



James P. Kiernan, P.E.
Project Manager

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July 7, 2017

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

RECEIVED

By Alameda County Environmental Health 10:49 am, Jul 13, 2017

Re: Unocal No. 6129 (351639)
Semi-Annual Status Report – Second Quarter 2017
3420 35th Avenue, Oakland, California
Fuel Leak Case No.: RO0000058
GeoTracker Global ID #T0600101465

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: Semi-Annual Status Report – Second Quarter 2017 by Arcadis

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

ENVIRONMENT

Subject:
Semi-Annual Status Report, Second Quarter 2017

Dear Mr. Nowell,

Date:
July 3, 2017

On behalf of Chevron Environmental Management Company's (CEMC's) affiliate, Union Oil Company of California (Union Oil), Arcadis has prepared the attached *Semi-Annual Status Report, Second Quarter 2017* for the following facility:

Contact:
Samuel Miles

<u>Unocal Station No.</u>	<u>Case No.</u>	<u>Location</u>
6129	RO0000058	3420 35 th Avenue Oakland, CA

Phone:
206.726.4720

Email:
Samuel.Miles@arcadis.com

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

Our ref:
B0035135.1639

Sincerely,

Arcadis U.S., Inc.



Samuel Miles
Project Manager

Copies:
Geotracker Database
Mr. James Kiernan, CEMC (electronic)
Mr. Ed Ralston, Phillips 66 (electronic)
Son Nguyen & Le Pham, Nguyen/Pham Family Trust, property owner (paper copy)

**SEMI-ANNUAL STATUS REPORT
Second Quarter 2017
July 3, 2017**

Facility No:	<u>Unocal Station No. 6129</u>	Address:	<u>3420 35th Avenue, Oakland, CA</u>
Arcadis Contact Person / Phone No.:	<u>Samuel Miles / (206) 726-4720</u>		
Arcadis Project No.:	<u>B0035135.1639</u>		
Primary Agency/Regulatory ID No.:	<u>Alameda County Environmental Health (ACEH) / Keith Nowell / Case No. RO0000058</u>		

WORK CONDUCTED THIS PERIOD [Second Quarter 2017]:

1. Conducted semi-annual groundwater monitoring activities on April 6, 2017.
2. Prepared the *Semi-Annual Status Report, Second Quarter 2017*.

WORK PROPOSED NEXT PERIOD [Fourth Quarter 2017]:

1. If required, conduct semi-annual groundwater monitoring activities in the fourth quarter 2017.
2. Prepare the *Semi-Annual Status Report, Fourth Quarter 2017*.

Current Phase of Project:	<u>Monitoring</u>	
Frequency of Monitoring / Sampling:	<u>Semi-Annually</u>	
Are Phase Separate Hydrocarbons (PSH) Present On-site:	<u>No</u>	
Cumulative PSH Recovered to Date:	<u>None</u>	(gallons)
Approximate Depth to Groundwater:	<u>24.63 to 25.65</u>	(feet below top of casing)
Approximate Groundwater Elevation:	<u>163.31 to 166.17</u>	(feet above mean sea)
Groundwater Flow Direction	<u>West-Southwest</u>	
Groundwater Gradient	<u>0.026</u>	(foot per foot)
Current Remediation Techniques:	<u>None</u>	

Permits for Discharge:	None
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Summary of Unusual Activity:	None
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Agency Directive Requirements:	None
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DISCUSSION

Gettler-Ryan Inc. (G-R) conducted semi-annual groundwater monitoring activities on April 6, 2017. Field data sheets and general procedures are included as Attachment A. Three (3) monitoring wells (MW-1, MW-2, and MW-3) 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. The site location and layout are presented on Figures 1 and 2, respectively; the groundwater elevation contours for the site on April 6, 2017 are presented on Figure 3. Analytical results are presented on Figure 4. A copy of the laboratory analytical report and chain-of-custody documentation are included as Attachment B.

The direction of groundwater flow, calculated gradient, and analytical results were consistent with previous monitoring events. Total petroleum hydrocarbons as gasoline (TPH-g) was only detected in MW-1 (350 micrograms per liter [$\mu\text{g/L}$]) and MW-3 (370 $\mu\text{g/L}$). No benzene was detected in the samples collected during the current monitoring event, and with the exception of one event in February 1991, benzene has not been detected at the site. Methyl tertiary butyl ether (MTBE) was only detected in wells MW-1 (430 $\mu\text{g/L}$) and MW-3 (460 $\mu\text{g/L}$). No other constituents of concern (COCs) were detected in the wells with the exception of a low concentration of di-isopropyl ether (DIPE) in MW-2 (2.0 $\mu\text{g/L}$).

