



James P. Kiernan, P.E.
Project Manager

**Chevron Environmental
Management Company**
6001 Bollinger Canyon Road
Room C2102
San Ramon, CA 94583
Tel (925) 842-3220
jkiernan@chevron.com

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 8:43 am, Aug 02, 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,

A handwritten signature in blue ink, appearing to be 'J. Kiernan', with a long horizontal stroke extending to the right.

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.


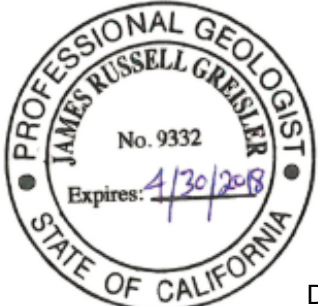
The direction of groundwater flow and calculated gradient were generally consistent with previous monitoring events. Groundwater analytical results were generally similar to previous events. Petroleum hydrocarbons were generally only detected in well MW-5, consisting of total petroleum hydrocarbons as 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	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)	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	153.66	--	--	--	--	1,800	10,000	<0.50	0.54	85	370	2.0	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<250	post-purge
	6/3/2015	153.66	14.70	0	0	138.96	760	5,100	<0.50	<0.50	39	120	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	9/7/2015	153.66	16.63	0	0	137.03	3,800	4,100	<5.0	<5.0	130	540	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2,500	
	12/22/2015	153.66	11.82	0	0	141.84	1,700	5,600	16	63	53	320	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2,500	
	3/15/2016	153.66	11.54	0	0	142.12	1,300	2,200	2.8	1	13	9.4	0.7	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	6/22/2016	153.66	12.35	0	0	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	12/21/2010	154.62	12.10	0	0	142.52	<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	
	3/10/2011	154.62	11.36	0	0	143.26	<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	
	06/07/2011	154.62	11.33	0	0	143.29	<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	154.62	13.00	0	0	141.62	<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	154.62	14.02	0	0	140.60	<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	154.62	11.94	0	0	142.68	<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	154.62	11.39	0	0	143.23	<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	
	07/02/2012	154.62	11.49	0	0	143.13	<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	154.62	16.09	0	0	138.53	<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	154.62	11.41	0	0	143.21	<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	
	4/22/2013	154.62	11.43	0	0	143.19	<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	154.62	15.71	0	0	138.91	<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	154.62	16.83	0	0	137.79	<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	154.62	15.22	0	0	139.40	<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	154.62	11.43	0	0	143.19	<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	154.62	14.96	0	0	139.66	<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	154.62	16.70	0	0	137.92	<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	154.62	11.61	0	0	143.01	<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
	1/20/2015	154.62	--	--	--	--	<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	154.62	11.76	0	0	142.86	<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	154.62	16.08	0	0	138.54	<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	154.62	15.55	0	0	139.07	<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	
	3/15/2016	154.62	11.33	0	0	143.29	<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	154.62	11.50	0	0	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	12/21/2010	155.38	13.46	0	0	141.92	<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	155.38	12.07	0	0	143.31	<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	155.38	12.59	0	0	142.79	<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	
	08/18/2011	155.38	14.37	0	0	141.01	<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	
	10/04/2011	155.38	15.22	0	0	140.16	<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	155.38	15.32	0	0	140.06	<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	155.38	13.09	0	0	142.29	<49	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	07/02/2012	155.38	14.42	0	0	140.96	<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	155.38	16.20	0	0	139.18	<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	155.38	13.27	0	0	142.11	<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	
	4/22/2013	155.38	14.30	0	0	141.08	<50	52	<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	155.38	16.30	0	0	139.08								Insufficient Water to Sample								
	10/17/2013	155.38	16.77	0	0	138.61	<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	155.38	15.33	0	0	140.05	<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	
	4/17/2014	155.38	13.82	0	0	141.56	<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	155.38	15.70	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	155.38	16.67	0	0	138.71	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	1/20/2015	155.38	14.13	0	0	141.25	<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	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		
	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	<250	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		
	MW-8	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	pre-purge	
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	<250	post-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

