/L)	DIPE (µg/L)	ETBE (#g/L)	TAME (#g/L)
MW-3 (cont)	01/23/07	<50	-	2	-	-	12
	07/24/07	<50	-	20	-	2	-
	01/22/08	<50	**	<0.5	_	2	1.2
	07/22/08	<50		7	14		1.2
	01/13/09	<50	-	10	4		-
	01/12/10	- 2	-	14	12	1.0	-
MW-4	07/14/03	SAMPLED ANNUALLY			_		1
	01/12/04	<50	-	<0.5		2	
	01/25/05	<50	-	<0.5	2		-
	01/24/06	<50		<0.5	227	2	-
	01/23/07	<50	**	<0.5	-	_	
	01/22/08	<50	-	<0.5	_	2	-
	01/13/09	<50	-	<0.5	÷	2	_
	01/12/10		-	<0.5	A-A	-	1020
/W-5	07/14/03	SAMPLED ANNUALLY			-	8	(m)
	01/12/04	<50		<0.5	-	77	-
	01/25/05	<50		<0.5		**	-
	01/24/06	<50		<0.5	2	-	-
	01/23/07	INACCESSIBLE - VEHICLE	PARKED OVER W		1-5	*	C++.0
	01/22/08	<50		<0.5	0 <del>+</del> 0	0.00	**
	01/13/09	<50		<0.5	**	*	**
	01/12/10			<0.5	,	-	-
1W-6	07/14/03	SAMPLED ANNUALLY			44	-	_
	01/12/04	<50	· ·	25	-		_
	01/25/05	<50	4	3	-	2	
	01/24/06	<50		<0.5	-	4	_
	01/23/07	<50	-	8			-
	01/22/08	<50	-2.5	4		13	2
	01/13/09	<50	2	6	U	5	- 5
	01/12/10	•		<0.5			7

## Table 2 Groundwater Analytical Results - Oxygenate Compounds

WELL ID	DATE	ETHANOL	TBA	MTBE	DIPE	ETBE	TAME
		(µg/L)	(jug/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-7	07/14/03	<50		20			••
	01/12/04	<50		27			
	07/27/04	<50	••	44	••		**
	01/25/05	<50		34			
	07/26/05	<50	••	19		••	
	01/24/06	<50		18	••		
	07/25/06	<50		19		••	
	01/23/07	<50		15			**
	07/24/07	<50		24	••		
	01/22/08	<50	••	12			
	07/22/08	<50		25	••		
	01/13/09	<50		7		••	
	07/14/09	••		10	••		••
	01/12/10			5			
MW-8	07/14/03	<50		58			
	01/12/04	<50	••	110	••		
	07/27/04	<50	••	89		••	••
	01/25/05	<50		52			
	07/26/05	<50		23			
	01/24/06	<50		31			
	07/25/06	<50		20		••	
	01/23/07	<50		26	••	••	
	07/24/07	<50		30	••	••	
	01/22/08	<50		27			
	07/22/08	<50		21			
	01/13/09	<50		14		••	
	07/14/09	••		10			
	01/12/10			8			

#### Table 2

### Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-1583 5509 Martin Luther King Way 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

 $(\mu g/L)$  = Micrograms per liter

-- = Not Analyzed

#### **ANALYTICAL METHODS:**

EPA Method 8260 for Oxygenate Compounds

#### 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 IWM to Chemical Waste Management located in Kettleman Hills, California.



Cilent/Facility#:	Chevron #9	-1563		Job Number	r: <b>386506</b>		
Site Address:	5509 Martin	Luther	King Way	Event Date:	1-12	-10	— (inclusive)
City:	Oakland, C			Sampler:			_(""0"03146)
					70-		_
Well ID	MW- (			Date Monitored	. ( 12	.10	
Well Diameter	0 (6)	 n.					<b>_</b> ,
Total Depth		<u>:::-</u> t.		olume 3/4"= 0 actor (VF) 4"= 0		2"= 0.17 3"= 0.3	T ]
Depth to Water						6"= 1.50 12"= 5.8	<u> </u>
Boptil to Water	<u> </u>		Official in water col	umn is less then 0.	50 ft.	,	
Depth to Water		XVF_ <u>_&amp;</u> _,	<u> </u>	x3 case volume	= Estimated Purg	ge Volume: 13	gal.
Deptil to water	w/ 60% Recharg	e ((Height of	Water Column x 0.2	0) + DTW]: <u>/ Ø .</u>	7/ Time Sta	erted:	(2400 h-s)
Purge Equipment:			Sampling Equipme	nt•	Time Co	mpleted:	(2400 hrs) (2400 hrs)
Disposable Bailer			Disposable Bailer		Depth to	Product:	ft
Stainless Steel Baile	er —		Pressure Bailer		Depth to	Water:	ft
Stack Pump			Discrete Bailer			rbon Thickness:onfirmation/Description	
Suction Pump		1	Peristaltic Pump		· · · · · · · · · · · · · · · · · · ·		
Grundfos			QED Bladder Pump		Skimmer	/ Absorbant Sock (circ	de one)
Peristaltic Pump		(	Other:		Amt Rem	noved from Skimmer:_ noved from Well:	gal
QED Bladder Pump					Water Re	emoved:	•
Other:	<del></del>				Product 1	Fransferred to:	
Sample Time/Da Approx. Flow Ra Did well de-water  Time (2400 hr.)	Volume (gal.)	gpm.	Sediment	or: <u> </u>		Sampling: 9.  ORP (mV)	46
	212	<del></del>	LABORATORY	INFORMATION			
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPI	E LABORATORY	T	ANALYSES	
MW- /		YES	HCL	LANCASTER	TPH-GRO(8015	)/BTEX+MTBE(8260)	
	x 1 liter ampers	YES	NP	LANCASTER	TPH-MO (8015)		
	<del></del>		<del> </del>	26			
				<del> </del> -	<del></del>		
				<del> </del>	<u> </u>		
COMMENTS:							
Add/Replaced Lo	ock:	Add/i	Replaced Plug: _		Add/Replaced	d Bolt:	