The detected concentrations were within the historical ranges and overall are stable to declining. Arcadis recommends continued groundwater monitoring to further evaluate groundwater quality and concentration trends. However, a reduction in the sampling frequency to annual appears warranted.

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.

Nasrin Erdelyi, P.G.
Staff Geologist

Date: July 3, 2017



Samuel Miles
Project Manager

Date: July 3, 2017

TABLES:

Table 1	Current Groundwater Gauging and Analytical Results
Table 2	Historical Groundwater Gauging and Analytical Results, First Quarter 1990 to Current

FIGURES:

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Groundwater Elevation Contour Map, April 6, 2017
Figure 4	First Semi-Annual Groundwater Analytical Map 2017

ATTACHMENTS:

Attachment A	Field Data Sheets and General Procedures
Attachment B	Laboratory Report and Chain-of-Custody Documentation

TABLES



Table 1. Current Groundwater Gauging and Analytical Results

Union Oil Company of California
 Unocal No. 6129 (351639)
 3420 35th Avenue, Oakland, California

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	GW Elev (ft amsl)	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-1	4/6/2017	24-44	190.79	25.65	165.14	350	<0.50	<0.50	<0.50	<1.0	430	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-2	4/6/2017	24-44	190.80	24.63	166.17	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	2.0	<0.50	<0.50	<250
MW-3	4/6/2017	23-43	188.58	25.27	163.31	370	<0.50	<0.50	<0.50	<1.0	460	<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
 GW Elev = Groundwater elevation
 µg/L = Micrograms per liter
Bold = Value exceeds laboratory reporting limits
 <0.50 = Not detected at or above the stated limit

TPH-g = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to Environmental Protection Agency (EPA) Method 8260B
 Samples analyzed by EPA Method 8260B:
 Benzene, toluene, ethylbenzene and total xylenes (collectively BTEX)
 MTBE = Methyl tert-butyl ether
 TBA = Tert-butanol or tertiary butyl alcohol
 EDB = 1,2-Dibromoethane
 EDC = 1,2-Dichloroethane
 DIPE = Di-isopropyl ether
 ETBE = Ethyl tert-butyl ether
 TAME = Tert-amyl methyl ether
 Ethanol
 Data QA/QC by: IC 5/18/2017

Table 2. Historical Groundwater Gauging and Analytical Results

First Quarter 1990 to Current

Union Oil Company of California
Unocal No. 6129 (351639)
3420 35th Avenue, Oakland, California