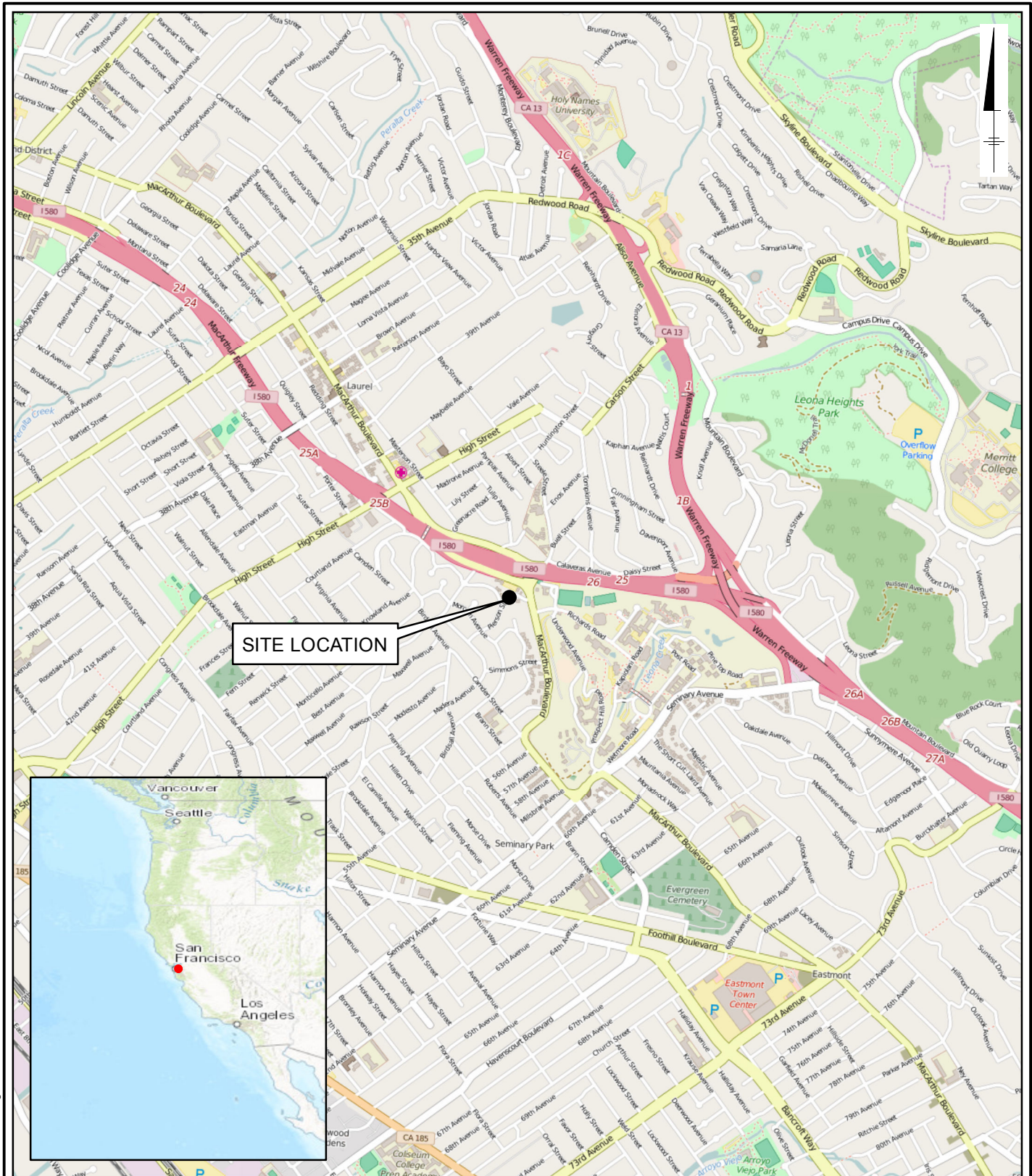
Well ID	Sample Date	TOC (ft amsl)	DTW (ft bTOC)	PSH thickness (ft)	PSH recovered (gal)	GW Elev (ft amsl)	TPHd (µg/L)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	EDB (µg/L)	EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	Comments	
	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

