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

April 6, 2017

RECEIVED
By Alameda County Environmental Health 8:49 am, Apr 11, 2017

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

Re: Unocal No. 5781 (351640)
Quarterly Status Report – First Quarter 2017
3535 Pierson Street, Oakland, California
Fuel Leak Case No.: RO0000253
GeoTracker Global ID #T0600101467

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website.

The information in this report is accurate to the best of my knowledge. This report was prepared by Arcadis, upon whose assistance and advice I have relied.

Sincerely,

James P. Kiernan, P.E.
Project Manager

Attachment: Quarterly Status Report – First Quarter 2017 by Arcadis

Arcadis U.S., Inc.
2999 Oak Road
Suite 300
Walnut Creek
CA 94597
Tel 408-797-2013
Fax 925-274-1103
www.arcadis-us.com

ENVIRONMENT

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

Subject:
Quarterly Status Report, First Quarter 2017

Date:
April 10, 2017

Contact:
Tamera Rogers

Phone:
408.797.2013

Email:
Tamera.Rogers@arcadis.com

Our ref:
B0035135.1640

Dear Mr. Nowell,

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, First Quarter 2017* for the following facility:

76 Station No.	**Case No.**	**Location**
Unocal #5781	RO0000253	3535 Pierson Street Oakland, CA

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

Sincerely,

Arcadis U.S., Inc.

Tamera Rogers
Project Manager

Katherine Brandt, P.G.
Senior Geologist

Copies:
Geotracker Database
Mr. James Kiernan, CEMC (electronic)
Dr. Delong Liu, United Brothers Enterprise Inc. (2501 North Main Street, Walnut Creek, CA 94597)
Mr. Ed Ralston, Phillips 66 (electronic)

ARCADIS Design & Consultancy for natural and built assets

QUARTERLY STATUS REPORT
First Quarter 2017
April 10, 2017

Facility No:	Unocal #5781	Address:	3535 Pierson Street, Oakland, CA

Arcadis Contact Person / Phone No.:	Tamera Rogers / (408) 797-2013
Arcadis Project No.:	B0035135.1640
Primary Agency/Regulatory ID No.:	Alameda County LOP Case # RO0000253: Keith Nowell / San Francisco Bay RWQCB (Region 2) – Case # 01-1592

WORK CONDUCTED THIS QUARTER [First Quarter 2017]:

1. Conducted quarterly groundwater monitoring activities on February 10, 2017.
2. Prepared the *Quarterly Status Report, First Quarter 2017*.
3. Submitted *Offsite Investigation Work Plan* on January 24, 2017 and a revised figure on March 10, 2017.

WORK PROPOSED NEXT PERIOD [Second and Third Quarter 2017]:

1. Conduct semi-annual groundwater monitoring activities.
2. Prepare the *Semi-Annual Status Report, Second Half 2017*.
3. Implement offsite investigation upon receipt of approval by ACDEH.

Current Phase of Project:	Monitoring/assessment	
Frequency of Monitoring / Sampling:	Quarterly (moving to semi-annual)	
Are Phase Separate Hydrocarbons (PSH) Present On-site:	No	
Cumulative PSH Recovered to Date:	None	(gallons)
Approximate Depth to Groundwater:	9.60 to 15.98	(feet below top of casing)
Approximate Groundwater Elevation:	138.81 to 144.11	(feet above mean sea level)
Groundwater Flow Direction	East-Northeast	

Groundwater Gradient	0.046	(foot per foot)
Current Remediation Techniques:	None	
Permits for Discharge:	N/A	
Summary of Unusual Activity:	N/A	
Agency Directive Requirements:	Conditional Work Plan Approval	

DISCUSSION

Gettler-Ryan, Inc. (G-R) conducted semi-annual groundwater monitoring activities on February 10, 2017. 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 included as Attachment B. The site location map and site plan are presented as Figures 1 and 2, respectively; the groundwater elevation contour map for the site on February 10, 2017 is presented as Figure 3. Isoconcentration contours (where applicable) 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 on Figures 8 (AECOM events) and 9 (Arcadis events). A copy of the laboratory analytical report and chain-of-custody documentation are included as Attachment C. Figure 3 from the Quarterly Status Report – Fourth Quarter 2016 was revised and is included as Attachment D.

The direction of groundwater flow, calculated gradient, and analytical results were generally consistent with previous monitoring events. Residual dissolved petroleum hydrocarbons are primarily limited to on-site monitoring well MW-5, and overall are declining. Analytical results indicated that total petroleum hydrocarbons as diesel (TPH-d) (690 micrograms per liter [µg/L]), TPH-g (2,100 µg/L), ethylbenzene (9.1 µg/L), and total xylenes (12 µg/L) were detected in the groundwater sample collected from MW-5. The TPH-d and TPH-g concentrations in MW-5 significantly decreased from the previous event. Only a low concentration of MTBE (0.93 µg/L) was detected in MW-4, and only a low concentration of TPH-d (60 µg/L) was detected in MW-9. The detected concentrations were within the historical ranges. No other

constituents of concern (COCs) were detected above laboratory reporting limits in any of the wells during this sampling event.

Arcadis recommends continued groundwater monitoring to further evaluate groundwater quality and concentration trends. However, as discussed in the previous report, we plan to implement a semi-annual sampling frequency (first and third quarters) in accordance with the July 24, 2009 Alameda County Environmental Health directive (Attachment E) beginning with the next event.

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.

Katherine Brandt

Date: April 10, 2017

Katherine Brandt, P.G.
Senior Geologist

Date: April 10, 2017

Tamera Rogers
Project Manager

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
Figure 4	TPH-g Isoconcentration Map
Figure 5	Benzene Concentration Map
Figure 6	MTBE Concentration Map
Figure 7	TBA Concentration Map
Figure 8	Historical Groundwater Flow Direction Rose Diagram (AECOM 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
Attachment D	Revised Figure 3, Quarterly Status Report - Fourth Quarter 2016
Attachment E	ACDEH Correspondence

TABLES

Table 1. Current Groundwater Gauging and Analytical Results
Union Oil Company of California
Unocal No. 5781 (351640)
3535 Pierson Street, Oakland, California

Well ID	Sample Date	TOC (ft amsl)	DTW (ft bTOC)	GW Elev (ft amsl)	TPH-d (µg/L)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	EDB (µg/L)	EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)
MW-A	2/10/2017	154.79	15.98	138.81	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-4	2/10/2017	153.48	9.80	143.68	<50	<50	<0.50	<0.50	<0.50	<1.0	**0.93**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-5	2/10/2017	153.66	10.93	142.73	**690**	**2,100**	<0.50	<0.50	**9.1**	**12**	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-6	2/10/2017	154.62	11.25	143.37	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-7	2/10/2017	155.38	11.32	144.06	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-8	2/10/2017	153.71	9.60	144.11	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-9	2/10/2017	153.37	9.79	143.58	**60**	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
QA	2/10/2017	--	--	--	**--**	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<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
-- = Not sampled/not measured
ft = Feet
Samples analyzed by EPA Method 8260B:
GW Elev = Groundwater elevation
µg/L = Micrograms per liter
Bold = Value exceeds laboratory reporting limits
<0.50 = Not detected at or above the laboratory detectio

TPH-g = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to Environmental Protection Agency (EPA) Method 8015
TPH-d = Total petroleum hydrocarbons, diesel range by LUFT GC/MS according to EPA Method 8015M with Silica Gel Cleanup
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
Data QA/QC by: DP 03/02/2017

Table 2. Historical Groundwater Gauging and Analytical Results
Fourth Quarter 1990 to Current
Union Oil Company 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)	TPH-d (µg/L)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	EDB (µg/L)	EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	Comments
MW-A	12/18/1990	--	--	--	--	--	73	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	5/3/1991	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	8/7/1991	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	11/8/1991	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	2/6/1992	151.80	19.88	0	0	131.92	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	8/4/1992	151.80	18.95	0	0	132.85	ND	ND	ND	ND	ND	0.51	--	--	--	--	--	--	--	--	
	2/10/1993	151.80	17.71	0	0	134.09	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	2/10/1994	151.80	15.25	0	0	136.55	ND	ND	ND	0.52	ND	0.92	--	--	--	--	--	--	--	--	
	2/9/1995	151.80	15.68	0	0	136.12	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	
	2/6/1996	151.80	12.52	0	0	139.28	120	ND	ND	ND	ND	2.1	--	--	--	--	--	--	--	--	
	2/5/1997	151.80	13.01	0	0	138.79	61	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	2/2/1998	151.80	11.91	0	0	139.89	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	2/22/1999	151.80	11.24	0	0	140.56	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	
	2/26/2000	151.80	12.16	0	0	139.64	ND	ND	ND	1.01	ND	ND	ND	--	--	--	--	--	--	--	
	3/7/2001	151.80	11.91	0	0	139.89	131	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	2/22/2002	151.80	14.08	0	0	137.72	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--	
	2/22/2003	151.80	14.41	0	0	137.39	93	<50	<0.50	<0.50	<0.50	<0.50	<2.0	<100	<2.0	<0.50	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<250	

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

	Sample	TOC	DTW	PSH thickness	PSH recovered	GW Elev	TPH-d	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	EDB	EDC	DIPE	ETBE	TAME	Ethanol	Comments
	11/23/2016	154.79	18.09	0	0	136.70	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	**47**	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	2/10/2017	154.79	15.98	0	0	138.81	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<250	
	11/23/2016	153.48	12.43	0	0	141.05	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	2/10/2017	153.48	9.80	0	0	143.68	<50	<50	<0.50	<0.50	<0.50	<1.0	**0.93**	<10	<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	<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	<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	<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	<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	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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<250	

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

	Sample	TOC	DTW	PSH thickness	PSH recovered	GW Elev	TPH-d	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	EDB	EDC	DIPE	ETBE	TAME	Ethanol	Comments
	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	<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	<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	<250	
	9/7/2015	153.66	16.63	0	0	137.03	3,800	4,100	<5.0	<5.0	130	540	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<2,500	
	12/22/2015	153.66	11.82	0	0	141.84	1,700	5,600	16	63	53	320	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<2,500	
	3/15/2016	153.66	11.54	0	0	142.12	1,300	2,200	2.8	1	13	9.4	0.7	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	6/22/2016	153.66	12.35	0	0	141.31		**1,600**	**0.55**	<0.50	**8.6**	**2.3**	**3.3**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	8/25/2016	153.66	15.18	0	0	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	<250	
	11/23/2016	153.66	12.31	0	0	141.35	**4,300**	**10,000**	<0.50	**0.99**	**89**	**260**	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	2/10/2017	153.66	10.93	0	0	142.73	**690**	**2,100**	<0.50	<0.50	**9.1**	**12**	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
MW-6	12/21/2010	154.62	12.10	0	0	142.52	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<250	
	6/22/2016	154.62	11.50	0	0	143.12	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<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	<250	
	11/23/2016	154.62	11.46	0	0	143.16	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	2/10/2017	154.62	11.25	0	0	143.37	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<250	
	7/31/2013	155.38	16.30	0	0	139.08	Insufficient Water to Sample														

