



James P. Kiernan, P.E.
Project Manager

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July 15, 2016

Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

RECEIVED

By Alameda County Environmental Health 10:17 am, Oct 13, 2016

Re: Unocal No. 5781 (351640)
Second Quarter 2016 Groundwater Monitoring Report
3535 Pierson Street, Oakland, California
Fuel Leak Case No.: RO0000253
GeoTracker Global ID #T0600101467

I have reviewed the attached report dated July 15, 2016.

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 Arcadis, upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13257(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

James P. Kiernan, P.E.
Project Manager

Attachment: Second Quarter 2016 Groundwater Monitoring Report by Arcadis

**QUARTERLY STATUS REPORT
Second Quarter 2016
July 15, 2016**

| | | | |
|-------------------------------------|--|----------|---|
| Facility No: | <u>Unocal #5781</u> | Address: | <u>3535 Pierson Street, Oakland, CA</u> |
| Arcadis Contact Person / Phone No.: | <u>Tamera Rogers</u> | | |
| Arcadis Project No.: | <u>B0035135.1640</u> | | |
| Primary Agency/Regulatory ID No.: | <u>Alameda County LOP Case # RO0000253: Keith Nowell / San Francisco Bay RWQCB (Region 2) – Case # 01-1592</u> | | |

WORK CONDUCTED THIS QUARTER [Second Quarter 2016]

1. Conducted quarterly groundwater monitoring activities on June 22, 2016.
2. Prepared the *Quarterly Status Report, Second Quarter 2016*.

WORK PROPOSED NEXT QUARTER [Third Quarter 2016]:

1. Conduct quarterly groundwater monitoring activities.
2. Prepare the Quarterly Status Report, Third Quarter 2016.

| | | |
|--|------------------------------|-----------------------------|
| Current Phase of Project: | <u>Monitoring/assessment</u> | |
| Frequency of Monitoring / Sampling: | <u>Quarterly</u> | |
| Are Phase Separate Hydrocarbons (PSH) Present On-site: | <u>No</u> | |
| Cumulative PSH Recovered to Date: | <u>0</u> | (gallons) |
| Approximate Depth to Groundwater: | <u>11.50 to 15.48</u> | (feet below top of casing) |
| Approximate Groundwater Elevation: | <u>139.31 to 143.12</u> | (feet above mean sea level) |
| Groundwater Flow Direction | <u>South to southwest</u> | |
| Groundwater Gradient | <u>0.02</u> | (foot per foot) |
| Current Remediation Techniques: | <u>None</u> | |

| | |
|--------------------------------|------|
| Permits for Discharge: | N/A |
| Summary of Unusual Activity: | N/A |
| Agency Directive Requirements: | None |

DISCUSSION

Gettler- Ryan, Inc. (G-R) conducted quarterly groundwater monitoring activities on June 22, 2016. Field data sheets and general procedures are included as Attachment A. Seven (7) monitoring wells were gauged, purged, and sampled by G-R representatives.


Groundwater samples were submitted to BC Laboratories, Inc. of Bakersfield, California under standard chain-of-custody protocols. Gauging and analytical data obtained by G-R for this event are summarized in Table 1. Historical gauging and analytical data for the site are summarized in Table 2 and Table 3 (Attachment B). The site location and layout are presented on Figures 1 and 2, respectively; the groundwater elevation contours for the site on June 22, 2016 are presented on Figure 3. Isoconcentration contours for total petroleum hydrocarbons as gasoline (TPHg), benzene, methyl tert-butyl ether (MTBE) and tertiary butyl alcohol (TBA) are presented on Figures 4 through 7, respectively. A copy of the laboratory analytical report and chain-of-custody documentation are included as Attachment C.



The direction of groundwater flow and calculated gradient were generally consistent with previous monitoring events. Groundwater analytical results were generally similar to previous events. Petroleum hydrocarbons were generally only detected in well MW-5, consisting of total petroleum hydrocarbons as diesel (TPH-d) (750 µg/L), TPH-g (1,600 µg/L), benzene (0.55 µg/L), ethylbenzene (8.6 µg/L), total xylenes (2.3 µg/L), and MTBE (3.3 µg/L). The current TPH-d, TPH-g, ethylbenzene, and xylenes concentrations were the lowest to date in this well. A low concentration of MTBE (0.97 µg/L) was detected in well MW-8. No other constituents of concern (COCs) were detected above laboratory reporting limits in any of the wells during this sampling event.

Residual dissolved impacts are primarily limited to one well (MW-5) and overall are declining. Arcadis recommends continued quarterly monitoring activities to further evaluate groundwater quality and concentration trends. The previously discussed additional delineation to the east of the site is also being evaluated.

LIMITATIONS

This report was prepared in accordance with the scope of work outlined in Arcadis' contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of Chevron Environmental Management Company's affiliate, Union Oil Company of California ("Union Oil"), for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Arcadis. To the extent that this report is based on information provided to Arcadis by third parties, Arcadis may have made efforts to verify this third party information, but Arcadis cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by Arcadis.

Prepared By:  Date: July 15, 2016
Tamera Rogers, Project Geologist

Reviewed By:  Date: July 15, 2016

Russ Greisler, P.G. 9332
Project Geologist

ATTACHMENTS:

| | |
|--------------|---|
| Table 1 | Current Groundwater Gauging and Analytical Results |
| Table 2 | Historical Groundwater Gauging and Analytical Results, Fourth Quarter 1990 to Current |
| Figure 1 | Site Location Map |
| Figure 2 | Site Plan |
| Figure 3 | Groundwater Elevation Map, June 22, 2016 |
| Figure 4 | TPHg Isoconcentration Map, June 22, 2016 |
| Figure 5 | Benzene Isoconcentration Map, June 22, 2016 |
| Figure 6 | MTBE Isoconcentration Map, June 22, 2016 |
| Figure 7 | TBA Isoconcentration Map, June 22, 2016 |
| Attachment A | Field Data Sheets and General Procedures |
| Attachment B | Historical Groundwater Analytical Data |
| Attachment C | Laboratory Report and Chain-of-Custody Documentation |

TABLES



Table 1. Current Groundwater Gauging and Analytical Results

Union Oil of California
 Unocal No. 5781 (351640)
 3535 Pierson Street
 Oakland, California

| Well ID | Sample Date | TOC (ft amsl) | DTW (ft bTOC) | PSH thickness (ft) | PSH recovered (gal) | GW Elev (ft amsl) | TPHd (µg/L) | TPHg (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE (µg/L) | TBA (µg/L) | EDB (µg/L) | EDC (µg/L) | DIPE (µg/L) | ETBE (µg/L) | TAME (µg/L) | Ethanol (µg/L) | |
|---------|-------------|---------------|---------------|--------------------|---------------------|-------------------|-------------|--------------|----------------|----------------|----------------------|----------------------|-------------|------------|------------|------------|-------------|-------------|-------------|----------------|------|
| MW-A | 6/22/2016 | 154.79 | 15.48 | 0.00 | 0.00 | 139.31 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 |
| MW-4 | 6/22/2016 | 153.48 | 12.05 | 0.00 | 0.00 | 141.43 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 |
| MW-5 | 6/22/2016 | 153.66 | 12.35 | 0.00 | 0.00 | 141.31 | 750 | 1,600 | 0.55 | <0.50 | 8.6 | 2.3 | 3.3 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 |
| MW-6 | 6/22/2016 | 154.62 | 11.50 | 0.00 | 0.00 | 143.12 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 |
| MW-7 | 6/22/2016 | 155.38 | 14.20 | 0.00 | 0.00 | 141.18 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 |
| MW-8 | 6/22/2016 | 153.71 | 12.32 | 0.00 | 0.00 | 141.39 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.97 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 |
| MW-9 | 6/22/2016 | 153.37 | 11.92 | 0.00 | 0.00 | 141.45 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 |
| QA | 6/22/2016 | -- | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 |

Notes:

MW = Groundwater monitoring well
 TOC = Top of casing
 ft amsl = Feet above mean sea level
 DTW = Depth to groundwater
 ft bTOC = Feet below top of casing
 PSH = Phase separate hydrocarbons
 ft = Feet
 gal = Gallons
 GW Elev = Groundwater elevation
 µg/L = Micrograms per liter
Bold = Value exceeds laboratory reporting limits
 <0.50 = Not detected at or above the stated laboratory detection limit
 DRY = Dry well
 -- = Not sampled

TPHd = Total petroleum hydrocarbons, diesel range by LUFT GC/MS according to Environmental Protection Agency (EPA) Method 8260B
 TPHg = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to Environmental Protection Agency (EPA) Method 8260B
 Analytes according to Environmental Protection Agency (EPA) Method 8260B:
 Benzene, toluene, ethylbenzene and total xylenes (collectively BTEX)
 MTBE = Methyl tert-butyl ether
 TBA = Tert-butanol or tertiary butyl alcohol
 EDB = 1,2-Dibromoethane
 EDC = 1,2-Dichloroethane
 DIPE = Di-isopropyl ether
 ETBE = Ethyl tert-butyl ether
 TAME = Tert-amyl methyl ether
 Ethanol
 J = Estimated value (between laboratory reporting limit and method detection limit)
 * = Insufficient water to sample

**Table 2. Historical Groundwater Gauging and Analytical Results
Fourth Quarter 1990 to Current**
Union Oil of California
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

| Well ID | Sample Date | TOC (ft amsl) | DTW (ft bTOC) | PSH thickness (ft) | PSH recovered (gal) | GW Elev (ft amsl) | TPHd (µg/L) | TPHg (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) | MTBE (µg/L) | TBA (µg/L) | EDB (µg/L) | EDC (µg/L) | DIPE (µg/L) | ETBE (µg/L) | TAME (µg/L) | Ethanol (µg/L) | Comments | |
|---------|-------------|---------------|---------------|--------------------|---------------------|-------------------|-------------|-------------|----------------|----------------|---------------------|----------------------|-------------|------------|------------|------------|-------------|-------------|-------------|----------------|----------|------------|
| MW-A | 12/18/1990 | -- | -- | -- | -- | -- | 73 | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 5/3/1991 | -- | -- | -- | -- | -- | ND | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 8/7/1991 | -- | -- | -- | -- | -- | ND | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 11/8/1991 | -- | -- | -- | -- | -- | ND | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 2/6/1992 | 151.80 | 19.88 | 0 | 0 | 131.92 | ND | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 8/4/1992 | 151.80 | 18.95 | 0 | 0 | 132.85 | ND | ND | ND | ND | ND | 0.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 2/10/1993 | 151.80 | 17.71 | 0 | 0 | 134.09 | ND | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 2/10/1994 | 151.80 | 15.25 | 0 | 0 | 136.55 | ND | ND | ND | 0.52 | ND | 0.92 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 2/9/1995 | 151.80 | 15.68 | 0 | 0 | 136.12 | ND | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 2/6/1996 | 151.80 | 12.52 | 0 | 0 | 139.28 | 120 | ND | ND | ND | ND | 2.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 2/5/1997 | 151.80 | 13.01 | 0 | 0 | 138.79 | 61 | ND | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 2/2/1998 | 151.80 | 11.91 | 0 | 0 | 139.89 | ND | ND | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 2/22/1999 | 151.80 | 11.24 | 0 | 0 | 140.56 | ND | ND | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 2/26/2000 | 151.80 | 12.16 | 0 | 0 | 139.64 | ND | ND | ND | 1.01 | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 3/7/2001 | 151.80 | 11.91 | 0 | 0 | 139.89 | 131 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 2/22/2002 | 151.80 | 14.08 | 0 | 0 | 137.72 | <50 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 2/22/2003 | 151.80 | 14.41 | 0 | 0 | 137.39 | 93 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.0 | <10 | <2.0 | <0.50 | <2.0 | <0.50 | <2.0 | <2.0 | <500 | |
| | 2/3/2004 | 151.80 | 14.32 | 0 | 0 | 137.48 | 60 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.0 | <5.0 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <50 | |
| | 2/18/2005 | 151.80 | 14.21 | 0 | 0 | 137.59 | <50 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 3/29/2006 | 151.80 | 12.72 | 0 | 0 | 139.08 | <200 | <50 | <0.30 | <0.30 | <0.30 | <0.60 | 0.54 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 3/28/2007 | 151.80 | 13.98 | 0 | 0 | 137.82 | 92 | <50 | <0.30 | <0.30 | <0.30 | <0.60 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 3/22/2008 | 151.80 | 12.68 | 0 | 0 | 139.12 | <50 | <50 | <0.30 | <0.30 | <0.30 | <0.60 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 3/27/2009 | 151.80 | 14.35 | 0 | 0 | 137.45 | 53 | <50 | <0.30 | <0.30 | <0.30 | <0.60 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 3/23/2010 | 151.80 | 19.55 | 0 | 0 | 132.25 | <58 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 6/16/2010 | 154.79 | 17.85 | 0 | 0 | 136.94 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 9/29/2010 | 154.79 | 15.50 | 0 | 0 | 139.29 | <1200 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.63 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 12/21/2010 | 154.79 | 14.43 | 0 | 0 | 140.36 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.65 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 3/10/2011 | 154.79 | 17.70 | 0 | 0 | 137.09 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.56 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 06/07/2011 | 154.79 | 13.92 | 0 | 0 | 140.87 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.57 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 08/18/2011 | 154.79 | 18.83 | 0 | 0 | 135.96 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.61 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 10/04/2011 | 154.79 | 14.67 | 0 | 0 | 140.12 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.72 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 01/24/2012 | 154.79 | 16.75 | 0 | 0 | 138.04 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 04/06/2012 | 154.79 | 17.14 | 0 | 0 | 137.65 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 07/02/2012 | 154.79 | 14.79 | 0 | 0 | 140.00 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.56 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 10/4/2012 | 154.79 | 17.52 | 0 | 0 | 137.27 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 1/23/2013 | 154.79 | 15.08 | 0 | 0 | 139.71 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.55 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 4/22/2013 | 154.79 | 15.60 | 0 | 0 | 139.19 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.59 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 7/31/2013 | 154.79 | 16.42 | 0 | 0 | 138.37 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 10/17/2013 | 154.79 | 16.57 | 0 | 0 | 138.22 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 2/24/2014 | 154.79 | 17.33 | 0 | 0 | 137.46 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 4/17/2014 | 154.79 | 16.65 | 0 | 0 | 138.14 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 7/18/2014 | 154.79 | 18.02 | 0 | 0 | 136.77 | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 10/21/2014 | 154.79 | 18.41 | 0 | 0 | 136.38 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 1/20/2015 | 154.79 | 17.95 | 0 | 0 | 136.84 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | pre-purge |
| | 1/20/2015 | 154.79 | -- | -- | -- | -- | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | post-purge |
| | 6/3/2015 | 154.79 | 18.70 | 0 | 0 | 136.09 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 9/7/2015 | 154.79 | 18.18 | 0 | 0 | 136.61 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 12/22/2015 | 154.79 | 18.50 | 0 | 0 | 136.29 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 3/15/2016 | 154.79 | 18.27 | 0 | 0 | 136.52 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 6/22/2016 | 154.79 | 15.48 | 0 | 0 | 139.31 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |