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	GW Elev (ft amsl)	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-1	1/5/1990	24 - 44	190.79	32.80	157.99	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-1	5/11/1990	24 - 44	190.79	31.80	158.99	<30	<0.30	7.1	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-1	8/9/1990	24 - 44	190.79	32.37	158.42	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-1	11/14/1990	24 - 44	190.79	33.32	157.47	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-1	2/12/1991	24 - 44	190.79	33.02	157.77	<30	0.32	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-1	5/9/1991	24 - 44	190.79	30.95	159.84	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-1	11/13/2003	24 - 44	190.79	--	--	180	<1.0	<1.0	<1.0	<2.0	240	<200	<4.0	<4.0	<4.0	<4.0	<4.0	<1,000
MW-1	8/27/2004	24 - 44	190.79	30.65	160.14	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<0.50	<0.50	<0.50	<1.0	<0.50	<50
MW-1	11/23/2004	24 - 44	190.79	29.35	161.44	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<0.50	<0.50	<0.50	<1.0	<0.50	<50
MW-1	2/9/2005	24 - 44	190.79	26.89	163.90	<50	<0.50	<0.50	<0.50	<1.0	9.3	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<50
MW-1	5/17/2005	24 - 44	190.79	26.56	164.23	<50	<0.50	<0.50	<0.50	<1.0	1.9	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<50
MW-1	7/27/2005	24 - 44	190.79	27.33	163.46	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<50
MW-1	12/6/2005	24 - 44	190.79	29.59	161.20	<50	<0.50	0.93	<0.50	1.80	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	2/21/2006	24 - 44	190.79	28.27	162.52	<50	<0.50	<0.50	<0.50	<1.0	2.6	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	6/8/2006	24 - 44	190.79	26.07	164.72	<50	<0.50	<0.50	<0.50	<1.0	11	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	9/15/2006	24 - 44	190.79	28.86	161.93	<50	<0.50	<0.50	<0.50	<0.50	1.4	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	12/14/2006	24 - 44	190.79	29.49	161.30	<50	<0.50	<0.50	<0.50	<0.50	3.5	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	3/28/2007	24 - 44	190.79	27.24	163.55	<50	<0.50	<0.50	<0.50	<0.50	0.64	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	6/25/2007	24 - 44	190.79	28.30	162.49	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	9/22/2007	24 - 44	190.79	30.61	160.18	<50	<0.50	<0.50	<0.50	<0.50	4.1	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	12/14/2007	24 - 44	190.79	30.30	160.49	<50	<0.50	<0.50	<0.50	<1.0	0.65	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	3/17/2008	24 - 44	190.79	27.22	163.57	<50	<0.50	<0.50	<0.50	<1.0	14	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-1	6/20/2008	24 - 44	190.79	30.10	160.69	<50	<0.50	<0.50	<0.50	<1.0	11	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-1	9/11/2008	24 - 44	190.79	31.04	159.75	<51	<0.50	<0.50	<0.50	<1.0	1.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-1	11/25/2008	24 - 44	190.79	30.88	159.91	<50	<0.50	<0.50	<0.50	<1.0	5.8	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	3/9/2009	24 - 44	190.79	27.50	163.29	<50	<0.50	<0.50	<0.50	<1.0	25	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	5/28/2009	24 - 44	190.79	28.25	162.54	<50	<0.50	<0.50	<0.50	<1.0	17	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	12/11/2009	24 - 44	190.79	30.60	160.19	<50	<0.50	<0.50	<0.50	<1.0	18	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	5/7/2010	24 - 44	190.79	26.06	164.73	67	<0.50	<0.50	<0.50	<1.0	64	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	11/1/2010	24 - 44	190.79	30.18	160.61	<50	<0.50	<0.50	<0.50	<1.0	92	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	5/27/2011	24 - 44	190.79	26.87	163.92	110	<0.50	<0.50	<0.50	<1.0	220	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	11/23/2011	24 - 44	190.79	29.14	161.65	110	<0.50	<0.50	<0.50	<1.0	150	41	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	5/24/2012	24 - 44	190.79	26.58	164.21	140	<0.50	<0.50	<0.50	<1.0	190	66	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	10/23/2012	24 - 44	190.79	30.51	160.28	130	<0.50	<0.50	<0.50	<1.0	140	47	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	5/2/2013	24 - 44	190.79	28.30	162.49	150	<0.50	<0.50	<0.50	<1.0	270	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	11/13/2013	24 - 44	190.79	31.65	159.14	240	<0.50	<0.50	<0.50	<1.0	270	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	5/12/2014	24 - 44	190.79	28.95	161.84	98	<0.50	<0.50	<0.50	<1.0	170	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	11/19/2014	24 - 44	190.79	31.50	159.29	130	<0.50	<0.50	<0.50	<1.0	180	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	6/17/2015	24 - 44	190.79	29.27	161.52	52	<0.50	<0.50	<0.50	<1.0	100	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	12/15/2015	24 - 44	190.79	31.76	159.03	60	<0.50	<0.50	<0.50	<1.0	48	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	6/15/2016	24 - 44	190.79	29.64	161.15	89	<0.50	<0.50	<0.50	<1.0	600	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250

Table 2. Historical Groundwater Gauging and Analytical Results
First Quarter 1990 to Current
Union Oil Company of California
Unocal No. 6129 (351639)
3420 35th Avenue, Oakland, California

