



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

October 14, 2016

RECEIVED

By Alameda County Environmental Health 2:37 pm, Dec 20, 2016

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

Re: Unocal No. 5781 (351640)
Quarterly Status Report-Third Quarter 2016
3535 Pierson Street, Oakland, California
Fuel Leak Case No.: RO0000253
GeoTracker Global ID #T0600101467

I have reviewed the attached report dated October 14, 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 U.S., Inc., upon whose assistance and advice I have relied.

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

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

Sincerely,

James P. Kiernan, P.E.
Project Manager

Attachment: Quarterly Status Report-Third Quarter 2016 by Arcadis

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

ENVIRONMENT

Subject:
Quarterly Status Report, Third Quarter 2016

Dear Mr. Nowell,

Date:
October 14, 2016

On behalf of Chevron Environmental Management Company's (CEMC's) affiliate, Union Oil Company of California (Union Oil), Arcadis has prepared the attached *Quarterly Status Report, Third Quarter 2016* for the following facility:

Contact:
Tamera Rogers

<u>76 Station No.</u>	<u>Case No.</u>	<u>Location</u>
Unocal #5781	RO0000253	3535 Pierson Street Oakland, CA

Phone:
408.797.2013

Email:
Tamera.Rogers@arcadis.com

If you have any questions, please do not hesitate to contact me.

Our ref:
B0035135.1640

Sincerely,

Arcadis U.S., Inc.



Tamera Rogers
Project Manager



Katherine Brandt, P.G.
Senior Geologist



Mr. Keith Nowell
October 14, 2016

Copies:

Geotracker Database

Mr. James Kiernan, CEMC (electronic)

Mr. Delong Liu, United Brothers Enterprise Inc. (2501 North Main Street, Walnut Creek,
CA 94597)

Mr. Ed Ralston, Phillips 66 (electronic)

**QUARTERLY STATUS REPORT
Third Quarter 2016
October 14, 2016**

Facility No:	<u>Unocal #5781</u>	Address:	<u>3535 Pierson Street, Oakland, CA</u>
Arcadis Contact Person / Phone No.:	<u>Tamera Rogers / (408) 797-2013</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 [Third Quarter 2016]

1. Conducted quarterly groundwater monitoring activities on August 25, 2016.
2. Prepared the *Quarterly Status Report, Third Quarter 2016*.

WORK PROPOSED NEXT QUARTER [Fourth Quarter 2016]:

1. Conduct quarterly groundwater monitoring activities.
2. Prepare the *Quarterly Status Report, Fourth Quarter 2016*.
3. Submit *Upgradient Well Installation Work Plan*.

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>None</u>	(gallons)
Approximate Depth to Groundwater:	<u>13.08 to 17.30</u>	(feet below top of casing)
Approximate Groundwater Elevation:	<u>137.49 to 140.64</u>	(feet above mean sea level)
Groundwater Flow Direction	<u>Southwest</u>	
Groundwater Gradient	<u>0.02</u>	(foot per foot)

Current Remediation Techniques:	None
Permits for Discharge:	N/A
Summary of Unusual Activity:	N/A
Agency Directive Requirements:	None

DISCUSSION

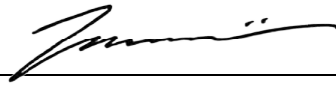
Gettler-Ryan, Inc. (G-R) conducted quarterly groundwater monitoring activities on August 25, 2016. Field data sheets and general procedures are included as Attachment A. Seven (7) monitoring wells (MW-A and MW-4 through MW-9) were gauged, purged, and sampled by G-R representatives.

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 August 25, 2016 are presented on Figure 3. Isoconcentration contours for total petroleum hydrocarbons as gasoline (TPH-g), benzene, methyl tertiary butyl ether (MTBE) and tertiary butyl alcohol (TBA) are presented on Figures 4 through 7, respectively. Groundwater flow direction rose diagrams are presented in Figures 8 (Stantec events) and 9 (Arcadis events). A copy of the laboratory analytical report and chain-of-custody documentation are included as Attachment C.


The direction of groundwater flow, calculated gradient, and analytical results were generally consistent with previous monitoring events. The TPHg plume is localized to on-site monitoring well MW-5, consisting of total petroleum hydrocarbons as diesel (TPH-d) (880 micrograms per liter [µg/L]), TPH-g (2,600 µg/L), toluene (0.66 µg/L), ethylbenzene (6.6 µg/L), total xylenes (14 µg/L), MTBE (4.4 µg/L) and TBA (180 µg/L). The concentrations of TPHd, TPHg, toluene, total xylenes, MTBE, and TBA all increased since the second quarter 2016 sampling event. 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 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: October 14, 2016
Tamera Rogers
Project Manager



Reviewed By:  Date: October 14, 2016
Katherine Brandt, P.G.
Senior 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 Contour Map, August 25, 2016
Figure 4	TPHg Isoconcentration Map, August 25, 2016
Figure 5	Benzene Isoconcentration Map, August 25, 2016
Figure 6	MTBE Isoconcentration Map, August 25, 2016
Figure 7	TBA Isoconcentration Map, August 25, 2016
Figure 8	Historical Groundwater Flow Direction Rose Diagram (Stantec Events)
Figure 9	Groundwater Flow Direction Rose Diagram (Arcadis Events)
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)	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	8/25/2016	154.79	17.30	0.00	0.00	137.49	<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	8/25/2016	153.48	13.08	0.00	0.00	140.40	<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	<0.50	<250	
MW-5	8/25/2016	153.66	15.18	0.00	0.00	138.48	880	2,600	<0.50	0.66	6.6	14	4.4	180	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
MW-6	8/25/2016	154.62	13.98	0.00	0.00	140.64	<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	<0.50	<250	
MW-7	8/25/2016	155.38	15.67	0.00	0.00	139.71	<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	<0.50	<250	
MW-8	8/25/2016	153.71	13.57	0.00	0.00	140.14	<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	<0.50	<250	
MW-9	8/25/2016	153.37	13.75	0.00	0.00	139.62	<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	<0.50	<250	
QA	8/25/2016	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<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 8015M with Silica Gel Cleanup (S)
 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	0.51	ND	--	--	--	--	--	--	--	--	--	
	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	--	--	--	--	--	--	--	--	--	
	2/22/1999	151.80	11.24	0	0	140.56	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	
	2/26/2000	151.80	12.16	0	0	139.64	ND	ND	ND	1.01	ND	ND	--	--	--	--	--	--	--	--	--	
	3/7/2001	151.80	11.91	0	0	139.89	131	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	2/22/2002	151.80	14.08	0	0	137.72	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	--	--	--	--	--	--	--	
	2/22/2003	151.80	14.41	0	0	137.39	93	<50	<0.50	<0.50	<0.50	<0.50	<2.0	<100	<2.0	<0.50	<2.0	<2.0	<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	
	8/25/2016	154.79	17.30	0	0	137.49	<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			
8/25/2016	153.48	13.08	0	0	140.40	<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	<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	<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	
	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	<1									

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

Unocal 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-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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<0.50	<250			
6/22/2016	154.62	11.50	0	0	143.12	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<250			
8/25/2016	154.62	13.98	0	0	140.64	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<0.50	<250	pre-purge	
	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	<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	<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	<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	<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	<0.50	<250			
8/25/2016	155.38	15.67	0	0	139.71	<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	<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	
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	
	8/25/2016	--	--	--	--	--	--	<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 8015M with SGC
 TPHg = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to Environmental Protection Agency (EPA) Method 8015
 Benzene, toluene, ethylbenzene, and total xylenes (collectively BTEX)
 MTBE = Methyl tert-butyl ether
 TBA = Tert-butanol or tertiary butyl alcohol
 EDB = 1,2-Dibromoethane
 EDC = 1,2-Dichloroethane
 DIPE = Di-isopropyl ether
 ETBE = Ethyl tert-butyl ether
 TAME = Tert-amyl methyl ether
 Ethanol
 J = Estimated value (between laboratory reporting limit and method detection limit)
 * = Well paved over