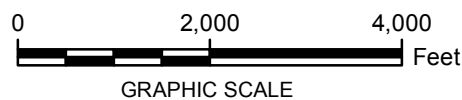
FIGURES



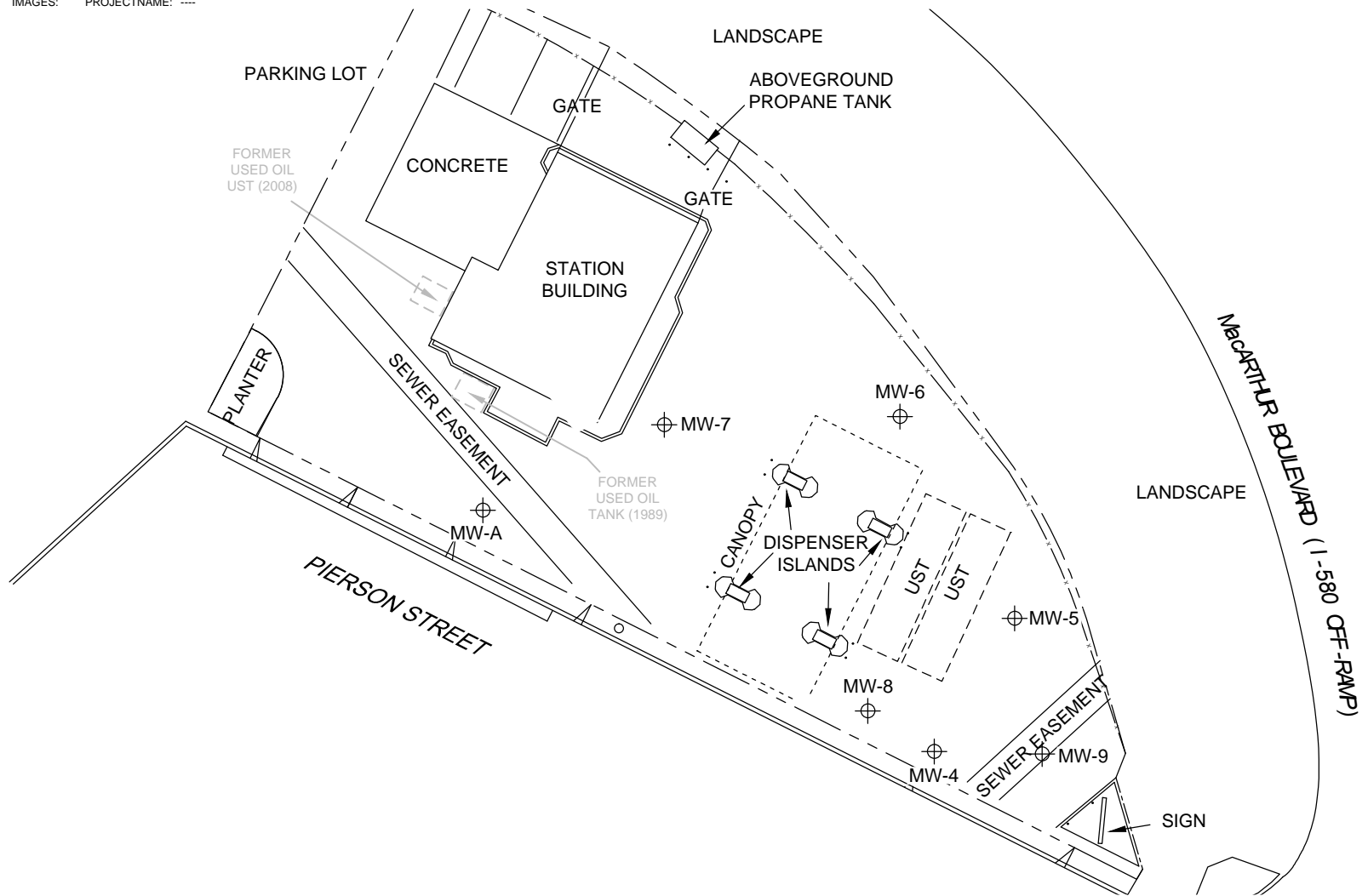


UNOCAL NO. 5781 (351640)
3535 PIERSON STREET
OAKLAND, CALIFORNIA

SITE LOCATION MAP

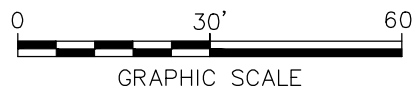


XREFS: IMAGES: PROJECTNAME: ----



LEGEND

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



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