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	GW Elev (ft amsl)	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-1	11/21/2016	24 - 44	190.79	30.81	159.98	<50	<0.50	<0.50	<0.50	<1.0	73	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-1	4/6/2017	24 - 44	190.79	25.65	165.14	350	<0.50	<0.50	<0.50	<1.0	430	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-2	1/5/1990	24 - 44	190.80	33.02	157.78	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-2	5/11/1990	24 - 44	190.80	31.98	158.82	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-2	8/9/1990	24 - 44	190.80	32.45	158.35	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-2	11/14/1990	24 - 44	190.80	33.47	157.33	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-2	2/12/1991	24 - 44	190.80	33.15	157.65	<30	<0.30	0.42	<0.30	0.51	--	--	--	--	--	--	--	--
MW-2	5/9/1991	24 - 44	190.80	30.88	159.92	<30	<0.30	<>0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-2	11/13/2003	24 - 44	190.80	--	--	<2,000	<20	<20	<20	<40	2,100	<4,000	<80	<80	<80	<80	<80	<20,000
MW-2	8/27/2004	24 - 44	190.80	30.28	160.52	950	<5.0	<5.0	<5.0	<10	1,400	<5.0	<5.0	<5.0	<5.0	24	<5.0	<500
MW-2	11/23/2004	24 - 44	190.80	28.75	162.05	53	<0.50	<0.50	<0.50	<1.0	4	<5.0	<0.50	<0.50	<0.50	18	<0.50	<50
MW-2	2/9/2005	24 - 44	190.80	26.08	164.72	<500	<0.50	<0.50	<0.50	<1.0	400	<5.0	<5.0	<5.0	<5.0	19	<5.0	<500
MW-2	5/17/2005	24 - 44	190.80	24.53	166.27	<50	<0.50	<0.50	<0.50	<1.0	330	<5.0	<0.50	<0.50	<0.50	12	<0.50	<50
MW-2	7/27/2005	24 - 44	190.80	27.51	163.29	<500	<5.0	<5.0	<5.0	<10	580	140	<5.0	<5.0	<5.0	16	<5.0	<500
MW-2	12/6/2005	24 - 44	190.80	29.13	161.67	340	<0.50	<0.50	<0.50	<1.0	780	61	<0.50	<0.50	<0.50	15	<0.50	<250
MW-2	2/21/2006	24 - 44	190.80	29.23	161.57	190	<0.50	<0.50	<0.50	<1.0	340	<10	<0.50	<0.50	<0.50	18	<0.50	<250
MW-2	6/8/2006	24 - 44	190.80	25.76	165.04	<500	<5.0	<5.0	<5.0	<10	440	<100	<5.0	<5.0	<5.0	14	<5.0	<2,500
MW-2	9/15/2006	24 - 44	190.80	29.17	161.63	<500	<5.0	<5.0	<5.0	<5.0	570	<100	<5.0	<5.0	<5.0	17	<5.0	<2,500
MW-2	12/14/2006	24 - 44	190.80	29.11	161.69	520	<0.50	<0.50	<0.50	<0.50	770	27	<0.50	<0.50	<0.50	20	<0.50	<250
MW-2	3/28/2007	24 - 44	190.80	26.68	164.12	290	<0.50	<0.50	<0.50	<0.50	460	260	<0.50	<0.50	<0.50	23	<0.50	<250
MW-2	6/25/2007	24 - 44	190.80	25.91	164.89	<50	<0.50	<0.50	<0.50	<0.50	1.2	<10	<0.50	<0.50	<0.50	23	<0.50	<250