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

	Sample	TOC	DTW	PSH thickness	PSH recovered	GW Elev	TPH-d	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	EDB	EDC	DIPE	ETBE	TAME	Ethanol	Comments
	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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<250	
	11/23/2016	155.38	14.87	0	0	140.51	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	2/10/2017	155.38	11.32	0	0	144.06	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
MW-8	12/21/2010	153.71	11.63	0	0	142.08	81	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	3/10/2011	153.71	11.38	0	0	142.33	61	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	06/07/2011	153.71	11.54	0	0	142.17	71	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	08/18/2011	153.71	12.47	0	0	141.24	<40	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	10/04/2011	153.71	12.90	0	0	140.81	<40	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	01/24/2012	153.71	12.52	0	0	141.19	<40	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	04/06/2012	153.71	11.35	0	0	142.36	160	270	<0.50	3.7	7.8	91	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	07/02/2012	153.71	12.50	0	0	141.21	<40	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	10/4/2012	153.71	13.89	0	0	139.82	<50	<50	<0.50	<0.50	<0.50	2.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	1/23/2013	153.71	13.06	0	0	140.65	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	4/22/2013	153.71	12.82	0	0	140.89	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	7/31/2013	153.71	13.63	0	0	140.08	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	10/17/2013	153.71	14.48	0	0	139.23	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	2/24/2014	153.71	13.56	0	0	140.15	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	4/17/2014	153.71	11.90	0	0	141.81	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	7/18/2014	153.71	13.78	0	0	139.93	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	10/21/2014	153.71	14.38	0	0	139.33	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	1/20/2015	153.71	13.28	0	0	140.43	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	pre-purge
	1/20/2015	153.71	--	--	--	--	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	post-purge
	6/3/2015	153.71	12.88	0	0	140.83	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	9/7/2015	153.71	14.19	0	0	139.52	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	12/22/2015	153.71	12.90	0	0	140.81	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	3/15/2016	153.71	13.14	0	0	140.57	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	6/22/2016	153.71	12.32	0	0	141.39	<50	<50	<0.50	<0.50	<0.50	<1.0	**0.97**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	8/25/2016	153.71	13.57	0	0	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	<250	
	11/23/2016	153.71	13.46	0	0	140.25	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	2/10/2017	153.71	9.60	0	0	144.11	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
MW-9	12/21/2010	153.37	10.53	0	0	142.84	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	3/10/2011	153.37	10.86	0	0	142.51	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	06/07/2011	153.37	11.36	0	0	142.01	<40	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	08/18/2011	153.37	12.52	0	0	140.85	<40	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	10/04/2011	153.37	13.32	0	0	140.05	<40	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	01/24/2012	153.37	11.23	0	0	142.14	<40	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	04/06/2012	153.37	10.98	0	0	142.39	<40	340	<0.50	4.4	9	120	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	07/02/2012	153.37	12.58	0	0	140.79	<40	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	

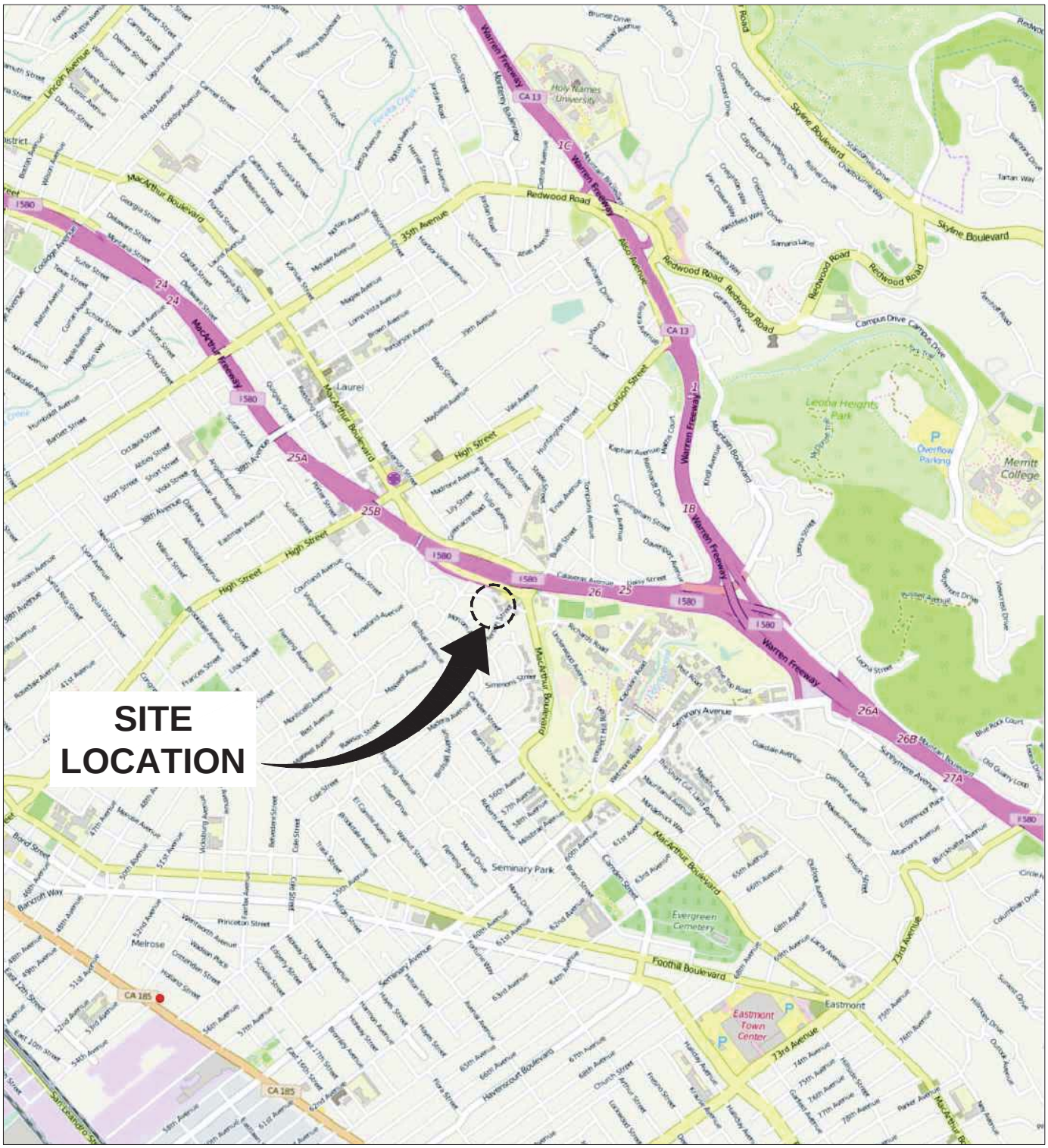
Table 2. Historical Groundwater Gauging and Analytical Results
Fourth Quarter 1990 to Current
Union Oil Company of California
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

	Sample	TOC	DTW	PSH thickness	PSH recovered	GW Elev	TPH-d	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	EDB	EDC	DIPE	ETBE	TAME	Ethanol	Comments
	10/4/2012	153.37	14.31	0	0	139.06	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	1/23/2013	153.37	11.11	0	0	142.26	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	4/22/2013	153.37	12.22	0	0	141.15	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	7/31/2013	153.37	14.10	0	0	139.27	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	10/17/2013	153.37	14.56	0	0	138.81	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	2/24/2014	153.37	12.85	0	0	140.52	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	4/17/2014	153.37	11.73	0	0	141.64	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	7/18/2014	153.37	13.69	0	0	139.68	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	10/21/2014	153.37	14.32	0	0	139.05	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	1/20/2015	153.37	11.80	0	0	141.57	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	pre-purge
	1/20/2015	153.37	--	--	--	--	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	post-purge
	6/3/2015	153.37	13.30	0	0	140.07	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	9/7/2015	153.37	14.05	0	0	139.32	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	12/22/2015	153.37	10.50	0	0	142.87	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	3/15/2016	153.37	10.26	0	0	143.11	<50	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	6/22/2016	153.37	11.92	0	0	141.45	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	8/25/2016	153.37	13.75	0	0	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	<250	
	11/23/2016	153.37	11.62	0	0	141.75	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	2/10/2017	153.37	9.79	0	0	143.58	**60**	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
QA	1/23/2013	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<250	
	11/23/2016	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	
	2/10/2017	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<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/Not measured

TPH-d = Total petroleum hydrocarbons, diesel range by LUFT GC/MS according (EPA) Method 8015M with Silica Gel Clean Up.
TPH-g = 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
Data QA/QC by DP = 03/02/2017

FIGURES



SOURCE: OpenStreetMap (and) contributors, CC-BY-SA

N

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.