Client/Facility#:	Chevron #9	-1583		Job Number	: 386506		
Site Address:	5509 Martin	Luther	King Way	Event Date:	1-12-1	D (	inclusive)
City:	Oakland, C	A		Sampler:	-50-c		
144							
Well ID	MW-2	_		Date Monitored	1-12-10	<u> </u>	
Well Diameter		<u>n.</u>	Volu		.02 1"= 0.04 2"=	0.17 3"= 0.38	
Total Depth		<u>t.</u>		or (VF) 4"= 0		1.50 12"= 5.80	
Depth to Water	-9.66 f	<u>t</u>	Check if water colu	mn is less then 0.	50 ft.	1	
Depth to Water	<u>₹//8</u>	XVF <u> </u>	Water Column x 0.20	_ x3 case volume	= Estimated Purge Vol	ume: <u>///////</u> c	al.
	w cow recharg	e (Lueight of	vvater Column x 0.20	1+DIVI. 77.59	Time Started:		(2400 hrs)
Purge Equipment:		;	Sampling Equipment	:		ed:	(2400 hrs)
Disposable Bailer		ı	Disposable Bailer		Depth to Produ	r:	ft
Stainless Steel Baile	·	F	Pressure Bailer		Hydrocarbon T		ft ft
Stack Pump			Discrete Bailer			ation/Description:	
Suction Pump	·		Peristaltic Pump	<u> </u>	Chimmer / Al		
Grundfos Peristaltic Pump	<del></del>		QED Bladder Pump		Amt Removed	orbant Sock (circle of from Skimmer:	one) gal
QED Bladder Pump		(	Other:		Amt Removed	from Well:	gal
Other:					Water Remove		
					Product Transfi	errea to:	
Start Time (purge	): 1022	<del></del> -	\\\( 4\\ \)	-1*1.*			
Sample Time/Dat		1-1210	Weather Co	, -	showers		
•		<del>`</del>	***************************************		_Odor: Y / 🕪 _		
Approx. Flow Rat		_gpm	Sediment D	· / —			ti.
Did well de-water	? <u> </u>	yes, Time	: <u>1027</u> Volu	me: <u>6</u>	gal. DTW @ Sam	pling: <u>10.7</u>	2
Time	Makima (c. d.)		Conductivity	Temperature	D.O.	ORP	
(2400 hr.)	Volume (gal.)	pН	(µmhos/cm(-106)	(O/F)	(mg/L)	(mV)	
1026	4	7.33	916	17.6			
1027	6						
		<del></del>					
			LABORATORY IN	FORMATION	<del></del>		
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY		NALYSES	
MW- 'L	x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTE	X+MTBE(8260)	
	x-1 liter ambers	YES	NP.	LANCASTER	TPH-MO (8015)		
	·	*	<del> </del>		<del> </del>	<del></del>	
					<del></del>	<u> </u>	
COMMENTS		<del></del>	<u> </u>			<del></del>	
COMMENTS:	<del></del> -	<del></del>	<u> </u>				
		<del> </del>	<del></del>				
	<del></del>						
Add/Replaced Lo	ok.	A 44 /F	Replaced Plug:		Add/Replaced Boli		



Client/Facility#	Chevron #9	-1583		Job Number:	386506	
Site Address:	5509 Martin	Luther	King Way	Event Date:	1-12-10	(inclusive)
City:	Oakland, C	A		Sampler:	Soe	(\(\text{\text{Moldol}\(\text{VO}\)}\)
Well ID	MW-3				4	
Well Diameter	- A ( # \ )	 in.		Date Monitored:	1-12-10	
Total Depth		ft.	Volui			3"= 0.38
Depth to Water						12*= 5.80
Dopail to Trate!	8.68	<u>.</u>	Check if water column	in is less then 0.5	0 ft. = Estimated Purge Volume:_	13
Depth to Water		e [(Height of	Water Column x 0.20)	+ DTW]:	Estimated Purge Volume:_	70 gal.
					Time Started:	(2400 hrs)
Purge Equipment:			Sampling Equipment:		Time Completed: Depth to Product:	(2400 hrs)
Disposable Bailer Stainless Steet Balle			Disposable Bailer		Depth to Water:	
Stack Pump	"		Pressure Bailer		Hydrocarbon Thickne	ess:ft
Suction Pump			Discrete Bailer Peristaltic Pump		Visual Confirmation/[	Description:
Grundfos	<del></del>		QED Bladder Pump		Skimmer / Absorbant	Sock (circle one)
Peristaltic Pump			Other:		Amt Removed from S	Skimmer: gal
QED Bladder Pump		`			Amt Removed from V	Vell:gal
Other:					Water Removed: Product Transferred t	, o.
Start Time (purge	1100		Weather Co.	nditiona	1 /	
Sample Time/Da	<del></del>	-12-10		,	lovdy	··
Approx. Flow Ra					Odor: Y / (N)	
Did well de-water		_gpm.	Sediment De	·		
Did well de-water	r yes "	f yes, Time	: <i>]105</i> Volui	ne: <u>4</u>	gal. DTW @ Sampling	11.81
Time	/		Conductivity	Temperature	D.O. (	ORP
(2400 hr.)	Volume (gal.)	pН	(µmhos/cm -	(6/F)		mV)
1105	4	6.84	587	17.5	·	•
Cho.	1					·
						<del></del>
					<del></del>	
SAMPLE ID	(#) CONTAINER	REFRIG.	LABORATORY IN PRESERV. TYPE	FORMATION LABORATORY	-	
MW-5	6 x voa vial	YES	HCL		ANALYS TPH-GRO(8015)/BTEX+MT	
	~x 1-liter ambers	YES	NP NP		TPH-MO (8015)	DE(0200)
<u> </u>						
<del></del>						
<del></del>	<del></del>	<del>_</del>				
					<del></del>	
						<del></del>
COMMENTS:						
	**			·	· · · · · · · · · · · · · · · · · · ·	<del></del>
		<del></del>			<del></del>	<del></del>
A-1-15	l		<del></del>	<del></del>	<del></del>	<del></del>
Add/Replaced Lo	ock:	Add/F	Replaced Plug:		Add/Replaced Bolt:	- <del></del>