MW-2	9/22/2007	24 - 44	190.80	30.18	160.62	400	<0.50	<0.50	<0.50	<0.50	530	<10	<0.50	<0.50	<0.50	35	<0.50	<250
MW-2	12/14/2007	24 - 44	190.80	29.96	160.84	400	<0.50	<0.50	<0.50	<1.0	930	48	<0.50	<0.50	<0.50	24	<0.50	<250
MW-2	3/17/2008	24 - 44	190.80	26.74	164.06	570	<5.0	<5.0	<5.0	<10	630	<100	<5.0	<5.0	<5.0	18	<5.0	<2,500
MW-2	6/20/2008	24 - 44	190.80	29.78	161.02	580	<0.50	<0.50	<0.50	<1.0	1,200	<10	<0.50	<0.50	<0.50	16	<0.50	<250
MW-2	9/11/2008	24 - 44	190.80	30.62	160.18	220	<0.50	<0.50	<0.50	<1.0	29	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-2	11/25/2008	24 - 44	190.80	30.48	160.32	500	<0.50	<0.50	<0.50	<1.0	1,500	<10	<0.50	<0.50	<0.50	19	<0.50	<250
MW-2	3/9/2009	24 - 44	190.80	25.75	165.05	910	<5.0	<5.0	<5.0	<10	1,400	<100	<5.0	<5.0	<5.0	15	<5.0	<2,500
MW-2	5/28/2009	24 - 44	190.80	27.71	163.09	460	<0.50	<0.50	<0.50	<1.0	740	<10	<0.50	<0.50	<0.50	20	<0.50	<250
MW-2	12/11/2009	24 - 44	190.80	29.80	161.00	640	<5.0	<5.0	<5.0	<10	1,300	<100	<5.0	<5.0	<5.0	19	<5.0	<2,500
MW-2	5/7/2010	24 - 44	190.80	25.11	165.69	600	<1.0	<1.0	<1.0	<2.0	940	<20	<1.0	<1.0	<1.0	14	<1.0	<500
MW-2	11/1/2010	24 - 44	190.80	29.90	160.90	140	<0.50	<0.50	<0.50	<1.0	730	<10	<0.50	<0.50	<0.50	28	<0.50	<250
MW-2	5/27/2011	24 - 44	190.80	26.44	164.36	560	<0.50	<0.50	<0.50	<1.0	1,100	210	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-2	11/23/2011	24 - 44	190.80	28.53	162.27	830	<0.50	<0.50	<0.50	<1.0	1,500	400	<0.50	<0.50	<0.50	9	<0.50	<250
MW-2	5/24/2012	24 - 44	190.80	25.97	164.83	1,000	<0.50	<0.50	<0.50	<1.0	1,200	430	<0.50	<0.50	<0.50	8.8	<0.50	<250
MW-2	10/23/2012	24 - 44	190.80	30.14	160.66	750	<0.50	<0.50	<0.50	<1.0	1,300	420	<0.50	<0.50	<0.50	14	<0.50	<250
MW-2	5/2/2013	24 - 44	190.80	27.14	163.66	290	<0.50	<0.50	<0.50	<1.0	460	<10	<0.50	<0.50	6.2	<0.50	<0.50	<250
MW-2	11/13/2013	24 - 44	190.80	31.37	159.43	1,200	<0.50	<0.50	<0.50	<1.0	1,300	<10	<0.50	<0.50	17	<0.50	<0.50	<250
MW-2	5/12/2014	24 - 44	190.80	28.49	162.31	260	<0.50	<0.50	<0.50	<1.0	510	44	<0.50	<0.50	12	<0.50	<0.50	<250
MW-2	11/19/2014	24 - 44	190.80	31.46	159.34	430	<0.50	<0.50	<0.50	<1.0	980	<10	<0.50	<0.50	31	<0.50	<0.50	<250
MW-2	6/17/2015	24 - 44	190.80	29.70	161.10	<50	<0.50	<0.50	<0.50	<1.0	25	<10	<0.50	<0.50	3.1	<0.50	<0.50	<250