**Table 2. Historical Groundwater Gauging and Analytical Results
Fourth Quarter 1990 to Current**
Union Oil of California
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

| Well ID | Sample Date | TOC (ft amsl) | DTW (ft bTOC) | PSH thickness (ft) | PSH recovered (gal) | GW Elev (ft amsl) | TPHd (µg/L) | TPHg (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) | MTBE (µg/L) | TBA (µg/L) | EDB (µg/L) | EDC (µg/L) | DIPE (µg/L) | ETBE (µg/L) | TAME (µg/L) | Ethanol (µg/L) | Comments | | |
|------------|-------------|---------------|---------------|--------------------|---------------------|-------------------|--|-------------|----------------|----------------|---------------------|----------------------|-------------|------------|------------|------------|-------------|-------------|-------------|----------------|-----------|------------|--|
| MW-4 | 6/16/2010 | 153.48 | 11.13 | 0 | 0 | 142.35 | <50 | 58 | <0.50 | 9.7 | 1.3 | 16 | 5.4 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 9/29/2010 | 153.48 | 12.62 | 0 | 0 | 140.86 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 7.3 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 12/21/2010 | 153.48 | 11.17 | 0 | 0 | 142.31 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 3/10/2011 | 153.48 | 10.57 | 0 | 0 | 142.91 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2.2 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 06/07/2011 | 153.48 | 10.94 | 0 | 0 | 142.54 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1.6 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 08/18/2011 | 153.48 | 12.07 | 0 | 0 | 141.41 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 4 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 10/04/2011 | 153.48 | 12.70 | 0 | 0 | 140.78 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 3.8 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 01/24/2012 | 153.48 | 12.40 | 0 | 0 | 141.08 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1.5 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 04/06/2012 | 153.48 | 11.10 | 0 | 0 | 142.38 | <40 | 390 | <0.50 | 3.8 | 11 | 150 | 2.2 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 07/02/2012 | 153.48 | 12.14 | 0 | 0 | 141.34 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2.4 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 10/4/2012 | 153.48 | 13.43 | 0 | 0 | 140.05 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1.3 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 1/23/2013 | 153.48 | 11.64 | 0 | 0 | 141.84 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 4/22/2013 | 153.48 | 12.22 | 0 | 0 | 141.26 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2.5 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 7/31/2013 | 153.48 | 13.24 | 0 | 0 | 140.24 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.95 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 10/17/2013 | 153.48 | 13.85 | 0 | 0 | 139.63 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 2/24/2014 | 153.48 | 13.06 | 0 | 0 | 140.42 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 4/17/2014 | 153.48 | 11.96 | 0 | 0 | 141.52 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 7/18/2014 | 153.48 | 12.90 | 0 | 0 | 140.58 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 10/21/2014 | 153.48 | 13.68 | 0 | 0 | 139.80 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 1/20/2015 | 153.48 | 11.98 | 0 | 0 | 141.50 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | pre-purge | |
| | 1/20/2015 | 153.48 | -- | -- | -- | -- | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | post-purge | |
| | 6/3/2015 | 153.48 | 12.42 | 0 | 0 | 141.06 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 9/7/2015 | 153.48 | 13.18 | 0 | 0 | 140.30 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 12/22/2015 | 153.48 | 12.38 | 0 | 0 | 141.10 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | | |
| 3/15/2016 | 153.48 | 10.71 | 0 | 0 | 142.77 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | | |
| 6/22/2016 | 153.48 | 12.05 | 0 | 0 | 141.43 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | | |
| MW-5 | 6/16/2010 | 153.66 | 11.95 | 0 | 0 | 141.71 | 3,000 | 29,000 | 580 | 6,800 | 850 | 7,200 | <50 | <1000 | <50 | <50 | <50 | <50 | <50 | <50 | <25000 | | |
| | 9/29/2010 | 153.66 | 13.67 | 0 | 0 | 139.99 | 64,000 | 29,000 | 220 | 4,100 | 2,500 | 23,000 | 52 | <1000 | <50 | <50 | <50 | <50 | <50 | <50 | <25000 | | |
| | 12/21/2010 | 153.66 | 11.17 | 0 | 0 | 142.49 | 11,000 | 50,000 | 81 | 4,800 | 2,200 | 22,000 | <50 | <1000 | <50 | <50 | <50 | <50 | <50 | <50 | <25000 | | |
| | 3/10/2011 | 153.66 | 11.35 | 0 | 0 | 142.31 | 4,900 | 48,000 | 69 | 3,600 | 1,700 | 20,000 | <50 | <1000 | <50 | <50 | <50 | <50 | <50 | <50 | <25000 | | |
| | 06/07/2011 | 153.66 | 11.45 | 0 | 0 | 142.21 | 3,700 | 40,000 | 32 | 2,300 | 1,500 | 16,000 | 24 | 150 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 330 | | |
| | 08/18/2011 | 153.66 | 12.30 | 0 | 0 | 141.36 | 5,400 | 30,000 | 29 | 1,000 | 980 | 7,200 | 56 | 44 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 10/04/2011 | 153.66 | 13.72 | 0 | 0 | 139.94 | 20,000 | 42,000 | 21 | 2,400 | 2,400 | 20,000 | 42 | <250 | <12 | <12 | <12 | <12 | <12 | <12 | <6,200 | | |
| | 01/24/2012 | 153.66 | 12.20 | 0 | 0 | 141.46 | 46,000 | 71,000 | <25 | 1,100 | 1,400 | 10,000 | <25 | <500 | <25 | <25 | <25 | <25 | <25 | <25 | <12,000 | | |
| | 04/06/2012 | 153.66 | 11.88 | 0 | 0 | 141.78 | 21,000 | 58,000 | 9.9 | 880 | 660 | 9,800 | 12 | <120 | <6.2 | <6.2 | <6.2 | <6.2 | <6.2 | <6.2 | <3,100 | | |
| | 07/02/2012 | 153.66 | 12.75 | 0 | 0 | 140.91 | 30,000 | 53,000 | 89 | 590 | 1,000 | 12,000 | 26 | <500 | <25 | <25 | <25 | <25 | <25 | <25 | <12,000 | | |
| | 10/4/2012 | 153.66 | 16.03 | 0.39 | 0 | 137.34 | No Sample Collected - Free Product in Well | | | | | | | | | | | | | | | | |
| | 1/23/2013 | 153.66 | 12.02 | 0 | 0 | 141.64 | 22,000 | 54,000 | <25 | 160 | 1,100 | 13,000 | <25 | <500 | <25 | <25 | <25 | <25 | <25 | <25 | <25 | <12,000 | |
| | 4/22/2013 | 153.66 | 12.37 | 0 | 0 | 141.29 | 7,600 | 39,000 | 0.7 | 65 | 330 | 4,500 | 2.9 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 7/31/2013 | 153.66 | 15.62 | 0 | 0 | 138.04 | 11,000 | 35,000 | 1 | 59 | 470 | 3,500 | 9.8 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| | 10/17/2013 | 153.66 | 16.41 | 0 | 0 | 137.25 | <50 | 86,000 | <10 | 66 | 770 | 9,300 | <10 | <200 | <10 | <10 | <10 | <10 | <10 | <10 | <5,000 | | |
| | 2/24/2014 | 153.66 | 15.27 | 0 | 0 | 138.39 | 1,700 | 3,900 | <0.50 | 4.5 | 240 | 1,800 | 1.7 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 4/17/2014 | 153.66 | 12.02 | 0 | 0 | 141.64 | 960 | 27,000 | <0.50 | 2.5 | 160 | 1,100 | 1.4 | 310 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | | |
| 7/18/2014 | 153.66 | 15.28 | 0 | 0 | 138.38 | 2,100 | 6,600 | <0.50 | 0.97 | 84 | 330 | 3.6 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | | |
| 10/21/2014 | 153.66 | 17.03 | 0 | 0 | 136.63 | 3,000 | 27,000 | <0.50 | 40 | 370 | 2,900 | 7.7 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | | |
| 1/20/2015 | 153.66 | 12.24 | 0 | 0 | 141.42 | 880 | 9,100 | <0.50 | 0.65 | 85 | 400 | 2.2 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | pre-purge | | |

Table 2. Historical Groundwater Gauging and Analytical Results
 Fourth Quarter 1990 to Current
 Union Oil of California
 Unocal No. 5781 (351640)
 3535 Pierson Street
 Oakland, California

| Well ID | Sample Date | TOC (ft amsl) | DTW (ft bTOC) | PSH thickness (ft) | PSH recovered (gal) | GW Elev (ft amsl) | TPHd (μg/L) | TPHg (μg/L) | Benzene (μg/L) | Toluene (μg/L) | Ethyl-benzene (μg/L) | Total Xylenes (μg/L) | MTBE (μg/L) | TBA (μg/L) | EDB (μg/L) | EDC (μg/L) | DIPE (μg/L) | ETBE (μg/L) | TAME (μg/L) | Ethanol (μg/L) | Comments | |
|------------|-------------|---------------|---------------|--------------------|---------------------|-------------------|-------------|-------------|----------------|----------------|----------------------|----------------------|-------------|------------|------------|------------|-------------|-------------|-------------|----------------|------------|-----------|
| MW-8 | 1/20/2015 | 155.38 | -- | -- | -- | -- | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | post-purge | |
| | 6/3/2015 | 155.38 | 15.13 | 0 | 0 | 140.25 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 9/7/2015 | 155.38 | 16.17 | 0 | 0 | 139.21 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 12/22/2015 | 155.38 | 15.58 | 0 | 0 | 139.80 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 3/15/2016 | 155.38 | 12.83 | 0 | 0 | 142.55 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 6/22/2016 | 155.38 | 14.20 | 0 | 0 | 141.18 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 12/21/2010 | 153.71 | 11.63 | 0 | 0 | 142.08 | 81 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| 3/10/2011 | 153.71 | 11.38 | 0 | 0 | 142.33 | 61 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 06/07/2011 | 153.71 | 11.54 | 0 | 0 | 142.17 | 71 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 08/18/2011 | 153.71 | 12.47 | 0 | 0 | 141.24 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 10/04/2011 | 153.71 | 12.90 | 0 | 0 | 140.81 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 01/24/2012 | 153.71 | 12.52 | 0 | 0 | 141.19 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 04/06/2012 | 153.71 | 11.35 | 0 | 0 | 142.36 | 160 | 270 | <0.50 | 3.7 | 7.8 | 91 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 07/02/2012 | 153.71 | 12.50 | 0 | 0 | 141.21 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 10/4/2012 | 153.71 | 13.89 | 0 | 0 | 139.82 | <50 | <50 | <0.50 | <0.50 | <0.50 | 2.4 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 1/23/2013 | 153.71 | 13.06 | 0 | 0 | 140.65 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 4/22/2013 | 153.71 | 12.82 | 0 | 0 | 140.89 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 7/31/2013 | 153.71 | 13.63 | 0 | 0 | 140.08 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 10/17/2013 | 153.71 | 14.48 | 0 | 0 | 139.23 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 2/24/2014 | 153.71 | 13.56 | 0 | 0 | 140.15 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 4/17/2014 | 153.71 | 11.90 | 0 | 0 | 141.81 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 7/18/2014 | 153.71 | 13.78 | 0 | 0 | 139.93 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 10/21/2014 | 153.71 | 14.38 | 0 | 0 | 139.33 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 1/20/2015 | 153.71 | 13.28 | 0 | 0 | 140.43 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 1/20/2015 | 153.71 | -- | -- | -- | -- | -- | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | pre-purge | |
| 6/3/2015 | 153.71 | 12.88 | 0 | 0 | 140.83 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 9/7/2015 | 153.71 | 14.19 | 0 | 0 | 139.52 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 12/22/2015 | 153.71 | 12.90 | 0 | 0 | 140.81 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 3/15/2016 | 153.71 | 13.14 | 0 | 0 | 140.57 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| 6/22/2016 | 153.71 | 12.32 | 0 | 0 | 141.39 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.97 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | | |
| MW-9 | 12/21/2010 | 153.37 | 10.53 | 0 | 0 | 142.84 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 3/10/2011 | 153.37 | 10.86 | 0 | 0 | 142.51 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 06/07/2011 | 153.37 | 11.36 | 0 | 0 | 142.01 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 08/18/2011 | 153.37 | 12.52 | 0 | 0 | 140.85 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 10/04/2011 | 153.37 | 13.32 | 0 | 0 | 140.05 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 01/24/2012 | 153.37 | 11.23 | 0 | 0 | 142.14 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 04/06/2012 | 153.37 | 10.98 | 0 | 0 | 142.39 | <40 | 340 | <0.50 | 4.4 | 9 | 120 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 07/02/2012 | 153.37 | 12.58 | 0 | 0 | 140.79 | <40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 10/4/2012 | 153.37 | 14.31 | 0 | 0 | 139.06 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 1/23/2013 | 153.37 | 11.11 | 0 | 0 | 142.26 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 4/22/2013 | 153.37 | 12.22 | 0 | 0 | 141.15 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 7/31/2013 | 153.37 | 14.10 | 0 | 0 | 139.27 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 10/17/2013 | 153.37 | 14.56 | 0 | 0 | 138.81 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 2/24/2014 | 153.37 | 12.85 | 0 | 0 | 140.52 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 4/17/2014 | 153.37 | 11.73 | 0 | 0 | 141.64 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 7/18/2014 | 153.37 | 13.69 | 0 | 0 | 139.68 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 10/21/2014 | 153.37 | 14.32 | 0 | 0 | 139.05 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 1/20/2015 | 153.37 | 11.80 | 0 | 0 | 141.57 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | pre-purge |