Client/Facility#:	Chevron #9	-1583		Job Number	: <b>386506</b>	
Site Address:	5509 Martin	Luther	King Way	Event Date:	1-12-10	(inclusive)
City:	Oakland, C	4		Sampler:	Joc	
Well ID Well Diameter Total Depth Depth to Water	MW-4 2)3 i 26.20 f 11.15 f 15.05 w/ 80% Recharg	n. t. xVF Ø e ((Height of	Factorial Check if water column 17 = 2.5	Date Monitored  Jume 3/4"= 0  ctor (VF) 4"= 0  Jumn is less then 0.5  x3 case volume 0) + DTWJ: 1 4./	.:	gal.  (2400 hrs) (2400 hrs) (2400 hrs) ft ft kness: ft n/Description: gal n Welt: gal
QED Bladder Pump Other:					Water Removed:_	ed to:
Start Time (purge Sample Time/Dat Approx. Flow Rat Did well de-water Time (2400 hr.)	te:	gpm. yes, Time pH 7 · 2 5 7 · 3 0 7 · 3 6	Sediment [	Description:  Ume:  Temperature  (D/F)  19.0	Odor: Y / D  gal. DTW @ Sampli  D.O.  (mg/L)	ng: <u>/2 · 6 /</u> ORP (mV)
SAMPLE ID	(#) PONTAINER	REFRIG.	PRESERV TYPE		ANAI	YSES
MW- 4	x voa vial <b>≭1</b> liter ambers	YES YES	HCL NP	LANCASTER -LANCASTER	TPH-GRO(8015)/BTEX+N	
COMMENTS:  Add/Replaced Lo	nok.	A -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	Deplement St.			
varanzehiaren Et	····	Add/F	Replaced Plug: _		Add/Replaced Bolt:	



Client/Facility#	Chevron #9	-1583		Job Number	r: <b>386506</b>		
Site Address:	5509 Martin	Luther	King Way	Event Date:	1-17	-10	– (inclusive)
City:	Oakland, C			Sampler:	<u> </u>		_ (
		78					_
Well ID	MW-5			Date Monitored	1: 1-12	-10	
Well Diameter	(2)13 i	<u>—</u> п.	· [5				<del>~</del>
Total Depth	19.11	<del></del> t.		/olume 3/4"= ( factor (VF) 4"= 0		2"= 0.17 3"= 0.3 6"= t.50 12"= 5.8	
Depth to Water				olumn is less then 0.			<u> </u>
•	10.63		17 = / 8	x3 case volume	50 II.	<u>~</u> ~	
Depth to Water		e ((Height of	Water Column v 0	.20) + DTW]: _/	- Esumated Purge	volume: S - O	_ gal.
,	···· oo io i toonaig	o (i loight of	Trater Column X 0.	20) + D1Wj. <u>- 7 D G</u>	Time Star	ted:	(2400 hrs)
Purge Equipment:			Sampling Equipm	ent:	Time Con	npleted:	(2400 hrs)
Disposable Bailer		1	Disposable Bailer		Depth to I	Product:	ft
Stainless Steel Baile	er	i	Pressure Bailer			Vater:	ft
Stack Pump		1	Discrete Bailer			nfirmation/Description	π
Suction Pump			Peristaltic Pump		<u> </u>		
Grundfos			QED Bladder Pump		Skimmer /	Absorbant Sock (circoved from Skimmer:	le one)
Peristaltic Pump  QED Bladder Pump	<del></del>	(	Other:		Amt Remo	ved from Well:	gal
Other:					Water Rer	noved:	
Otiki	<del></del>				Product Ti	ransferred to:	<del></del>
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate (2400 hr.)	ate: 0805 //	gpm. yes, Time pH 6.87 7./8	Conductivity (µmhos/cm - µs)  8 5 7  8 4 6  8 5 2	Description: Descr			3
SAMPLE ID	(#) CONTAINER	REFRIG.	LABORATORY PRESERV. TYPE	INFORMATION			
MW-	x voa vial	YES	HCL	LANCASTER		ANALYSES BTEX+MTBE(8260)	
	rx-1 liter embers	YES	NP	LANCASTER	TPH-MO (8015)	DIEX MITDE(6200)	
						<del></del>	
	<u>.</u>		ļ				
			<del> </del> -	<del></del>	<del> </del>		
			<del> </del>		<del> </del>		
					<del>                                     </del>		<del> </del>
							<del></del>
COMMENTS: _							<del></del>
Add/Replaced L	ock:	Add/f	Replaced Plug:		Add/Replaced	Bolt:	