FIGURES

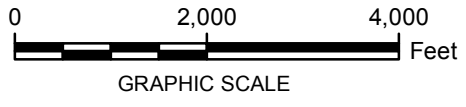




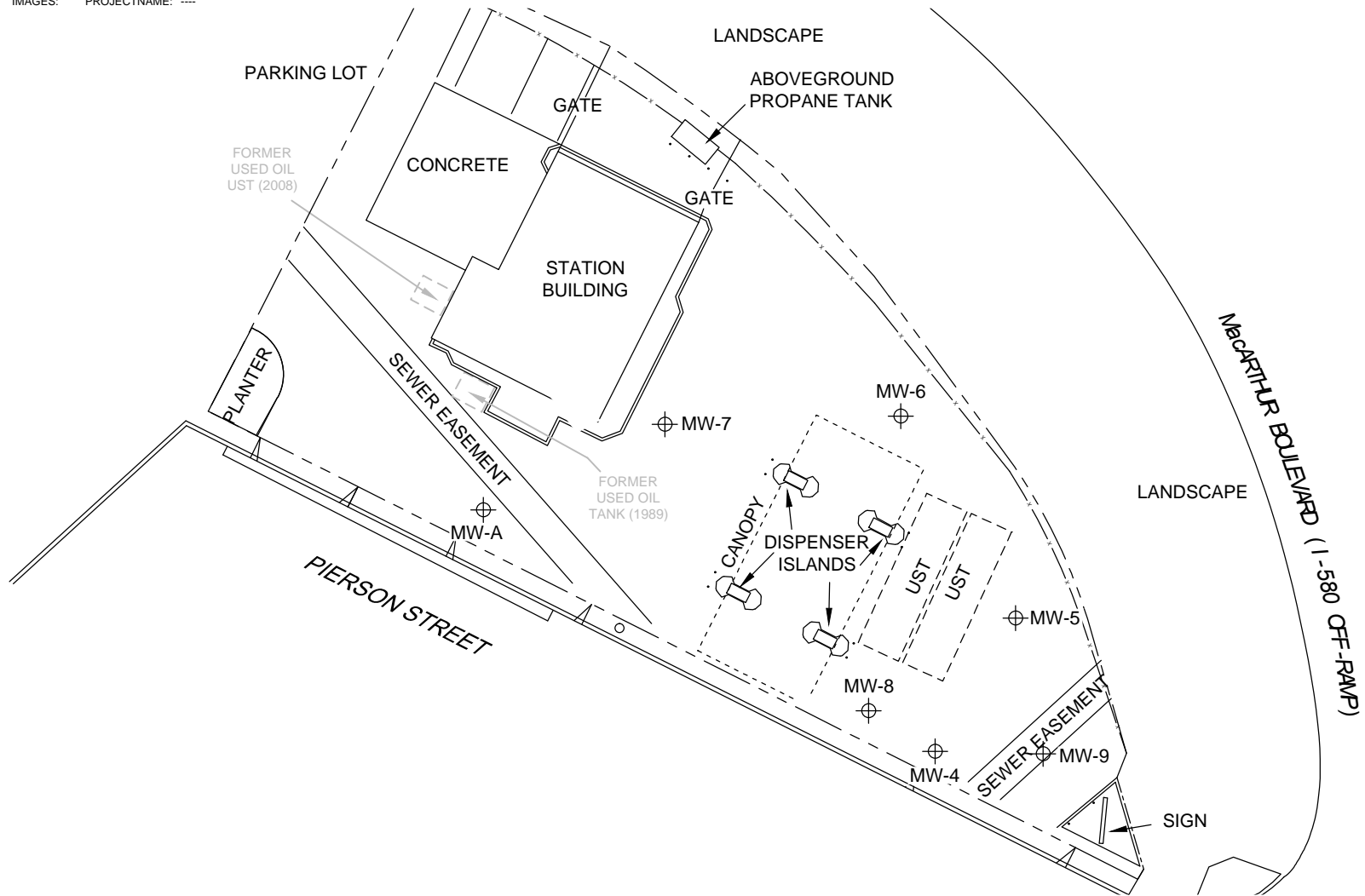
SITE LOCATION

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

SITE LOCATION MAP

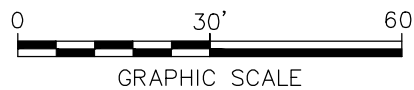


XREFS: IMAGES: PROJECTNAME: ----



LEGEND

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



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

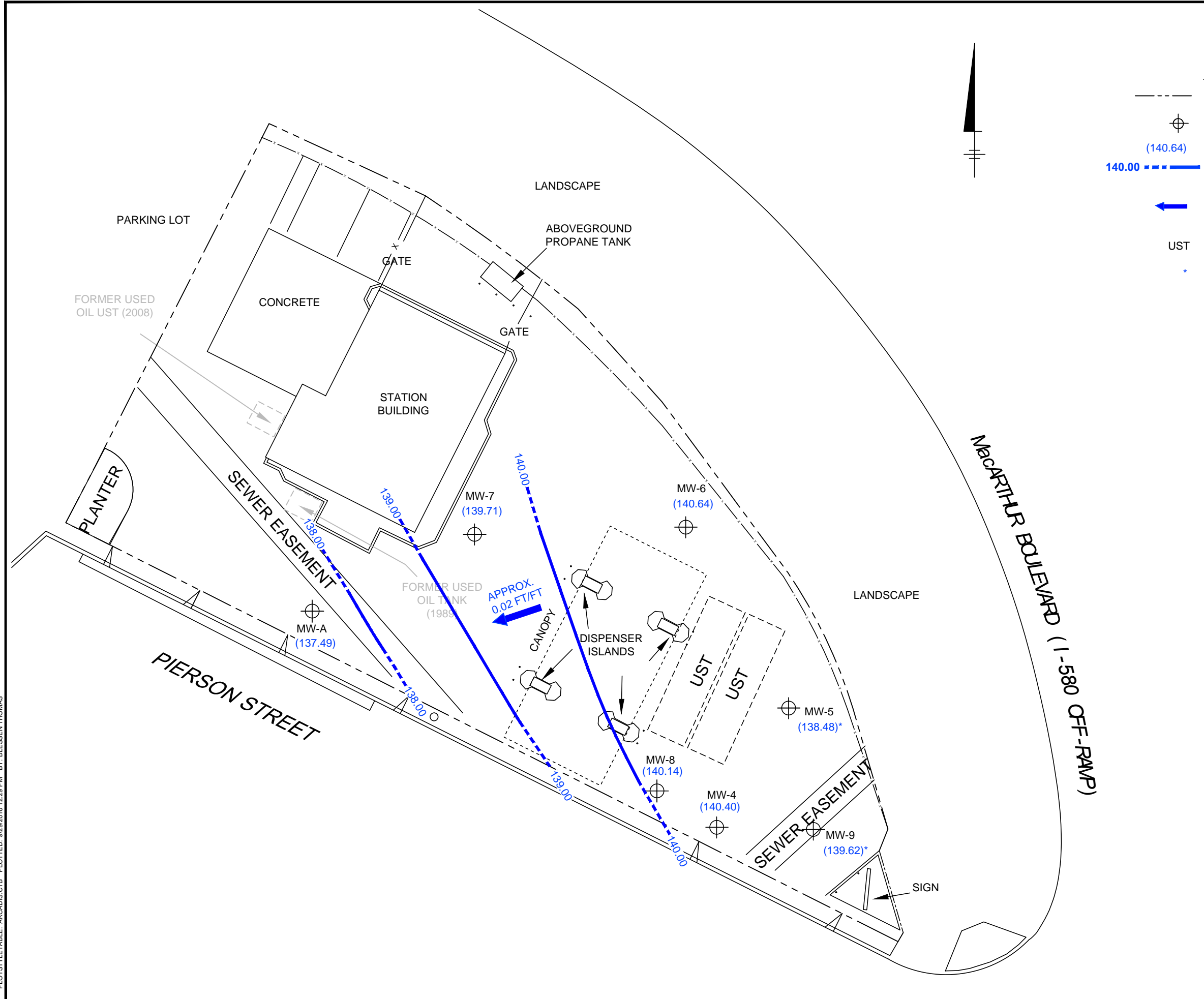
SITE PLAN



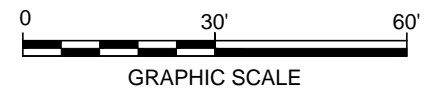
FIGURE

2

CITY: BANGALORE, INDIA DIV: GROUP: ENV/CAD DB: R/SUCHITH LD: E. MURESAN PIC: M. FLEISCHNER PM: Z. MASON TM: Z. MASON ES: E. NICOLA
 \\hs-wk-hq-fe-10\bl_Proj\Environment - Arcadis\ARCADIS_USA_PROJECTS\CHEVRON_NORTHERN CALIFORNIA_SITES\351640-Pierson Street Oakland\E-Drawings\3Q 2016\Fig 2 - Groundwater Elevation Map.dwg LAYOUT: 3 SAVED: 9/28/2016 5:23 PM ACADVER: 19.05 (LMS TECH) PAGES: 1/1 PAGES SETUP: ---
 PLOTSTYLE TABLE: ARCADIS.CTB PLOTTED: 9/29/2016 12:29 PM BY: BLESSEN THOMAS



- LEGEND**
- SUBJECT PROPERTY BOUNDARY
 - ⊕ MONITORING WELL
 - (140.64) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
 - 140.00 - - - 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
 - * DATA NOT USED IN CONTOURING