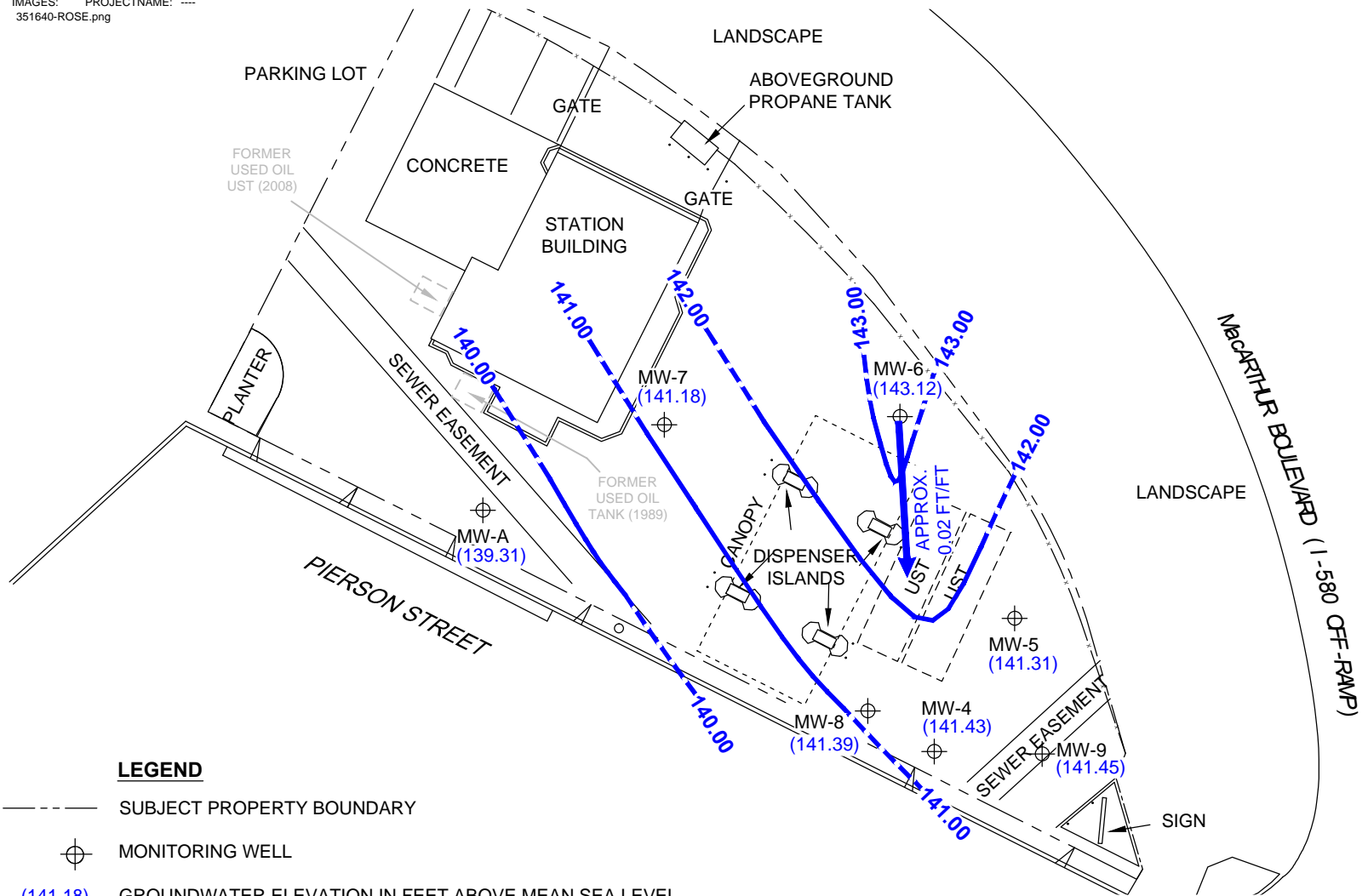
SITE PLAN



FIGURE

2

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



LEGEND

--- SUBJECT PROPERTY BOUNDARY

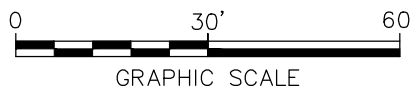
⊕ MONITORING WELL

(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

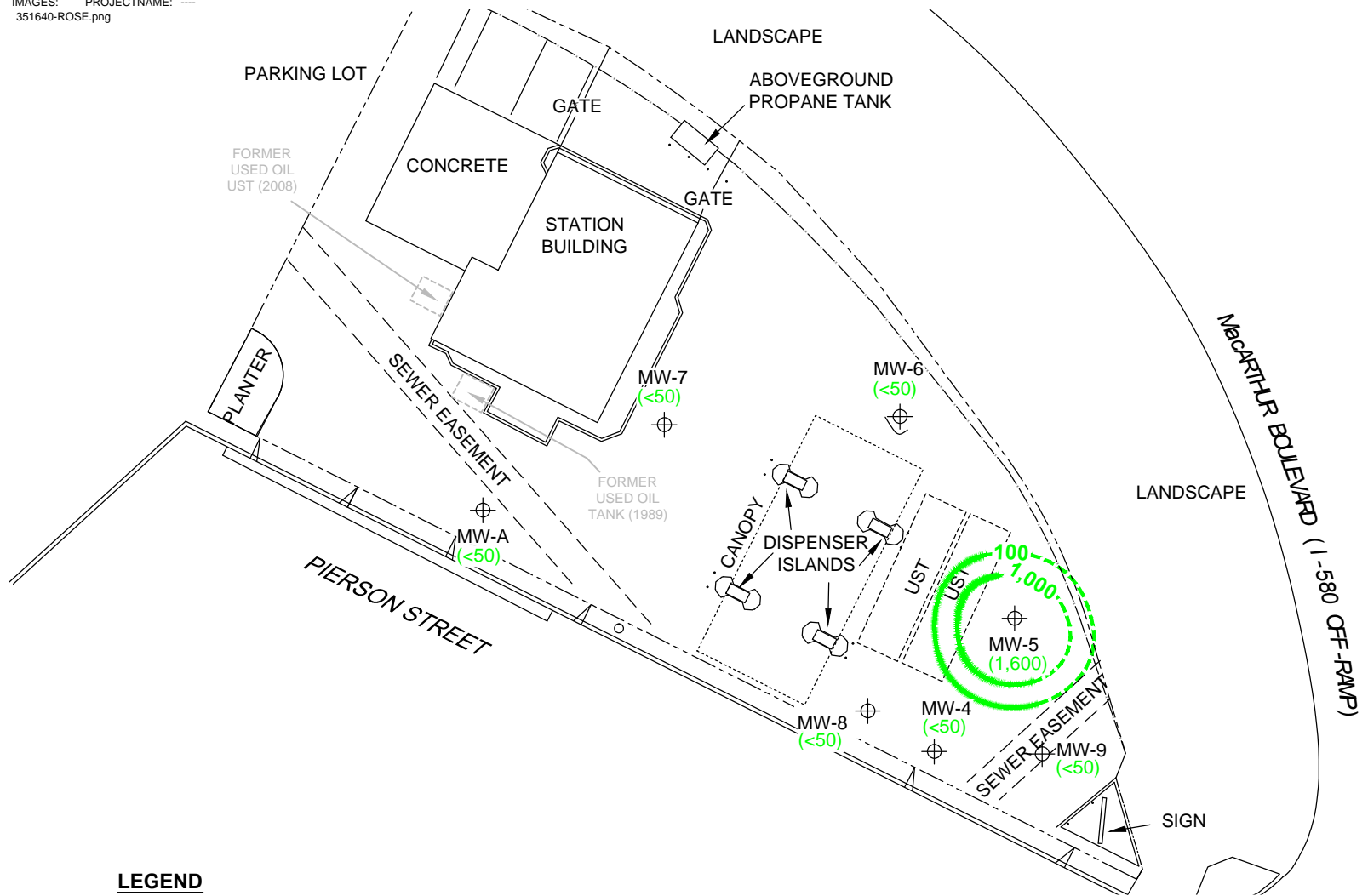
GROUNDWATER ELEVATION MAP



FIGURE