Client/Facility#:	Chevron #9	-1583		Job Number	: 386506	
Site Address:	5509 Martin	Luther	King Way	Event Date:	1-12-10	(inclusive)
City:	Oakland, C			Sampler:	For	(mcidsive)
						<del></del>
Well ID	Mw- 6			Date Monitored	: 1-12.10	
Well Diameter	(2)3 i	<u>n.</u>	Volu	me 3/4"= 0.		= 0.38
Total Depth	19.651	<u>t.</u>	1 -111	or (VF) 4"= 0.		= 0.38 = 5.80
Depth to Water	7.925	t. 🛄	Check if water colur	mn is less then 0.5	50 ft.	
		_xVF <u>0</u> ·	17 = 1.99	x3 case volume	= Estimated Purge Volume: 6	gal,
Depth to Water	w/ 80% Rechárg	e [(Height of	Water Column x 0.20)	+ DTWJ: 10.	26	
Purge Equipment:			Rampilna Eaulament		Time Started: Time Completed:	(2400 hrs) (2400 hrs)
Disposable Bailer			<b>Sampiling Equip</b> ment Disposable Bailer		Depth to Product:	(24001lis)
Stainless Steel Baile	, <del></del>		Pressure Bailer		Depth to Water:	ft
Stack Pump	· —		Discrete Bailer		Hydrocarbon Thickness:	ft
Suction Pump	<del></del>		Peristaltic Pump		Visual Confirmation/Descrip	otion:
Grundfos			QED Bladder Pump	<del></del>	Skimmer / Absorbant Sock	(circle one)
Peristaltic Pump			Other:		Amt Removed from Skimme	er: gal
QED Bladder Pump					Amt Removed from Well: Water Removed:	gal
Other:					Product Transferred to:	<del></del>
	2.	<del></del>				
Start Time (purge			Weather Co	nditions:	lowers	
Sample Time/Dat	te: <u>08421/</u>	-12-17	Water Color	:_clear	Odor: Y / 🕦	
Approx. Flow Rat	te:	gpm.	Sediment De	escription:	<del></del>	<del></del>
Did well de-water	? If	yes, Time		_	gal. DTW @ Sampling:	8.59
Time			Conductivity	Temperature		
(2400 hr.)	Volume (gal.)	рН	(µmhos/cm - µS)	( <b>C</b> / F )	D.O. ORP (mg/L) (mV)	
0822	2	7.43	951	110 5	, ,	
0830	4	7.41	427	18.2		<del></del>
0837		7.22	0142	18.2		
		7-70	<del></del>	<del></del>		<del></del> -
						<del></del>
SAMPLE ID.	(#) CONTAINER	REFRIG.	LABORATORY IN PRESERV. TYPE	LABORATORY	I AMALYONA	
MW- G	x voa vial	YES	HCL	LANCASTER	ANALYSES TPH-GRO(8015)/BTEX+MTBE(820	80)
	<del>x 1 liter ambers</del>	YES	NP	LANCASTER	TPH-MO (8645)	50)
					÷:	
			<del> </del>			
COMMENTS:						
_					<del></del>	
				<del></del>	· · · · · · · · · · · · · · · · · · ·	
A -1 1/15		<del></del>				
	ock:	A .1.14	Replaced Plug:		Add/Replaced Bolt:	



Client/Facility#	: Unevron #	9-1583		Job Number	r: <b>386506</b>		
Site Address:	5509 Martin	1 Luther	King Way	Event Date:	1-1	2-10	 (inclusive)
City:	Oakland, C	A		 Sampler:	To		()
				<del></del>			
Well ID	MW- 7	<u> </u>		Date Monitored	d: <u> </u>	2-10	
Well Diameter		in.	· va	olume 3/4"= (	0.02 1"= 0.04	2"= 0.17 3"	'= 0.38
Total Depth	19.45	ft.	Fa	ctor (VF) 4"= (			= 5.80
Depth to Water				umn is less then 0.			
_	8.10	xVF_ <u>_</u> 01	<u> </u>	🔏 x3 case volume	= Estimated Pur	ge Volume: <i>4.</i>	<u>√</u> gal.
Depth to Water	w/ 80% Recharg	JE [(Height of	Water Column x 0.2	0) + DTW]: 12.4			
Purge Equipment:			Camallas Environa		Time St	arted: ompleted:	(2400 hrs) (2400 hrs)
Disposable Bailer			Sampiling Equipme Disposable Bailer	_	Depth to	Product:	ft
Stainless Steel Baile	er ——		Pressure Bailer		Depth to	Water:	ft
Stack Pump			Discrete Bailer			rbon Thickness: onfirmation/Descr	
Suction Pump	-11 11		Peristaltic Pump				
Grundfos		(	QED Bladder Pump		Skimme	r / Absorbant Soci	(circle one)
Peristaltic Pump		(	Other:		Amt Rer	noved from Skimn	ner:gal
QED Bladder Pump					Water R	emoved:	gai
Other:	<del></del>				Product	Transferred to:	
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.) 1/42 1/46 1/5/	ate: 1200 //	gpm. f yes, Time pH 6.70	Water Col Sediment Vo Conductivity (µmhos/cm -05)	18.6		N Mo	12.05
SAMPLE ID	(#) CONTAINER	REFRIG.	LABORATORY PRESERV. TYPE				
MW- 7	6 x voa vial		HCL	LANCASTER		ANALYSES 5)/BTEX+MTBE(82	260)
	2 x 1 liter ambers		NP	LANCASTER	TPH-MO (8015		
<u> </u>		ļ	ļ	<del></del>			
<del></del>	<del></del>	<del></del>	<del> </del>	<del></del>	<del>                                     </del>	<del></del>	
				<del> </del>	<del>                                       </del>		<del></del>
							<del></del>
COMMENTS:							
Add/Replaced L	ock:	Add/f	Replaced Plug: _		Add/Replace	d Boit:	