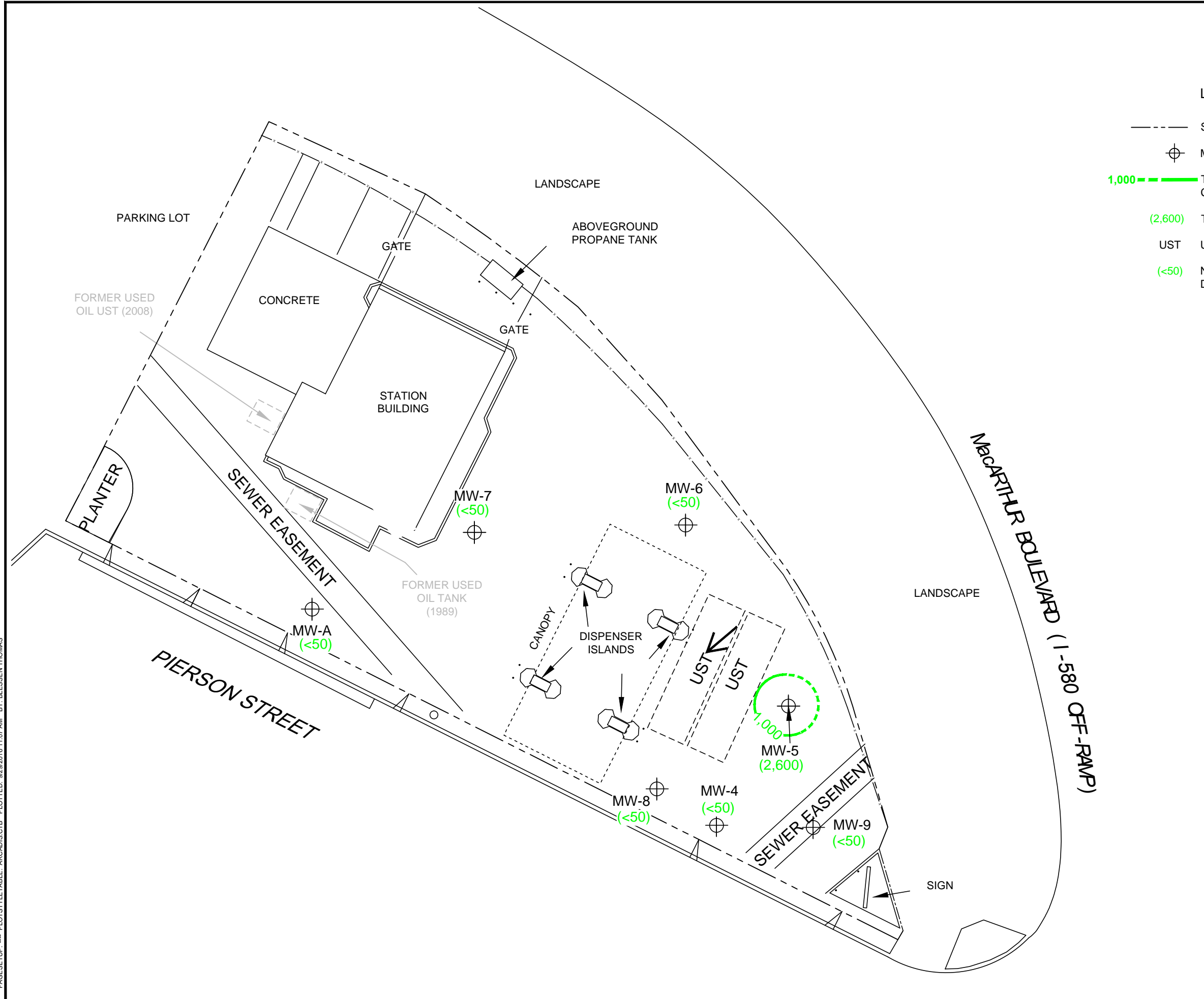
UNOCAL NO. 5781 (351640)
 3535 PIERSON STREET, OAKLAND CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP

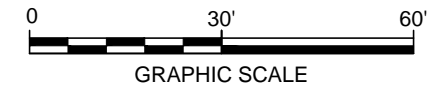
FIGURE 3

ARCADIS Design & Consultancy for natural and built assets

CITY: BANGALORE, INDIA DIV/ GROUP: ENV/CAD DB: R. SUDHITH LD: E. MURESAN PIC: M. FLEISCHNER PM: Z. MASON TM: Z. MASON ES: E. NICOLA
 \\nc-uk-hf-10\bl_Proj\Environment - Arcadis\ARCADIS USA, PROJECTS\CHEVRON, NORTHERN CALIFORNIA SITES\351640-Pierson Street Oakland\E-Drawings\30_2016\TPH-g Iso Concentration Map_1_1_0112.svd.dwg LAYOUT: 4 - SAVED: 9/28/2016 3:32 PM ACADVER: 19.0S (LMS TECH)
 PAGES: 1 OF 1 PLOT STYLE TABLE: ARCADIS.CTB PLOTTED: 9/29/2016 11:07 AM BY: BLESSEN THOMAS



- LEGEND:**
- SUBJECT PROPERTY BOUNDARY
 - ⊕ MONITORING WELL
 - 1,000 --- TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (TPH-g) CONCENTRATION CONTOUR (DASHED WHERE INFERRED)
 - (2,600) TPH-g CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
 - UST UNDERGROUND STORAGE TANK
 - (<50) NOT DETECTED AT OR ABOVE LABORATORY METHOD DETECTION LIMIT

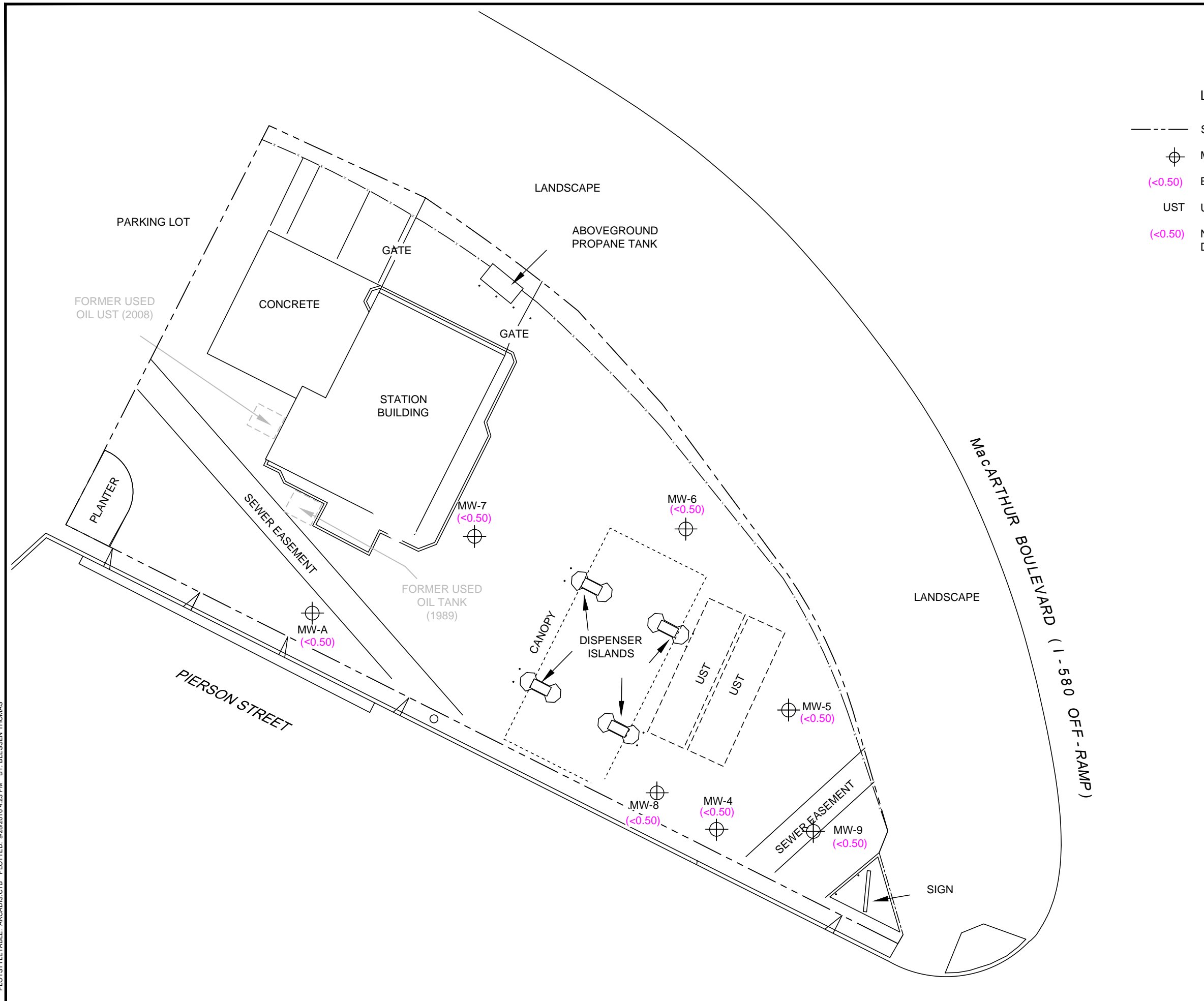


UNOCAL NO. 5781 (351640)
 3535 PIERSON STREET, OAKLAND, CALIFORNIA

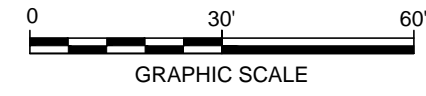
TPHg ISOCONCENTRATION MAP

FIGURE
4

CITY: BANGALORE, INDIA DIV: GROUP: ENV/CAD DB: R/SUCHITH LD: E. MURESAN PIC: M. FLEISCHNER PM: Z. MASON TM: Z. MASON ES: E. NICOLAI
 \\h-cv-01-01-10\h-cv-01-01-10\Projects\Environment - Arcadis\ARCADIS_USA_PROJECTS\CHEVRON_NORTHERN_CALIFORNIA_SITES\351640\Pierson_Street_Oakland\E-Drawings\3Q_2016\Benzene Iso Concentration Map.dwg LAYOUT: 7 SAVED: 9/27/2016 2:21 PM ACADVER: 19.05 (LMS TECH) PAGES: 7 PAGESETUP: ----
 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 9/28/2016 4:23 PM BY: BLESSEN THOMAS



- LEGEND:**
- SUBJECT PROPERTY BOUNDARY
 - ⊕ MONITORING WELL
 - (<0.50) BENZENE CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
 - UST UNDERGROUND STORAGE TANK
 - (<0.50) NOT DETECTED AT OR ABOVE LABORATORY METHOD DETECTION LIMIT