**Table 2. Historical Groundwater Gauging and Analytical Results
Fourth Quarter 1990 to Current**

Union Oil of California
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

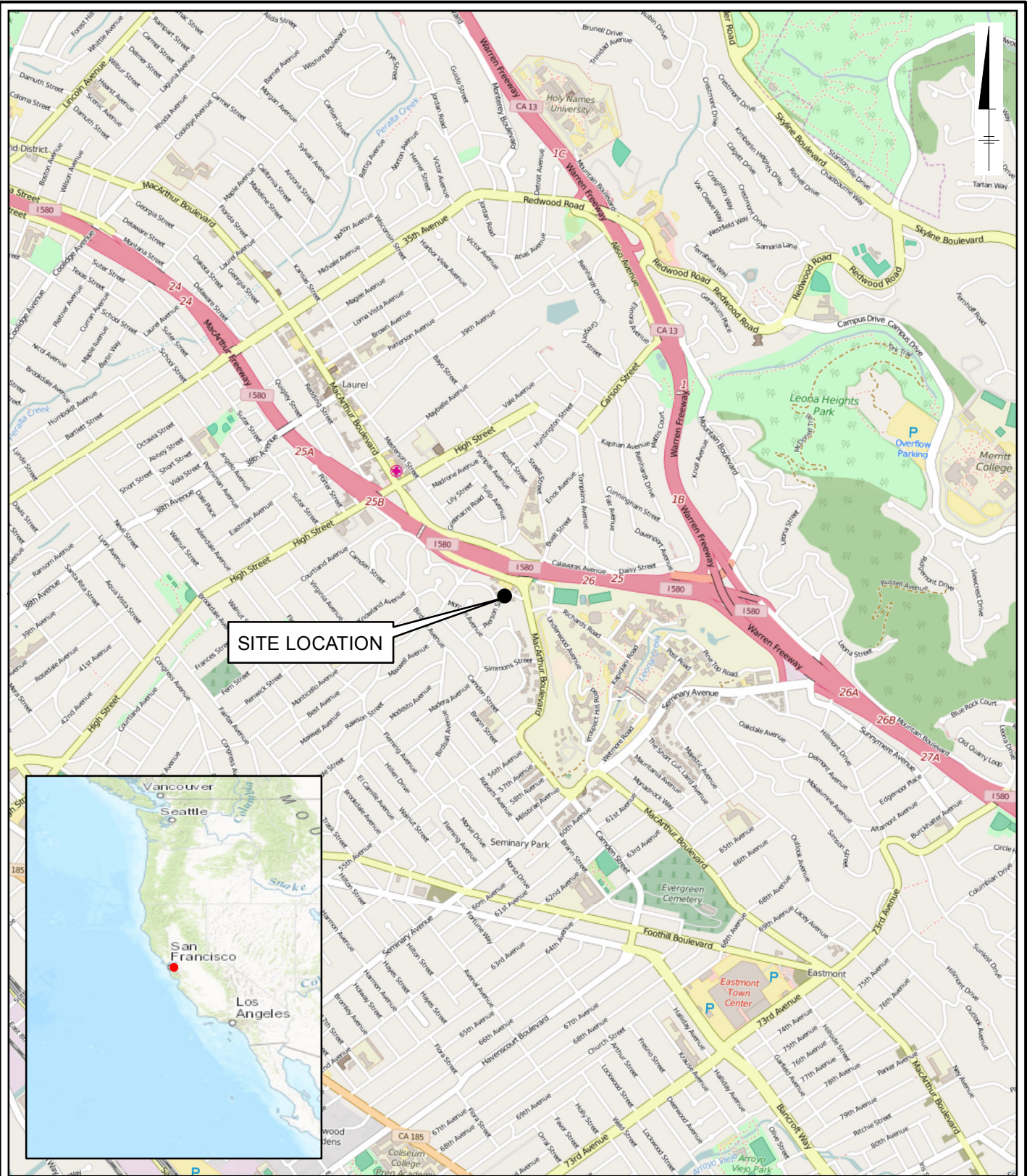
| Well ID | Sample Date | TOC (ft amsl) | DTW (ft bTOC) | PSH thickness (ft) | PSH recovered (gal) | GW Elev (ft amsl) | TPHd (µg/L) | TPHg (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Total Xylenes (µg/L) | MTBE (µg/L) | TBA (µg/L) | EDB (µg/L) | EDC (µg/L) | DIPE (µg/L) | ETBE (µg/L) | TAME (µg/L) | Ethanol (µg/L) | Comments | |
|-----------|-------------|---------------|---------------|--------------------|---------------------|-------------------|-------------|-------------|----------------|----------------|---------------------|----------------------|-------------|------------|------------|------------|-------------|-------------|-------------|----------------|----------|------------|
| | 1/20/2015 | 153.37 | -- | -- | -- | -- | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | post-purge |
| | 6/3/2015 | 153.37 | 13.30 | 0 | 0 | 140.07 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 9/7/2015 | 153.37 | 14.05 | 0 | 0 | 139.32 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 12/22/2015 | 153.37 | 10.50 | 0 | 0 | 142.87 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 3/15/2016 | 153.37 | 10.26 | 0 | 0 | 143.11 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 6/22/2016 | 153.37 | 11.92 | 0 | 0 | 141.45 | <50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| QA | 1/23/2013 | -- | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 4/22/2013 | -- | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 7/31/2013 | -- | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 10/17/2013 | -- | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 2/24/2014 | -- | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 4/17/2014 | -- | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 7/18/2014 | -- | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 10/21/2014 | -- | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 9/7/2015 | -- | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 12/22/2015 | -- | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 3/15/2016 | -- | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <10 | <250 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| | 6/22/2016 | -- | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |

Notes: MW = Groundwater monitoring well
 TOC = Top of casing
 ft amsl = Feet above mean sea level
 DTW = Depth to groundwater
 ft bTOC = Feet below top of casing
 PSH = Phase separate hydrocarbons
 ft = Feet
 gal = Gallons
 GW Elev = Groundwater elevation
 µg/L = Micrograms per liter
Bold = Value exceeds laboratory reporting limits; PSH thickness is greater than 0.00 ft
 <0.50 = Not detected at or above the stated limit
 -- = Not sampled
 NM = Not measured
 DRY = Dry well

TPHd = Total petroleum hydrocarbons, diesel range by LUFT GC/MS according to Environmental Protection Agency (EPA) Method 8260B
 TPHg = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to Environmental Protection Agency (EPA) Method 8260B
 Benzene, toluene, ethylbenzene, and total xylenes (collectively BTEX)
 MTBE = Methyl tert-butyl ether
 TBA = Tert-butanol or tertiary butyl alcohol
 EDB = 1,2-Dibromoethane
 EDC = 1,2-Dichloroethane
 DIPE = Di-isopropyl ether
 ETBE = Ethyl tert-butyl ether
 TAME = Tert-amyl methyl ether
 Ethanol
 J = Estimated value (between laboratory reporting limit and method detection limit)
 * = Well paved over

FIGURES



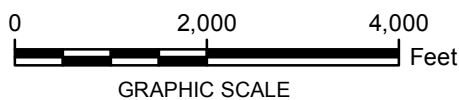


SITE LOCATION

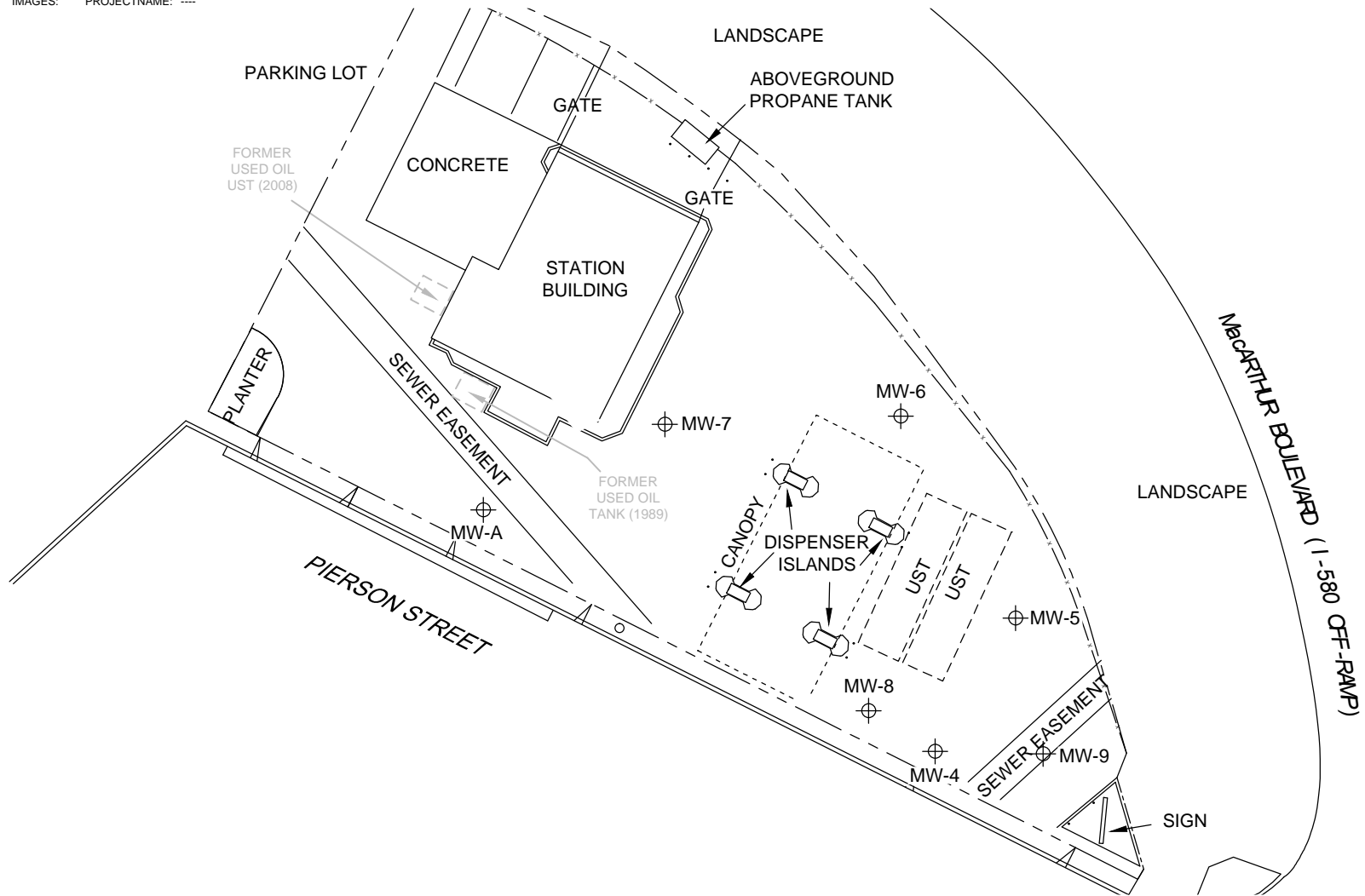


UNOCAL NO. 5781 (351640)
3535 PIERSON STREET
OAKLAND, CALIFORNIA

SITE LOCATION MAP

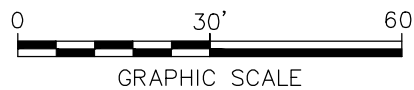


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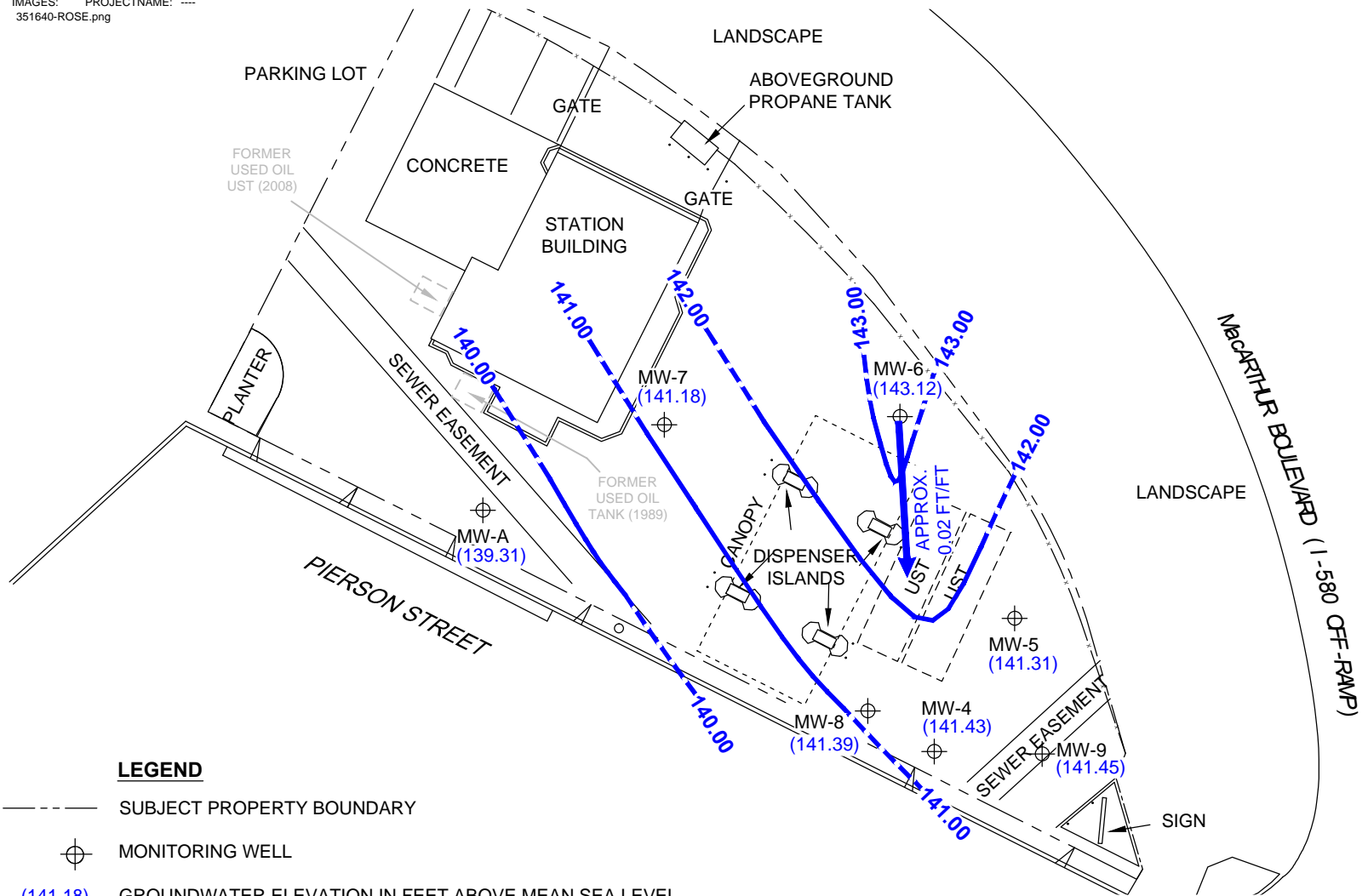
LEGEND

- Subject Property Boundary
- ⊕ Monitoring Well
- UST Underground Storage Tank



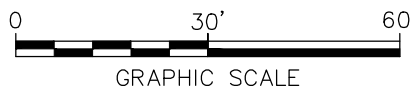
| | |
|---|---|
| UNOCAL NO. 5781 (351640) 3535 PIERSON STREET, OAKLAND, CALIFORNIA | |
| SITE PLAN | |
|  | Design & Consultancy for natural and built assets |
| FIGURE 2 | |