Client/Facility#:	Chevron #9	<u>-1583</u>		Job Number	r: <b>386506</b>	
Site Address:	5509 Martir	Luther	King Way	Event Date:	1-12-10	(inclusive)
City:	Oakland, C.	A		Sampler:	Fre	(,
		- 13				
Weli iD		<del></del>		Date Monitored	1: 1-12-10	
Well Diameter	(2)13	in.	Volu	me 3/4"= 0	0.02 t"= 0.04 2"= 0.17	3"= 0.38
Total Depth		ft	Fact	or (VF) 4"= 0		3 = 0.38 2"≈ 5.80
Depth to Water	10.45	<u>t.</u>	Check if water colur	nn is less then 0.	50 ft.	-1.
	6.65	xVF <u></u>	<u>.17 = 1.13</u>	x3 case volume	= Estimated Purge Volume: 3.	gal.
Depth to Water	w/ 80% Recharg	e [(Height of	Water Column x 0.20)	+ DTWJ: //, 1	8 Time Started	
Purge Equipment:			Sampling Equipment	•	Time Started: Time Completed:	(2400 hrs)
Disposable Bailer			Disposable Bailer		Depth to Product:	ft
Stainless Steel Baile			Pressure Bailer		Depth to Water:	
Stack Pump			Discrete Bailer		Hydrocarbon Thickness: Visual Confirmation/Desc	ft
Suction Pump		1	Peristaltic Pump		<u> </u>	
Grundfos			QED Bladder Pump		Skimmer / Absorbant Soc	ck (circle one)
Peristaltic Pump		(	Other:		Amt Removed from Skim Amt Removed from Well:	imer:gal
QED Bladder Pump Other:					Water Removed:	
Other	<del></del> -				Product Transferred to:	
Approx. Flow Ra Did well de-wate  Time (2400 hr.)  12/6  /220		gpm.	Sediment De	escription:	gal. DTW @ Sampling: _ D.O. ORP (mg/L) (mV)	
			LABORATORY IN	FORMATION		
SAMPLE ID	(#) CONTAINER  x voa vial	REFRIG.	PRESERV. TYPE	LABORATORY		
IVIVV- D	x voa viai	YES YES	HCL NP	LANCASTER LANCASTER	TPH-GRO(8015)/BTEX+MTBE(I	8260)
		120	- 10	LANCASTER	TETT-NO (8015)	
			-			
COMMENTS:						
Add/Replaced L	ock:	Add/l	Replaced Plug:		Add/Replaced Bolt:	

## Chevron California Region Analysis Request/Chain of Custody



011210-02

Acct. # 12099

For Lancaster Laboratories use only Sample # 5863136-45

Group # 019497

	i Proj	ect	<b>#</b> 61	H-19	60				A	naly	808	Re	que	stec	1			IG	#//	7855	7		
Facility #: SS#9-1583 G-R#386506 GI	obal ID#T060			T	Matri					_	P	res	erva	tior	ı Co	des				Ť	Prese	rvative Co	dea
Site Address:5509 MARTIN LUTHER KING							1	X	H			]	$\neg$			Щ				H=I	HCI	T = Thi	osulfate
Chevron PM:MTI Lead			<del></del>	╁	1	7-				TPH 8015 MOD DRO 🗌 SINCE Gel Cleanup		- }			}	]					HNO₃ H₂SO₄	6 = Na 0 = Ot	
Consultant/Office: G-R, Inc., 6747 Sierra Co			94568	-[	9 0	2	8			힣		Ų	H	ļ								orting need	
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Lancaster Laboratories, Inc., 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 (717) 636-2400 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the offent.



12425, Lancesler, PA 17605-2425 - 717-656-2500 Ferr 717-656-2661 - www.lancesterlebs.com

ANALYTICAL RESULTS RECEIVED

Prepared for:

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

GETTLER-RYAN INC.

JAN 26 2010

916-677-3407

Prepared by:

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

January 25, 2010

Project: 91583

Samples arrived at the laboratory on Thursday, January 14, 2010. The PO# for this group is 91583 and the release number is MTI. The group number for this submittal is 1178557.

Client Sample Description	Lancaster Labs (LLI) #
MW-1-W-100112 Grab Water	5883138
MW-2-W-100112 Grab Water	5883139
MW-3-W-100112 Grab Water	5883140
MW-4-W-100112 Grab Water	5883141
MW-5-W-100112 Grab Water	5883142
MW-6-W-100112 Grab Water	5883143
MW-7-W-100112 Grab Water	5883144
MW-8-W-100112 Grab Water	5883145

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: Cheryl Hansen



2425 New Holland Piles, PO Box 12425, Lancasier, PA 17605-2425 \*717-656-2500 Fext.717-656-2661 \* www.lancesterlabs.com

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

Respectfully Submitted,

Robin C. Runkle Senior Specialist

Pala Chi



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Page 1 of 1

Sample Description: MW-1-W-100112 Grab Water

Facility# 91583 Job# 386506 MTI# 61H-1960 GRD

5509 Martin Luther King-Oa T0600100348 MW-1

LLI Sample # WW 5883138 LLI Group # 1178557

CA

Project Name: 91583

Collected: 01/12/2010 10:10

by JA

Account Number: 12099

Submitted: 01/14/2010 09:20

Chevron c/o CRA

Reported: 01/25/2010 at 18:07

Suite 110

Discard: 02/25/2010

2000 Opportunity Drive Roseville CA 95678

MLO01

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	
06054	Benzene	71-43-2	N.D.	0.5	1
06054	Ethylbenzene	100-41-4	N.D.	0.5	1
06054	Methyl Tertiary Butyl Ether	1634-04-4	15	0.5	1
06054	Toluene	108-88-3	N.D.	0.5	1
06054	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	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution
06054 01146	GC/MS VOA Water Prep BTEX+MTBE 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	P100181AA P100181AA 10018A94A 10018A94A	01/18/2010 16:55 01/18/2010 16:55 01/18/2010 17:21 01/18/2010 17:21	Daniel H Heller Daniel H Heller Marie D John Marie D John	Pactor 1 1 1 1