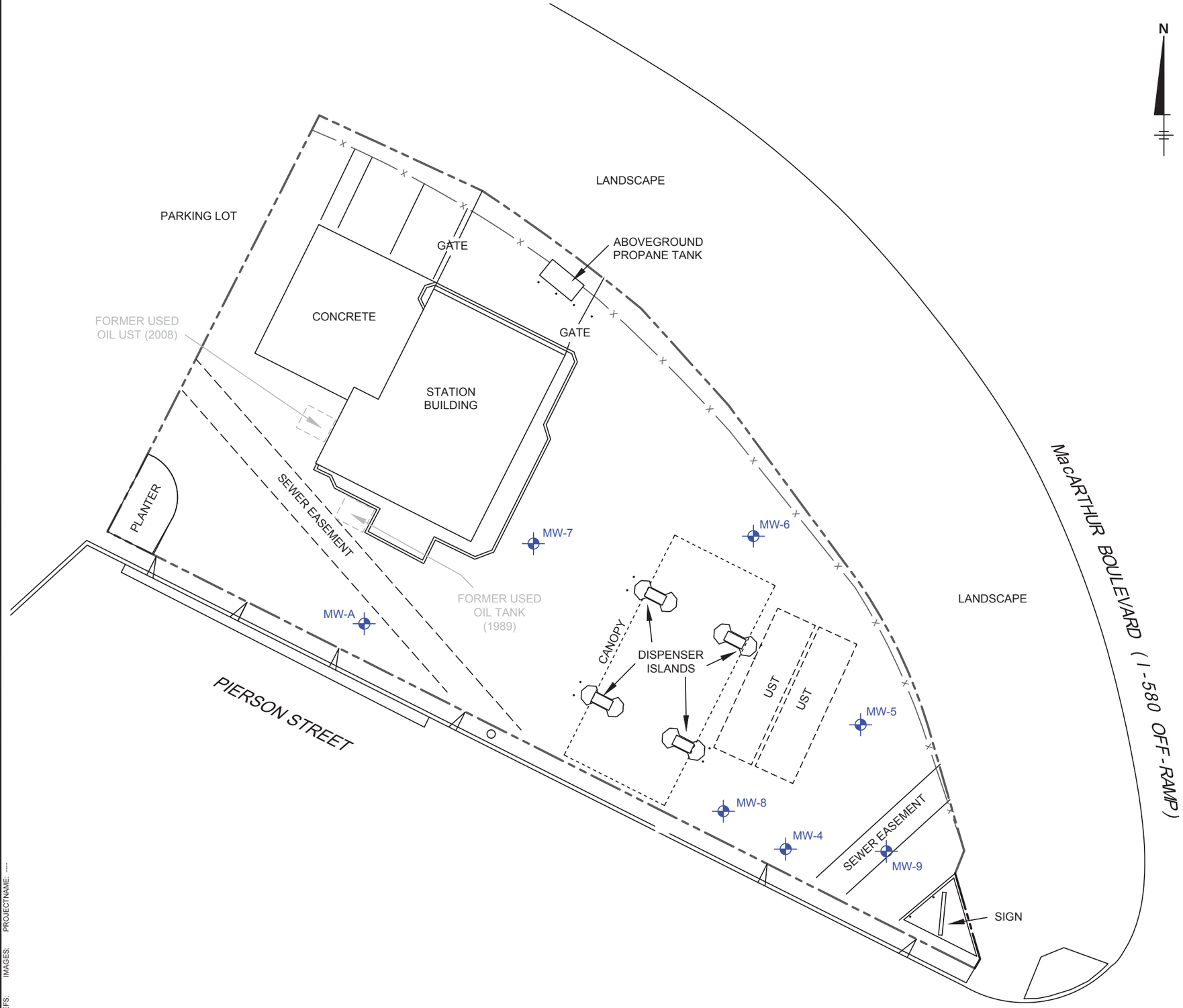
CALIFORNIA

UNOCAL NO. 5781 (351640)
3535 PIERSON STREET, OAKLAND, CALIFORNIA
QUARTERLY STATUS REPORT
FIRST QUARTER 2017

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1

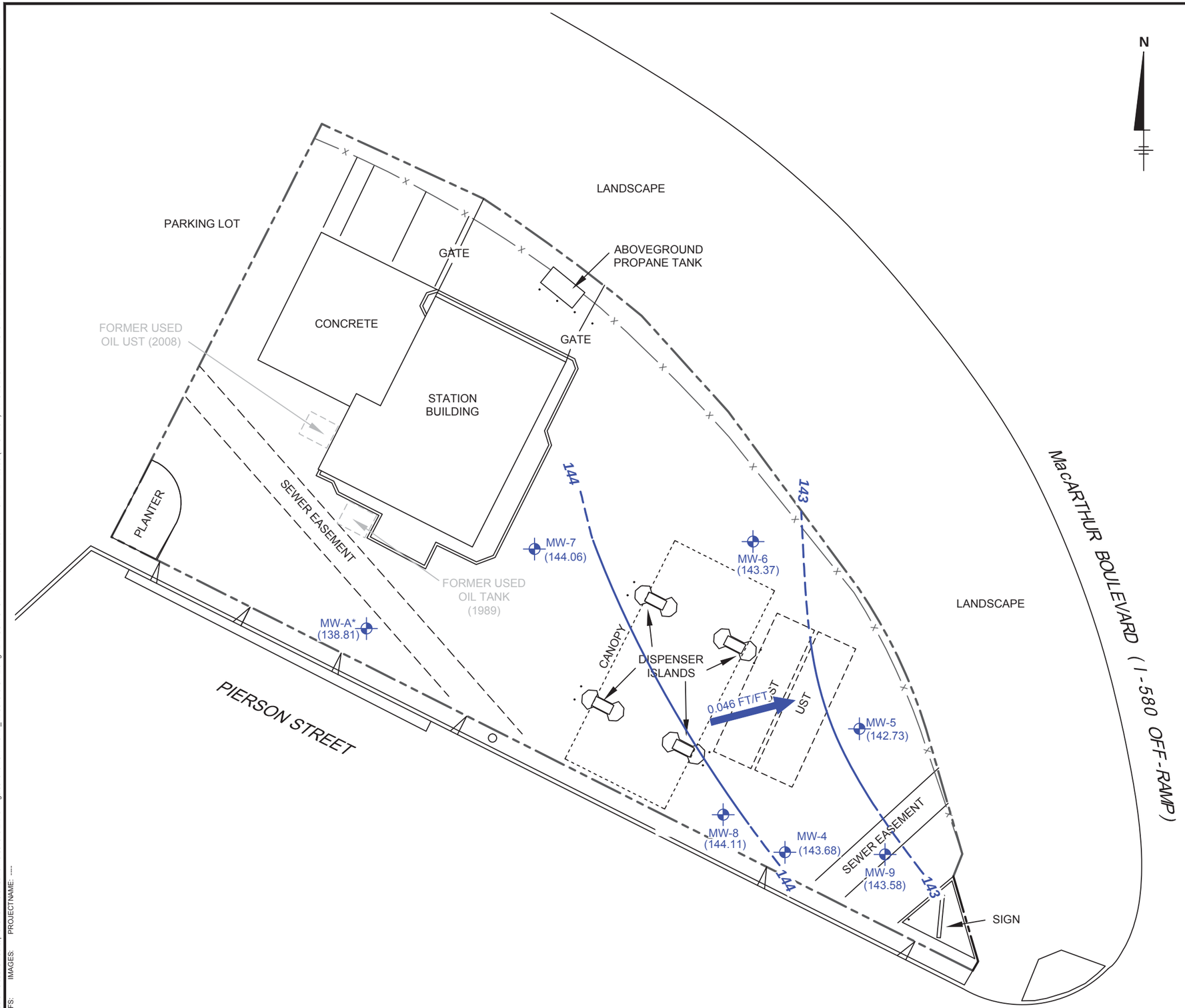


UNOCAL NO. 5781 (351640)
3535 PIERSON STREET, OAKLAND, CALIFORNIA
QUARTERLY STATUS REPORT
FIRST QUARTER 2017

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2



LEGEND

- SUBJECT PROPERTY BOUNDARY
- FENCE LINE
- MONITORING WELL
- (144.06) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 143 GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (DASHED WHERE INFERRED)
- UST UNDERGROUND STORAGE TANK
- 0.046 FT/FT GROUNDWATER FLOW DIRECTION AND HYDRAULIC GRADIENT IN FOOT PER FOOT (FT/FT)
- MW-A* NOT USED IN CONTOURING AS IT WAS SCREENED IN DEEPER AQUIFER

0 20’ 40’