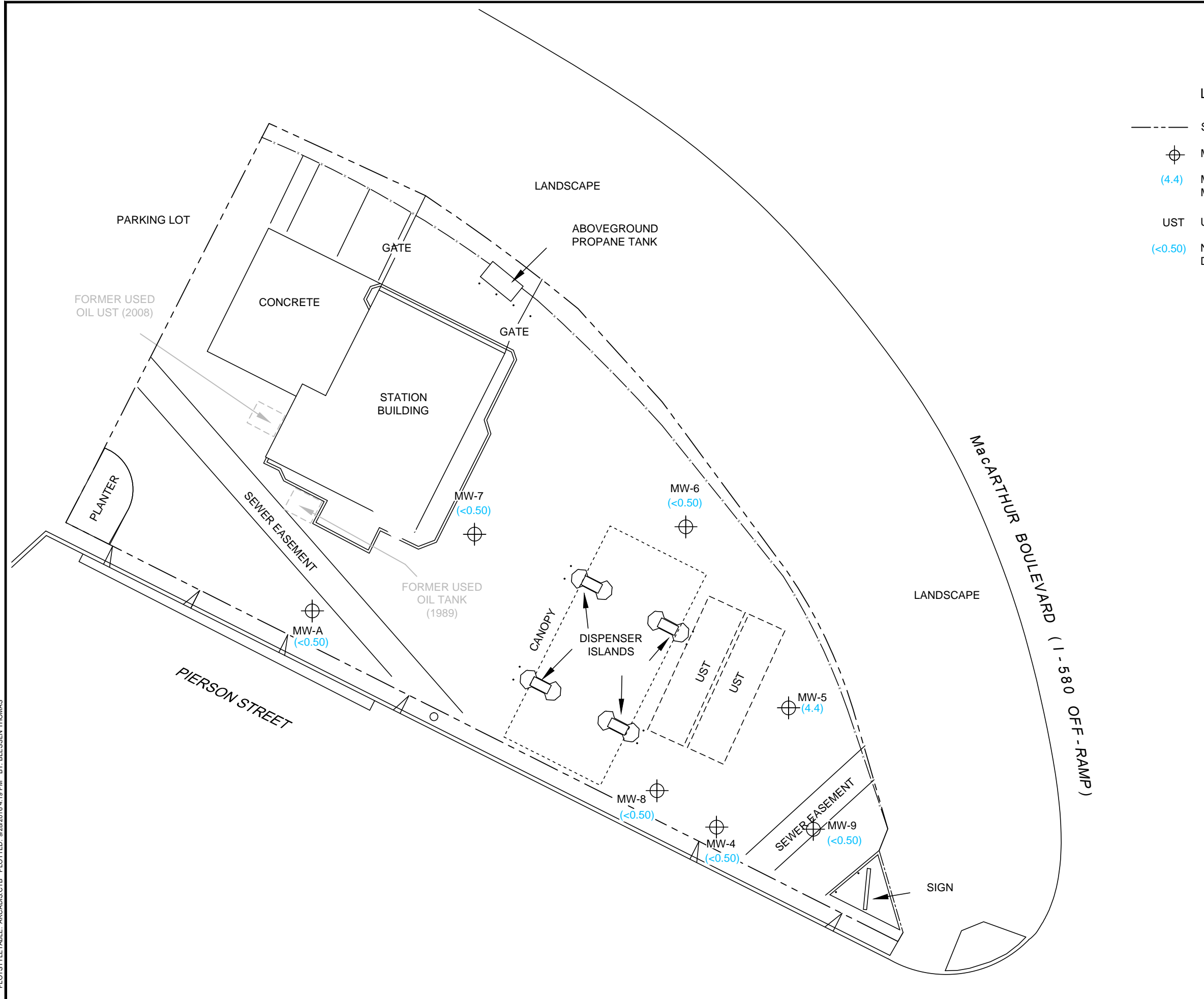
UNOCAL NO. 5781 (351640)
 3535 PIERSON STREET, OAKLAND, CALIFORNIA

BENZENE ISOCONCENTRATION MAP

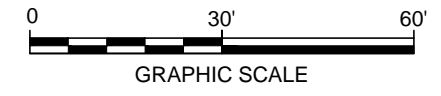
ARCADIS *Design & Consultancy for natural and built assets*

FIGURE **5**

CITY: BANGALORE, INDIA DIV/ GROUP: ENVICAD DB: R. SUDHITH LD: E. MURESAN PIC: M. FLEISCHNER PM: Z. MASON TM: Z. MASON ES: E. NICOLA
 \\jc-uk-hq-10\bl_Proj\Environment - Arcadis\ARCADIS USA, PROJECTS\CHEVRON, NORTHERN CALIFORNIA SITES\351640-Pierson Street Oakland\E-Drawings\30 2016\MTBE Iso Concentration Map.dwg LAYOUT: 6 SAVED: 9/27/2016 4:33 PM ACADVER: 19.05 (LMS TECH) PAGES: 1/1 PAGES SETUP: ----
 PLOT STYLE TABLE: ARCADIS.CTB PLOTTED: 9/28/2016 4:19 PM BY: BLESSEN THOMAS



- LEGEND:**
- SUBJECT PROPERTY BOUNDARY
 - ⊕ MONITORING WELL
 - (4.4) METHYL T-BUTYL ETHER (MTBE) CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
 - UST UNDERGROUND STORAGE TANK
 - (<0.50) NOT DETECTED AT OR ABOVE LABORATORY METHOD DETECTION LIMIT



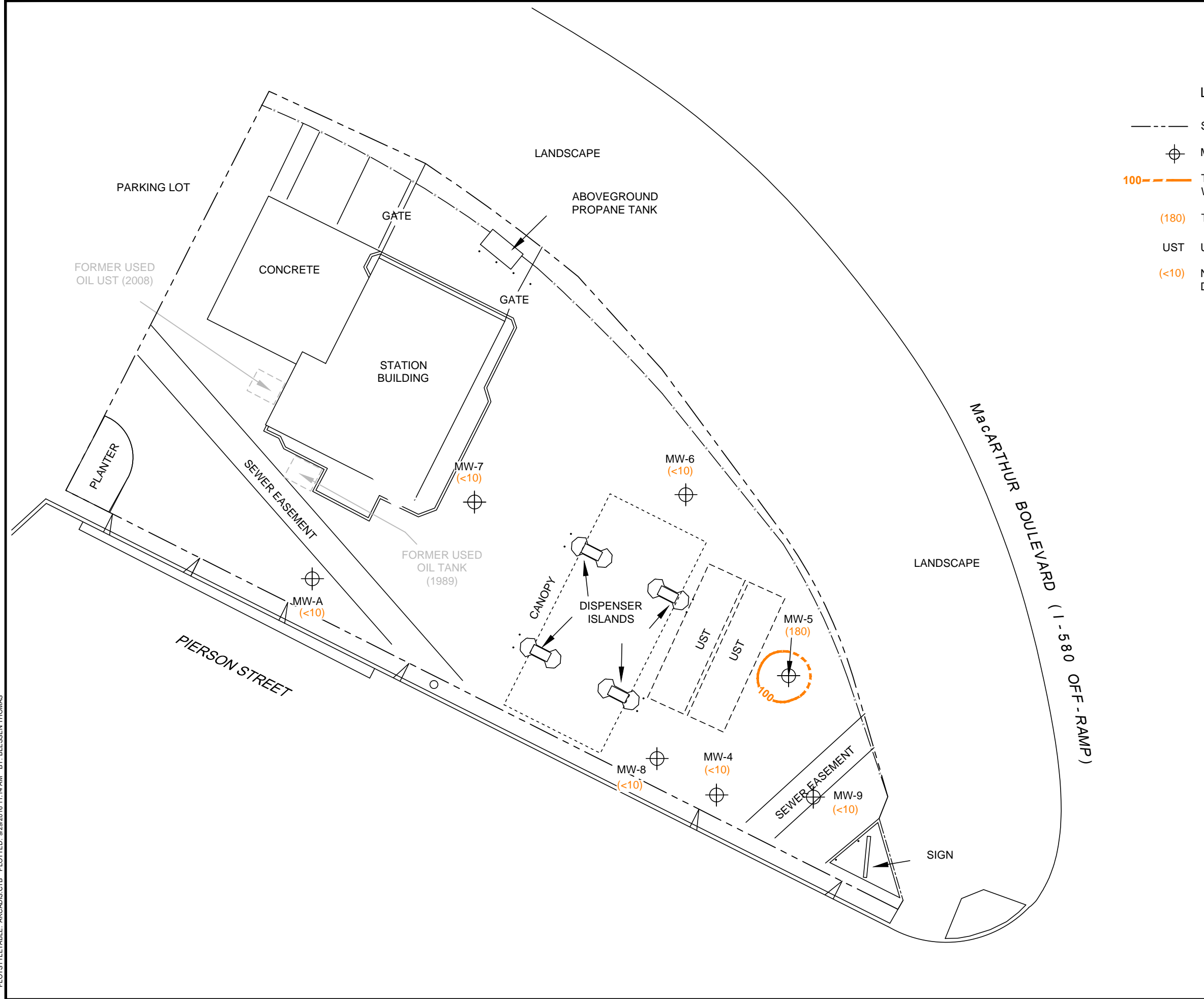
UNOCAL NO. 5781 (351640)
 3535 PIERSON STREET, OAKLAND, CALIFORNIA

MTBE ISOCONCENTRATION MAP

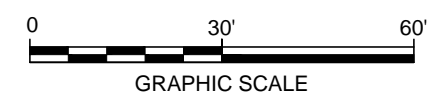
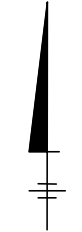
ARCADIS Design & Consultancy for natural and built assets

FIGURE 6

CITY: BANGALORE, INDIA; DIV: GROUP; ENVCAD: DB: R. SUCHITH; LD: E. MURESAN; PIC: M. FLEISCHNER; PM: Z. MASON; TIT: Z. MASON; ES: E. NICOLAI; \\\\hrc-hq-hq-10\BL_Proj\Environment - Arcadis\ARCADIS\USA_PROJECTS\CHEVRON_NORTHERN CALIFORNIA_SITES\351640-Pierson Street Concentration Map.dwg; LAYOUT: 7; SAVED: 9/28/2016 3:55 PM; ACADVER: 19.05 (LMS TECH); PAGES SETUP: ---; PLOTSTYLE TABLE: ARCADIS.CTB; PLOTTED: 9/29/2016 11:14 AM; BY: BLESSEN THOMAS