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Page 1 of 1

Sample Description: MW-2-W-100112 Grab Water

Facility# 91583 Job# 386506 MTI# 61H-1960 GRD

5509 Martin Luther King-Oa T0600100348 MW-2

LLI Sample # WW 5883139 LLI Group # 1178557

CA

Project Name: 91583

Collected: 01/12/2010 10:43

by JA

Account Number: 12099

Submitted: 01/14/2010 09:20

Chevron c/o CRA Suite 110

Reported: 01/25/2010 at 18:07

2000 Opportunity Drive

Discard: 02/25/2010

Roseville CA 95678

MLO02

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	
06054	Benzene	71-43-2	N.D.	0.5	1
06054	Ethylbenzene	100-41-4	N.D.	0.5	ī
06054	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
06054	Toluene	108-88-3	N.D.	0.5	1
06054	Xylene (Total)	1330-20-7	N.D.	0.5	ī
GC Vol	atiles 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	Method	Trial#	Batch#	Analysis Dete and Time	Analyst	Dilution Factor
06054 01146	GC/MS VOA Water Prep BTEX+MTBE 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	P100181AA P100181AA 10018A94A 10018A94A	01/18/2010 17:17 01/18/2010 17:17 01/18/2010 17:48 01/18/2010 17:48	Daniel H Heller Daniel H Heller Marie D John Marie D John	1 1 1 1



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Page 1 of 1

Sample Description: MW-3-W-100112 Grab Water

Facility# 91583 Job# 386506 MTI# 61H-1960 GRD

5509 Martin Luther King-Oa T0600100348 MW-3

LLI Sample # WW 5883140 LLI Group # 1178557

CA

Project Name: 91583

Collected: 01/12/2010 11:25

by JA

Account Number: 12099

Submitted: 01/14/2010 09:20

Reported: 01/25/2010 at 18:07

Discard: 02/25/2010

Chevron c/o CRA

Suite 110

2000 Opportunity Drive Roseville CA 95678

MLO03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	u <b>g/1</b>	ug/l	
06054	Benzene	71-43-2	N.D.	0.5	1
06054	Ethylbenzene	100-41-4	N.D.	0.5	1
06054	Methyl Tertiary Butyl Ether	1634-04-4	14	0.5	ī
06054	Toluene	108-88-3	N.D.	0.5	1
06054	Xylene (Total)	1330-20-7	N.D.	0.5	ī
GC Vol	atiles SW-846	8015B	ug/l	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	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06054 01146	GC/MS VOA Water Prep BTEX+MTBE 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	P100181AA P100181AA 10018A94A 10018A94A	01/18/2010 17:40 01/18/2010 17:40 01/18/2010 18:15 01/18/2010 18:15	Daniel H Heller Daniel H Heller Marie D John Marie D John	1 1 1 1



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Page 1 of 1

Sample Description: MW-4-W-100112 Grab Water

Facility# 91583 Job# 386506 MTI# 61H-1960 GRD

5509 Martin Luther King-Oa T0600100348 MW-4

LLI Sample # WW 5883141 LLI Group # 1178557

CA

Project Name: 91583

Collected: 01/12/2010 09:18

by JA

Account Number: 12099

Submitted: 01/14/2010 09:20

Reported: 01/25/2010 at 18:07

Discard: 02/25/2010

Chevron c/o CRA

Suite 110

2000 Opportunity Drive Roseville CA 95678

MLO04

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	
06054	Benzene	71-43-2	N.D.	0.5	,
06054	Ethylbenzene	100-41-4	N.D.	0.5	1
06054	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
06054	Toluene	108-88-3	N.D.	0.5	1
06054	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Vol	atiles SW-846	8015B	ug/1	u <b>g/1</b>	
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	Method	Trial#	Batch#	Analysis	Analyst	Dilution
01163 06054 01146	GC/MS VOA Water Prep BTEX+MTBE 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	F100153AA F100153AA 10018A94A 10018A94A	Date and Time 01/16/2010 02:15 01/16/2010 02:15 01/18/2010 18:42 01/18/2010 18:42	Kelly E Keller Kelly E Keller Marie D John Marie D John	Factor 1 1 1 1



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Page 1 of 1

Sample Description: MW-5-W-100112 Grab Water

Facility# 91583 Job# 386506 MTI# 61H-1960 GRD

5509 Martin Luther King-Oa T0600100348 MW-5

LLI Sample # WW 5883142

LLI Group # 1178557

CA

Project Name: 91583

Collected: 01/12/2010 08:05

by JA

Account Number: 12099

Submitted: 01/14/2010 09:20

Chevron c/o CRA Suite 110

Reported: 01/25/2010 at 18:07

Discard: 02/25/2010

2000 Opportunity Drive Roseville CA 95678

MLO05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	u <b>g/1</b>	
06054	Benzene	71-43-2	N.D.	0.5	1
06054	Ethylbenzene	100-41-4	N.D.	0.5	1
06054	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
06054	Toluene	108-88-3	N.D.	0.5	1
06054	Xylene (Total)	1330-20-7	N.D.	0.5	i
GC Vol	atiles SW-846	8015B	ug/l	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	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
No.					Date and Time	Amous you C	Pactor
	GC/MS VOA Water Prep	SW-846 5030B	1	F100222AA	01/22/2010 14:09	Anita M Dale	1
	BTEX+MTBE by 8260B	SW-846 8260B	1	P100222AA	01/22/2010 14:09	Anita M Dale	ī
	GC VOA Water Prep	SW-846 5030B	1	10018A94A	01/18/2010 19:09	Marie D John	1
01/28	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10018A94A	01/18/2010 19:09	Marie D John	1



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Page 1 of 1

Sample Description: MW-6-W-100112 Grab Water

Facility# 91583 Job# 386506 MTI# 61H-1960 GRD

5509 Martin Luther King-Oa T0600100348 MW-6

LLI Sample # WW 5883143 LLI Group # 1178557

C3.