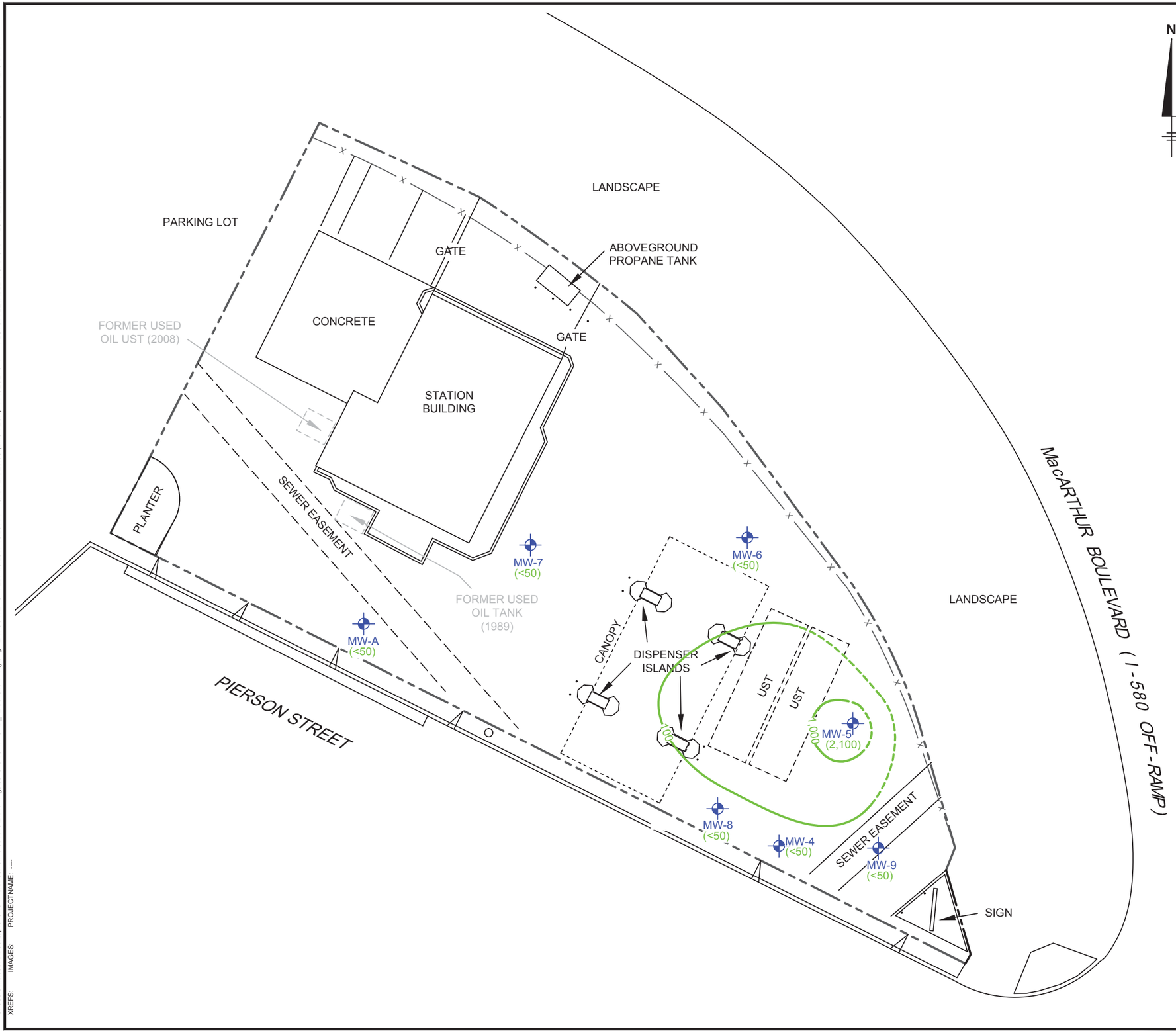
GRAPHIC SCALE

UNOCAL NO. 5781 (351640)
3535 PIERSON STREET, OAKLAND, CALIFORNIA
QUARTERLY STATUS REPORT
FIRST QUARTER 2017

GROUNDWATER ELEVATION CONTOUR MAP FEBRUARY 10, 2017

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3



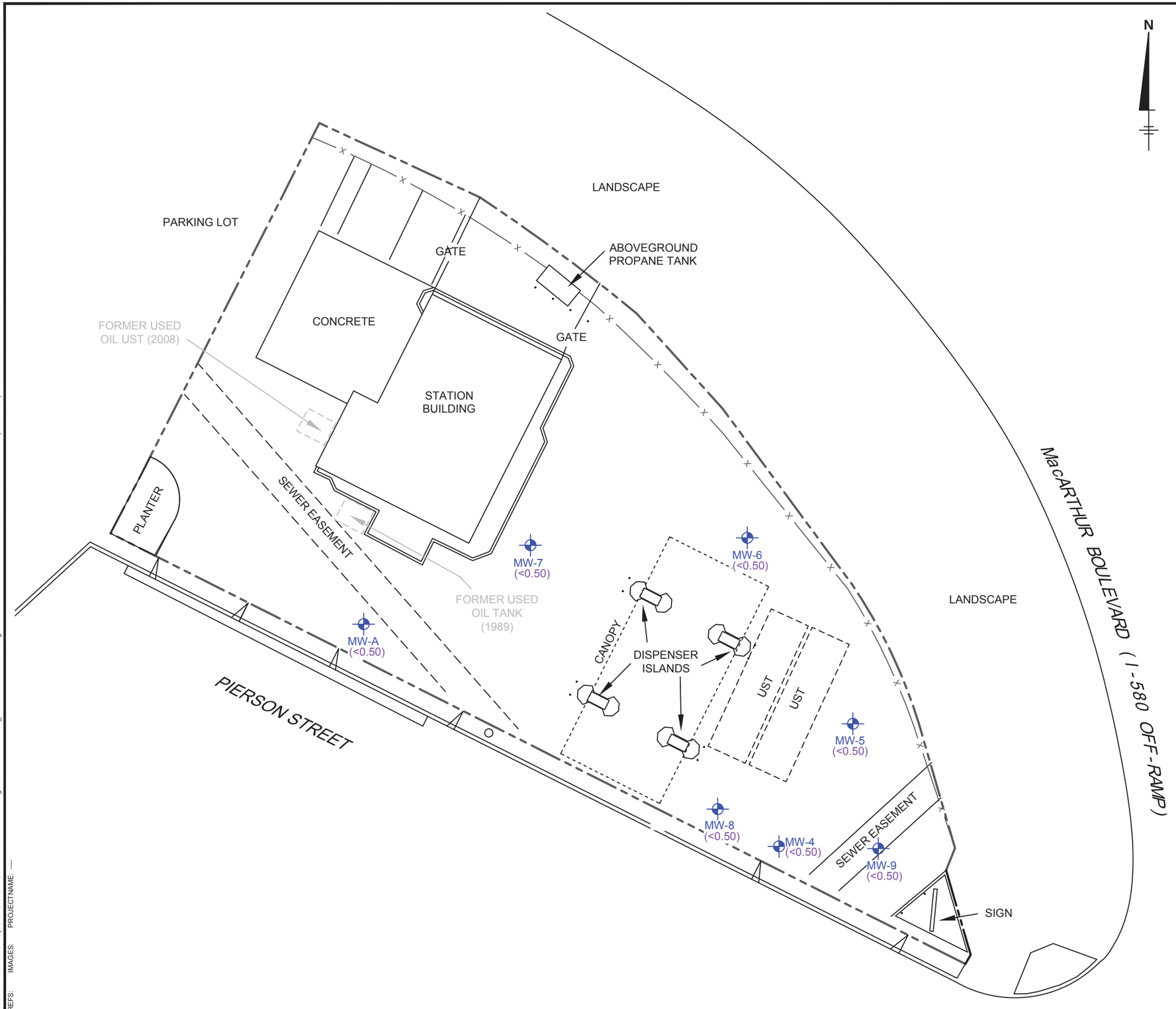
UNOCAL NO. 5781 (351640)
3535 PIERSON STREET, OAKLAND, CALIFORNIA

QUARTERLY STATUS REPORT
FIRST QUARTER 2017

TPH-g ISOCONCENTRATION MAP
FEBRUARY 10, 2017

ARCADIS Design & Consultancy for natural and built assets

FIGURE
4

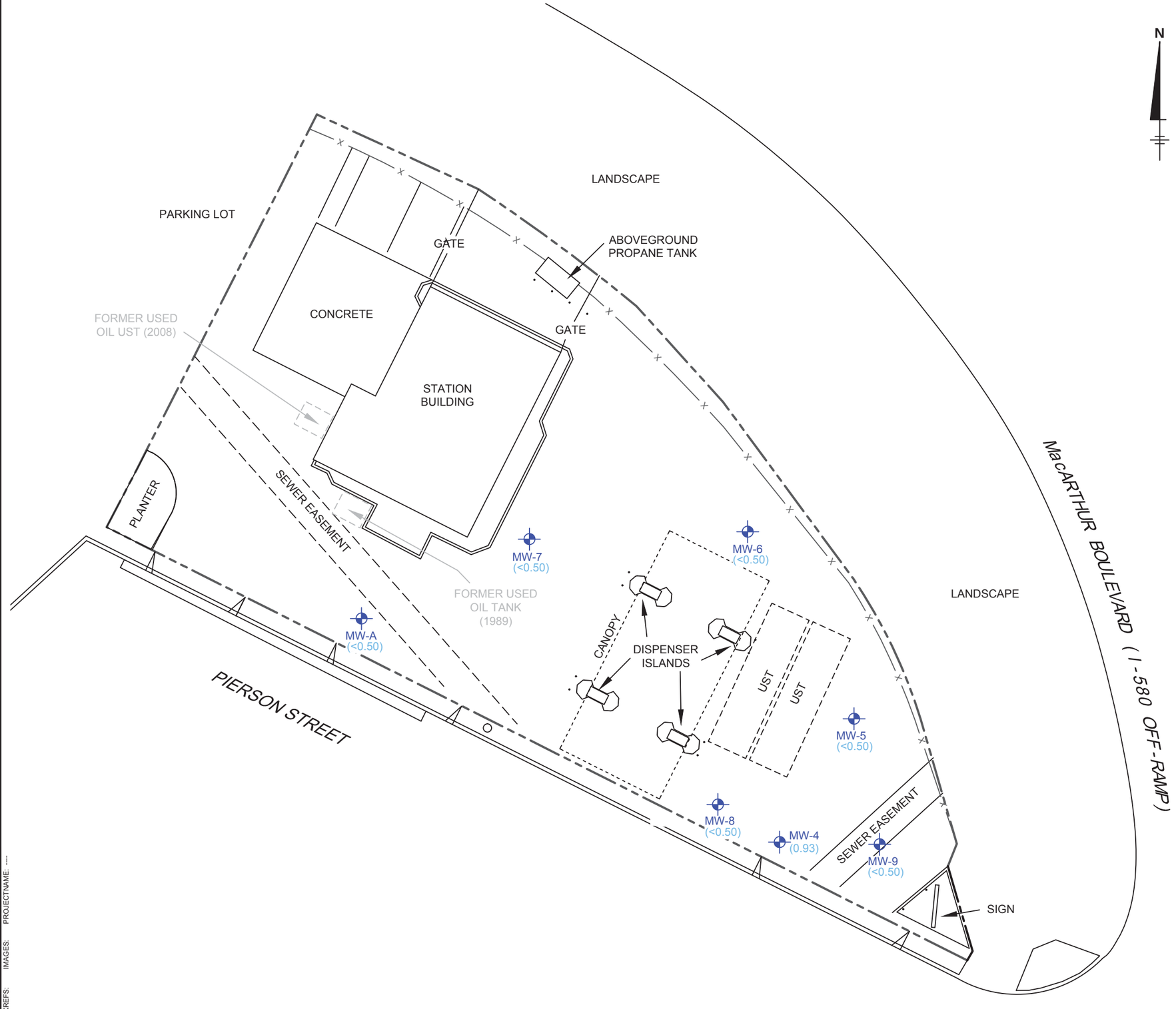


UNOCAL NO. 5781 (351640)
3535 PIERSON STREET, OAKLAND, CALIFORNIA
QUARTERLY STATUS REPORT
FIRST QUARTER 2017

BENZENE CONCENTRATION MAP
FEBRUARY 10, 2017

ARCADIS Design & Consultancy for natural and built assets

FIGURE
5



LEGEND

- SUBJECT PROPERTY BOUNDARY
- x — FENCE LINE
- MONITORING WELL
- 13 — MTBE CONCENTRATION CONTOUR (DASHED WHERE INFERRED)
- (0.93) METHYL TERTIARY 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

0 20' 40'