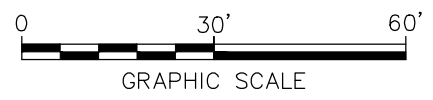
3

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



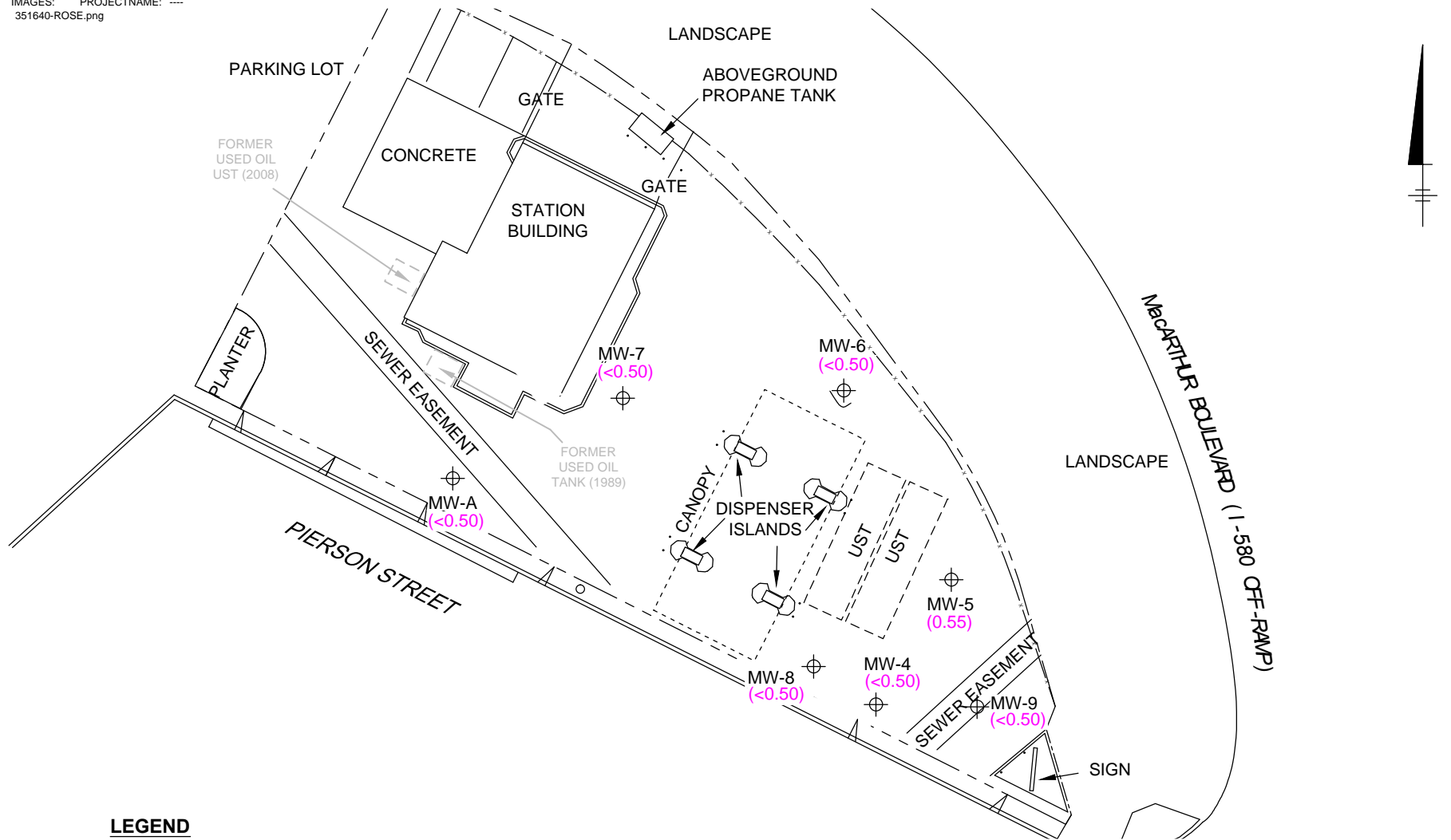
LEGEND

- SUBJECT PROPERTY BOUNDARY
- ⊕ MONITORING WELL
- (<50) TPHg CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- 1,000 - - - - - TPH-g ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED)
- UST UNDERGROUND STORAGE TANK