Project Name: 91583

Collected: 01/12/2010 08:42

by JA

Account Number: 12099

Submitted: 01/14/2010 09:20

Chevron c/o CRA

Reported: 01/25/2010 at 18:07

Suite 110

Discard: 02/25/2010

2000 Opportunity Drive Roseville CA 95678

MLO06

CAT No.	Anelysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Pactor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
06054	Benzene	71-43-2	N.D.	0.5	1
06054	Ethylbenzene	100-41-4	N.D.	0.5	1
06054	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ī
06054	Toluene	108-88-3	N.D.	0.5	ī
06054	Xylene (Total)	1330-20-7	N.D.	0.5	ī
GC Vol	atiles SW-846	8015B	ug/l	ug/1	
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	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Pactor
06054 01146	GC/MS VOA Water Prep BTEX+MTBE 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	F100153AA F100153AA 10018A94A 10018A94A	01/16/2010 02:58 01/16/2010 02:58 01/18/2010 19:36 01/18/2010 19:36	Kelly E Keller Kelly E Keller Marie D John Marie D John	1 1 1



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Page 1 of 1

Sample Description: MW-7-W-100112 Grab Water

Facility# 91583 Job# 386506 MTI# 61H-1960 GRD

5509 Martin Luther King-Oa T0600100348 MW-7

LLI Sample # WW 5883144

LLI Group # 1178557 CA

Project Name: 91583

Collected: 01/12/2010 12:00

by JA

Account Number: 12099

Submitted: 01/14/2010 09:20

Chevron c/o CRA Suite 110

Reported: 01/25/2010 at 18:07

2000 Opportunity Drive

Discard: 02/25/2010

Roseville CA 95678

MLO07

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	u <b>g/1</b>	ug/l	
06054	Benzene		71-43-2	N.D.	0.5	1
06054	Ethylbenzene		100-41-4	N.D.	0.5	1
06054	Methyl Tertiary Buty	yl Ether	1634-04-4	5	0.5	1
06054	Toluene		108-88-3	N.D.	0.5	1
06054	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Vol	atiles	SW-846	8015B	ug/l	ug/1	
01728	TPH-GRO N. CA water	C6-C12	n.a.	N.D.	50	1
GC Ext	ractable TPH	SW-846	8015B modified	ug/l	ug/1	
02500	Total TPH		n.a.	1,500	39	1
02500	TPH Motor Oil C16-C3		n.a.	1,500	39	1
that	uantitation is based of a hydrocarbon com -octane) through C40	ponent mi	x calibration in a	range that includes	to 3	-

#### 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	F100153AA	01/16/2010 03:20	Kelly E Keller	1
	BTEX+MTBE by 8260B	SW-846 8260B	1	F100153AA	01/16/2010 03:20	Kelly E Keller	1
	GC VOA Water Prep	SW-846 5030B	1	10018A94A	01/18/2010 20:03	Marie D John	1
	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10018A94A	01/18/2010 20:03	Marie D John	1
07003		SW-846 3510C	1	100140016A	01/15/2010 10:25	Olivia I Santiago	1
02500	TPH Fuels by GC (Waters)	SW-846 8015B modified	1	100140016A	01/18/2010 20:17	Heather E Williams	



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Sample Description: MW-8-W-100112 Grab Water

Facility# 91583 Job# 386506 MTI# 61H-1960 GRD

5509 Martin Luther King-Oa T0600100348 MW-8

LLI Sample # WW 5883145 LLI Group # 1178557

Project Name: 91583

Collected: 01/12/2010 12:35

by JA

Account Number: 12099

Submitted: 01/14/2010 09:20

Reported: 01/25/2010 at 18:07

Discard: 02/25/2010

Chevron c/o CRA

Suite 110

2000 Opportunity Drive Roseville CA 95678

MLO08

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Pactor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	
06054	Benzene		71-43-2	N.D.	0.5	1
06054	Ethylbenzene		100-41-4	N.D.	0.5	1
06054	Methyl Tertiary But	yl Ether	1634-04-4	8	0.5	1
06054	Toluene		108-88-3	N.D.	0.5	1
06054	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Vol	atiles	SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	370	50	1
GC Ext	ractable TPH	SW-846	8015B modified	ug/l	ug/l	
02500	Total TPH		n.a.	100	40	1
02500	TPH Motor Oil C16-C3	36	n.a.	100	40	1
that	puantitation is based of a hydrocarbon com n-octane) through C40	mponent mi	x calibration in a	the sample pattern to range that includes rocarbons.		*

#### 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	F100153AA	01/16/2010 03:41	Kelly E Keller	1
	BTEX+MTBE by 8260B	SW-846 8260B	1	F100153AA	01/16/2010 03:41		1
01146	GC VOA Water Prep	SW-846 5030B	1	10018A94A	01/18/2010 20:30	Marie D John	ī
	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10018A94A	01/18/2010 20:30	Marie D John	1
07003	Extraction - DRO (Waters)	SW-846 3510C	1	100140016A	01/15/2010 10:25	Olivia I Santiago	ī
02500	TPH Fuels by GC (Waters)	SW-846 8015B	1	100140016A	01/18/2010 19:53	Heather E Williams	



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### Quality Control Summary

Client Name: Chevron c/o CRA Reported: 01/25/10 at 06:07 PM Group Number: 1178557