XREFS: IMAGES: PROJECTNAME: ---
 351640-ROSE.png



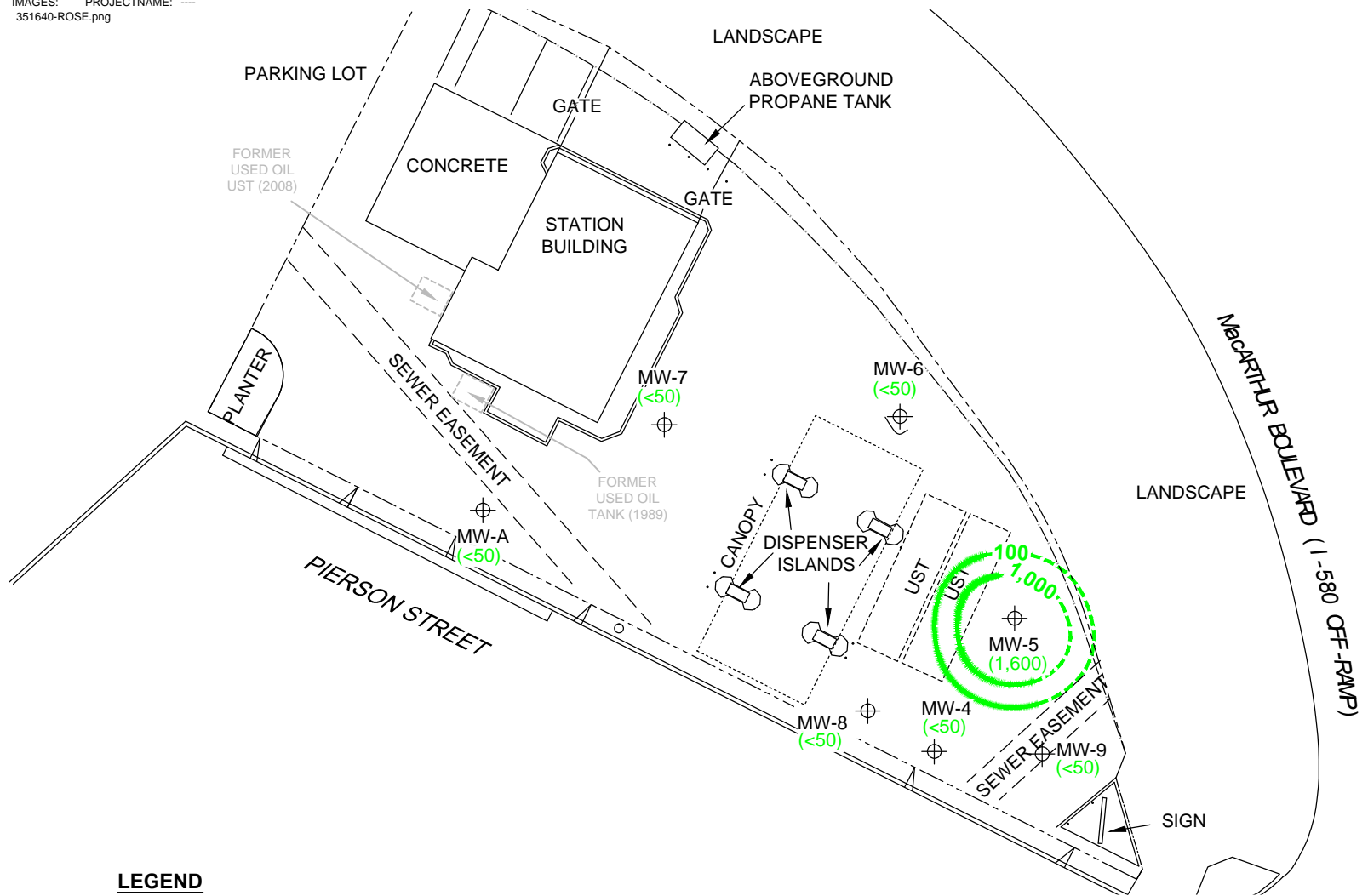
LEGEND

- SUBJECT PROPERTY BOUNDARY
- ⊕ MONITORING WELL
- (141.18) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 142.00 - - - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (DASHED WHERE INFERRED)
- ← GROUNDWATER FLOW DIRECTION AND HYDRAULIC GRADIENT IN FEET PER FOOT (FT/FT)
- UST UNDERGROUND STORAGE TANK



| | |
|--|---|
| UNOCAL NO. 5781 (351640) 3535 PIERSON STREET, OAKLAND, CALIFORNIA | |
| GROUNDWATER ELEVATION MAP | |
| ARCADIS | Design & Consultancy for natural and built assets |
| FIGURE | 3 |

XREFS: IMAGES: PROJECTNAME: ----
 351640-ROSE.png



LEGEND

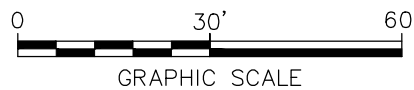
----- SUBJECT PROPERTY BOUNDARY


⊕ MONITORING WELL

<math>< 50</math> TPHg CONCENTRATION IN MICROGRAMS PER LITER ($\mu\text{g/L}$)

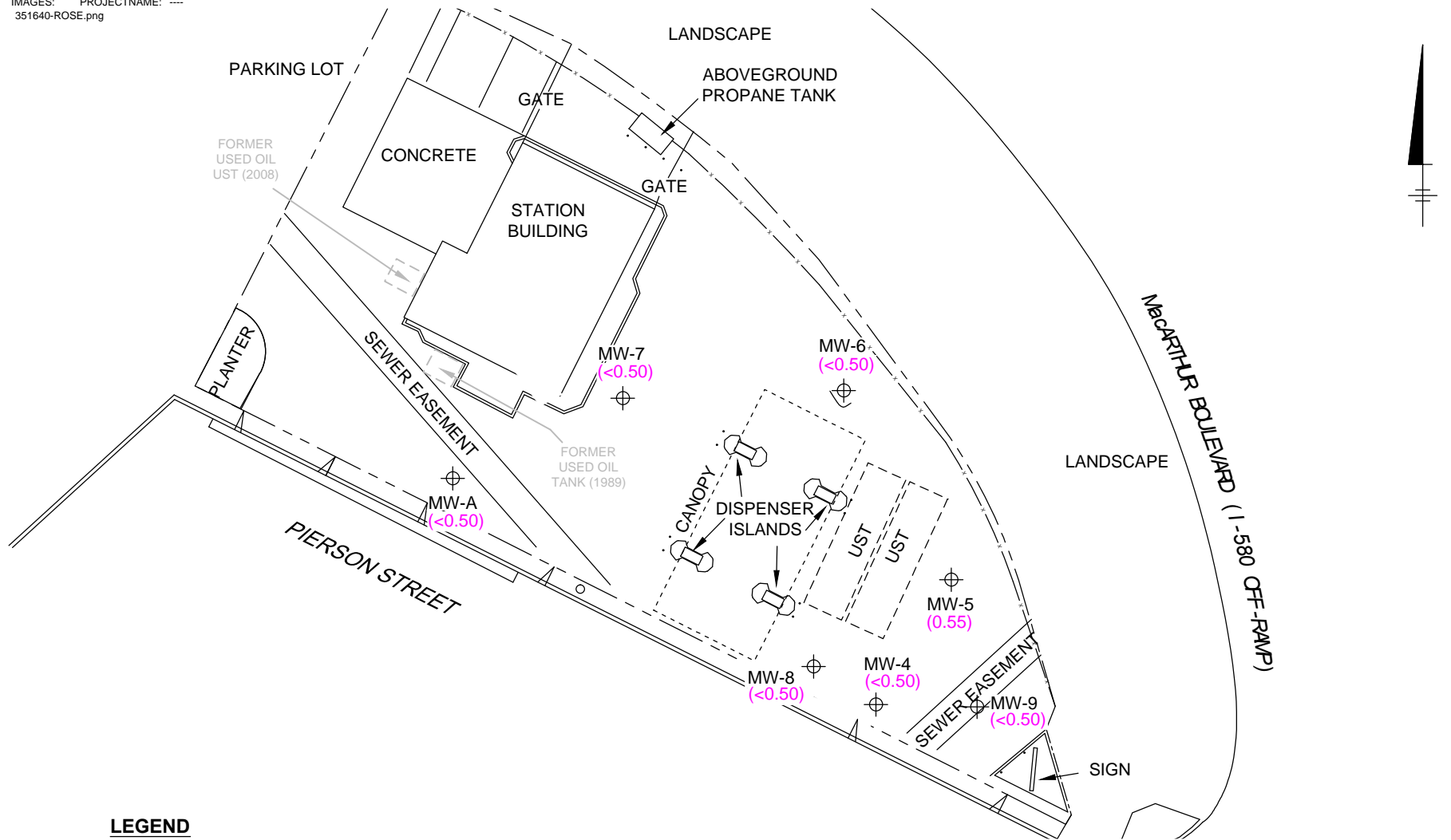
1,000 - - - - - TPH-g ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED)

UST UNDERGROUND STORAGE TANK



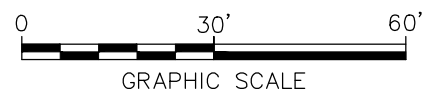
| | |
|---|--|
| UNOCAL NO. 5781 (351640) 3535 PIERSON STREET, OAKLAND, CALIFORNIA | |
| TPHg ISOCONCENTRATION MAP | |
|  | <small>Design & Consultancy for natural and built assets</small> |
| FIGURE | 4 |

XREFS: IMAGES: PROJECTNAME: ----
 351640-ROSE.png



LEGEND

- SUBJECT PROPERTY BOUNDARY
- ⊕ MONITORING WELL
- <math><0.50</math> BENZENE CONCENTRATION IN MICROGRAMS PER LITER ($\mu\text{g/L}$)
- UST UNDERGROUND STORAGE TANK



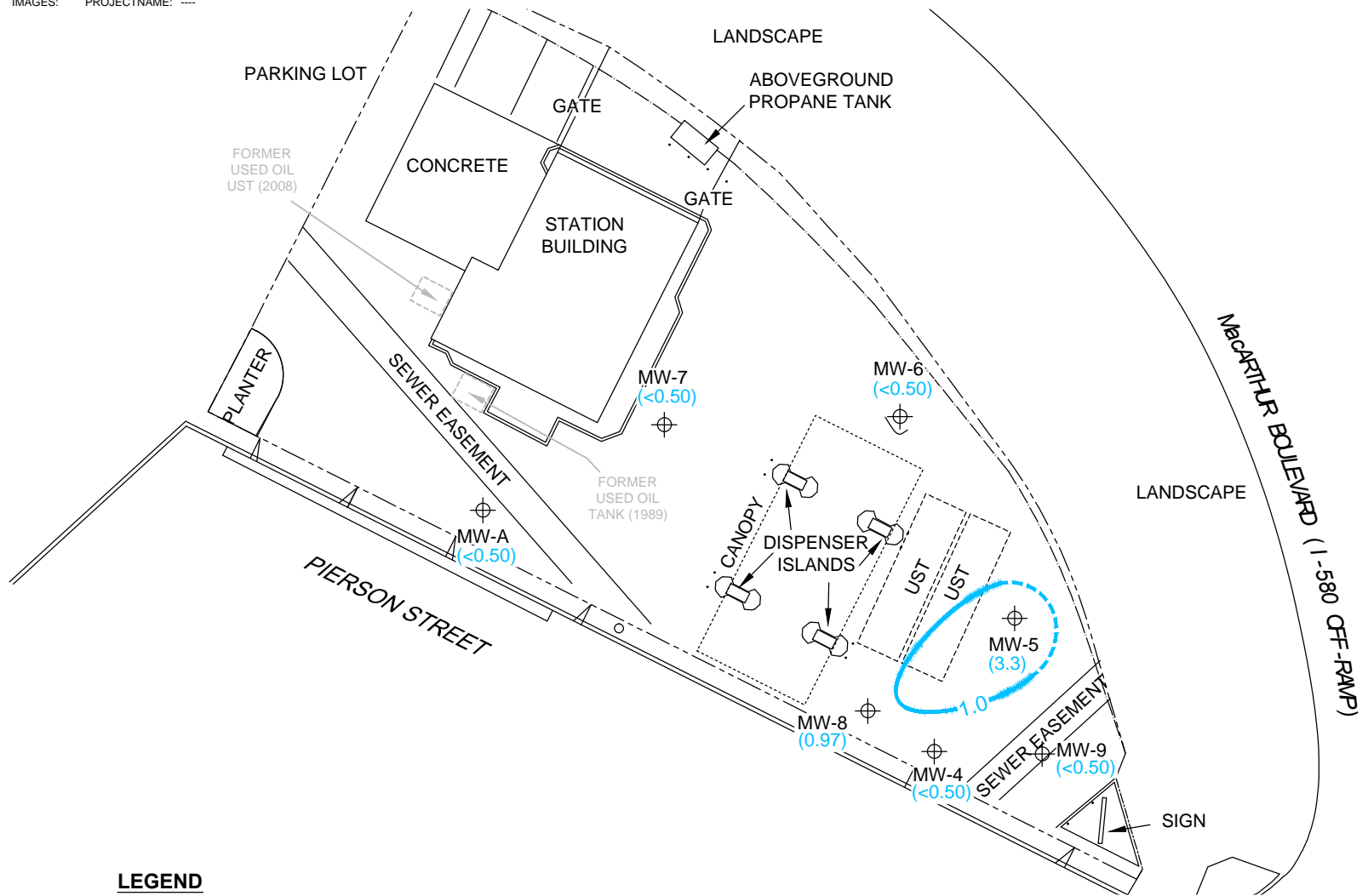
UNOCAL NO. 5781 (351640)
 3535 PIERSON STREET, OAKLAND, CALIFORNIA

BENZENE ISOCONCENTRATION MAP

ARCADIS | Design & Consultancy
 for natural and built assets

FIGURE
5

XREFS: IMAGES: PROJECTNAME: ----



LEGEND

----- SUBJECT PROPERTY BOUNDARY

⊕ MONITORING WELL

(<0.50) MTBE CONCENTRATION IN MICROGRAMS PER LITER (µg/L)

1.0 --- MTBE ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED)

UST UNDERGROUND STORAGE TANK



GRAPHIC SCALE

UNOCAL NO. 5781 (351640)
 3535 PIERSON STREET, OAKLAND, CALIFORNIA

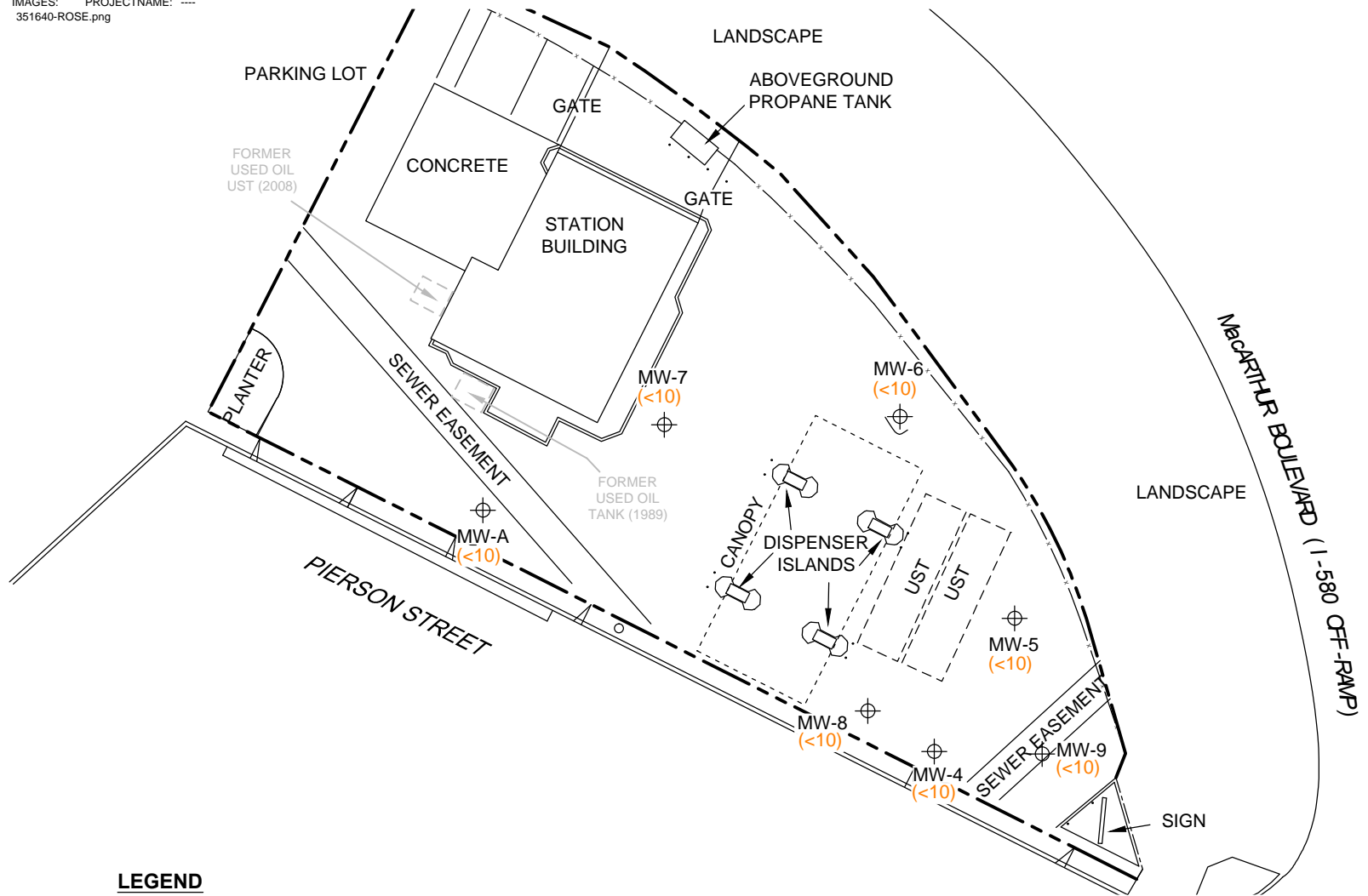
MTBE ISOCONCENTRATION MAP



FIGURE

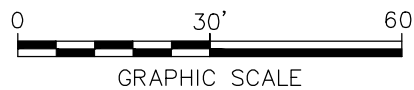
6

XREFS: IMAGES: PROJECTNAME: ----
 351640-ROSE.png



LEGEND

- SUBJECT PROPERTY BOUNDARY
- ⊕ MONITORING WELL
- (<10) TBA CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- UST UNDERGROUND STORAGE TANK