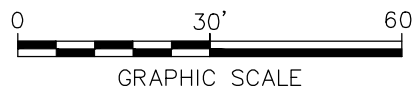
UNOCAL NO. 5781 (351640) 3535 PIERSON STREET, OAKLAND, CALIFORNIA	
TPHg ISOCONCENTRATION MAP	
	Design & Consultancy for natural and built assets
FIGURE	4

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



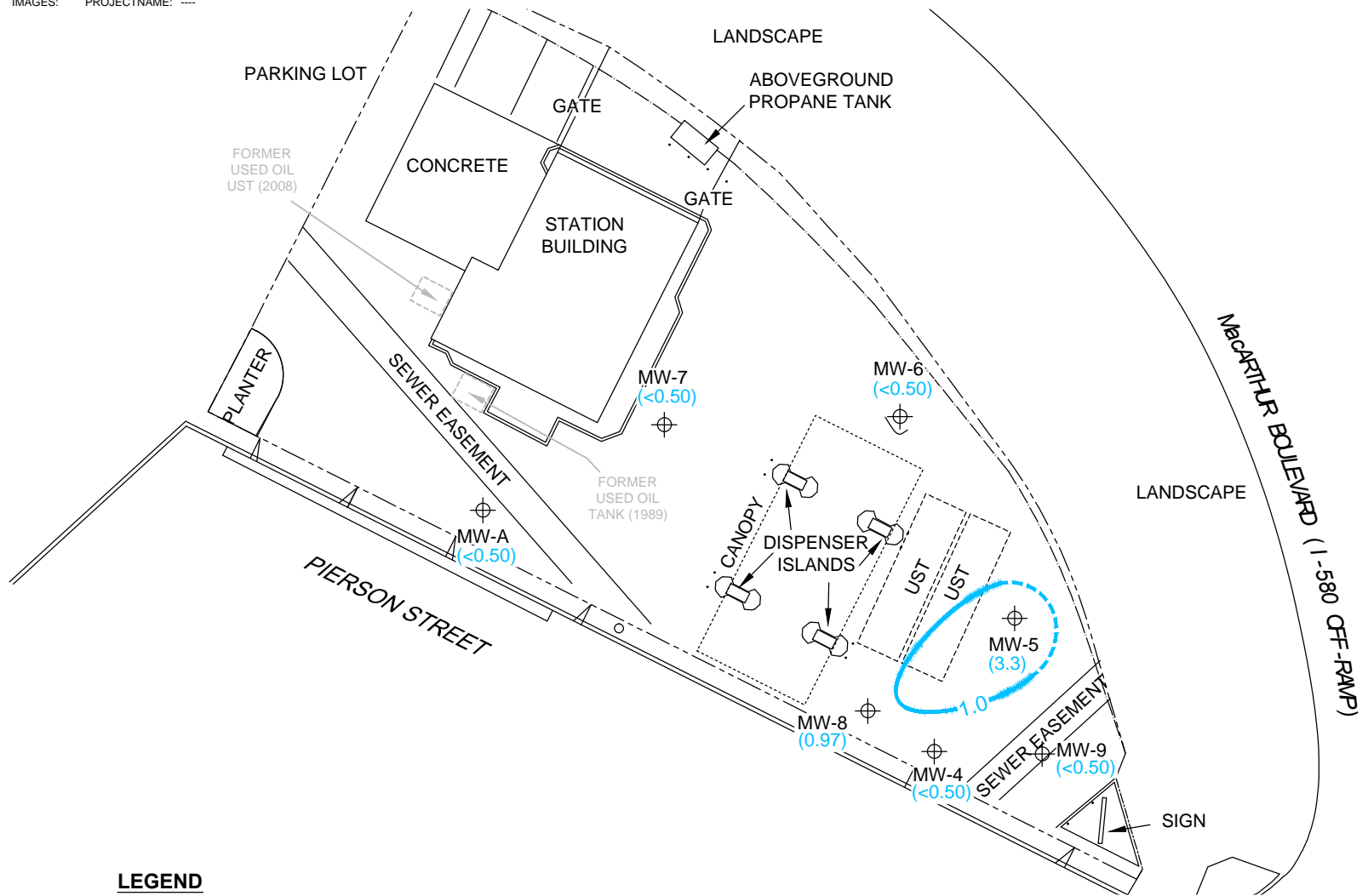
LEGEND

- 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

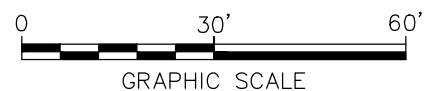
----- SUBJECT PROPERTY BOUNDARY

⊕ MONITORING WELL

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

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

UST UNDERGROUND STORAGE TANK



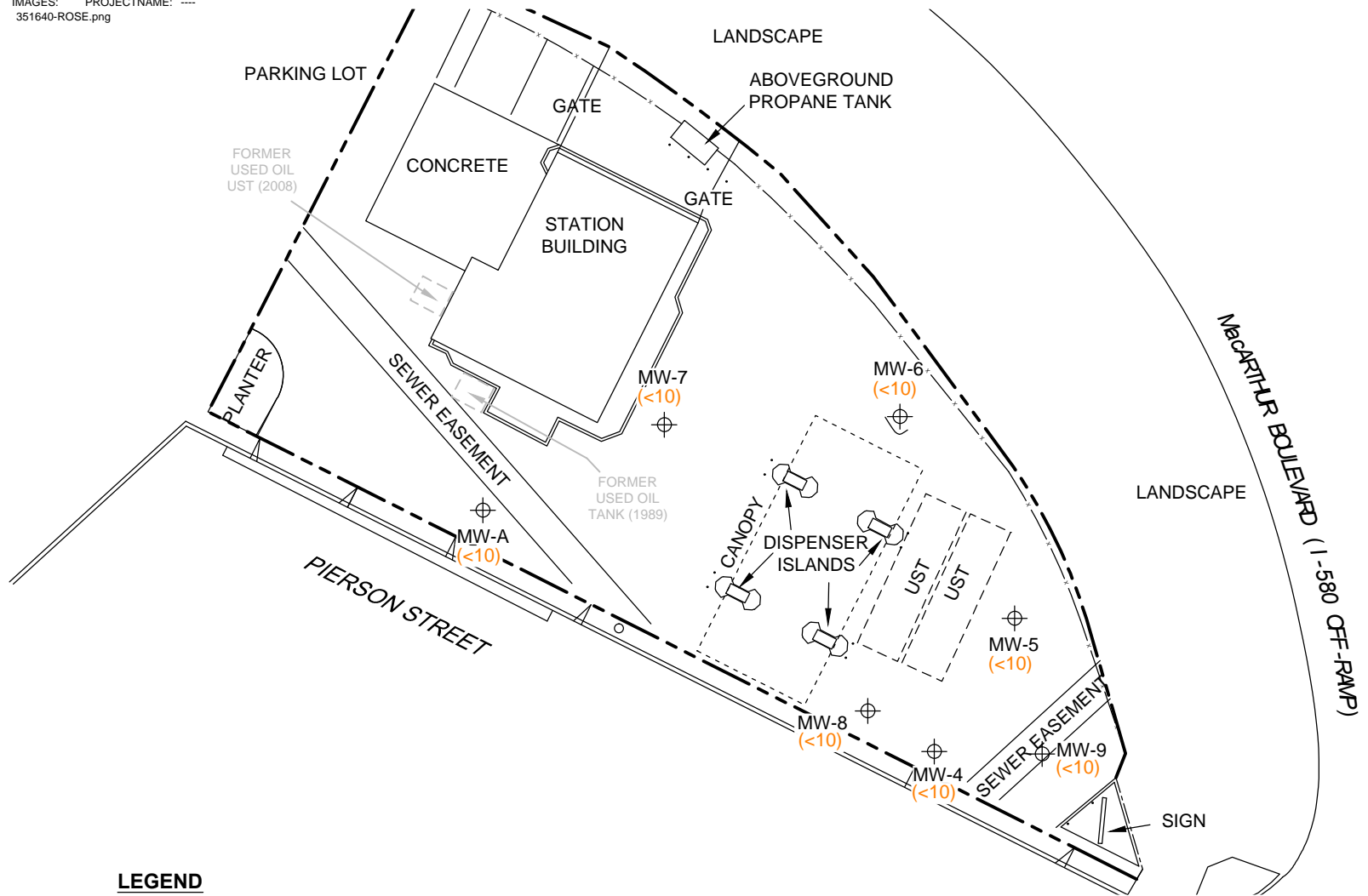
UNOCAL NO. 5781 (351640)
 3535 PIERSON STREET, OAKLAND, CALIFORNIA

MTBE ISOCONCENTRATION MAP



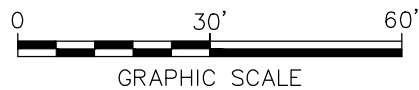
FIGURE
6

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: 21/4 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 Weather Conditions: Cloudy
 Sample Time/Date: — / 6-22-16 Water Color: Clear Odor: Y / 10
 Approx. Flow Rate: 1.0 gpm. Sediment Description: Clear
 Did well de-water? Y If yes, Time: 0615 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)

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.

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.
 $8.45 \times VF .17 = 1.43$ 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

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>

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 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: 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 (µS/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: 214 in.
 Total Depth: 19.93 ft.
 Depth to Water: 12.32 ft.
7.61 xVF = .17 = 1.29

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]: 13.84

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 (° / 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)

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 (° / 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>Arco's</u>			ANALYSES REQUIRED										
Site Global ID: <u>T0600101467</u>			Consultant Contact: <u>Tamara Rogers</u>			TPH - Diesel by EPA 8015 w/49C 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): Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/> Special Instructions									
Site Address: <u>3555 PIERSON ST.</u>			Consultant Phone No.: <u>408-747-2013</u>													
<u>OAKLAND CA</u>			Sampling Company: <u>(Call) K-1601</u>													
Union Oil PM: <u>Nicole Hincenoux</u>			Sampled By (PRINT): <u>Alex Wong</u>													
Union Oil PM Phone No.: <u>415-790-6612</u>			Sampler Signature: _____			BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911										
Charge Code: <u>NWRTB-0-51140-0-LAB</u>			This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.													