- LEGEND:**
- SUBJECT PROPERTY BOUNDARY
 - ⊕ MONITORING WELL
 - 100 --- T-BUTYL ALCOHOL (TBA) CONCENTRATION CONTOUR (DASHED WHERE INFERRED)
 - (180) TBA CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
 - UST UNDERGROUND STORAGE TANK
 - (<10) NOT DETECTED AT OR ABOVE LABORATORY METHOD DETECTION LIMIT



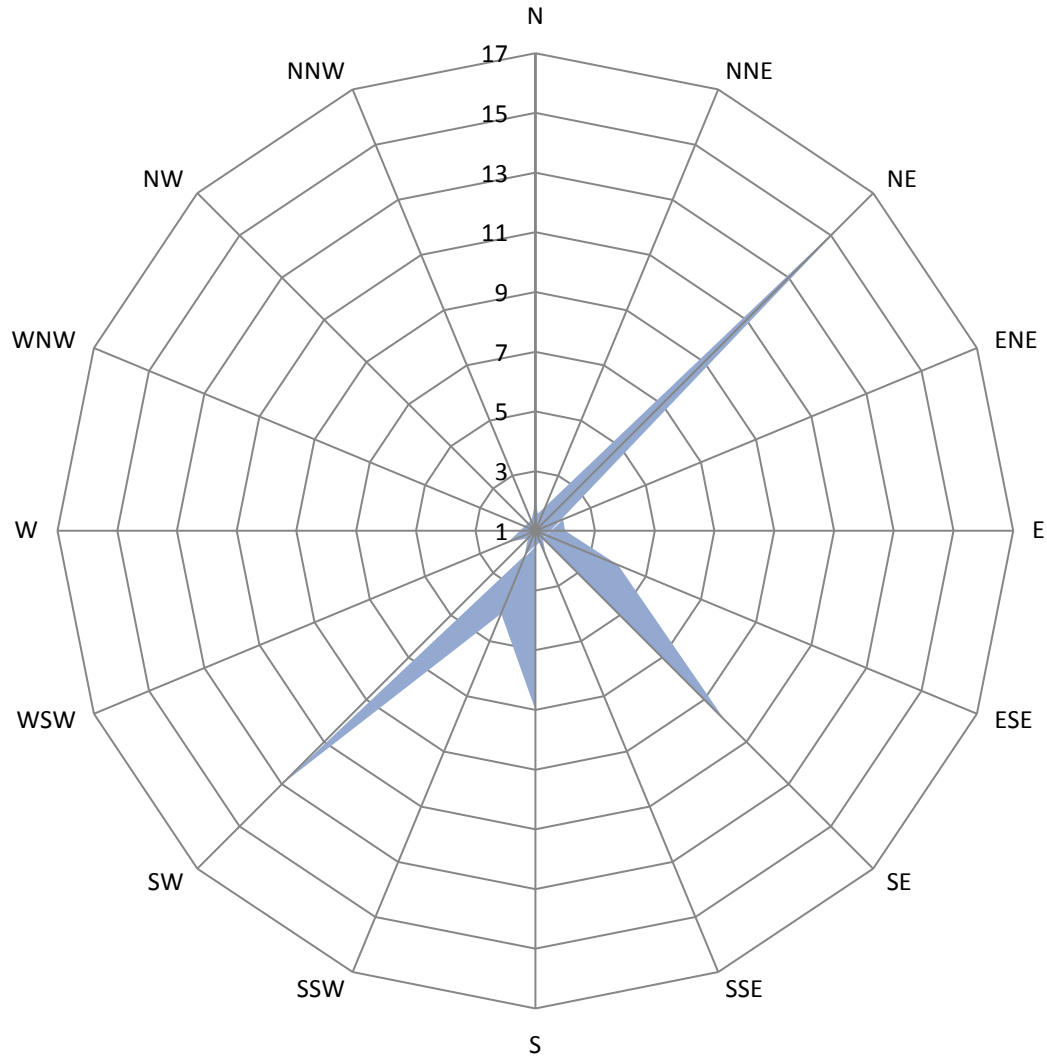
UNOCAL NO. 5781 (351640)
3535 PIERSON STREET, OAKLAND, CALIFORNIA

TBA ISOCONCENTRATION MAP

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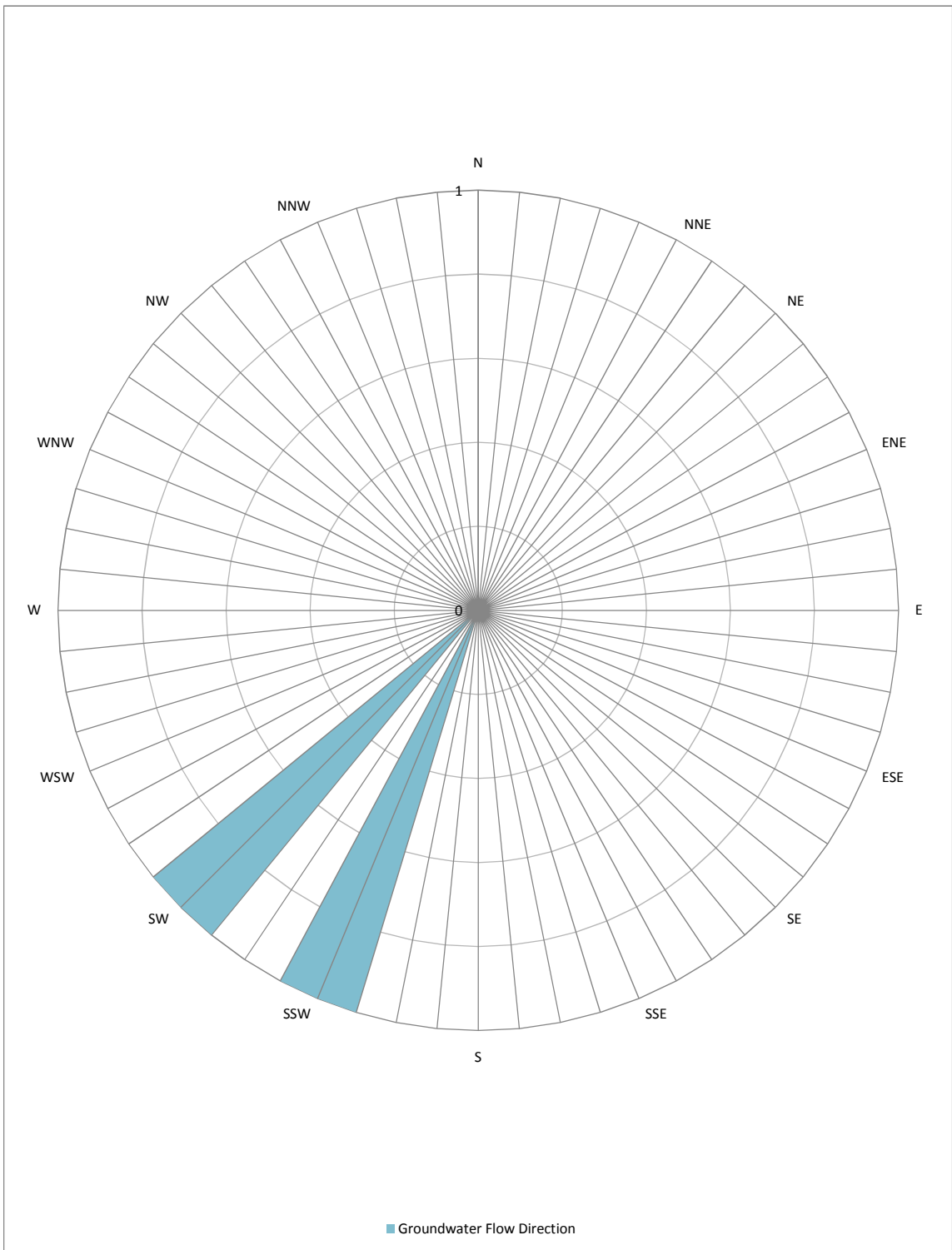
FIGURE
7

Unocal No. 5781 (351640) Historical Rose Diagram



Note:
Concentric circles represent the frequency of groundwater flow direction conducted from second quarter 2010 through first quarter 2016.

■ Number of Occurrences



Legend

- N=North
- NNE= North Northeast
- NE= Northeast
- ENE= East Northeast
- E= East
- ESE= East Southeast
- SE=Southeast
- SSE= South Southeast
- S= South
- SW= Southwest
- SSW= South Southwest
- WSW= West South West
- W= West
- WNW= West Northwest
- NW=Northwest
- NNW= North Northwest

Note

Rose diagram based on gradient direction calculations from groundwater monitoring events conducted by Arcadis.

Number of Events Observed 2
=

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

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM



ATTACHMENT A

[Field Data Sheets and General Procedures]





GETTLER-RYAN INC.