Table 2. Historical Groundwater Gauging and Analytical Results

First Quarter 1990 to Current

Union Oil Company of California
Unocal No. 6129 (351639)
3420 35th Avenue, Oakland, California

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	GW Elev (ft amsl)	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-2	12/15/2015	24 - 44	190.80	31.71	159.09	680	<0.50	<0.50	<0.50	<1.0	1,300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-2	6/15/2016	24 - 44	190.80	29.35	161.45	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-2	11/21/2016	24 - 44	190.80	30.58	160.22	140	<0.50	<0.50	<0.50	<1.0	270	<10	<0.50	<0.50	17	<0.50	<0.50	<250
MW-2	4/6/2017	24 - 44	190.80	24.63	166.17	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	2.0	<0.50	<0.50	<250
MW-3	1/5/1990	23 - 43	188.58	31.88	156.70	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-3	5/11/1990	23 - 43	188.58	31.25	157.33	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-3	8/9/1990	23 - 43	188.58	31.53	157.05	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-3	11/14/1990	23 - 43	188.58	33.30	155.28	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-3	2/12/1991	23 - 43	188.58	32.05	156.53	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-3	5/9/1991	23 - 43	188.58	30.37	158.21	<30	<0.30	<0.30	<0.30	<0.30	--	--	--	--	--	--	--	--
MW-3	11/13/2003	23 - 43	188.58	--	--	2,600	<20	<20	<20	<40	3,700	<4,000	<80	<80	<80	<80	<80	<20,000
MW-3	8/27/2004	23 - 43	188.58	29.61	158.97	1,700	<10	<10	<10	<20	2,600	<100	<10	<10	<10	<20	<10	<1,000
MW-3	11/23/2004	23 - 43	188.58	28.48	160.10	1,500	<10	<10	<10	<20	1,800	<100	<10	<10	<10	<20	<10	<1,000
MW-3	2/9/2005	23 - 43	188.58	26.45	162.13	<1,000	<0.50	<0.50	<0.50	<1.0	2,100	130	<10	<10	<10	<10	<10	<1,000
MW-3	5/17/2005	23 - 43	188.58	25.61	162.97	<1,000	<0.50	<0.50	<0.50	<1.0	1,200	<100	<10	<10	<10	<10	<10	<1,000
MW-3	7/27/2005	23 - 43	188.58	27.35	161.23	<1,000	<10	<10	<10	<20	1,400	360	<10	<10	<10	<10	<10	<1,000
MW-3	12/6/2005	23 - 43	188.58	28.78	159.80	430	<0.50	1.6	<0.50	3.6	1,800	160	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	2/21/2006	23 - 43	188.58	28.91	159.67	420	<0.50	<0.50	<0.50	<1.0	1,100	88	<0.50	<0.50	<0.50	<0.50	0.58	<250
MW-3	6/8/2006	23 - 43	188.58	25.97	162.61	<1,200	<12	<12	<12	<25	1,000	<250	<12	<12	<12	<12	<12	<6,200
MW-3	9/15/2006	23 - 43	188.58	28.73	159.85	<1,200	<12	<12	<12	<12	1,200	<250	<12	<12	<12	<12	<12	<6,200
MW-3	12/14/2006	23 - 43	188.58	28.62	159.96	<1,000	<10	<10	<10	<10	1,300	<200	<10	<10	<10	<10	<10	<5,000
MW-3	3/28/2007	23 - 43	188.58	26.69	161.89	500	<1.0	<1.0	<1.0	<1.0	860	500	<1.0	<1.0	<1.0	<1.0	<1.0	<500
MW-3	6/25/2007	23 - 43	188.58	26.74	161.84	270	<0.50	<0.50	<0.50	<0.50	570	11	<0.50	0.65	<0.50	<0.50	<0.50	<250
MW-3	9/22/2007	23 - 43	188.58	29.57	159.01	500	<0.50	<0.50	<0.50	<0.50	980	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	12/14/2007	23 - 43	188.58	29.30	159.28	270	<0.50	<0.50	<0.50	<1.0	570	26	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	3/17/2008	23 - 43	188.58	26.82	161.76	220	<0.50	<0.50	<0.50	<1.0	520	<10	<0.50	0.65	<0.50	<0.50	<0.50	<250
MW-3	6/20/2008	23 - 43	188.58	29.10	159.48	490	<0.50	<0.50	<0.50	<1.0	1,300	49	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	9/11/2008	23 - 43	188.58	29.89	158.69	630	<5.0	<5.0	<5.0	<10	1,200	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<2,500
MW-3	11/25/2008	23 - 43	188.58	29.74	158.84	380	<0.50	<0.50	<0.50	<1.0	870	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	3/9/2009	23 - 43	188.58	25.56	163.02	310	<0.50	<0.50	<0.50	<1.0	720	15	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	5/28/2009	23 - 43	188.58	27.55	161.03	410	<0.50	<0.50	<0.50	<1.0	750	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	12/11/2009	23 - 43	188.58	29.10	159.48	220	<0.50	<0.50	<0.50	<1.0	620	63	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	5/7/2010	23 - 43	188.58	25.72	162.86	360	<0.50	<0.50	<0.50	<1.0	660	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	11/1/2010	23 - 43	188.58	29.29	159.29	120	<0.50	<0.50	<0.50	<1.0	490	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	5/27/2011	23 - 43	188.58	26.53	162.05	340	<0.50	<0.50	<0.50	<1.0	890	73	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	5/24/2012	23 - 43	188.58	25.95	162.63	660	<0.50	<0.50	<0.50	<1.0	1,100	300	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	10/23/2012	23 - 43	188.58	29.39	159.19	480	<0.50	<0.50	<0.50	<1.0	500	160	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	5/2/2013	23 - 43	188.58	26.98	161.60	130	<0.50	<0.50	<0.50	<1.0	220	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	11/13/2013	23 - 43	188.58	30.28	158.30	110	<0.50	<0.50	<0.50	<1.0	100	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	5/12/2014	23 - 43	188.58	27.93	160.65	98	<0.50	<0.50	<0.50	<1.0	160	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	11/19/2014	23 - 43	188.58	30.22	158.36	180	<0.50	<0.50	<0.50	<1.0	250	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250

Table 2. Historical Groundwater Gauging and Analytical Results

First Quarter 1990 to Current

Union Oil Company of California

Unocal No. 6129 (351639)