| | |
|--|---|
| UNOCAL NO. 5781 (351640) 3535 PIERSON STREET, OAKLAND, CALIFORNIA | |
| TBA ISOCONCENTRATION MAP | |
| | Design & Consultancy for natural and built assets |
| FIGURE | 7 |

ATTACHMENT A

[Field Data Sheets and General Procedures]





GETTLER-RYAN INC.



TRANSMITTAL

June 24, 2016
G-R #385641

TO: Ms. Tamera Rogers
Arcadis
6296 San Ignacio Ave., Suite C & D
San Jose, California 95119

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Chevron Facility**
#351640/5781
3535 Pierson Street
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

| COPIES | DESCRIPTION |
|---------|---|
| VIA PDF | Groundwater Monitoring and Sampling Data Package Second Quarter Event of June 22, 2016 |

COMMENTS:

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

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

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

trans/351640 5781

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

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

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

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

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781
 Site Address: 3535 Pierson Street
 City: Oakland, CA

Job Number: 385641
 Event Date: 6-22-16 (inclusive)
 Sampler: AW

Well ID: MW-A
 Well Diameter: 214 in.
 Total Depth: 45.01 ft.
 Depth to Water: 15.48 ft.
29.53 xVF = .17 = 5.02

Date Monitored: 6-22-16

| | | | | |
|-------------|------------|----------|----------|-----------|
| Volume | 3/4"= 0.02 | 1"= 0.04 | 2"= 0.17 | 3"= 0.38 |
| Factor (VF) | 4"= 0.66 | 5"= 1.02 | 6"= 1.50 | 12"= 5.80 |

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 15.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 21.38

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump ✓
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer ✓
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): 0415
 Sample Time/Date: 0445 / 6-22-16
 Approx. Flow Rate: 1.0 gpm.
 Did well de-water? N If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Dark
 Water Color: Clear Odor: Y / 10
 Sediment Description: Clear
 DTW @ Sampling: 19.78

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (mS / μmhos/cm) | Temperature (°C / F) | D.O. (mg/L) | ORP (mV) |
|-----------------|---------------|-------------|------------------------------|----------------------|-------------|----------|
| <u>0420</u> | <u>5.0</u> | <u>8.03</u> | <u>657</u> | <u>19.0</u> | | |
| <u>0425</u> | <u>10.0</u> | <u>7.95</u> | <u>623</u> | <u>19.2</u> | | |
| <u>0430</u> | <u>15.0</u> | <u>7.90</u> | <u>609</u> | <u>19.3</u> | | |

LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|-------------|---------------------------|---------|---------------|------------|--|
| <u>MW-A</u> | <u>1</u> x voa vial | YES | HCL | BC LABS | TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260) |
| | <u>2</u> x 1 liter ambers | YES | NP | BC LABS | TPH-DRO w/sgc(8015M) |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

COMMENTS: Pre purge samples taken @ 0410, discarded

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? Y DTW READING: — TIME: —

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781 Job Number: 385641
 Site Address: 3535 Pierson Street Event Date: 6-22-16 (inclusive)
 City: Oakland, CA Sampler: AW

Well ID: MW-4 Date Monitored: 6-22-16
 Well Diameter: 2 1/4 in.
 Total Depth: 24.74 ft.
 Depth to Water: 12.05 ft. Check if water column is less than 0.50 ft.
12.69 xVF .66 = 8.37 x3 case volume = Estimated Purge Volume: 25.5 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.58

| | | | | |
|-------------|------------|----------|----------|-----------|
| Volume | 3/4"= 0.02 | 1"= 0.04 | 2"= 0.17 | 3"= 0.38 |
| Factor (VF) | 4"= 0.66 | 5"= 1.02 | 6"= 1.50 | 12"= 5.80 |

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): 0705 Weather Conditions: Cloudy
 Sample Time/Date: 6-22-16 Water Color: Cloudy Odor: Y 10
 Approx. Flow Rate: 1-2 gpm. Sediment Description: Cloudy
 Did well de-water? Y If yes, Time: 0728 Volume: ~17.0 gal. DTW @ Sampling: 12.05

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (mS μmhos/cm) | Temperature (°F) | D.O. (mg/L) | ORP (mV) |
|-----------------|---------------|-------------|----------------------------|------------------|-------------|----------|
| <u>0715</u> | <u>8.5</u> | <u>6.57</u> | <u>375</u> | <u>18.9</u> | | |
| <u>0728</u> | <u>17.0</u> | <u>6.64</u> | <u>394</u> | <u>19.3</u> | | |
| | | | | | | |
| | | | | | | |

LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|-------------|---------------------------|---------|---------------|------------|--|
| <u>MW-4</u> | <u>6</u> x voa vial | YES | HCL | BC LABS | TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260) |
| | <u>2</u> x 1 liter ambers | YES | NP | BC LABS | TPH-DRO w/sgc(8015M) |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

COMMENTS: Pre-purge taken - 0700

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? Y DTW READING: 18.74 TIME: 0955

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781
 Site Address: 3535 Pierson Street
 City: Oakland, CA

Job Number: 385641
 Event Date: 6-22-16 (inclusive)
 Sampler: AV

Well ID: MW-5
 Well Diameter: 2 1/4 in.
 Total Depth: 19.90 ft.
 Depth to Water: 12.35 ft.
7.55 xVF = .66 = 4.98

Date Monitored: 6-22-16

| | | | | |
|-------------|------------|----------|----------|-----------|
| Volume | 3/4"= 0.02 | 1"= 0.04 | 2"= 0.17 | 3"= 0.38 |
| Factor (VF) | 4"= 0.66 | 5"= 1.02 | 6"= 1.50 | 12"= 5.80 |

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 15.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.86

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): 0600
 Sample Time/Date: — / 6-22-16
 Approx. Flow Rate: 1.0 gpm.
 Did well de-water? Y If yes, Time: 0615

Weather Conditions: Cloudy
 Water Color: Clear Odor: Y / 10
 Sediment Description: Clear
 Volume: 10.0 gal. DTW @ Sampling: 12.35

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µS / mS µmhos/cm) | Temperature (° / F) | D.O. (mg/L) | ORP (mV) |
|-----------------|---------------|-------------|---------------------------------|---------------------|-------------|----------|
| <u>0605</u> | <u>5.0</u> | <u>6.80</u> | <u>263</u> | <u>18.3</u> | | |
| <u>0615</u> | <u>10.0</u> | <u>6.86</u> | <u>299</u> | <u>18.7</u> | | |
| | | | | | | |
| | | | | | | |

LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|-------------|---------------------------|---------|---------------|------------|--|
| <u>MW-5</u> | <u>6</u> x voa vial | YES | HCL | BC LABS | TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260) |
| | <u>2</u> x 1 liter ambers | YES | NP | BC LABS | TPH-DRO w/sgc(8015M) |
| | | | | | |
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| | | | | | |
| | | | | | |

COMMENTS: Pre purge taken @ 0555

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) N DTW READING: 16.85 TIME: 0915

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781
 Site Address: 3535 Pierson Street
 City: Oakland, CA

Job Number: 385641
 Event Date: 6-22-16 (inclusive)
 Sampler: AW

Well ID: MW-6 Date Monitored: 6-22-16
 Well Diameter: 8.4 in.
 Total Depth: 19.95 ft.
 Depth to Water: 11.50 ft. Check if water column is less than 0.50 ft.
8.45 x VF .17 = 1.43 x3 case volume = Estimated Purge Volume: 4.5 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.19

| | | | | |
|--------------------|------------|----------|----------|-----------|
| Volume Factor (VF) | 3/4"= 0.02 | 1"= 0.04 | 2"= 0.17 | 3"= 0.38 |
| | 4"= 0.66 | 5"= 1.02 | 6"= 1.50 | 12"= 5.80 |

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): 0530 Weather Conditions: Cloudy
 Sample Time/Date: 6-22-16 Water Color: Clear Odor: Y / 10
 Approx. Flow Rate: 1 gpm. Sediment Description: Clear
 Did well de-water? Y If yes, Time: 0545 Volume: ~3.0 gal. DTW @ Sampling: 11.50

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmS/cm) | Temperature (°F) | D.O. (mg/L) | ORP (mV) |
|-----------------|---------------|-------------|-----------------------|------------------|-------------|----------|
| <u>0537</u> | <u>1.5</u> | <u>6.18</u> | <u>220</u> | <u>19.7</u> | | |
| <u>0545</u> | <u>3.0</u> | <u>6.23</u> | <u>246</u> | <u>19.9</u> | | |
| | | | | | | |
| | | | | | | |

LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|-------------|---------------------------|------------|---------------|----------------|---|
| <u>MW-6</u> | <u>6</u> x voa vial | <u>YES</u> | <u>HCL</u> | <u>BC LABS</u> | <u>TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)</u> |
| | <u>2</u> x 1 liter ambers | <u>YES</u> | <u>NP</u> | <u>BC LABS</u> | <u>TPH-DRO w/sgc(8015M)</u> |
| | | | | | |
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COMMENTS: Pre purge sample taken @ 0525

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? Y DTW READING: 15.33 TIME: 0900

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781
 Site Address: 3535 Pierson Street
 City: Oakland, CA

Job Number: 385641
 Event Date: 6-22-16 (inclusive)
 Sampler: AW

Well ID: MW-7
 Well Diameter: 21.4 in.
 Total Depth: 19.70 ft.
 Depth to Water: 14.20 ft.
5.50 xVF .17 = 0.93

Date Monitored: 6-22-16

| | | | | |
|-------------|------------|----------|----------|-----------|
| Volume | 3/4"= 0.02 | 1"= 0.04 | 2"= 0.17 | 3"= 0.38 |
| Factor (VF) | 4"= 0.66 | 5"= 1.02 | 6"= 1.50 | 12"= 5.80 |

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 3.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 15.30

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): 0500 Weather Conditions: Pawn
 Sample Time/Date: — / 6-22-16 Water Color: Cloudy Odor: Y / (N)
 Approx. Flow Rate: — gpm. Sediment Description: Cloudy
 Did well de-water? Y If yes, Time: 0515 Volume: ~2.0 gal. DTW @ Sampling: 14.20

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µmhos/cm) | Temperature (°F) | D.O. (mg/L) | ORP (mV) |
|-----------------|---------------|-------------|-------------------------|------------------|-------------|----------|
| <u>0506</u> | <u>1.0</u> | <u>6.16</u> | <u>338</u> | <u>18.8</u> | _____ | _____ |
| <u>0515</u> | <u>2.0</u> | <u>6.24</u> | <u>354</u> | <u>18.9</u> | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |

LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|-------------|---------------------------|------------|---------------|----------------|---|
| <u>MW-7</u> | <u>6</u> x voa vial | <u>YES</u> | <u>HCL</u> | <u>BC LABS</u> | <u>TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)</u> |
| | <u>2</u> x 1 liter ambers | <u>YES</u> | <u>NP</u> | <u>BC LABS</u> | <u>TPH-DRO w/sgc(8015M)</u> |
| _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ |

COMMENTS: Pre-purge sample taken 0455

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) N DTW READING: 17.08 TIME: 0840

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781
 Site Address: 3535 Pierson Street
 City: Oakland, CA

Job Number: 385641
 Event Date: 6-22-16 (inclusive)
 Sampler: AW

Well ID: MW-8
 Well Diameter: 21.4 in.
 Total Depth: 19.93 ft.
 Depth to Water: 12.32 ft.
7.61 xVF = .17 = 1.29

Date Monitored: 6-22-16

| | | | | |
|--------------------|-------------|-----------|-----------|------------|
| Volume Factor (VF) | 3/4" = 0.02 | 1" = 0.04 | 2" = 0.17 | 3" = 0.38 |
| | 4" = 0.66 | 5" = 1.02 | 6" = 1.50 | 12" = 5.80 |

Check if water column is less than 0.50 ft.
 x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.84

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr

Start Time (purge): 0750
 Sample Time/Date: 0820 / 6-22-16
 Approx. Flow Rate: - gpm.
 Did well de-water? N If yes, Time: _____

Weather Conditions: Cloudy
 Water Color: Cloudy Odor: Y 170
 Sediment Description: Cloudy
 Volume: - gal. DTW@ Sampling: 13.50

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (µS / mS µmhos/cm) | Temperature (°C / F) | D.O. (mg/L) | ORP (mV) |
|-----------------|---------------|-------------|---------------------------------|----------------------|-------------|----------|
| <u>0755</u> | <u>1.5</u> | <u>6.34</u> | <u>317</u> | <u>19.3</u> | | |
| <u>0800</u> | <u>3.0</u> | <u>6.40</u> | <u>340</u> | <u>19.5</u> | | |
| <u>0805</u> | <u>4.0</u> | <u>6.48</u> | <u>348</u> | <u>19.6</u> | | |

LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|-----------|--------------------|---------|---------------|------------|--|
| MW-8 | 6 x voa vial | YES | HCL | BC LABS | TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260) |
| | 2 x 1 liter ambers | YES | NP | BC LABS | TPH-DRO w/sgc(8015M) |
| | | | | | |
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COMMENTS: 0745 - Pre-purge sample taken - discarded.