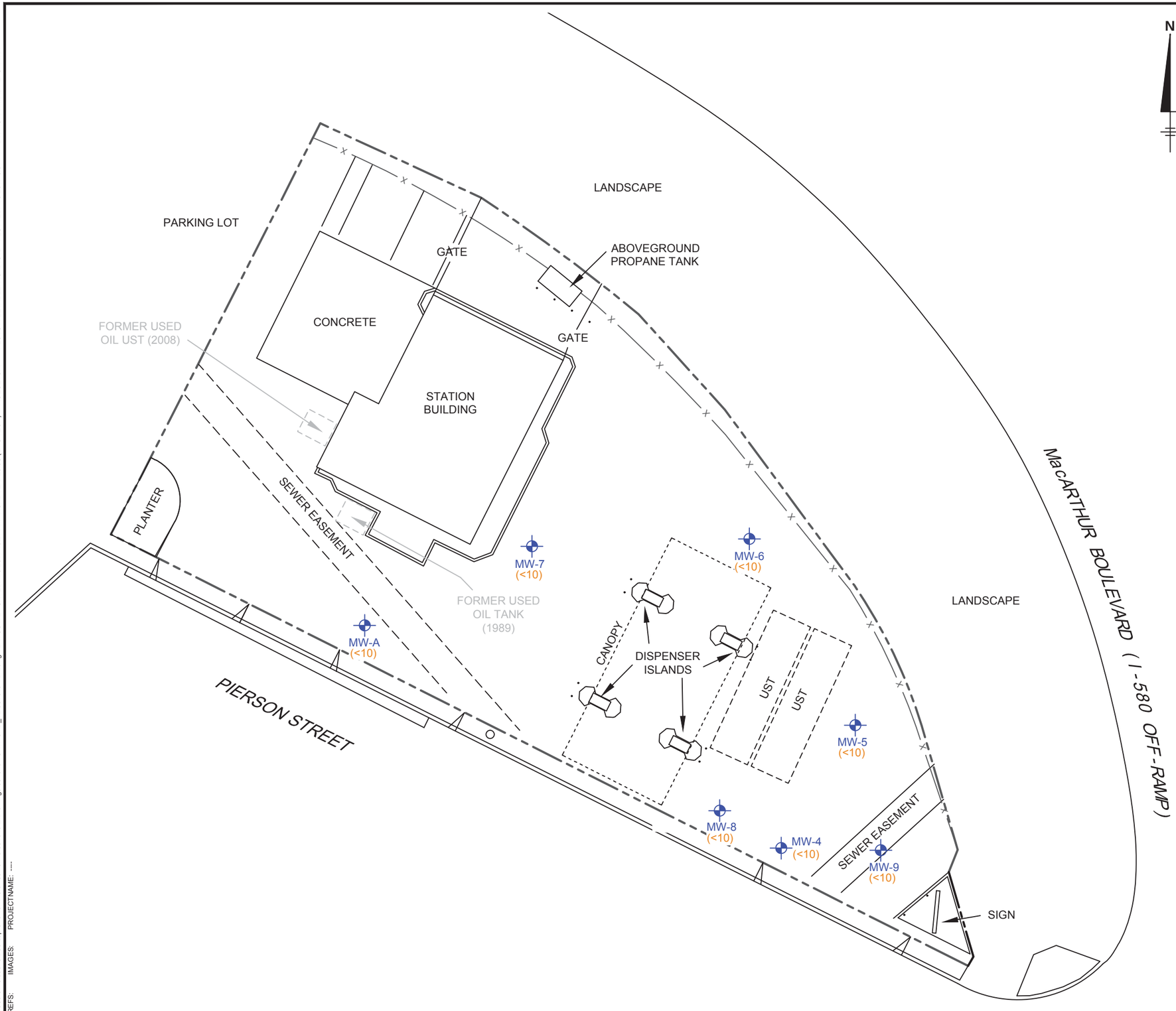
GRAPHIC SCALE

UNOCAL NO. 5781 (351640)
3535 PIERSON STREET, OAKLAND, CALIFORNIA
QUARTERLY STATUS REPORT
FIRST QUARTER 2017

MTBE CONCENTRATION MAP
FEBRUARY 10, 2017

ARCADIS Design & Consultancy for natural and built assets

FIGURE
6

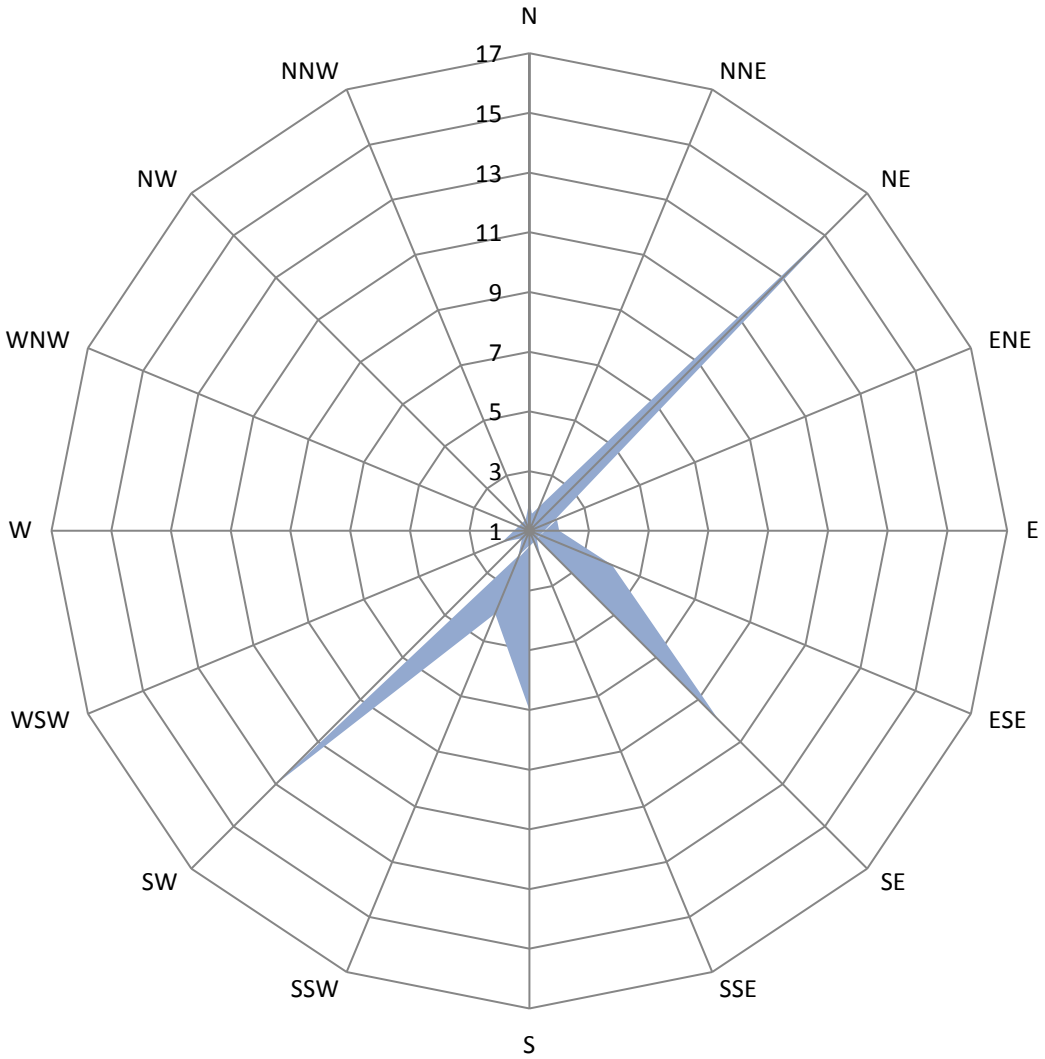


UNOCAL NO. 5781 (351640)
3535 PIERSON STREET, OAKLAND, CALIFORNIA
QUARTERLY STATUS REPORT
FIRST QUARTER 2017

TBA CONCENTRATION MAP
FEBRUARY 10, 2017

ARCADIS Design & Consultancy for natural and built assets

FIGURE
7



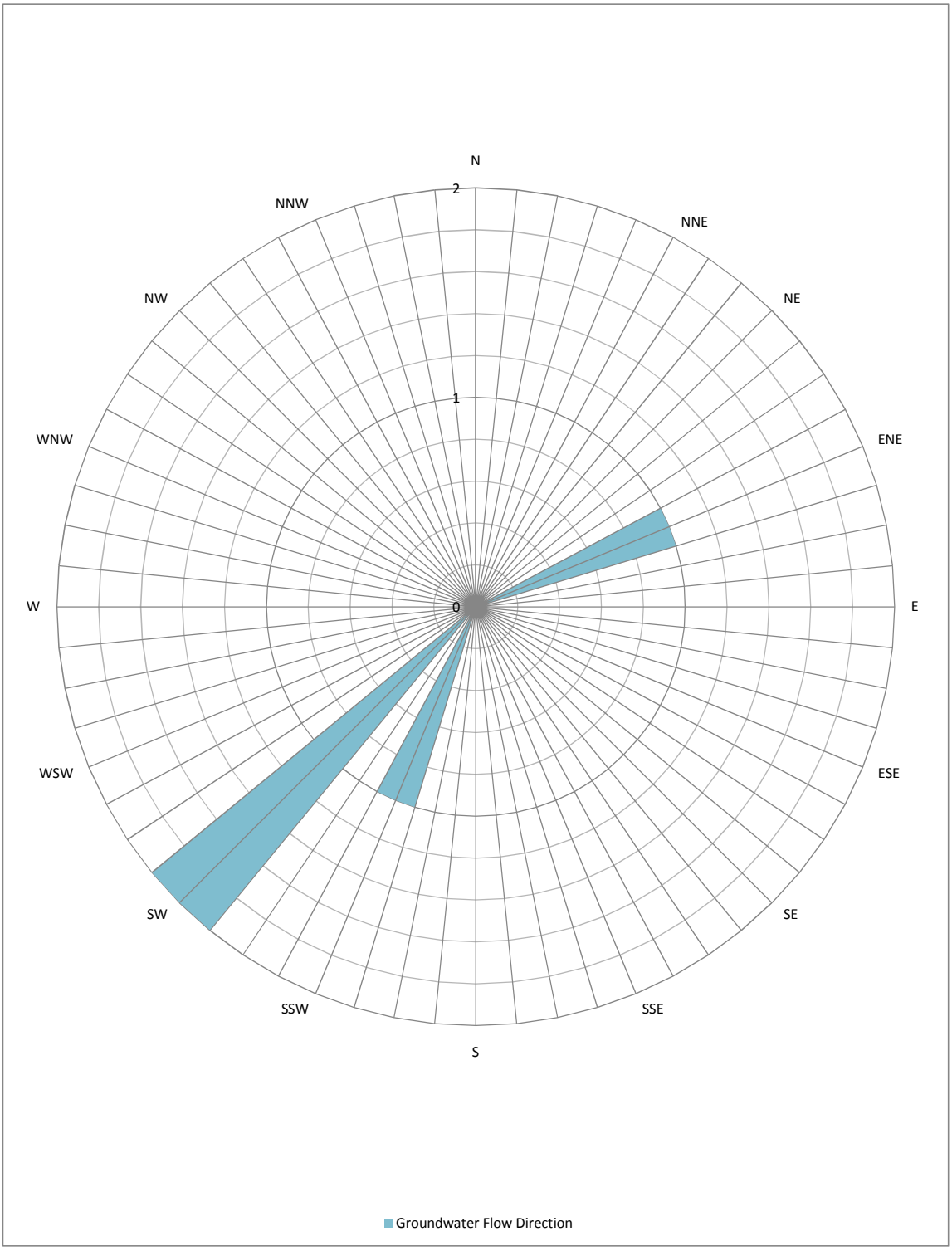
Note:
Concentric circles represent the frequency of groundwater flow direction conducted from second quarter 2010 through first quarter 2016.

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

HISTORICAL GROUNDWATER FLOW DIRECTION ROSE DIAGRAM

ARCADIS Design & Consultancy for natural and built assets

FIGURE
8



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 4
=

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

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM

ARCADIS Design & Consultancy for natural and built assets

FIGURE 9

ATTACHMENT A

Field Data Sheets and General Procedures

GETTLER-RYAN INC.

TRANSMITTAL

February 15, 2017
G-R #17155641

TO: Mr, Carl Edwards
Arcadis
100 Montgomery Street, Suite 300
San Francisco, California 94104

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 **First Semi Annual Event of February 10, 2017**

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 #: 17155641

Event Date: 2.10.17

Sampler: FT

WELL ID	Vault Frame Condition	Gasket/ O-Ring (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Bolt Flanges B=Broken S=Stripped R=Retaped	Apron Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) Inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y (N)	REPLACE CAP Y (N)	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Y (N)
MW-A	OK			S=1	OK					EMCO | 8" | 2	
MW-4	OK									EMCO | 12" | 2	
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. Total well depths are measured annually.

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 Job Number: 17155641
Site Address: 3535 Pierson Street Event Date: 2.10.17 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-A Date Monitored: 2.10.17
Well Diameter Ø14 in.
Total Depth 45.00 ft.
Depth to Water 15.98 ft.

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

☐ Check if water column is less then 0.50 ft.

29.02 xVF .17 = 4.93 x3 case volume = Estimated Purge Volume: 15.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 21.78

Purge Equipment:		Sampling Equipment:	
Disposable Bailer		Disposable Bailer	✓
Stainless Steel Bailer		Pressure Bailer	
Stack Pump	✓	Metal Filters	
Peristaltic Pump		Peristaltic Pump	
QED Bladder Pump		QED Bladder Pump	
Other:		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): 0945 Weather Conditions: CLOUDY / SUNNY
Sample Time/Date: 1040 / 2.10.17 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: ≈ 2.5 gpm. Sediment Description: NONE
Did well de-water? No If yes, Time: Volume: gal. DTW @ Sampling: 21.06

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0947	5.0	7.67	632	19.4		
0949	10.0	7.64	639	19.6		
0951	15.0	7.61	647	19.9		

LABORATORY INFORMATION

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

COMMENTS: 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:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781 Job Number: 17155641
Site Address: 3535 Pierson Street Event Date: 2.10.17 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-4 Date Monitored: 2.10.17
Well Diameter 2 (4) in.
Total Depth 24.74 ft.
Depth to Water 9.80 ft.

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

☐ Check if water column is less then 0.50 ft.

14.94 xVF .66 = 9.86 x3 case volume = Estimated Purge Volume: 30.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.78

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): 1025 Weather Conditions: SUNNY / CLOUDY
Sample Time/Date: 1020 / 2.10.17 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: ≈ 2.5 gpm. Sediment Description: NONE
Did well de-water? YES If yes, Time: 1031 Volume: 15.0 gal. DTW @ Sampling: 9.80

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1029	10.0	7.68	1128	20.4		
					/	/
					/	/

LABORATORY INFORMATION

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

COMMENTS:

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) / N DTW READING: 13.74 TIME: 1250

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: 17155641
Site Address: 3535 Pierson Street Event Date: 2.10.17 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-5 Date Monitored: 2.10.17
Well Diameter 2 (4) in.
Total Depth 19.89 ft.
Depth to Water 10.93 ft.

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

☐ Check if water column is less then 0.50 ft.

8.96 xVF .66 = 5.91 x3 case volume = Estimated Purge Volume: 18.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.72

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): 1150 Weather Conditions: SUNNY / CLOUDY
Sample Time/Date: 1145 / 2.10.17 Water Color: CLEAR Odor: (Y) / N STRONG
Approx. Flow Rate: ≈ 2.0 gpm. Sediment Description: NONE
Did well de-water? YES If yes, Time: 1154 Volume: 8.0 gal. DTW @ Sampling: 10.93

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1153	6.0	6.93	520	19.5		

LABORATORY INFORMATION

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

COMMENTS:

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) / N DTW READING: 15.06 TIME: 1330

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: 17155641
Site Address: 3535 Pierson Street Event Date: 2.10.17 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-6 Date Monitored: 2.10.17
Well Diameter 2/4 in.
Total Depth 19.95 ft.
Depth to Water 11.25 ft.