3420 35th Avenue, Oakland, California

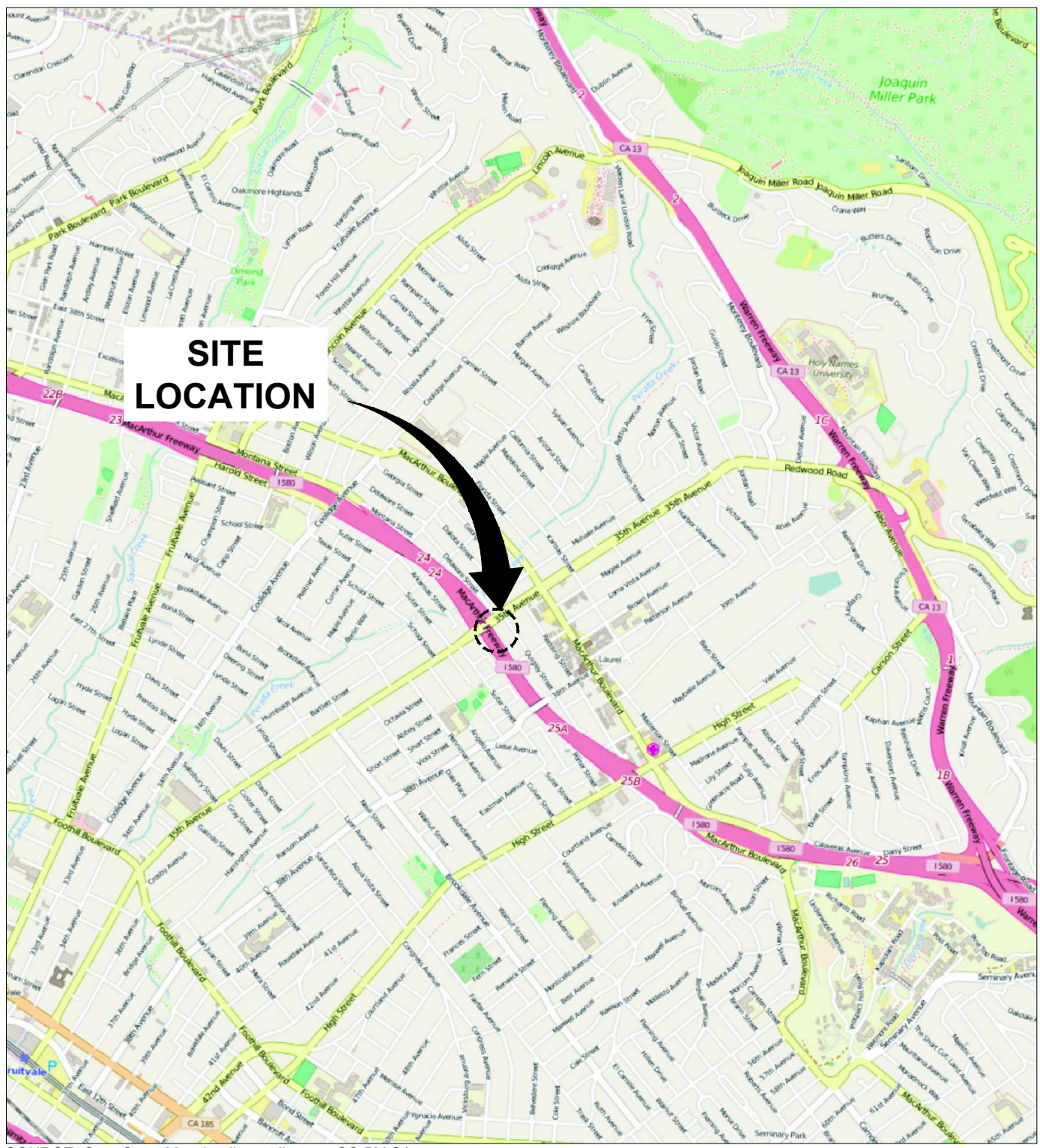
Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	GW Elev (ft amsl)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	EDB (µg/L)	EDC (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)
MW-3	6/17/2015	23 - 43	188.58	28.75	159.83	220	<0.50	<0.50	<0.50	<1.0	570	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	12/15/2015	23 - 43	188.58	30.45	158.13	220	<0.50	<0.50	<0.50	<1.0	240	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	6/15/2016	23 - 43	188.58	28.64	159.94	550	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	11/21/2016	23 - 43	188.58	29.58	159.00	130	<0.50	<0.50	<0.50	<1.0	430	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
MW-3	4/6/2017	23 - 43	188.58	25.27	163.31	370	<0.50	<0.50	<0.50	<1.0	460	<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
 ft = Feet
 -- = Not sampled/not measured
 GW Elev = Groundwater elevation
 µg/L = Micrograms per liter
Bold = Value exceeds laboratory reporting limits
 <0.50 = Not detected at or above the stated limit

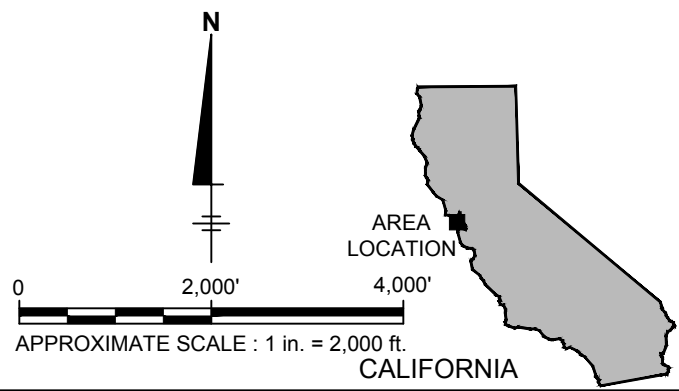
TPH-g = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to Environmental Protection Agency (EPA) Method 8260B
 Samples analyzed by EPA Method 8260B:
 Benzene, toluene, ethylbenzene, and total xylenes (collectively BTEX)
 MTBE = Methyl tert-butyl ether
 TBA = Tert-butanol or tertiary butyl alcohol
 EDB = 1,2-Dibromoethane
 EDC = 1,2-Dichloroethane
 DIPE = Di-isopropyl ether
 ETBE = Ethyl tert-butyl ether
 TAME = Tert-amyl methyl ether
 Ethanol
 J = Estimated value (between laboratory reporting limit and method detection limit)
 Data QA/QC by: IC 5/18/17