TRANSMITTAL

September 2, 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 Third Quarter Event of August 25, 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

WELL CONDITION STATUS SHEET

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

Job #: **385641**
 Event Date: **8.25.16**
 Sampler: **FT**

WELL ID	Vault Frame Condition	Gasket/O-Ring <small>(M) Missing (R) Replaced</small>	Bolts <small>(M) Missing (R) Replaced</small>	Bolt Flanges <small>B=Broken S=Stripped R=Retaped</small>	Apron Condition <small>C=Cracked B=Broken G=Gone</small>	Grout Seal <small>(Deficient) Inches from TOC</small>	Casing <small>(Condition prevents tight cap seal)</small>	REPLACE LOCK <small>Y/N</small>	REPLACE CAP <small>Y/N</small>	WELL VAULT <small>Manufacture/Size/# of Bolts</small>	Pictures Taken <small>Y/N</small>	
MW-A	OK	→		S=1	OK	→				Emco 8" 2 Emco 1/2" 2		
MW-4	OK	→				→						
MW-5	OK	→		1 Broken Bolt in Flange	OK	→						
MW-6	OK	→				→						
MW-7	OK	→		S=1	OK	→						
MW-8	OK	→				→						
MW-9	OK	→				→	↓	↓	↓		↓	

Comments _____

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: 8-25-16 (inclusive)
 Sampler: FR

Well ID: MW-A
 Well Diameter: 2.4 in.
 Total Depth: 45.01 ft.
 Depth to Water: 17.30 ft.
27.71 xVF .17 = 4.71

Date Monitored: 8-25-16

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: 14.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 22.84

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): 1100
 Sample Time/Date: 1118 8-25-16
 Approx. Flow Rate: = 2.5 gpm.
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Fog
 Water Color: CLEAN Odor: Y / N
 Sediment Description: NONE
 DTW @ Sampling: 22.56

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS/mS µmhos/cm)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)
<u>1102</u>	<u>4.5</u>	<u>6.56</u>	<u>351</u>	<u>20.7</u>	<u>/</u>	<u>/</u>
<u>1104</u>	<u>9.0</u>	<u>6.60</u>	<u>359</u>	<u>20.4</u>	<u>/</u>	<u>/</u>
<u>1106</u>	<u>14.0</u>	<u>6.63</u>	<u>367</u>	<u>20.1</u>	<u>/</u>	<u>/</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-A</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: _____

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? Y / N 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: 8-25-16 (inclusive)
 City: Oakland, CA Sampler: FR

Well ID: MW-4 Date Monitored: 8-25-16
 Well Diameter: 2 1/4 in.
 Total Depth: 24.74 ft.
 Depth to Water: 13.08 ft. Check if water column is less than 0.50 ft.
11.66 xVF .66 = 7.69 x3 case volume = Estimated Purge Volume: 23.0 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 15.41

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): 1155 Weather Conditions: Partly Sunny
 Sample Time/Date: 1155 8-25-16 Water Color: CLEAR Odor: Y / N
 Approx. Flow Rate: = 2.0 gpm. Sediment Description: None
 Did well de-water? Yes If yes, Time: 1202 Volume: 10.0 gal. DTW @ Sampling: 13.08

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (US mS μmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1200</u>	<u>8.0</u>	<u>6.60</u>	<u>387</u>	<u>20.6</u>	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</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: _____

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) N DTW READING: 1752 TIME: 1415

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: 8.25.16 (inclusive)
 City: Oakland, CA Sampler: FT

Well ID: MW-5 Date Monitored: 8-25-16
 Well Diameter: 21 in.
 Total Depth: 19.90 ft.
 Depth to Water: 15.18 ft. Check if water column is less than 0.50 ft.
4.72 xVF .66 = 3.11 x3 case volume = Estimated Purge Volume: 9.0 gal.
 Depth to Water w/ 80% Recharge ((Height of Water Column x 0.20) + DTW): 16.12

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): 1345 Weather Conditions: SUNNY
 Sample Time/Date: 1340 / 8.25.16 Water Color: CLEAR Odor: Ø / N STROK
 Approx. Flow Rate: 1.5 gpm. Sediment Description: NONE
 Did well de-water? YES If yes, Time: 1348 Volume: 4.0 gal. DTW @ Sampling: 15.18

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS mS µmhos/cm)	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>1347</u>	<u>3.0</u>	<u>6.43</u>	<u>287</u>	<u>21.1</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: _____

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) N DTW READING: 17.92 TIME: 1425

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: 8.25.16 (inclusive)
 City: Oakland, CA Sampler: FT

Well ID: MW-6 Date Monitored: 8.25.16
 Well Diameter: 2 1/4 in.
 Total Depth: 19.95 ft.
 Depth to Water: 13.98 ft. Check if water column is less than 0.50 ft.
5.97 xVF .17 = 1.01 x3 case volume = Estimated Purge Volume: 3.0 gal.
 Depth to Water w/ 80% Recharge ((Height of Water Column x 0.20) + DTW): 15.17

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): 1245 Weather Conditions: Sunny
 Sample Time/Date: 1245 / 8.25.16 Water Color: CLEAN Odor: Y / N
 Approx. Flow Rate: ✓ gpm. Sediment Description: NONE
 Did well de-water? yes If yes, Time: 1251 Volume: 2.0 gal. DTW @ Sampling: 13.98

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS/mS / µmhos/cm)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)
<u>1248</u>	<u>1.0</u>	<u>6.37</u>	<u>246</u>	<u>20.9</u>	_____	_____
<u>1251</u>	<u>2.0</u>	<u>6.40</u>	<u>251</u>	<u>20.6</u>	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</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: _____

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) N DTW READING: 17.91 TIME: 1420

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: 8-25-16 (inclusive)
 City: Oakland, CA Sampler: FR

Well ID: MW-7 Date Monitored: 8-25-16
 Well Diameter: 2 1/4 in.
 Total Depth: 19.70 ft.
 Depth to Water: 15.67 ft. Check if water column is less than 0.50 ft.
4.03 xVF .17 = .68 x3 case volume = Estimated Purge Volume: 2.0 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.47

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): 1133 Weather Conditions: FOW
 Sample Time/Date: 1133 / 8.25.16 Water Color: CLEAN Odor: Y / (N)
 Approx. Flow Rate: / gpm. Sediment Description: NOPE
 Did well de-water? yes If yes, Time: 1137 Volume: 1.0 gal. DTW @ Sampling: 15.67

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS mS / µmhos/cm)	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>1137</u>	<u>7.5</u>	<u>6.30</u>	<u>383</u>	<u>21.1</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: _____

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? Y / N DTW READING: 17.45 TIME: 1410

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: 8.25.16 (inclusive)
 City: Oakland, CA Sampler: FT

Well ID: MW-8 Date Monitored: 8.25.16
 Well Diameter: 2.14 in.
 Total Depth: 19.93 ft.
 Depth to Water: 13.57 ft. Check if water column is less than 0.50 ft.
6.36 xVF .17 = 1.08 x3 case volume = Estimated Purge Volume: 3.0 gal.
 Depth to Water w/ 80% Recharge (Height of Water Column x 0.20) + DTW: 14.84

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): 1305 Weather Conditions: SUNNY
 Sample Time/Date: 1330 / 8.25.16 Water Color: CLEAN Odor: Y / (N)
 Approx. Flow Rate: / gpm. Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 14.79

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (mS / μ mhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1308</u>	<u>1.0</u>	<u>6.45</u>	<u>384</u>	<u>21.0</u>		
<u>1311</u>	<u>2.0</u>	<u>6.48</u>	<u>389</u>	<u>20.9</u>		
<u>1314</u>	<u>3.0</u>	<u>6.50</u>	<u>394</u>	<u>20.6</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</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: _____

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? Y / (N) 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: 8-25-16 (inclusive)
 Sampler: Fr

Well ID: MW-9
 Well Diameter: 2 1/4 in.
 Total Depth: 19.66 ft.
 Depth to Water: 13.75 ft.
5.91 xVF .17 = 1.00

Date Monitored: 8-25-16

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

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 3.0 gal.

Depth to Water w/ 80% Recharge (Height of Water Column x 0.20) + DTW: 14.93

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): 1217
 Sample Time/Date: 1405 / 8-25-16
 Approx. Flow Rate: / gpm.
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Fog / Sunny
 Water Color: CLEAN Odor: Y / (N)
 Sediment Description: NONE
 DTW @ Sampling: 14.85

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS mS µmhos/cm)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)
<u>1220</u>	<u>1.0</u>	<u>6.28</u>	<u>379</u>	<u>21.3</u>	/	/
<u>1223</u>	<u>2.0</u>	<u>6.31</u>	<u>385</u>	<u>21.1</u>	/	/
<u>1227</u>	<u>3.0</u>	<u>6.33</u>	<u>390</u>	<u>20.9</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: SLOW RECOVERY

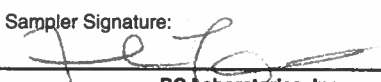
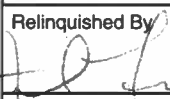

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? Y / (N) DTW READING: _____ TIME: _____

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: 5781				Union Oil Consultant: ALCADIS		ANALYSES REQUIRED											
Site Global ID: T0600101467				Consultant Contact: TAMARA ROBERTS		TPH - Diesel by EPA 8015 M W/S GC TPH - G by EPA 8015 (8015) BTEX/MTBE/S... EPA 8260B Ethanol by EPA 8260B EPA 8260B with OXYS (8)											
Site Address: 3535 PIENSON ST. OAKLAND, CA				Consultant Phone No: (408) 797-2013													
Union Oil PM: NICOLE M. AILCEVEAUX				Sampling Company: GETTLER-RYAN													
Union Oil PM Phone No: (925) 790-6912 / (510) 363-7354				Sampled By (PRINT): FRANK TENNINONI													
Charge Code: NWRTB-0 -0- LAB				Sampler Signature: 													
<p>This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.</p>				<p>BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911</p>													
SAMPLE ID												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			
Field Point Name	Matrix	Depth	Date (yyymmdd)	Sample Time	# of Containers	Notes / Comments											
QA	W-S-A		16-08-25		2												
MW-A	W-S-A			1118	8												
MW-4	W-S-A			1155													
MW-5	W-S-A			1340													
MW-6	W-S-A			1245													
MW-7	W-S-A			1133													
MW-8	W-S-A			1330													
MW-9	W-S-A			1405													
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																
Relinquished By: 			Company: 6-RINC			Date / Time: (1700) 16-08-25			Relinquished By: 			Company: GRIN			Date / Time: 8-2-16 11:10		
Received By: GETTLER-RYAN FRIDGE			Company: FRIDGE			Date / Time: 8-25-16 17:00			Received By: Mary Bryan Belah			Company: BELAH			Date / Time: 8-26-16 12:30		