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

☐ Check if water column is less then 0.50 ft.

8.70 xVF .17 = 1.47 x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.99

Purge Equipment:		Sampling Equipment:	
Disposable Bailer	✓	Disposable Bailer	✓
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Metal Filters	
Peristaltic Pump		Peristaltic Pump	
QED Bladder Pump		QED Bladder Pump	
Other:		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): 1130 Weather Conditions: CLOUDY / SUNNY
Sample Time/Date: 1130 /2.10.17 Water Color: LT. BRN. Odor: Y / (N)
Approx. Flow Rate: — gpm. Sediment Description: S. SILTY
Did well de-water? Yes If yes, Time: 1135 Volume: 2.0 gal. DTW @ Sampling: 11.25

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1134	1.5	7.47	421	19.3		
	[redacted]					
	[redacted]					

LABORATORY INFORMATION

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

COMMENTS:

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) N DTW READING: 14.89 TIME: 1255

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: 17155641
Site Address: 3535 Pierson Street Event Date: 2.10.17 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-7 Date Monitored: 2.10.17
Well Diameter ②/4 in.
Total Depth 19.69 ft.
Depth to Water 11.32 ft.

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

☐ Check if water column is less then 0.50 ft.

8.37 xVF .17 = 1.42 x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.99

Purge Equipment:		Sampling Equipment:	
Disposable Bailer	✓	Disposable Bailer	✓
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Metal Filters	
Peristaltic Pump		Peristaltic Pump	
QED Bladder Pump		QED Bladder Pump	
Other:		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): 1005 Weather Conditions: CLOUDY / SUNNY
Sample Time/Date: 1005/2.10.17 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: — gpm. Sediment Description: NONE
Did well de-water? Yes If yes, Time: 1009 Volume: 2.0 gal. DTW @ Sampling: 12.99

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS/ mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1008	1.5	7.58	650	20.0		

LABORATORY INFORMATION

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

COMMENTS:

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) / N DTW READING: 13.32 TIME: 1245

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: 17155641
Site Address: 3535 Pierson Street | Event Date: 2.10.17 (inclusive)
City: Oakland, CA | Sampler: FT

Well ID: MW-8 | Date Monitored: 2.10.17
Well Diameter: 2/4 in.
Total Depth: 19.92 ft.
Depth to Water: 9.60 ft.

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

☐ Check if water column is less then 0.50 ft.

10.32 xVF .17 = 1.75 x3 case volume = Estimated Purge Volume: 5.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.66

Purge Equipment:		Sampling Equipment:	
Disposable Bailer	✓	Disposable Bailer	✓
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Metal Filters	
Peristaltic Pump		Peristaltic Pump	
QED Bladder Pump		QED Bladder Pump	
Other:		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): 1055 | Weather Conditions: CLOUDY / SUNNY
Sample Time/Date: 1117 / 2.10.17 | Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: ~ gpm. | Sediment Description: NONE
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 11.56

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1058	1.5	7.40	645	19.2		
1101	3.0	7.38	650	19.3		
1105	5.0	7.36	656	19.5		

LABORATORY INFORMATION

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

COMMENTS:

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: 17155641
Site Address: 3535 Pierson Street Event Date: 2.10.17 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-9 Date Monitored: 2.10.17
Well Diameter ②/4 in.
Total Depth 19.65 ft.
Depth to Water 9.79 ft.

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

☐ Check if water column is less then 0.50 ft.

9.86 xVF .17 = 1.67 x3 case volume = Estimated Purge Volume: 5.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.76

Purge Equipment:		Sampling Equipment:	
Disposable Bailer	✓	Disposable Bailer	✓
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Metal Filters	
Peristaltic Pump		Peristaltic Pump	
QED Bladder Pump		QED Bladder Pump	
Other:		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): 1210 Weather Conditions: CLOUDY / SUNNY
Sample Time/Date: 1232 /2.10.17 Water Color: LT. BRN. Odor: Y / (N)
Approx. Flow Rate: ✓ gpm. Sediment Description: S. SILTY
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 10.85

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1213	1.5	7.53	545	19.4		
1216	3.0	7.51	551	19.6		
1220	5.0	7.49	557	19.8	✓	✓

LABORATORY INFORMATION

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

COMMENTS:

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 ____ of ____

Union Oil Site ID: 5781	Union Oil Consultant: HILGARDS
Site Global ID: T0600101467	Consultant Contact: CHRIS GUARINO
Site Address: 3535 MELROSE ST. OAKLAND, CA	Consultant Phone No.: (415) 805-0754
	Sampling Company: GETTLER-RYAN
Union Oil PM: JAMES N KIELNAD	Sampled By (PRINT): FRANK T.
Union Oil PM Phone No.: (925) 842-3220	Sampler Signature:
Charge Code: NWRTB-0 351640 -0- LAB	BC Laboratories, Inc.
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.	Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911

ANALYSES REQUIRED

Turnaround Time (TAT): Standard ☒ 24 Hours ☐ 48 Hours ☐ 72 Hours ☐

Special Instructions

SAMPLE ID: Field Point Name	Matrix	Depth	Date (yymmdd)	Sample Time	# of Containers	TPH - Diesel by EPA 8015 M w/ SGC	TPH - G by [illegible] (8015)	BTEX/MTBE/[illegible] by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B [illegible] with OXYS (8)	Notes / Comments
QA	W-S-A		17.2.10		2		X	X			
MW-A	W-S-A			1040	8	X	X	X		X	
MW-4	W-S-A			1020							
MW-5	W-S-A			1145							
MW-6	W-S-A			1130							
MW-7	W-S-A			1005							
MW-8	W-S-A			1117							
MW-9	W-S-A			1232							
	W-S-A										
	W-S-A										
	W-S-A										
	W-S-A										

Relinquished By	Company	Date / Time:
[signature]	GTL INC.	17.2.13 (0745)
[signature]	[illegible]	2-13-17 1000

Received By	Company	Date / Time:
GETTLER-RYAN FRIDGE		2-14-17 0800
Doug Boyce	BC Lab	2-13-17 1500

ATTACHMENT B

Historical Groundwater Analytical Data

Table 3 - Historical Groundwater Analytical Data
February 2004 - March 2009
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

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

NOTES:

µg/L = Micrograms per liter

ID = Identification

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

ATTACHMENT C

Laboratory Report and Chain-of-Custody Documentation

Date of Report: 02/22/2017

Tamera Rogers

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

Client Project:	351640
BCL Project:	5781
BCL Work Order:	1703973
Invoice ID:	B259944

Enclosed are the results of analyses for samples received by the laboratory on 2/13/2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Molly Meyers

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

Table of Contents

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: ARCADIS
Site Global ID: T0600101467	Consultant Contact: CHRIS EDWARDS
Site Address: 3535 PIERSON ST. OAKLAND, CA	Consultant Phone No.(415) 825-0755
Union Oil PM: JAMES D. KIERNAN	Sampling Company: GETTLER-RYAN
Union Oil PM Phone No.(925) 842-3220	Sampled By (PRINT): FRANK T.
Charge Code: NWRTB- 0 351640 -0- LAB 17-03973	Sampler Signature:
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.	BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911

ANALYSES REQUIRED

Turnaround Time (TAT): Standard ☒ 24 Hours ☐ 48 Hours ☐ 72 Hours ☐

Special Instructions

SAMPLE ID Field Point Name	Matrix	Depth	Date (yymmdd)	Sample Time	# of Containers	TPH - Diesel by EPA 8015 M SSS	TPH - G by [redacted] (8015)	BTEX/MTBE [redacted] by EPA 8260	Ethanol by EPA 8260B	EPA 8260B [redacted] with OXYS (8)	Notes / Comments
1 QA	W-S-A		17.2.10		2		X	X			
2 MW-A	W-S-A			1040	8	X	X	X		X	
3 MW-4	W-S-A			1020							
4 MW-5	W-S-A			1145							
5 MW-6	W-S-A			1130							
6 MW-7	W-S-A			1005							
7 MW-8	W-S-A			1117							
8 MW-9	W-S-A			1232							
	W-S-A										
	W-S-A										
	W-S-A										
	W-S-A										

CHK BY DISTRIBUTION SUB-OUT

Relinquished By	Company	Date / Time:	Relinquished By	Company	Date / Time :	Relinquished By	Company	Date / Time:
[signature]	GTR INC.	17.2.13 (0745)	[signature]	GTRINC.	02-13-17 1300	[signature]	BCLAB	2/13/17 18:30
Received By	**Company**	**Date / Time:**	**Received By**	**Company**	**Date / Time :**	**Received By**	**Company**	**Date / Time:**
GETTLER-RYAN FRIDGE		02-13-17 0800	Doug Bogan	BCLAB	2-13-17 1300	[signature]	BCLAB	2/13 2150

Chain of Custody and Cooler Receipt Form for 1703973 Page 2 of 2

BC LABORATORIES INC. — COOLER RECEIPT FORM — Page 1 Of 1

Submission #: 17-03973

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐	Ice Chest ☒ None ☐ Box ☐	YES ☐ NO ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____	Other ☐ (Specify)_____	W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) 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: VOA Thermometer ID: 207 Date/Time 2/13 21:45

Temperature: (A) 1.1 °C / (C) 1.3 °C Analyst Init GSP

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										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	AB									
40ml VOA VIAL		A-F	A-F	A-F	A-F	A-F	A-F	A-F		
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		GH	GH	GH	GH	GH	GH	GH		
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: Date/Time: 2/13/17 2225

A = Actual / C = Corrected

Rev 21 05/23/2016

[S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMRECrev 20]

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

Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1703973-01	**COC Number:**	---	**Receive Date:**	02/13/2017 21:50
	Project Number:	5781	**Sampling Date:**	02/10/2017 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	QA-W-170210	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Blank Water
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): QA			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1703973-02	**COC Number:**	---	**Receive Date:**	02/13/2017 21:50
	Project Number:	5781	**Sampling Date:**	02/10/2017 10:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-A-W-170210	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): MW-A			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1703973-03	**COC Number:**	---	**Receive Date:**	02/13/2017 21:50
	Project Number:	5781	**Sampling Date:**	02/10/2017 10:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-W-170210	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): MW-4			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			

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

Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1703973-04	**COC Number:**	---	**Receive Date:**	02/13/2017 21:50
	Project Number:	5781	**Sampling Date:**	02/10/2017 11:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-5-W-170210	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): MW-5			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1703973-05	**COC Number:**	---	**Receive Date:**	02/13/2017 21:50
	Project Number:	5781	**Sampling Date:**	02/10/2017 11:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-6-W-170210	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): MW-6			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1703973-06	**COC Number:**	---	**Receive Date:**	02/13/2017 21:50
	Project Number:	5781	**Sampling Date:**	02/10/2017 10:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-7-W-170210	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): MW-7			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			

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

Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1703973-07	**COC Number:**	---	**Receive Date:**	02/13/2017 21:50
	Project Number:	5781	**Sampling Date:**	02/10/2017 11:17
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-8-W-170210	**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:			
1703973-08	**COC Number:**	---	**Receive Date:**	02/13/2017 21:50
	Project Number:	5781	**Sampling Date:**	02/10/2017 12:32
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-9-W-170210	**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:			