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 Result	Blank MDL	Report Units	LCS NREC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: F100153AA	Sample num	mber(s): 58	83141.5883	143-5883	145			
Benzene	N.D.	0.5	ug/l	88		79-120		
Ethylbenzene	N.D.	0.5	ug/l	91		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	89		76-120		
Toluene	N.D.	0.5	ug/l	91		79-120		
Xylene (Total)	N.D.	0.5	ug/l	93		80-120		
Batch number: F100222AA	Sample num	ber(s): 58	83142					
Benzene	N.D.	0.5	ug/l	97	93	79-120	4	30
Ethylbenzene	N.D.	0.5	ug/l	98	94	79-120	5	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	97	100	76-120	2	30
Toluene	N.D.	0.5	ug/l	98	94	79-120	4	30
Xylene (Total)	N.D.	0.5	ug/1	99	95	80-120	4	30
Batch number: P100181AA	Sample num	ber(s): 58	33138-5883	140				
Benzene	N.D.	0.5	ug/l	96	95	79-120	0	30
Ethylbenzene	N.D.	0.5	ug/l	95	95	79-120	ŏ	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/1	103	103	76-120	ŏ	30
Toluene	N.D.	0.5	uq/l	98	98	79-120	ŏ	30
Xylene (Total)	N.D.	0.5	ug/l	97	97	80-120	ō	30
Batch number: 10018A94A	Sample num	ber(s): 588	33138-5883	145				
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	118	118	75-135	0	30
Batch number: 100140016A	Sample num	ber(s): 588	33144-5883	145				
Total TPH	N.D.	40.	ug/l	79	85	60-120	8	20
TPH Motor Oil C16-C36	N.D.	40.	ug/l				~	

#### 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 REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP <u>Conc</u>	DUP RPD	Dup RPD
Batch number: F100153AA Benzene	Sample 1 -114 (2)	number(s) -25 (2)		,588314 12	3-5883 30	145 UNSPK:	P882265		
Ethylbenzene Methyl Tertiary Butyl Ether Toluene	-30 (2) 156* -453 (2)	36 (2) 160* -206	71-134 72-126 80-125	11 1 8	30 30 30				
Xylene (Total)	-89 (2)	(2) 27 (2)	79-125	11	30	15			

#### \*- 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: 01/25/10 at 06:07 PM

Group Number: 1178557

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	ns <del>\rec</del>	MSD BREC	MS/MSD Limits	RPD	RPD <u>MAX</u>	BKG Conc	DUP <u>Conc</u>	DUP RPD	Dup RPD Max
Batch number: F100222AA	Sample	number (s)	: 5883142	UNSPK .	P8844	59			
Benzene	101		80-126						
Ethylbenzene	102		71-134						
Methyl Tertiary Butyl Ether	95		72-126						
Toluene	101		80-125						
Xylene (Total)	101		79-125						
Batch number: P100181AA	Sample	number(s)	: 5883138	-588314	O UNSPI	C+ P883099			
Benzene	106		80-126		• • • • • • • • • • • • • • • • • • • •	2003033			
Ethylbenzene	105		71-134						
Methyl Tertiary Butyl Ether	106		72-126						
Toluene	107		80-125						
Xylene (Total)	107		79-125						
Batch number: 10018A94A	Sample	number(s)	: 5883138	-58831 <i>4</i>	5 MNCDI	r. D002122			
TPH-GRO N. CA water C6-C12	104		63-154	200314	2 OMSE1				

#### 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+MTBE by 8260B

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5883141	91	91	92	105
5883143	94	92	89	102
5883144	88	89	87	99
5883145	89	90	89	103
Blank	93	92	90	103
LCS	90	90	90	103
MS	92	93	89	101
MSD	94	93	91	103
Limits:	80-116	77-113	80-113	78-113
	Jame: BTEX+MTBE by 8260B Der: F100222AA			
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5883142	90	90	93	101
Blank	91	91	92	99
LCS	91	88	92	103
LCSD	93	92	92	103
MS	90	88	91	100
Limits:	80-116	77-113	80-113	78-113

#### \*- Outside of specification

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



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#### Quality Control Summary

Client Name: Chevron c/o CRA Reported: 01/25/10 at 06:07 PM Group Number: 1178557

Surrogate Quality Control

Analysis Name: BTEX+MTBE by 8260B Batch number: P100181AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzer
5883138	91	90	89	87
5883139	91	88	89	86
5883140	91	88	90	88
Blank	91	88	90	87
LCS	91	89	91	89
LCSD	91	91	91	89
MS	91	91	90	87
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12 Batch number: 10018A94A Trifluorotoluene-F

5883138	84	
5883139	85	
5883140	85	
5883141	85	
5883142	85	
5883143	85	
5883144	85	
5883145	88	
Blank	86	
LCS	100	
LCSD	98	
MS	96	
Limits:	63-135	

Analysis Name: TPH Fuels by GC (Waters)

Chlorobenzene

Batch number: 100140016A

5883144	56	66	
5883145	80	86	
Blank	72	78	
LCS	68	92	
LCSD	77	97	
Limits:	28-152	52-131	

Orthoterphenvl

#### \*- Outside of specification

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> 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:

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

- less than The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.
- greater than
- 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 ppm 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.

inorganic Qualifiers

- parts per billion ppb
- 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. Dry weight basis

### U.S. EPA data qualifiers:

### Organic Qualifiers

#### Value is <CRDL, but ≥IDL TIC is a possible aldol-condensation product В Estimated due to interference Analyte was also detected in the blank Ε Duplicate injection precision not met Pesticide result confirmed by GC/MS M Spike amount not within control limits C Compound quatitated on a diluted sample N Method of standard additions (MSA) used Concentration exceeds the calibration range of E for calculation Compound was not detected the instrument U Post digestion spike out of control limits Estimated value Presumptive evidence of a compound (TICs only) Duplicate analysis not within control limits Concentration difference between primary and Correlation coefficient for MSA < 0.995 confirmation columns >25%

Compound was not detected

Defined in case narrative

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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