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? Y DTW READING: - TIME: -

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781
 Site Address: 3535 Pierson Street
 City: Oakland, CA

Job Number: 385641
 Event Date: 6-22-16 (inclusive)
 Sampler: BW

Well ID: MW-9
 Well Diameter: 214 in.
 Total Depth: 19.66 ft.
 Depth to Water: 11.92 ft.
7.74 xVF = .17 = 1.31

Date Monitored: 6-22-16

| | | | | |
|-------------|------------|----------|----------|-----------|
| Volume | 3/4"= 0.02 | 1"= 0.04 | 2"= 0.17 | 3"= 0.38 |
| Factor (VF) | 4"= 0.66 | 5"= 1.02 | 6"= 1.50 | 12"= 5.80 |

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge ((Height of Water Column x 0.20) + DTW): 13.46

Purge Equipment:

Disposable Bailer ✓
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer ✓
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

| | |
|---------------------------------------|------------------|
| Time Started: | _____ (2400 hrs) |
| Time Completed: | _____ (2400 hrs) |
| Depth to Product: | _____ ft |
| Depth to Water: | _____ ft |
| Hydrocarbon Thickness: | _____ ft |
| Visual Confirmation/Description: | _____ |
| Skimmer / Absorbant Sock (circle one) | |
| Amt Removed from Skimmer: | _____ ltr |
| Amt Removed from Well: | _____ ltr |
| Water Removed: | _____ ltr |

Start Time (purge): 0630
 Sample Time/Date: — / 6-22-16
 Approx. Flow Rate: — gpm.
 Did well de-water? Y If yes, Time: 0645

Weather Conditions: Cloudy
 Water Color: Cloudy Odor: Y / (N)
 Sediment Description: Cloudy
 Volume: ~3.0 gal. DTW @ Sampling: 11.92

| Time (2400 hr.) | Volume (gal.) | pH | Conductivity (mS / μ mhos/cm) | Temperature (C / F) | D.O. (mg/L) | ORP (mV) |
|-----------------|---------------|-------------|-----------------------------------|---------------------|-------------|----------|
| <u>0637</u> | <u>1.5</u> | <u>6.36</u> | <u>330</u> | <u>20.0</u> | _____ | _____ |
| <u>0645</u> | <u>3.0</u> | <u>6.40</u> | <u>344</u> | <u>19.8</u> | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |

LABORATORY INFORMATION

| SAMPLE ID | (#) CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|-------------|---------------------------|---------|---------------|------------|--|
| <u>MW-9</u> | <u>6</u> x voa vial | YES | HCL | BC LABS | TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260) |
| | <u>2</u> x 1 liter ambers | YES | NP | BC LABS | TPH-DRO w/sgc(8015M) |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

COMMENTS: Pre purge taken @ 0625


WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) / N DTW READING: 16.65 TIME: 09:30

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____

CHAIN OF CUSTODY FORM

Union Oil Company of California ■ 6101 Bollinger Canyon Road ■ San Ramon, CA 94583

COC 1 of 1

| Union Oil Site ID: <u>5781</u> | | | | Union Oil Consultant: <u>Arca's</u> | | ANALYSES REQUIRED | | | | | | | | | | | | | | | | | | |
|---|--------------|-------|---------------|--|-----------------|--------------------------------|------------------|--|----------------------|-------------------------------|--------------------|------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| Site Global ID: <u>T0600101467</u> | | | | Consultant Contact: <u>Tamara Rogers</u> | | TPH - Diesel by EPA 8015 w/50C | TPH - G by GC/MS | BTEX/MTBE/OXYS by EPA 8260B | Ethanol by EPA 8260B | EPA 8260B Full List with OXYS | BTEX / MTBE (8260) | TPH-G (8015) | Turnaround Time (TAT): | | | | | | | | | | | |
| Site Address: <u>3555 PIERSON ST. OAKLAND CA</u> | | | | Consultant Phone No.: <u>408-747-2013</u> | | | | | | | | | Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> | | | | | | | | | | | |
| Union Oil PM: <u>Nicole Hincenoux</u> | | | | Sampling Company: <u>(C-HI) R-1601</u> | | | | | | | | | 48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/> | | | | | | | | | | | |
| Union Oil PM Phone No.: <u>925-790-6612</u> | | | | Sampled By (PRINT): <u>Alex Wong</u> | | Special Instructions | | | | | | Notes / Comments | | | | | | | | | | | | |
| Charge Code: <u>NWRTB-0 51140-0-LAB</u> | | | | Sampler Signature:  | | | | | | | | | | | | | | | | | | | | |
| <p><small>This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.</small></p> | | | | <p>BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911</p> | | | | | | | | | | | | | | | | | | | | |
| SAMPLE ID | | | | Sample Time | # of Containers | | | | | | | | | | | | | | | | | | | |
| Field Point Name | Matrix | Depth | Date (yymmdd) | | | | | | | | | | | | | | | | | | | | | |
| <u>QA</u> | <u>W-S-A</u> | | <u>160622</u> | <u>—</u> | <u>2</u> | | | | | | | | | | | | | | | | | | | |
| <u>rw-A</u> | <u>W-S-A</u> | | ↓ | <u>1445</u> | <u>8</u> | X | | X | | | | | | | | | | | | | | | | |
| <u>rw-4</u> | <u>W-S-A</u> | | ↓ | <u>0700</u> | <u>8</u> | X | | X | | | | | | | | | | | | | | | | |
| <u>mw-5</u> | <u>W-S-A</u> | | ↓ | <u>0555</u> | <u>8</u> | X | | X | | | | | | | | | | | | | | | | |
| <u>rw-6</u> | <u>W-S-A</u> | | ↓ | <u>0525</u> | <u>8</u> | X | | X | | | | | | | | | | | | | | | | |
| <u>mw-7</u> | <u>W-S-A</u> | | ↓ | <u>0455</u> | <u>8</u> | X | | X | | | | | | | | | | | | | | | | |
| <u>rw-8</u> | <u>W-S-A</u> | | ↓ | <u>0820</u> | <u>8</u> | X | | X | | | | | | | | | | | | | | | | |
| <u>rw-9</u> | <u>W-S-A</u> | | ↓ | <u>0625</u> | <u>8</u> | X | | X | | | | | | | | | | | | | | | | |
| | <u>W-S-A</u> | | | | | | | | | | | | | | | | | | | | | | | |
| | <u>W-S-A</u> | | | | | | | | | | | | | | | | | | | | | | | |
| | <u>W-S-A</u> | | | | | | | | | | | | | | | | | | | | | | | |
| | <u>W-S-A</u> | | | | | | | | | | | | | | | | | | | | | | | |
| Relinquished By <u>GRINC</u> Company <u>GRINC</u> Date / Time: <u>06-22-16 1000</u> | | | | Relinquished By <u>[Signature]</u> Company <u>[Signature]</u> Date / Time: <u>06-22-16 1330</u> | | | | Relinquished By _____ Company _____ Date / Time: _____ | | | | | | | | | | | | | | | | |
| Received By <u>[Signature]</u> Company <u>[Signature]</u> Date / Time: <u>06-22-16 1000</u> | | | | Received By <u>Jenny Bogan</u> Company _____ Date / Time: <u>6-27-16 1330</u> | | | | Received By _____ Company _____ Date / Time: _____ | | | | | | | | | | | | | | | | |

ATTACHMENT B

[Historical Groundwater Analytical Data]



**Table 3 - Historical Groundwater Analytical Data
February 2004 - March 2009**

Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

| WELL ID | DATE | DICHLORO- difluoro- METHANE (µg/L) | 1,1-DCA (µg/L) | 1,1-DCE (µg/L) | cis- 1,2-DCE (µg/L) | trans- 1,2-DCE (µg/L) | 1,2- DICHLORO- PROPANE (µg/L) | cis-1,3- DICHLORO- PROPANE (µg/L) | 1,1,2,2- TETRACHLORO- ETHANE (µg/L) | TETRACHLORO- ETHENE (µg/L) | TRICHLORO- TRIFLUORO- ETHANE (µg/L) | 1,1,1- TRICHLORO- ETHANE (µg/L) | 1,1,2- TRICHLORO- ETHANE (µg/L) | TRICHLORO- ETHENE (µg/L) | TRICHLORO- FLUORO- METHANE (µg/L) | VINYL CHLORIDE (µg/L) |
|---------|-----------|---|-------------------|-------------------|---------------------------|-----------------------------|--|--|--|----------------------------------|--|--|--|--------------------------------|--|-----------------------------|
| MW-A | 2/3/2004 | ND<1.0 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | ND<0.50 |
| | 2/18/2005 | ND<1.0 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | ND<0.50 |
| | 3/29/2006 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 |
| | 3/28/2007 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 |
| | 3/22/2008 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 |
| | 3/27/2009 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 |

NOTES:

µg/L = Micrograms per liter

ID = Identification

ND<# = Analyte not detected at or above indicated laboratory practical quantitation limit

ATTACHMENT C

[Laboratory Report and Chain-of-Custody Documentation]





Date of Report: 07/06/2016

Tamera Rogers

Arcadis

6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Client Project: 351640
BCL Project: 5781
BCL Work Order: 1617219
Invoice ID: B239628

Enclosed are the results of analyses for samples received by the laboratory on 6/22/2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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CHAIN OF CUSTODY FORM

Union Oil Company of California 6101 Bollinger Canyon Road San Ramon, CA 94583

COC _____ of _____

| Union Oil Site ID: 16-17219 Site Global ID: 5781 Site Address: 10600 101467 3535 PIERSON ST. OAKLAND CA Union Oil PM: Nicole Hernandez Union Oil PM Phone No.: 925-940-6912 Charge Code: NWRTB-0351640-0-LAB | Union Oil Consultant: Atroads Consultant Contact: Tamara Rogers Consultant Phone No.: 408-197-2013 Sampling Company: Greifler Ryan Sampled By (PRINT): Alex Wong Sampler Signature: BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911 | Turnaround Time (TAT): Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/> Special Instructions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|----------------|----|----|--------|----|------|--|----|------|--|----|------|--|----|------|--|----|------|--|----|------|--|----|------|--|---|-------------|-----------------|---|---|------|---|------|---|------|---|------|---|------|---|------|---|------|---|--|
| This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">SAMPLE ID</th> <th>Date (yyymmdd)</th> </tr> </thead> <tbody> <tr><td>-1</td><td>QA</td><td>160622</td></tr> <tr><td>-2</td><td>MW-A</td><td></td></tr> <tr><td>-3</td><td>MW-4</td><td></td></tr> <tr><td>-4</td><td>MW-5</td><td></td></tr> <tr><td>-5</td><td>MW-6</td><td></td></tr> <tr><td>-6</td><td>MW-7</td><td></td></tr> <tr><td>-7</td><td>MW-8</td><td></td></tr> <tr><td>-8</td><td>MW-9</td><td></td></tr> </tbody> </table> | SAMPLE ID | | Date (yyymmdd) | -1 | QA | 160622 | -2 | MW-A | | -3 | MW-4 | | -4 | MW-5 | | -5 | MW-6 | | -6 | MW-7 | | -7 | MW-8 | | -8 | MW-9 | | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sample Time</th> <th># of Containers</th> </tr> </thead> <tbody> <tr><td>—</td><td>2</td></tr> <tr><td>0445</td><td>8</td></tr> <tr><td>0700</td><td>8</td></tr> <tr><td>0555</td><td>8</td></tr> <tr><td>0525</td><td>8</td></tr> <tr><td>0455</td><td>8</td></tr> <tr><td>0820</td><td>8</td></tr> <tr><td>0625</td><td>8</td></tr> </tbody> </table> | Sample Time | # of Containers | — | 2 | 0445 | 8 | 0700 | 8 | 0555 | 8 | 0525 | 8 | 0455 | 8 | 0820 | 8 | 0625 | 8 | ANALYSES REQUIRED TPH - Diesel by EPA 8015 W/5gc TPH - G by GC/MS BTEX/MTBE/OXYS by EPA 8260B Ethanol by EPA 8260B EPA 8260B Full List with OXYS X BTEX/MTBE (8260) X TPH-G (8015) |
| SAMPLE ID | | Date (yyymmdd) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -1 | QA | 160622 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -2 | MW-A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -3 | MW-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -4 | MW-5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -5 | MW-6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -6 | MW-7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -7 | MW-8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -8 | MW-9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sample Time | # of Containers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| — | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0445 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0700 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0555 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0525 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0455 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0820 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0625 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Relinquished By: GR INC Date / Time: 06-22-16 1330 Received By: GREIFLER-RYAN Date / Time: 06-22-16 1330 | | Relinquished By: Young Boyan Date / Time: 6-22-16 1830 Received By: REL. BSO Date / Time: 6/22/16 18:30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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Chain of Custody and Cooler Receipt Form for 1617219 Page 2 of 2

Page 1 Of 1

BC LABORATORIES INC. COOLER RECEIPT FORM

Submission #: 16-17219

SHIPPING INFORMATION
 Fed Ex UPS Ontrac Hand Delivery
 BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER
 Ice Chest None Box
 Other (Specify) _____

FREE LIQUID
 YES NO W / S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Comments: _____
 Intact? Yes No Intact? Yes No

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received
 YES NO

Emissivity: 0.95 Container: Amber Thermometer ID: 208 Date/Time 6-22-2141
 Temperature: (A) 0.0 °C / (C) 0.0 °C Analyst Init ARL

| SAMPLE CONTAINERS | SAMPLE NUMBERS | | | | | | | | | |
|--|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| QT PE UNPRES | | | | | | | | | | |
| 4oz / 8oz / 16oz PE UNPRES | | | | | | | | | | |
| 2oz Cr ⁶ | | | | | | | | | | |
| QT INORGANIC CHEMICAL METALS | | | | | | | | | | |
| INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz | | | | | | | | | | |
| PT CYANIDE | | | | | | | | | | |
| PT NITROGEN FORMS | | | | | | | | | | |
| PT TOTAL SULFIDE | | | | | | | | | | |
| 2oz. NITRATE / NITRITE | | | | | | | | | | |
| PT TOTAL ORGANIC CARBON | | | | | | | | | | |
| PT CHEMICAL OXYGEN DEMAND | | | | | | | | | | |
| PIA PHENOLICS | | | | | | | | | | |
| 40ml VOA VIAL TRAVEL BLANK | <u>A, B</u> | <u>A → F</u> | <u>A → F</u> | <u>A → F</u> | <u>A → F</u> | <u>A → F</u> | <u>A → F</u> | <u>A → F</u> | | |
| 40ml VOA VIAL | | | | | | | | | | |
| QT EPA 1664 | | | | | | | | | | |
| PT ODOR | | | | | | | | | | |
| RADIOLOGICAL | | | | | | | | | | |
| BACTERIOLOGICAL | | | | | | | | | | |
| 40 ml VOA VIAL- 504 | | | | | | | | | | |
| QT EPA 508/608/8080 | | | | | | | | | | |
| QT EPA 515.1/8150 | | | | | | | | | | |
| QT EPA 525 | | | | | | | | | | |
| QT EPA 525 TRAVEL BLANK | | | | | | | | | | |
| 40ml EPA 547 | | | | | | | | | | |
| 40ml EPA 531.1 | | | | | | | | | | |
| 8oz EPA 548 | | | | | | | | | | |
| QT EPA 549 | | | | | | | | | | |
| QT EPA 8015M | | | | | | | | | | |
| QT EPA 8270 | | | | | | | | | | |
| 8oz / 16oz / 32oz AMBER | | <u>G, H</u> | <u>G, H</u> | <u>G, H</u> | <u>G, H</u> | <u>G, H</u> | <u>G, H</u> | <u>G, H</u> | | |
| 8oz / 16oz / 32oz JAR | | | | | | | | | | |
| SOIL SLEEVE | | | | | | | | | | |
| PCB VIAL | | | | | | | | | | |
| PLASTIC BAG | | | | | | | | | | |
| TEDLAR BAG | | | | | | | | | | |
| FERROUS IRON | | | | | | | | | | |
| ENCORE | | | | | | | | | | |
| SMART KIT | | | | | | | | | | |
| SUMMA CANISTER | | | | | | | | | | |