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

Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1703973-01 | **Client Sample Name:** 5781, QA-W-170210, 2/10/2017 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)	73.2	%	75 - 125 (LCL - UCL)		EPA-8260B		S09	1
Toluene-d8 (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	139	%	80 - 120 (LCL - UCL)		EPA-8260B		S09	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	02/14/17	02/14/17 14:51	IO1	MS-V12	1	B[B1089

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

Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1703973-01 | **Client Sample Name:** 5781, QA-W-170210, 2/10/2017 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)	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	02/14/17	02/14/17 23:57	AKM	GC-V9	1	B[B0998

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

Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1703973-02 | **Client Sample Name:** 5781, MW-A-W-170210, 2/10/2017 10:40:00AM

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)	117	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	69.1	%	80 - 120 (LCL - UCL)		EPA-8260B		S09	1
4-Bromofluorobenzene (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	02/14/17	02/14/17 15:09	IO1	MS-V12	1	B[B1089

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

Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1703973-02 | **Client Sample Name:** 5781, MW-A-W-170210, 2/10/2017 10:40:00AM

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)	93.6	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	02/14/17	02/14/17 21:55	AKM	GC-V9	1	B[B0998

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

Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1703973-02 | **Client Sample Name:** 5781, MW-A-W-170210, 2/10/2017 10:40:00AM

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)	56.4	%	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	02/15/17	02/21/17 09:42	RSM	GC-5	1	B[B1633

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Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1703973-03 | **Client Sample Name:** 5781, MW-4-W-170210, 2/10/2017 10:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	**0.93**	**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)	121	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	115	%	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	02/14/17	02/14/17 15:27	IO1	MS-V12	1	B[B1089

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Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1703973-03 | **Client Sample Name:** 5781, MW-4-W-170210, 2/10/2017 10:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	88.2	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	02/14/17	02/15/17 00:18	AKM	GC-V9	1	B[B0998

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Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1703973-03 | **Client Sample Name:** 5781, MW-4-W-170210, 2/10/2017 10:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	47.9	%	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	02/15/17	02/21/17 09:57	RSM	GC-5	1	B[B1633

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Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1703973-04 | **Client Sample Name:** 5781, MW-5-W-170210, 2/10/2017 11:45:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	**9.1**	**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	**12**	**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)	85.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	87.8	%	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	02/14/17	02/14/17 17:49	IO1	MS-V12	1	B[B1089

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Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1703973-04 | **Client Sample Name:** 5781, MW-5-W-170210, 2/10/2017 11:45:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	**2100**	**ug/L**	**500**		**EPA-8015B**	ND	**A01**	1
a,a,a-Trifluorotoluene (FID Surrogate)	109	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	02/14/17	02/14/17 20:54	AKM	GC-V9	10	B[B0998

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Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1703973-04 | **Client Sample Name:** 5781, MW-5-W-170210, 2/10/2017 11:45:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	**690**	**ug/L**	**50**		**Luft/TPHd**	ND	**A52**	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	02/15/17	02/21/17 10:11	RSM	GC-5	1	B[B1633

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Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1703973-05 | **Client Sample Name:** 5781, MW-6-W-170210, 2/10/2017 11:30:00AM

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)	96.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	95.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	02/14/17	02/14/17 15:45	IO1	MS-V12	1	B[B1089

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Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1703973-05 | **Client Sample Name:** 5781, MW-6-W-170210, 2/10/2017 11:30:00AM

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)	93.9	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	02/14/17	02/14/17 22:15	AKM	GC-V9	1	B[B0998

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Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1703973-05 | **Client Sample Name:** 5781, MW-6-W-170210, 2/10/2017 11:30:00AM

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)	67.0	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	02/15/17	02/21/17 10:25	RSM	GC-5	1	B[B1633

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Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1703973-06 | **Client Sample Name:** 5781, MW-7-W-170210, 2/10/2017 10:05:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	02/14/17	02/14/17 16:02	IO1	MS-V12	1	B[B1089

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Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1703973-06 | **Client Sample Name:** 5781, MW-7-W-170210, 2/10/2017 10:05:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	89.8	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	02/14/17	02/15/17 00:38	AKM	GC-V9	1	B[B0998

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Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1703973-06 | **Client Sample Name:** 5781, MW-7-W-170210, 2/10/2017 10:05:00AM

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)	63.8	%	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	02/15/17	02/21/17 10:38	RSM	GC-5	1	B[B1633

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Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1703973-07 | **Client Sample Name:** 5781, MW-8-W-170210, 2/10/2017 11:17:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.0	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	02/14/17	02/14/17 16:20	IO1	MS-V12	1	B[B1089

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Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1703973-07 | **Client Sample Name:** 5781, MW-8-W-170210, 2/10/2017 11:17:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	89.3	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	02/14/17	02/15/17 00:59	AKM	GC-V9	1	B[B0998

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Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1703973-07 | **Client Sample Name:** 5781, MW-8-W-170210, 2/10/2017 11:17:00AM

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)	58.3	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	02/15/17	02/21/17 11:20	RSM	GC-5	1	B[B1633

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Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1703973-08 | **Client Sample Name:** 5781, MW-9-W-170210, 2/10/2017 12:32:00PM

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)	97.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	02/14/17	02/14/17 16:38	IO1	MS-V12	1	B[B1089

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Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1703973-08 | **Client Sample Name:** 5781, MW-9-W-170210, 2/10/2017 12:32:00PM

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)	90.7	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	02/14/17	02/15/17 01:19	AKM	GC-V9	1	B[B1228

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Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1703973-08 | **Client Sample Name:** 5781, MW-9-W-170210, 2/10/2017 12:32:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	**60**	**ug/L**	**50**		**Luft/TPHd**	ND	**A52**	1
Tetracosane (Surrogate)	64.2	%	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	02/15/17	02/21/17 11:34	RSM	GC-5	1	B[B1633

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Reported: 02/22/2017 9:23
Project: 5781
Project Number: 351640
Project Manager: Tamera Rogers

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B[B1089						
Benzene	B[B1089-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	B[B1089-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	B[B1089-BLK1	ND	ug/L	0.50		
Ethylbenzene	B[B1089-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	B[B1089-BLK1	ND	ug/L	0.50		
Toluene	B[B1089-BLK1	ND	ug/L	0.50		
Total Xylenes	B[B1089-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	B[B1089-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	B[B1089-BLK1	ND	ug/L	10		
Diisopropyl ether	B[B1089-BLK1	ND	ug/L	0.50		
Ethanol	B[B1089-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	B[B1089-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	**B[B1089-BLK1**	**82.4**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B[B1089-BLK1**	**95.9**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B[B1089-BLK1**	**100**	%	**80 - 120 (LCL - UCL)**		

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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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B[B1089										
Benzene	B[B1089-BS1	LCS	27.230	25.000	ug/L	109		70 - 130		
Toluene	B[B1089-BS1	LCS	26.640	25.000	ug/L	107		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B[B1089-BS1	LCS	9.4200	10.000	ug/L	94.2		75 - 125		
Toluene-d8 (Surrogate)	B[B1089-BS1	LCS	10.000	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	B[B1089-BS1	LCS	9.9500	10.000	ug/L	99.5		80 - 120		

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Project: 5781
Project Number: 351640
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Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B[B1089	Used client sample: N										
Benzene	MS	1701379-68	ND	25.630	25.000	ug/L		103		70 - 130	
	MSD	1701379-68	ND	28.050	25.000	ug/L	9.0	112	20	70 - 130	
Toluene	MS	1701379-68	ND	25.530	25.000	ug/L		102		70 - 130	
	MSD	1701379-68	ND	28.290	25.000	ug/L	10.3	113	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1701379-68	ND	9.2000	10.000	ug/L		92.0		75 - 125	
	MSD	1701379-68	ND	9.0500	10.000	ug/L	1.6	90.5		75 - 125	
Toluene-d8 (Surrogate)	MS	1701379-68	ND	10.050	10.000	ug/L		100		80 - 120	
	MSD	1701379-68	ND	9.7900	10.000	ug/L	2.6	97.9		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	**1701379-68**	**ND**	**12.870**	**10.000**	**ug/L**		**129**		**80 - 120**	**S09**
	MSD	**1701379-68**	**ND**	**9.7600**	**10.000**	**ug/L**	**27.5**	**97.6**		**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: B[B0998						
Gasoline Range Organics (C4 - C12)	B[B0998-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	**B[B0998-BLK1**	**97.6**	%	**70 - 130 (LCL - UCL)**		
QC Batch ID: B[B1228						
Gasoline Range Organics (C4 - C12)	B[B1228-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	**B[B1228-BLK1**	**97.7**	%	**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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B[B0998										
Gasoline Range Organics (C4 - C12)	B[B0998-BS1	LCS	878.22	1000.0	ug/L	87.8		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	B[B0998-BS1	LCS	41.317	40.000	ug/L	103		70 - 130		
QC Batch ID: B[B1228										
Gasoline Range Organics (C4 - C12)	B[B1228-BS1	LCS	1010.5	1000.0	ug/L	101		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	B[B1228-BS1	LCS	37.204	40.000	ug/L	93.0		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 Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B[B0998	Used client sample: N										
Gasoline Range Organics (C4 - C12)	MS	1701379-64	ND	953.68	1000.0	ug/L		95.4		70 - 130	
	MSD	1701379-64	ND	1030.4	1000.0	ug/L	7.7	103	20	70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1701379-64	ND	40.446	40.000	ug/L		101		70 - 130	
	MSD	1701379-64	ND	41.787	40.000	ug/L	3.3	104		70 - 130	
QC Batch ID: B[B1228	Used client sample: N										
Gasoline Range Organics (C4 - C12)	MS	1703964-08	2310.4	9729.0	6000.0	ug/L		124		70 - 130	A01
	MSD	1703964-08	2310.4	9120.2	6000.0	ug/L	6.5	113	20	70 - 130	A01
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1703964-08	ND	36.633	40.000	ug/L		91.6		70 - 130	
	MSD	1703964-08	ND	34.771	40.000	ug/L	5.2	86.9		70 - 130	

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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: B[B1633						
Diesel Range Organics (C12 - C24)	B[B1633-BLK1	ND	ug/L	50		
Tetracosane (Surrogate)	**B[B1633-BLK1**	**56.3**	%	**40 - 140 (LCL - UCL)**		
Capric acid (Reverse Surrogate)	B[B1633-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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B[B1633										
Diesel Range Organics (C12 - C24)	B[B1633-BS1	LCS	181.44	500.00	ug/L	36.3		20 - 110		
Tetracosane (Surrogate)	B[B1633-BS1	LCS	9.1220	20.000	ug/L	45.6		40 - 140		
Capric acid (Reverse Surrogate)	B[B1633-BS1	LCS	ND	100.00	ug/L	0		0 - 1		

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Reported: 02/22/2017 9:23
Project: 5781
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Project Manager: Tamera Rogers

Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B[B1633	Used client sample: N										
Diesel Range Organics (C12 - C24)	MS	1632299-58	ND	212.39	500.00	ug/L		42.5		20 - 110	
	MSD	1632299-58	ND	287.25	500.00	ug/L	30.0	57.5	30	20 - 110	
Tetracosane (Surrogate)	MS	1632299-58	ND	11.393	20.000	ug/L		57.0		40 - 140	
	MSD	1632299-58	ND	12.855	20.000	ug/L	12.1	64.3		40 - 140	
Capric acid (Reverse Surrogate)	MS	1632299-58	ND	ND	100.00	ug/L		0		0 - 1	
	MSD	1632299-58	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.
S09	The surrogate recovery on the sample for this compound was not within the control limits.