ATTACHMENT B

[Historical Groundwater Analytical Data]



Table 3 - Additional Historical Groundwater Results 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- TETRACHLOR O-ETHANE (µg/L)	TETRACHLOR O-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: 09/02/2016

Tamera Rogers

Arcadis

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

Client Project: 351640
BCL Project: 5781
BCL Work Order: 1623845
Invoice ID: B245181

Enclosed are the results of analyses for samples received by the laboratory on 8/26/2016. 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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Union Oil Company of California ■ 6101 Bollinger Canyon Road ■ San Ramon, CA 94583
Union Oil Site ID: 16-23845 of 1

Union Oil Consultant: ARCADIS
 Consultant Contact: TAMARA ROBLES
 Consultant Phone No: (408) 797-2013
 Sampling Company: GETTLER-RYAN
 Sampled By (PRINT): Fredy Teran
 Sampler Signature: [Signature]
 BC Laboratories, Inc.
 Project Manager: Molly Meyers
 4100 Atlas Court, Bakersfield, CA 93308
 Phone No. 661-327-4911

Charge Code: NWRTE-0 - - - - LAB

This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.

SAMPLE ID	Field Point Name	Matrix	Depth	Date (yyymmdd)	Sample Time	# of Containers	ANALYSES REQUIRED				Notes / Comments	
							TPH - Diesel by EPA 8015	TPH - G by (8015)	BTEX/MTBE EPA 8260	Ethanol by EPA 8260B		
1	QA	W-S-A		16-08-25		2						
2	MW-4	W-S-A			1118	8	X	X	X	X		
3	MW-5	W-S-A			1155							
4	MW-6	W-S-A			1245							
5	MW-7	W-S-A			1133							
6	MW-8	W-S-A			1330							
7	MW-9	W-S-A			1405							

Turnaround Time (TAT):
 Standard 24 Hours
 48 Hours 72 Hours
 Special Instructions

Relinquished By: [Signature] Date / Time: 1700
 Received By: GETTLER-RYAN FRIDGE Date / Time: 16.08.25

Relinquished By: [Signature] Company: ARCADIS Date / Time: 8-26-16
 Received By: [Signature] Company: GETTLER-RYAN Date / Time: 8/26/16 16:55

Relinquished By: [Signature] Company: ARCADIS Date / Time: 8-26-16
 Received By: [Signature] Company: GETTLER-RYAN Date / Time: 8-26-16 @ 20:35

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission # 16-23845

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

SHIPPING CONTAINER: Ice Chest None Box Other (Specify) _____

FREE LIQUID: YES NO (W) S

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals: Ice Chest Containers None Comments: _____

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

COC Received: YES NO

Emissivity: 0.97 Container: Amber Thermometer ID: 208 Date/Time: 8-26-2015

Temperature: (A) 0.0 °C / (C) 0.1 °C Analyst Init: ARC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	<u>014</u>	<u>AB</u>						<u>AB</u>		
40ml VOA VIAL	<u>016</u>	<u>A2F</u>	<u>A2F</u>	<u>A2F</u>	<u>A2F</u>	<u>A2F</u>	<u>A2F</u>	<u>A2F</u>	<u>A2F</u>	<u>114 12/16</u>
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		<u>pk 82ml</u>								
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER		<u>61H</u>	<u>61H</u>	<u>5</u>	<u>6</u>	<u>61H</u>	<u>61H</u>	<u>61H</u>		<u>61H</u>
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: MW-5 & MW-6 Ambers broken in lab Date/Time: 8-29-16 Rev 21 05/23/2016

Sample Numbering Completed By: JPL IS:WPDoc\WordPerfect\LAB_DOC\SI\FORMS\SAMRECrev 201



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

Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

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

1623845-01	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: QA-W-160825 Sampled By: GRD	Receive Date: 08/26/2016 20:35 Sampling Date: 08/25/2016 00:00 Sample Depth: --- Lab Matrix: Water Sample Type: Trip Blank Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): QA Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1623845-02	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-A-W-160825 Sampled By: GRD	Receive Date: 08/26/2016 20:35 Sampling Date: 08/25/2016 11:18 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:
-------------------	--	--

1623845-03	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-4-W-160825 Sampled By: GRD	Receive Date: 08/26/2016 20:35 Sampling Date: 08/25/2016 11:55 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: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

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

1623845-04	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-5-W-160825 Sampled By: GRD	Receive Date: 08/26/2016 20:35 Sampling Date: 08/25/2016 13:40 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:
-------------------	--	--

1623845-05	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-6-W-160825 Sampled By: GRD	Receive Date: 08/26/2016 20:35 Sampling Date: 08/25/2016 12:45 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:
-------------------	--	--

1623845-06	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-7-W-160825 Sampled By: GRD	Receive Date: 08/26/2016 20:35 Sampling Date: 08/25/2016 11:33 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: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1623845-07	COC Number:	---	Receive Date: 08/26/2016 20:35
	Project Number:	5781	Sampling Date: 08/25/2016 13:30
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	MW-8-W-160825	Lab Matrix: Water
	Sampled By:	GRD	Sample Type: Water
			Delivery Work Order:
			Global ID: T0600101467
			Location ID (FieldPoint): MW-8
			Matrix: W
			Sample QC Type (SACode): CS
		Cooler ID:	
1623845-08	COC Number:	---	Receive Date: 08/26/2016 20:35
	Project Number:	5781	Sampling Date: 08/25/2016 14:05
	Sampling Location:	---	Sample Depth: ---
	Sampling Point:	MW-9-W-160825	Lab Matrix: Water
	Sampled By:	GRD	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: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1623845-01	Client Sample Name: 5781, QA-W-160825, 8/25/2016 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)	93.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/30/16	08/30/16 20:07	IO1	MS-V12	1	BZH2659

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

Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1623845-01	Client Sample Name: 5781, QA-W-160825, 8/25/2016 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)	106	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/29/16	08/29/16 14:55	AKM	GC-V9	1	BZH2915

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

Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1623845-02	Client Sample Name: 5781, MW-A-W-160825, 8/25/2016 11:18:00AM
----------------------------------	--

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)	92.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/30/16	08/30/16 20:25	IO1	MS-V12	1	BZH2659

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

Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1623845-02	Client Sample Name: 5781, MW-A-W-160825, 8/25/2016 11:18:00AM
----------------------------------	--

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)	97.5	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/29/16	08/29/16 15:15	AKM	GC-V9	1	BZH2915

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

Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1623845-02	Client Sample Name: 5781, MW-A-W-160825, 8/25/2016 11:18:00AM
----------------------------------	--

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)	49.4	%	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	08/31/16	09/01/16 12:12	RSM	GC-5	1	BZI0138

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

Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1623845-03	Client Sample Name: 5781, MW-4-W-160825, 8/25/2016 11:55:00AM
----------------------------------	--

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)	111	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	94.4	%	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	08/30/16	08/30/16 20:43	IO1	MS-V12	1	BZH2659

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

Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1623845-03	Client Sample Name: 5781, MW-4-W-160825, 8/25/2016 11:55:00AM
----------------------------------	--

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)	99.7	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/29/16	08/29/16 15:36	AKM	GC-V9	1	BZH2915

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1623845-03	Client Sample Name: 5781, MW-4-W-160825, 8/25/2016 11:55:00AM
----------------------------------	--

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)	64.8	%	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	08/31/16	09/01/16 12:26	RSM	GC-5	1	BZI0138

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1623845-04	Client Sample Name: 5781, MW-5-W-160825, 8/25/2016 1:40:00PM
----------------------------------	---

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	6.6	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	4.4	ug/L	0.50		EPA-8260B	ND		1
Toluene	0.66	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	14	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	180	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)	99.6	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	94.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/30/16	08/31/16 02:34	IO1	MS-V12	1	BZH2659

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1623845-04	Client Sample Name: 5781, MW-5-W-160825, 8/25/2016 1:40:00PM
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	2600	ug/L	500		EPA-8015B	ND	A01	1
a,a,a-Trifluorotoluene (FID Surrogate)	101	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/29/16	08/29/16 19:42	AKM	GC-V9	10	BZH2915

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1623845-04	Client Sample Name: 5781, MW-5-W-160825, 8/25/2016 1:40:00PM
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	880	ug/L	50		Luft/TPHd	ND	A52	1
Tetracosane (Surrogate)	49.7	%	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	08/31/16	09/01/16 12:40	RSM	GC-5	1	BZI0138

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1623845-05	Client Sample Name: 5781, MW-6-W-160825, 8/25/2016 12:45:00PM
----------------------------------	--

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)	97.9	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	93.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/30/16	08/30/16 21:00	IO1	MS-V12	1	BZH2659

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1623845-05	Client Sample Name: 5781, MW-6-W-160825, 8/25/2016 12:45:00PM
----------------------------------	--

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)	105	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/30/16	08/30/16 09:30	AKM	GC-V9	1	BZH2915

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1623845-05	Client Sample Name: 5781, MW-6-W-160825, 8/25/2016 12:45:00PM
----------------------------------	--

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)	53.2	%	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	08/31/16	09/01/16 12:54	RSM	GC-5	1	BZI0138