SAMPLE ID				Sample Time	# of Containers															Notes / Comments																												
Field Point Name	Matrix	Depth	Date (yymmdd)																																													
QA	W-S-A		160622	—	2																																											
rw-A	W-S-A		↓	1445	8																																											
rw-4	W-S-A		↓	0700	8																																											
mw-5	W-S-A		↓	0555	8																																											
rw-6	W-S-A		↓	0525	8																																											
mw-7	W-S-A		↓	0455	8																																											
rw-8	W-S-A		↓	0820	8																																											
mw-9	W-S-A		↓	0625	8																																											
	W-S-A																																															
	W-S-A																																															
	W-S-A																																															
	W-S-A																																															

Relinquished By <u>GRINC</u> Company <u>GRINC</u> Date / Time: <u>06-27-16 1330</u>			Relinquished By <u>[Signature]</u> Company <u>GRINC</u> Date / Time: <u>06-27-16 1330</u>			Relinquished By _____ Company _____ Date / Time: _____		
Received By <u>[Signature]</u> Company <u>GRINC</u> Date / Time: <u>06-27-16 1330</u>			Received By <u>Jenny Bogan</u> Company <u>GRINC</u> 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 R/In 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="3">SAMPLE ID</th> <th rowspan="2">Date (yymmdd)</th> <th rowspan="2"># of Containers</th> </tr> <tr> <th>Field Point Name</th> <th>Matrix</th> <th>Depth</th> </tr> </thead> <tbody> <tr> <td>-1 QA</td> <td>W-S-A</td> <td></td> <td>160622</td> <td>2</td> </tr> <tr> <td>-2 MW-A</td> <td>W-S-A</td> <td></td> <td></td> <td>3</td> </tr> <tr> <td>-3 MW-4</td> <td>W-S-A</td> <td></td> <td></td> <td>3</td> </tr> <tr> <td>-4 MW-5</td> <td>W-S-A</td> <td></td> <td></td> <td>3</td> </tr> <tr> <td>-5 MW-6</td> <td>W-S-A</td> <td></td> <td></td> <td>3</td> </tr> <tr> <td>-6 MW-7</td> <td>W-S-A</td> <td></td> <td></td> <td>3</td> </tr> <tr> <td>-7 MW-8</td> <td>W-S-A</td> <td></td> <td></td> <td>3</td> </tr> <tr> <td>-8 MW-9</td> <td>W-S-A</td> <td></td> <td></td> <td>3</td> </tr> </tbody> </table>	SAMPLE ID			Date (yymmdd)	# of Containers	Field Point Name	Matrix	Depth	-1 QA	W-S-A		160622	2	-2 MW-A	W-S-A			3	-3 MW-4	W-S-A			3	-4 MW-5	W-S-A			3	-5 MW-6	W-S-A			3	-6 MW-7	W-S-A			3	-7 MW-8	W-S-A			3	-8 MW-9	W-S-A			3	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)	Notes / Comments
SAMPLE ID			Date (yymmdd)			# of Containers																																												
Field Point Name	Matrix	Depth																																																
-1 QA	W-S-A		160622	2																																														
-2 MW-A	W-S-A			3																																														
-3 MW-4	W-S-A			3																																														
-4 MW-5	W-S-A			3																																														
-5 MW-6	W-S-A			3																																														
-6 MW-7	W-S-A			3																																														
-7 MW-8	W-S-A			3																																														
-8 MW-9	W-S-A			3																																														
Relinquished By: GR INC Date / Time: 06-22-16 1330 Received By: GREIFLER-R/IN Date / Time: 06-22-16 1330			Relinquished By: Young Boyan Date / Time: 6-22-16 1330 Received By: REL. BSO Date / Time: 6/22/16 18:30																																															

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COOLER RECEIPT FORM Page 1 Of 1

BC LABORATORIES INC.
 Submission #: 16-17219

SHIPPING INFORMATION		SHIPPING CONTAINER	FREE LIQUID
Fed Ex <input type="checkbox"/>	UPS <input type="checkbox"/>	Ice Chest <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
BC Lab Field Service <input checked="" type="checkbox"/>	Ontrac <input type="checkbox"/>	None <input type="checkbox"/> Box <input type="checkbox"/>	(W) / S
Hand Delivery <input type="checkbox"/>		Other <input type="checkbox"/> (Specify) _____	

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	A, B	A → F	A → F	A → F	A → F	A → F	A → F	A → F		
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		G, H	G, H	G, H	G, H	G, H	G, H	G, H		
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)

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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
------------	---------------------------

1617219-01	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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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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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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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: 1617219-07	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	Control Limits		Lab Quals
								Percent 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	Quals
								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

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

Notes And Definitions

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