ATTACHMENT D

Revised Figure 3, Quarterly Status Report - Fourth Quarter 2016

ARCADIS Design & Consultancy for natural and built assets

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

Arcadis U.S., Inc.
2999 Oak Road
Suite 300
Walnut Creek
CA 94597
Tel 408-797-2013
Fax 925-274-1103

www.arcadis.com

Subject:
Revised Figure 3 – Quarterly Status Report – Fourth Quarter 2016 – Alameda County LOP Case #RO0000253 / RWQCB Case #01-1592 (3535 Pierson Street, Oakland, California)

Dear Mr. Nowell:

On January 15th, 2017 Arcadis submitted the *Quarterly Status Report, Fourth Quarter 2016* for the site located at 3535 Pierson Street, Oakland, CA. In this report, the groundwater elevation contours and calculated hydraulic gradient shown on Figure 3 were incorrect. Well MW-A was inadvertently used in the calculation even though the well is screened in a deeper aquifer. This caused the hydraulic gradient to be significantly different from previous events. We have updated this figure with the correct elevation contours and gradient (0.076 ft/ft) and included it as an attachment to this letter, to serve as an addendum to the report. If you have any questions please feel free to contact me, Tamera Rogers, at 408-797-2013 (Tamera.rogers@arcadis.com). We appreciate your assistance on this project.

Sincerely,

Arcadis U.S., Inc.

Tamera Rogers
Project Manager

Date:
April 7, 2017

Contact:
Tamera Rogers

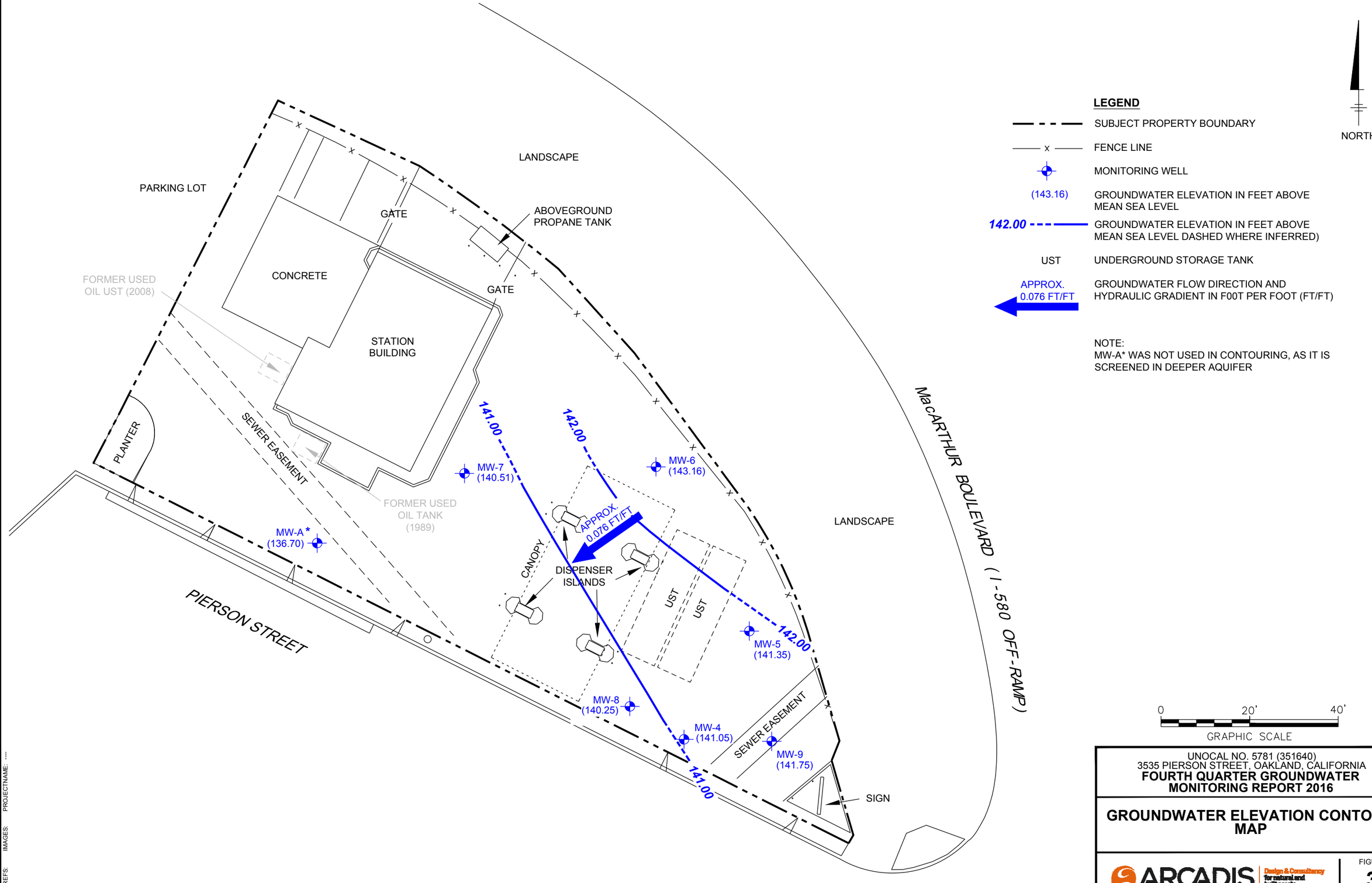
Phone:
408.797.2013

Email:
Tamera.Rogers@arcadis.com

Our ref:
351640

Attachments:

- Figure 3 – Groundwater Elevation Contour (*Quarterly Status Report, Fourth Quarter 2016)*



UNOCAL NO. 5781 (351640)
3535 PIERSON STREET, OAKLAND, CALIFORNIA
FOURTH QUARTER GROUNDWATER MONITORING REPORT 2016

GROUNDWATER ELEVATION CONTOUR MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

CITY:EMERYVILLE, CA DIV/GROUP:ENVCAD DB:AREYES
G:\ENVCAD\Emeryville\ACTIB0035135\1640\001AR\4Q 2016\DWG\B0035135.1640 W03.dwg LAYOUT: 3 SAVED: 3/15/2017 11:39 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/15/2017 12:32 PM BY: REYES, ALEC
XREFS: IMAGES: PROJECTNAME: ----

ATTACHMENT E

ACDEH Correspondence

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

July 24, 2009

TERRY GRAYSON
CONOCOPHILLIPS
76 BROADWAY STREET
SACRAMENTO CA 95818

UNITED BROTHERS ENTERPRISE INC
3535 PIERSON ST
OAKLAND CA 946193427

SCARTEEN CORP.
PO BOX 7600
LOS ANGELES CA 90051

Subject: Fuel Leak Case No. RO0000253 and Geotracker Global ID T0600101467, SITE UNOCAL #5781, 3535 PIERSON ST, Oakland CA 94619– Groundwater Monitoring Requirements

Dear Resposible Parties:

The purpose of this correspondence is to inform you of changes to groundwater monitoring requirements for all fuel leak cases in California. The California State Water Resources Control Board (State Water Board) has approved Resolution No. 2009-0042 (*Actions to Improve Administration of the UST Cleanup Fund and UST Cleanup Program*). Resolution No. 2009-0042 states that, "*Regional Water Board and LOP agencies shall reduce quarterly groundwater monitoring requirements to semiannual or less frequent monitoring at all sites unless site-specific needs warrant otherwise and shall notify all responsible parties of the new requirements no later than August 1, 2009. If more than semiannual monitoring is required for a case, the responsible party and State Water board shall be notified of the rationale and the notice shall be posted on Geotracker.*"

In accordance with Resolution No. 2009-0042, groundwater monitoring for your site is to be reduced to semiannual monitoring unless site-specific needs warrant otherwise. A semiannual groundwater monitoring should be used only for wells that have been sampled over a minimum of one hydrologic cycle (four consecutive quarters). New monitoring wells should be sampled quarterly for one year before a semiannual monitoring schedule is implemented for new wells.

Any groundwater monitoring wells that are currently sampled on a less frequent schedule than semiannual (annual or longer) may continue to be sampled on the less frequent schedule. Please present results from the semiannual groundwater monitoring in groundwater monitoring reports no later than 60 days following the groundwater sampling event.

If you have any questions, please call me at (510) 639-1279 or send me an electronic mail message at barbara.jakub@acgov.org.

Sincerely,

Barbara J. Jakub, P.G.
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032
(*Sent via E-mail to:* lgriffin@oaklandnet.com)
Donna Drogos, ACEH (*Sent via E-mail to: donna.drogos@acgov.org*)
Barbara Jakub, ACEH (*Sent via E-mail to: barbara.jakub@acgov.org*)
Geotracker, File

RESPONSIBLE PARTY OF RECORD AS OF 07/22/2009

RO0000253, UNOCAL #5781, 3535 PIERSON ST , Oakland, CA, 94619

Alameda County Environmental Health (ACEH) has the following information on record regarding the Responsible Party(ies) for the above referenced site. Please update the following information for our records. Should you have contact information regarding additional Responsible Parties, please correct the information accordingly. Also, please check the "e-mail preferred" box to receive all future correspondences and notifications by e-mail.

☐ E-mail Preferred ☐ Hardcopy Preferred

ACEH is requesting your e-mail address so that we can correspond with you quickly and efficiently regarding your case. Please note that ACEH respects your privacy. Your e-mail address will remain confidential and will not be provided to any third party.

Current Information	Corrections or Additions
TERRY GRAYSON CONOCOPHILLIPS 76 BROADWAY STREET SACRAMENTO CA 95818 Terry.L.Grayson@contractor.conocophillips.com 9165587666	Name: _____ Company: _____ Address: _____ City: _____ State: _____ Zip: _____ E-mail: _____ Home Phone: (____) _____ Office Phone: (____) _____ Cell Phone: (____) _____
FIRST2250 LAST2250 UNITED BROTHERS ENTERPRISE INC 3535 PIERSON ST OAKLAND CA 946193427	Name: _____ Company: _____ Address: _____ City: _____ State: _____ Zip: _____ E-mail: _____ Home Phone: (____) _____ Office Phone: (____) _____ Cell Phone: (____) _____
FIRST0662 LAST0662 SCARTEEN CORP. PO BOX 7600 LOS ANGELES CA 90051	Name: _____ Company: _____ Address: _____ City: _____ State: _____ Zip: _____ E-mail: _____ Home Phone: (____) _____ Office Phone: (____) _____ Cell Phone: (____) _____

STATE WATER RESOURCES CONTROL BOARD

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Report Type:	**Monitoring Report - Quarterly**
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Facility Name:	**UNOCAL #5781**
File Name:	**EDD_BCLabs_1703973_EDF.zip**
Organization Name:	**ARCADIS**
Username:	**ARCADIS76**
IP Address:	**8.39.233.220**
Submittal Date/Time:	**2/22/2017 10:23:52 AM**
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Username:	**ARCADIS76**
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STATE WATER RESOURCES CONTROL BOARD

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Submittal Type:	**GEO_REPORT**
Report Title:	**Quarterly Status Report, First Quarter 2017**
Report Type:	**Monitoring Report - Quarterly**
Report Date:	**4/10/2017**
Facility Global ID:	**T0600101467**
Facility Name:	**UNOCAL #5781**
File Name:	**351640 1SA17 GWMR FNL.pdf**
Organization Name:	**ARCADIS**
Username:	**ARCADIS76**
IP Address:	**8.39.233.202**
Submittal Date/Time:	**4/10/2017 10:02:55 AM**
Confirmation Number:	**3091676712**