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1623845-06	Client Sample Name: 5781, MW-7-W-160825, 8/25/2016 11:33:00AM
----------------------------------	--

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)	99.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/29/16	08/30/16 21:18	IO1	MS-V12	1	BZH2942

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1623845-06	Client Sample Name: 5781, MW-7-W-160825, 8/25/2016 11:33:00AM
----------------------------------	--

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)	98.4	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/29/16	08/29/16 19:01	AKM	GC-V9	1	BZH2915

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1623845-06	Client Sample Name: 5781, MW-7-W-160825, 8/25/2016 11:33:00AM
----------------------------------	--

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)	57.4	%	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	08/31/16	09/01/16 13:08	RSM	GC-5	1	BZI0138

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1623845-07	Client Sample Name: 5781, MW-8-W-160825, 8/25/2016 1:30:00PM
----------------------------------	---

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)	92.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/29/16	08/30/16 21:36	IO1	MS-V12	1	BZH2942

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1623845-07	Client Sample Name: 5781, MW-8-W-160825, 8/25/2016 1:30:00PM
----------------------------------	---

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)	105	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/30/16	08/30/16 09:50	AKM	GC-V9	1	BZH2915

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1623845-07	Client Sample Name: 5781, MW-8-W-160825, 8/25/2016 1:30:00PM
----------------------------------	---

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)	55.9	%	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	08/31/16	09/01/16 13:23	RSM	GC-5	1	BZI0138

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1623845-08	Client Sample Name: 5781, MW-9-W-160825, 8/25/2016 2:05:00PM
----------------------------------	---

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)	96.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/29/16	08/30/16 21:53	IO1	MS-V12	1	BZH2942

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San Jose, CA 95119

Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1623845-08	Client Sample Name: 5781, MW-9-W-160825, 8/25/2016 2:05:00PM
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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)	87.3	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/29/16	08/29/16 19:22	AKM	GC-V9	1	BZH2915

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Reported: 09/02/2016 14:01
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1623845-08	Client Sample Name: 5781, MW-9-W-160825, 8/25/2016 2:05:00PM
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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)	68.9	%	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	08/31/16	09/01/16 10:34	RSM	GC-5	1	BZI0138

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Reported: 09/02/2016 14:01
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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
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QC Batch ID: BZH2659

Benzene	BZH2659-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BZH2659-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BZH2659-BLK1	ND	ug/L	0.50		
Ethylbenzene	BZH2659-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BZH2659-BLK1	ND	ug/L	0.50		
Toluene	BZH2659-BLK1	ND	ug/L	0.50		
Total Xylenes	BZH2659-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BZH2659-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BZH2659-BLK1	ND	ug/L	10		
Diisopropyl ether	BZH2659-BLK1	ND	ug/L	0.50		
Ethanol	BZH2659-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BZH2659-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	BZH2659-BLK1	104	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BZH2659-BLK1	97.2	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BZH2659-BLK1	103	%	80 - 120 (LCL - UCL)		

QC Batch ID: BZH2942

Benzene	BZH2942-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BZH2942-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BZH2942-BLK1	ND	ug/L	0.50		
Ethylbenzene	BZH2942-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BZH2942-BLK1	ND	ug/L	0.50		
Toluene	BZH2942-BLK1	ND	ug/L	0.50		
Total Xylenes	BZH2942-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BZH2942-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BZH2942-BLK1	ND	ug/L	10		
Diisopropyl ether	BZH2942-BLK1	ND	ug/L	0.50		
Ethanol	BZH2942-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BZH2942-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	BZH2942-BLK1	95.4	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BZH2942-BLK1	108	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BZH2942-BLK1	102	%	80 - 120 (LCL - UCL)		

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Reported: 09/02/2016 14:01
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 Quals
								Percent Recovery	RPD	
QC Batch ID: BZH2659										
Benzene	BZH2659-BS1	LCS	21.630	25.000	ug/L	86.5		70 - 130		
Toluene	BZH2659-BS1	LCS	23.020	25.000	ug/L	92.1		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BZH2659-BS1	LCS	11.500	10.000	ug/L	115		75 - 125		
Toluene-d8 (Surrogate)	BZH2659-BS1	LCS	9.9000	10.000	ug/L	99.0		80 - 120		
4-Bromofluorobenzene (Surrogate)	BZH2659-BS1	LCS	9.8900	10.000	ug/L	98.9		80 - 120		
QC Batch ID: BZH2942										
Benzene	BZH2942-BS1	LCS	28.680	25.000	ug/L	115		70 - 130		
Toluene	BZH2942-BS1	LCS	31.480	25.000	ug/L	126		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BZH2942-BS1	LCS	11.550	10.000	ug/L	116		75 - 125		
Toluene-d8 (Surrogate)	BZH2942-BS1	LCS	10.340	10.000	ug/L	103		80 - 120		
4-Bromofluorobenzene (Surrogate)	BZH2942-BS1	LCS	10.040	10.000	ug/L	100		80 - 120		

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Reported: 09/02/2016 14:01
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
								Percent Recovery	RPD	
QC Batch ID: BZH2659		Used client sample: N								
Benzene	MS	1621392-79	ND	19.880	25.000	ug/L		79.5		70 - 130
	MSD	1621392-79	ND	20.120	25.000	ug/L	1.2	80.5	20	70 - 130
Toluene	MS	1621392-79	ND	22.870	25.000	ug/L		91.5		70 - 130
	MSD	1621392-79	ND	22.500	25.000	ug/L	1.6	90.0	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1621392-79	ND	11.220	10.000	ug/L		112		75 - 125
	MSD	1621392-79	ND	10.580	10.000	ug/L	5.9	106		75 - 125
Toluene-d8 (Surrogate)	MS	1621392-79	ND	10.140	10.000	ug/L		101		80 - 120
	MSD	1621392-79	ND	9.7600	10.000	ug/L	3.8	97.6		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1621392-79	ND	9.9200	10.000	ug/L		99.2		80 - 120
	MSD	1621392-79	ND	9.9400	10.000	ug/L	0.2	99.4		80 - 120
QC Batch ID: BZH2942		Used client sample: N								
Benzene	MS	1621392-82	ND	25.970	25.000	ug/L		104		70 - 130
	MSD	1621392-82	ND	28.210	25.000	ug/L	8.3	113	20	70 - 130
Toluene	MS	1621392-82	ND	24.950	25.000	ug/L		99.8		70 - 130
	MSD	1621392-82	ND	24.920	25.000	ug/L	0.1	99.7	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1621392-82	ND	10.940	10.000	ug/L		109		75 - 125
	MSD	1621392-82	ND	11.410	10.000	ug/L	4.2	114		75 - 125
Toluene-d8 (Surrogate)	MS	1621392-82	ND	9.4400	10.000	ug/L		94.4		80 - 120
	MSD	1621392-82	ND	9.5100	10.000	ug/L	0.7	95.1		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1621392-82	ND	9.9400	10.000	ug/L		99.4		80 - 120
	MSD	1621392-82	ND	10.830	10.000	ug/L	8.6	108		80 - 120

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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: BZH2915						
Gasoline Range Organics (C4 - C12)	BZH2915-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	BZH2915-BLK1	91.7	%	70 - 130 (LCL - UCL)		

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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: BZH2915											
Gasoline Range Organics (C4 - C12)	BZH2915-BS1	LCS	858.24	1000.0	ug/L	85.8		85	115		
a,a,a-Trifluorotoluene (FID Surrogate)	BZH2915-BS1	LCS	38.307	40.000	ug/L	95.8		70	130		

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent		Lab Quals
								Recovery	RPD	
QC Batch ID: BZH2915		Used client sample: N								
Gasoline Range Organics (C4 - C12)	MS	1621392-54	ND	888.22	1000.0	ug/L		88.8		70 - 130
	MSD	1621392-54	ND	929.10	1000.0	ug/L	4.5	92.9	20	70 - 130
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1621392-54	ND	36.092	40.000	ug/L		90.2		70 - 130
	MSD	1621392-54	ND	36.649	40.000	ug/L	1.5	91.6		70 - 130

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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: BZI0138						
Diesel Range Organics (C12 - C24)	BZI0138-BLK1	ND	ug/L	50		
Tetracosane (Surrogate)	BZI0138-BLK1	54.9	%	40 - 140 (LCL - UCL)		
Capric acid (Reverse Surrogate)	BZI0138-BLK1	0	%	0 - 1 (LCL - UCL)		

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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: BZI0138											
Diesel Range Organics (C12 - C24)	BZI0138-BS1	LCS	293.83	500.00	ug/L	58.8		20 - 110			
Tetracosane (Surrogate)	BZI0138-BS1	LCS	13.005	20.000	ug/L	65.0		40 - 140			
Capric acid (Reverse Surrogate)	BZI0138-BS1	LCS	ND	100.00	ug/L	0		0 - 1			

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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: BZI0138		Used client sample: N								
Diesel Range Organics (C12 - C24)	MS	1621392-83	ND	213.24	500.00	ug/L		42.6		20 - 110
	MSD	1621392-83	ND	243.02	500.00	ug/L	13.1	48.6	30	20 - 110
Tetracosane (Surrogate)	MS	1621392-83	ND	10.787	20.000	ug/L		53.9		40 - 140
	MSD	1621392-83	ND	11.934	20.000	ug/L	10.1	59.7		40 - 140
Capric acid (Reverse Surrogate)	MS	1621392-83	ND	ND	100.00	ug/L		0		0 - 1
	MSD	1621392-83	ND	ND	100.00	ug/L		0		0 - 1

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Notes And Definitions

- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A01 Detection and quantitation limits are raised due to sample dilution.
- A52 Chromatogram not typical of diesel.