Comments: _____ Date/Time: 6-23-16 0815 Rev 21 05/23/2016
 Sample Numbering Completed By: PSG (S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMRECrev 20)



Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

| Laboratory | Client Sample Information |
|------------|---------------------------|
|------------|---------------------------|

| | | |
|-------------------|--|--|
| 1617219-01 | COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: QA-W-160622 Sampled By: GRD | Receive Date: 06/22/2016 21:45 Sampling Date: 06/22/2016 00:00 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): QA Matrix: W Sample QC Type (SACode): CS Cooler ID: |
|-------------------|--|--|

| | | |
|-------------------|--|--|
| 1617219-02 | COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-A-W-160622 Sampled By: GRD | Receive Date: 06/22/2016 21:45 Sampling Date: 06/22/2016 04:45 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-A Matrix: W Sample QC Type (SACode): CS Cooler ID: |
|-------------------|--|--|

| | | |
|-------------------|--|--|
| 1617219-03 | COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-4-W-160622 Sampled By: GRD | Receive Date: 06/22/2016 21:45 Sampling Date: 06/22/2016 07:00 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-4 Matrix: W Sample QC Type (SACode): CS Cooler ID: |
|-------------------|--|--|

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Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

| Laboratory | Client Sample Information |
|------------|---------------------------|
|------------|---------------------------|

| | | |
|-------------------|--|--|
| 1617219-04 | COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-5-W-160622 Sampled By: GRD | Receive Date: 06/22/2016 21:45 Sampling Date: 06/22/2016 05:55 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-5 Matrix: W Sample QC Type (SACode): CS Cooler ID: |
|-------------------|--|--|

| | | |
|-------------------|--|--|
| 1617219-05 | COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-6-W-160622 Sampled By: GRD | Receive Date: 06/22/2016 21:45 Sampling Date: 06/22/2016 05:25 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-6 Matrix: W Sample QC Type (SACode): CS Cooler ID: |
|-------------------|--|--|

| | | |
|-------------------|--|--|
| 1617219-06 | COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-7-W-160622 Sampled By: GRD | Receive Date: 06/22/2016 21:45 Sampling Date: 06/22/2016 04:55 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-7 Matrix: W Sample QC Type (SACode): CS Cooler ID: |
|-------------------|--|--|

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Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

| Laboratory | Client Sample Information |
|------------|---------------------------|
|------------|---------------------------|

| | | |
|-------------------|--|--|
| 1617219-07 | COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-8-W-160622 Sampled By: GRD | Receive Date: 06/22/2016 21:45 Sampling Date: 06/22/2016 08:20 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-8 Matrix: W Sample QC Type (SACode): CS Cooler ID: |
|-------------------|--|--|

| | | |
|-------------------|--|--|
| 1617219-08 | COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-9-W-160622 Sampled By: GRD | Receive Date: 06/22/2016 21:45 Sampling Date: 06/22/2016 06:25 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-9 Matrix: W Sample QC Type (SACode): CS Cooler ID: |
|-------------------|--|--|

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Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

| | |
|----------------------------------|--|
| BCL Sample ID: 1617219-01 | Client Sample Name: 5781, QA-W-160622, 6/22/2016 12:00:00AM |
|----------------------------------|--|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Benzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dibromoethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethylbenzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Methyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Toluene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Total Xylenes | ND | ug/L | 1.0 | | EPA-8260B | ND | | 1 |
| t-Amyl Methyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| t-Butyl alcohol | ND | ug/L | 10 | | EPA-8260B | ND | | 1 |
| Diisopropyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethanol | ND | ug/L | 250 | | EPA-8260B | ND | | 1 |
| Ethyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane-d4 (Surrogate) | 103 | % | 75 - 125 (LCL - UCL) | | EPA-8260B | | | 1 |
| Toluene-d8 (Surrogate) | 99.6 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |
| 4-Bromofluorobenzene (Surrogate) | 97.8 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8260B | 06/27/16 | 06/27/16 10:40 | IO1 | MS-V12 | 1 | BZF1616 |

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Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

| | |
|----------------------------------|--|
| BCL Sample ID: 1617219-01 | Client Sample Name: 5781, QA-W-160622, 6/22/2016 12:00:00AM |
|----------------------------------|--|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|--|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Gasoline Range Organics (C4 - C12) | ND | ug/L | 50 | | EPA-8015B | ND | | 1 |
| a,a,a-Trifluorotoluene (FID Surrogate) | 86.4 | % | 70 - 130 (LCL - UCL) | | EPA-8015B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8015B | 06/23/16 | 06/23/16 20:39 | AKM | GC-V9 | 1 | BZF2013 |

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Arcadis
6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-02 | Client Sample Name: 5781, MW-A-W-160622, 6/22/2016 4:45:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Benzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dibromoethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethylbenzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Methyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Toluene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Total Xylenes | ND | ug/L | 1.0 | | EPA-8260B | ND | | 1 |
| t-Amyl Methyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| t-Butyl alcohol | ND | ug/L | 10 | | EPA-8260B | ND | | 1 |
| Diisopropyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethanol | ND | ug/L | 250 | | EPA-8260B | ND | | 1 |
| Ethyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane-d4 (Surrogate) | 99.1 | % | 75 - 125 (LCL - UCL) | | EPA-8260B | | | 1 |
| Toluene-d8 (Surrogate) | 96.9 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |
| 4-Bromofluorobenzene (Surrogate) | 97.2 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8260B | 06/27/16 | 06/27/16 10:57 | IO1 | MS-V12 | 1 | BZF1616 |

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6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-02 | Client Sample Name: 5781, MW-A-W-160622, 6/22/2016 4:45:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|--|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Gasoline Range Organics (C4 - C12) | ND | ug/L | 50 | | EPA-8015B | ND | | 1 |
| a,a,a-Trifluorotoluene (FID Surrogate) | 83.9 | % | 70 - 130 (LCL - UCL) | | EPA-8015B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8015B | 06/23/16 | 06/23/16 20:59 | AKM | GC-V9 | 1 | BZF2013 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-02 | Client Sample Name: 5781, MW-A-W-160622, 6/22/2016 4:45:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Diesel Range Organics (C12 - C24) | ND | ug/L | 50 | | Luft/TPHd | ND | | 1 |
| Tetracosane (Surrogate) | 49.0 | % | 40 - 140 (LCL - UCL) | | Luft/TPHd | | | 1 |
| Capric acid (Reverse Surrogate) | 0 | % | 0 - 1 (LCL - UCL) | | Luft/TPHd | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | Luft/TPHd | 06/27/16 | 07/05/16 17:46 | RSM | GC-5 | 1 | BZG0207 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-03 | Client Sample Name: 5781, MW-4-W-160622, 6/22/2016 7:00:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Benzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dibromoethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethylbenzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Methyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Toluene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Total Xylenes | ND | ug/L | 1.0 | | EPA-8260B | ND | | 1 |
| t-Amyl Methyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| t-Butyl alcohol | ND | ug/L | 10 | | EPA-8260B | ND | | 1 |
| Diisopropyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethanol | ND | ug/L | 250 | | EPA-8260B | ND | | 1 |
| Ethyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane-d4 (Surrogate) | 100 | % | 75 - 125 (LCL - UCL) | | EPA-8260B | | | 1 |
| Toluene-d8 (Surrogate) | 95.4 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |
| 4-Bromofluorobenzene (Surrogate) | 91.7 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8260B | 06/27/16 | 06/27/16 11:15 | IO1 | MS-V12 | 1 | BZF1616 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-03 | Client Sample Name: 5781, MW-4-W-160622, 6/22/2016 7:00:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|--|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Gasoline Range Organics (C4 - C12) | ND | ug/L | 50 | | EPA-8015B | ND | | 1 |
| a,a,a-Trifluorotoluene (FID Surrogate) | 89.4 | % | 70 - 130 (LCL - UCL) | | EPA-8015B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8015B | 06/23/16 | 06/23/16 21:20 | AKM | GC-V9 | 1 | BZF2013 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-03 | Client Sample Name: 5781, MW-4-W-160622, 6/22/2016 7:00:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Diesel Range Organics (C12 - C24) | ND | ug/L | 50 | | Luft/TPHd | ND | | 1 |
| Tetracosane (Surrogate) | 74.6 | % | 40 - 140 (LCL - UCL) | | Luft/TPHd | | | 1 |
| Capric acid (Reverse Surrogate) | 0 | % | 0 - 1 (LCL - UCL) | | Luft/TPHd | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | Luft/TPHd | 06/27/16 | 07/05/16 18:01 | RSM | GC-5 | 1 | BZG0207 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-04 | Client Sample Name: 5781, MW-5-W-160622, 6/22/2016 5:55:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Benzene | 0.55 | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dibromoethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethylbenzene | 8.6 | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Methyl t-butyl ether | 3.3 | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Toluene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Total Xylenes | 2.3 | ug/L | 1.0 | | EPA-8260B | ND | | 1 |
| t-Amyl Methyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| t-Butyl alcohol | ND | ug/L | 10 | | EPA-8260B | ND | | 1 |
| Diisopropyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethanol | ND | ug/L | 250 | | EPA-8260B | ND | | 1 |
| Ethyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane-d4 (Surrogate) | 105 | % | 75 - 125 (LCL - UCL) | | EPA-8260B | | | 1 |
| Toluene-d8 (Surrogate) | 91.8 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |
| 4-Bromofluorobenzene (Surrogate) | 98.1 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8260B | 06/27/16 | 06/27/16 12:43 | IO1 | MS-V12 | 1 | BZF1616 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-04 | Client Sample Name: 5781, MW-5-W-160622, 6/22/2016 5:55:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|--|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Gasoline Range Organics (C4 - C12) | 1600 | ug/L | 50 | | EPA-8015B | ND | | 1 |
| a,a,a-Trifluorotoluene (FID Surrogate) | 120 | % | 70 - 130 (LCL - UCL) | | EPA-8015B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8015B | 06/23/16 | 06/23/16 23:03 | AKM | GC-V9 | 1 | BZF2013 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-04 | Client Sample Name: 5781, MW-5-W-160622, 6/22/2016 5:55:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Diesel Range Organics (C12 - C24) | 750 | ug/L | 50 | | Luft/TPHd | ND | A52 | 1 |
| Tetracosane (Surrogate) | 65.2 | % | 40 - 140 (LCL - UCL) | | Luft/TPHd | | | 1 |
| Capric acid (Reverse Surrogate) | 0 | % | 0 - 1 (LCL - UCL) | | Luft/TPHd | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | Luft/TPHd | 06/27/16 | 07/05/16 18:45 | RSM | GC-5 | 1 | BZG0207 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-05 | Client Sample Name: 5781, MW-6-W-160622, 6/22/2016 5:25:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Benzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dibromoethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethylbenzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Methyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Toluene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Total Xylenes | ND | ug/L | 1.0 | | EPA-8260B | ND | | 1 |
| t-Amyl Methyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| t-Butyl alcohol | ND | ug/L | 10 | | EPA-8260B | ND | | 1 |
| Diisopropyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethanol | ND | ug/L | 250 | | EPA-8260B | ND | | 1 |
| Ethyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane-d4 (Surrogate) | 104 | % | 75 - 125 (LCL - UCL) | | EPA-8260B | | | 1 |
| Toluene-d8 (Surrogate) | 96.6 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |
| 4-Bromofluorobenzene (Surrogate) | 97.9 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8260B | 06/27/16 | 06/27/16 11:33 | IO1 | MS-V12 | 1 | BZF1616 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-05 | Client Sample Name: 5781, MW-6-W-160622, 6/22/2016 5:25:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|--|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Gasoline Range Organics (C4 - C12) | ND | ug/L | 50 | | EPA-8015B | ND | | 1 |
| a,a,a-Trifluorotoluene (FID Surrogate) | 90.7 | % | 70 - 130 (LCL - UCL) | | EPA-8015B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8015B | 06/23/16 | 06/23/16 21:40 | AKM | GC-V9 | 1 | BZF2013 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-05 | Client Sample Name: 5781, MW-6-W-160622, 6/22/2016 5:25:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Diesel Range Organics (C12 - C24) | ND | ug/L | 50 | | Luft/TPHd | ND | | 1 |
| Tetracosane (Surrogate) | 65.2 | % | 40 - 140 (LCL - UCL) | | Luft/TPHd | | | 1 |
| Capric acid (Reverse Surrogate) | 0 | % | 0 - 1 (LCL - UCL) | | Luft/TPHd | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | Luft/TPHd | 06/27/16 | 07/05/16 18:59 | RSM | GC-5 | 1 | BZG0207 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-06 | Client Sample Name: 5781, MW-7-W-160622, 6/22/2016 4:55:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Benzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dibromoethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethylbenzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Methyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Toluene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Total Xylenes | ND | ug/L | 1.0 | | EPA-8260B | ND | | 1 |
| t-Amyl Methyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| t-Butyl alcohol | ND | ug/L | 10 | | EPA-8260B | ND | | 1 |
| Diisopropyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethanol | ND | ug/L | 250 | | EPA-8260B | ND | | 1 |
| Ethyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane-d4 (Surrogate) | 102 | % | 75 - 125 (LCL - UCL) | | EPA-8260B | | | 1 |
| Toluene-d8 (Surrogate) | 98.2 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |
| 4-Bromofluorobenzene (Surrogate) | 94.4 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8260B | 06/27/16 | 06/27/16 11:50 | IO1 | MS-V12 | 1 | BZF1616 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-06 | Client Sample Name: 5781, MW-7-W-160622, 6/22/2016 4:55:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|--|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Gasoline Range Organics (C4 - C12) | ND | ug/L | 50 | | EPA-8015B | ND | | 1 |
| a,a,a-Trifluorotoluene (FID Surrogate) | 92.1 | % | 70 - 130 (LCL - UCL) | | EPA-8015B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8015B | 06/23/16 | 06/23/16 22:01 | AKM | GC-V9 | 1 | BZF2013 |

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6296 San Ignacio Ave, Suite C&D
San Jose, CA 95119

Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-06 | Client Sample Name: 5781, MW-7-W-160622, 6/22/2016 4:55:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Diesel Range Organics (C12 - C24) | ND | ug/L | 50 | | Luft/TPHd | ND | | 1 |
| Tetracosane (Surrogate) | 69.6 | % | 40 - 140 (LCL - UCL) | | Luft/TPHd | | | 1 |
| Capric acid (Reverse Surrogate) | 0 | % | 0 - 1 (LCL - UCL) | | Luft/TPHd | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | Luft/TPHd | 06/27/16 | 07/05/16 19:14 | RSM | GC-5 | 1 | BZG0207 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-07 | Client Sample Name: 5781, MW-8-W-160622, 6/22/2016 8:20:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|-------------|-------------|----------------------|-----|------------------|---------|-----------|-------|
| Benzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dibromoethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethylbenzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Methyl t-butyl ether | 0.97 | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Toluene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Total Xylenes | ND | ug/L | 1.0 | | EPA-8260B | ND | | 1 |
| t-Amyl Methyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| t-Butyl alcohol | ND | ug/L | 10 | | EPA-8260B | ND | | 1 |
| Diisopropyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethanol | ND | ug/L | 250 | | EPA-8260B | ND | | 1 |
| Ethyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane-d4 (Surrogate) | 105 | % | 75 - 125 (LCL - UCL) | | EPA-8260B | | | 1 |
| Toluene-d8 (Surrogate) | 94.4 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |
| 4-Bromofluorobenzene (Surrogate) | 92.9 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8260B | 06/27/16 | 06/27/16 12:08 | IO1 | MS-V12 | 1 | BZF1616 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-07 | Client Sample Name: 5781, MW-8-W-160622, 6/22/2016 8:20:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|--|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Gasoline Range Organics (C4 - C12) | ND | ug/L | 50 | | EPA-8015B | ND | | 1 |
| a,a,a-Trifluorotoluene (FID Surrogate) | 91.0 | % | 70 - 130 (LCL - UCL) | | EPA-8015B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8015B | 06/23/16 | 06/23/16 22:21 | AKM | GC-V9 | 1 | BZF2013 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-07 | Client Sample Name: 5781, MW-8-W-160622, 6/22/2016 8:20:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Diesel Range Organics (C12 - C24) | ND | ug/L | 50 | | Luft/TPHd | ND | | 1 |
| Tetracosane (Surrogate) | 59.4 | % | 40 - 140 (LCL - UCL) | | Luft/TPHd | | | 1 |
| Capric acid (Reverse Surrogate) | 0 | % | 0 - 1 (LCL - UCL) | | Luft/TPHd | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | Luft/TPHd | 06/27/16 | 07/05/16 19:29 | RSM | GC-5 | 1 | BZG0207 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-08 | Client Sample Name: 5781, MW-9-W-160622, 6/22/2016 6:25:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Benzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dibromoethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethylbenzene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Methyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Toluene | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Total Xylenes | ND | ug/L | 1.0 | | EPA-8260B | ND | | 1 |
| t-Amyl Methyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| t-Butyl alcohol | ND | ug/L | 10 | | EPA-8260B | ND | | 1 |
| Diisopropyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| Ethanol | ND | ug/L | 250 | | EPA-8260B | ND | | 1 |
| Ethyl t-butyl ether | ND | ug/L | 0.50 | | EPA-8260B | ND | | 1 |
| 1,2-Dichloroethane-d4 (Surrogate) | 105 | % | 75 - 125 (LCL - UCL) | | EPA-8260B | | | 1 |
| Toluene-d8 (Surrogate) | 96.4 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |
| 4-Bromofluorobenzene (Surrogate) | 101 | % | 80 - 120 (LCL - UCL) | | EPA-8260B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8260B | 06/27/16 | 06/27/16 12:26 | IO1 | MS-V12 | 1 | BZF1616 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-08 | Client Sample Name: 5781, MW-9-W-160622, 6/22/2016 6:25:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|--|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Gasoline Range Organics (C4 - C12) | ND | ug/L | 50 | | EPA-8015B | ND | | 1 |
| a,a,a-Trifluorotoluene (FID Surrogate) | 89.5 | % | 70 - 130 (LCL - UCL) | | EPA-8015B | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | EPA-8015B | 06/23/16 | 06/23/16 22:42 | AKM | GC-V9 | 1 | BZF2013 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

| | |
|----------------------------------|---|
| BCL Sample ID: 1617219-08 | Client Sample Name: 5781, MW-9-W-160622, 6/22/2016 6:25:00AM |
|----------------------------------|---|

| Constituent | Result | Units | PQL | MDL | Method | MB Bias | Lab Quals | Run # |
|-----------------------------------|--------|-------|----------------------|-----|-----------|---------|-----------|-------|
| Diesel Range Organics (C12 - C24) | ND | ug/L | 50 | | Luft/TPHd | ND | | 1 |
| Tetracosane (Surrogate) | 61.3 | % | 40 - 140 (LCL - UCL) | | Luft/TPHd | | | 1 |
| Capric acid (Reverse Surrogate) | 0 | % | 0 - 1 (LCL - UCL) | | Luft/TPHd | | | 1 |

| Run # | Method | Prep Date | Run Date/Time | Analyst | Instrument | Dilution | QC Batch ID |
|-------|-----------|-----------|----------------|---------|------------|----------|-------------|
| 1 | Luft/TPHd | 06/27/16 | 07/05/16 19:43 | RSM | GC-5 | 1 | BZG0207 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

| Constituent | QC Sample ID | MB Result | Units | PQL | MDL | Lab Quals |
|--|---------------------|-------------|----------|-----------------------------|-----|-----------|
| QC Batch ID: BZF1616 | | | | | | |
| Benzene | BZF1616-BLK1 | ND | ug/L | 0.50 | | |
| 1,2-Dibromoethane | BZF1616-BLK1 | ND | ug/L | 0.50 | | |
| 1,2-Dichloroethane | BZF1616-BLK1 | ND | ug/L | 0.50 | | |
| Ethylbenzene | BZF1616-BLK1 | ND | ug/L | 0.50 | | |
| Methyl t-butyl ether | BZF1616-BLK1 | ND | ug/L | 0.50 | | |
| Toluene | BZF1616-BLK1 | ND | ug/L | 0.50 | | |
| Total Xylenes | BZF1616-BLK1 | ND | ug/L | 1.0 | | |
| t-Amyl Methyl ether | BZF1616-BLK1 | ND | ug/L | 0.50 | | |
| t-Butyl alcohol | BZF1616-BLK1 | ND | ug/L | 10 | | |
| Diisopropyl ether | BZF1616-BLK1 | ND | ug/L | 0.50 | | |
| Ethanol | BZF1616-BLK1 | ND | ug/L | 250 | | |
| Ethyl t-butyl ether | BZF1616-BLK1 | ND | ug/L | 0.50 | | |
| 1,2-Dichloroethane-d4 (Surrogate) | BZF1616-BLK1 | 103 | % | 75 - 125 (LCL - UCL) | | |
| Toluene-d8 (Surrogate) | BZF1616-BLK1 | 93.7 | % | 80 - 120 (LCL - UCL) | | |
| 4-Bromofluorobenzene (Surrogate) | BZF1616-BLK1 | 95.9 | % | 80 - 120 (LCL - UCL) | | |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

| Constituent | QC Sample ID | Type | Result | Spike Level | Units | Percent Recovery | RPD | Control Limits | | Lab |
|-----------------------------------|--------------|------|--------|-------------|-------|------------------|-----|------------------|-----|-----|
| | | | | | | | | Percent Recovery | RPD | |
| QC Batch ID: BZF1616 | | | | | | | | | | |
| Benzene | BZF1616-BS1 | LCS | 20.490 | 25.000 | ug/L | 82.0 | | 70 - 130 | | |
| Toluene | BZF1616-BS1 | LCS | 22.800 | 25.000 | ug/L | 91.2 | | 70 - 130 | | |
| 1,2-Dichloroethane-d4 (Surrogate) | BZF1616-BS1 | LCS | 11.410 | 10.000 | ug/L | 114 | | 75 - 125 | | |
| Toluene-d8 (Surrogate) | BZF1616-BS1 | LCS | 9.6700 | 10.000 | ug/L | 96.7 | | 80 - 120 | | |
| 4-Bromofluorobenzene (Surrogate) | BZF1616-BS1 | LCS | 9.4300 | 10.000 | ug/L | 94.3 | | 80 - 120 | | |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

| Constituent | Type | Source Sample ID | Source Result | Result | Spike Added | Units | RPD | Percent | | Lab Quals |
|-----------------------------------|------|-----------------------|------------------|--------|----------------|-------|-----|----------|-----|--------------|
| | | | | | | | | Recovery | RPD | |
| QC Batch ID: BZF1616 | | Used client sample: N | | | | | | | | |
| Benzene | MS | 1616196-02 | ND | 22.380 | 25.000 | ug/L | | 89.5 | | 70 - 130 |
| | MSD | 1616196-02 | ND | 20.260 | 25.000 | ug/L | 9.9 | 81.0 | 20 | 70 - 130 |
| Toluene | MS | 1616196-02 | ND | 25.420 | 25.000 | ug/L | | 102 | | 70 - 130 |
| | MSD | 1616196-02 | ND | 24.070 | 25.000 | ug/L | 5.5 | 96.3 | 20 | 70 - 130 |
| 1,2-Dichloroethane-d4 (Surrogate) | MS | 1616196-02 | ND | 11.060 | 10.000 | ug/L | | 111 | | 75 - 125 |
| | MSD | 1616196-02 | ND | 11.010 | 10.000 | ug/L | 0.5 | 110 | | 75 - 125 |
| Toluene-d8 (Surrogate) | MS | 1616196-02 | ND | 9.9700 | 10.000 | ug/L | | 99.7 | | 80 - 120 |
| | MSD | 1616196-02 | ND | 10.010 | 10.000 | ug/L | 0.4 | 100 | | 80 - 120 |
| 4-Bromofluorobenzene (Surrogate) | MS | 1616196-02 | ND | 9.3800 | 10.000 | ug/L | | 93.8 | | 80 - 120 |
| | MSD | 1616196-02 | ND | 9.7800 | 10.000 | ug/L | 4.2 | 97.8 | | 80 - 120 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

| Constituent | QC Sample ID | MB Result | Units | PQL | MDL | Lab Quals |
|--|--------------|-----------|-------|----------------------|-----|-----------|
| QC Batch ID: BZF2013 | | | | | | |
| Gasoline Range Organics (C4 - C12) | BZF2013-BLK1 | ND | ug/L | 50 | | |
| a,a,a-Trifluorotoluene (FID Surrogate) | BZF2013-BLK1 | 99.5 | % | 70 - 130 (LCL - UCL) | | |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

| Constituent | QC Sample ID | Type | Result | Spike Level | Units | Percent Recovery | RPD | Control Limits | | Lab |
|--|--------------|------|--------|-------------|-------|------------------|-----|------------------|-----|-----|
| | | | | | | | | Percent Recovery | RPD | |
| QC Batch ID: BZF2013 | | | | | | | | | | |
| Gasoline Range Organics (C4 - C12) | BZF2013-BS1 | LCS | 973.12 | 1000.0 | ug/L | 97.3 | | 85 - 115 | | |
| a,a,a-Trifluorotoluene (FID Surrogate) | BZF2013-BS1 | LCS | 38.357 | 40.000 | ug/L | 95.9 | | 70 - 130 | | |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

| Constituent | Type | Source Sample ID | Source Result | Result | Spike Added | Units | RPD | Control Limits | | Lab Quals |
|--|------|-----------------------|------------------|--------|----------------|-------|-----|---------------------|-----|--------------|
| | | | | | | | | Percent Recovery | RPD | |
| QC Batch ID: BZF2013 | | Used client sample: N | | | | | | | | |
| Gasoline Range Organics (C4 - C12) | MS | 1612122-98 | ND | 957.56 | 1000.0 | ug/L | | 95.8 | | 70 - 130 |
| | MSD | 1612122-98 | ND | 869.69 | 1000.0 | ug/L | 9.6 | 87.0 | 20 | 70 - 130 |
| a,a,a-Trifluorotoluene (FID Surrogate) | MS | 1612122-98 | ND | 36.386 | 40.000 | ug/L | | 91.0 | | 70 - 130 |
| | MSD | 1612122-98 | ND | 39.380 | 40.000 | ug/L | 7.9 | 98.4 | | 70 - 130 |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Method Blank Analysis

| Constituent | QC Sample ID | MB Result | Units | PQL | MDL | Lab Quals |
|-----------------------------------|---------------------|-------------|-------|-----------------------------|-----|-----------|
| QC Batch ID: BZG0207 | | | | | | |
| Diesel Range Organics (C12 - C24) | BZG0207-BLK1 | ND | ug/L | 50 | | |
| Tetracosane (Surrogate) | BZG0207-BLK1 | 64.8 | % | 40 - 140 (LCL - UCL) | | |
| Capric acid (Reverse Surrogate) | BZG0207-BLK1 | 0 | % | 0 - 1 (LCL - UCL) | | |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Laboratory Control Sample

| Constituent | QC Sample ID | Type | Result | Spike Level | Units | Percent Recovery | RPD | Control Limits | | Lab | Quals |
|-----------------------------------|--------------|------|--------|-------------|-------|------------------|-----|------------------|-----|-----|-------|
| | | | | | | | | Percent Recovery | RPD | | |
| QC Batch ID: BZG0207 | | | | | | | | | | | |
| Diesel Range Organics (C12 - C24) | BZG0207-BS1 | LCS | 325.64 | 500.00 | ug/L | 65.1 | | 20 - 110 | | | |
| Tetracosane (Surrogate) | BZG0207-BS1 | LCS | 14.392 | 20.000 | ug/L | 72.0 | | 40 - 140 | | | |
| Capric acid (Reverse Surrogate) | BZG0207-BS1 | LCS | ND | 100.00 | ug/L | 0 | | 0 - 1 | | | |

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Reported: 07/06/2016 9:30
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Precision & Accuracy

| Constituent | Type | Source Sample ID | Source Result | Result | Spike Added | Units | RPD | Control Limits | | Lab Quals |
|-----------------------------------|------|-----------------------|------------------|--------|----------------|-------|------|---------------------|-----|--------------|
| | | | | | | | | Percent Recovery | RPD | |
| QC Batch ID: BZG0207 | | Used client sample: N | | | | | | | | |
| Diesel Range Organics (C12 - C24) | MS | 1612122-66 | ND | 273.85 | 500.00 | ug/L | | 54.8 | | 20 - 110 |
| | MSD | 1612122-66 | ND | 327.07 | 500.00 | ug/L | 17.7 | 65.4 | 30 | 20 - 110 |
| Tetracosane (Surrogate) | MS | 1612122-66 | ND | 12.396 | 20.000 | ug/L | | 62.0 | | 40 - 140 |
| | MSD | 1612122-66 | ND | 14.735 | 20.000 | ug/L | 17.2 | 73.7 | | 40 - 140 |
| Capric acid (Reverse Surrogate) | MS | 1612122-66 | ND | ND | 100.00 | ug/L | | 0 | | 0 - 1 |
| | MSD | 1612122-66 | ND | ND | 100.00 | ug/L | | 0 | | 0 - 1 |

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Project: 5781
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Notes And Definitions

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A52 Chromatogram not typical of diesel.