FIGURES

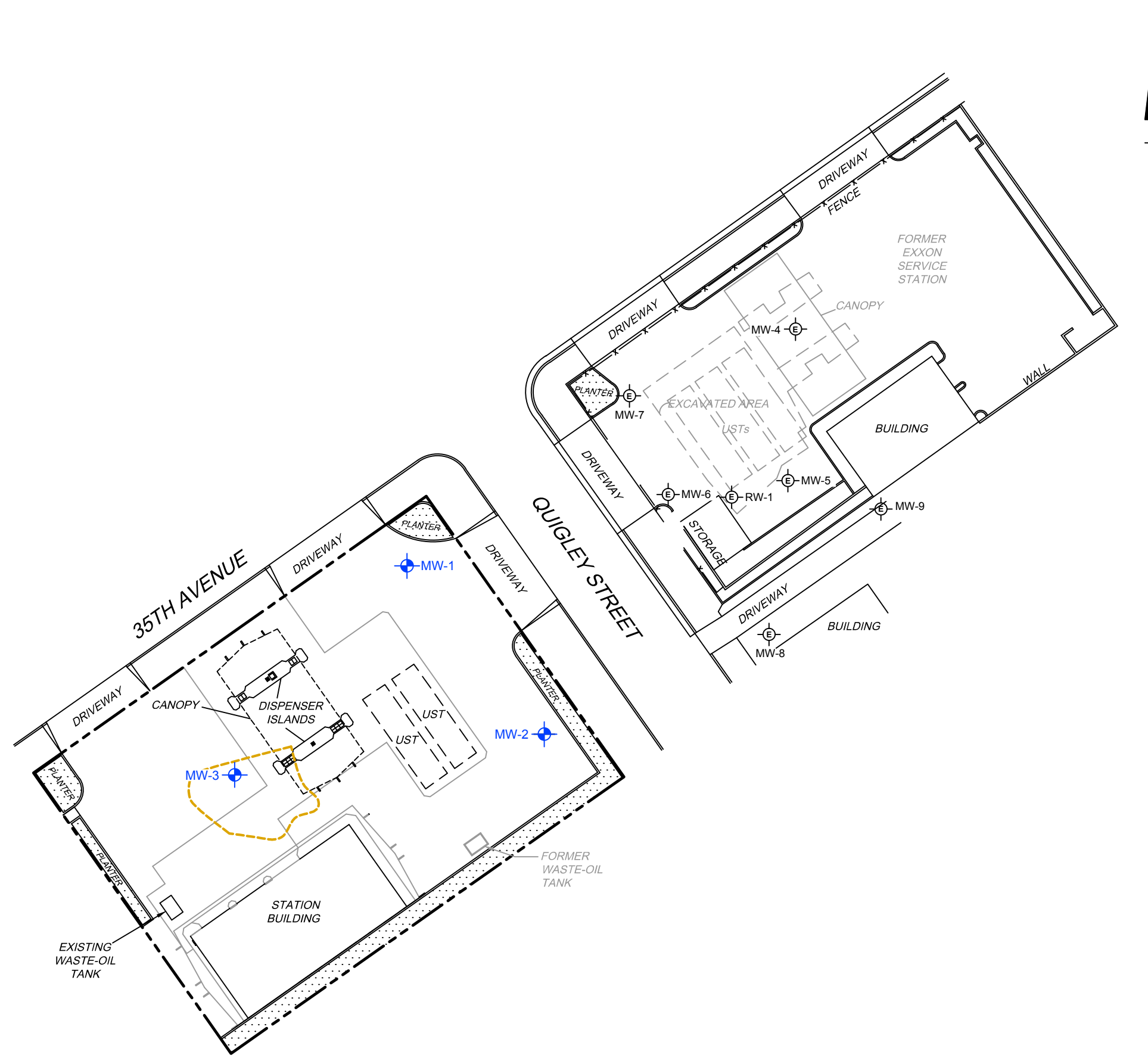




SOURCE: OpenStreetMap (and) contributors, CC-BY-SA



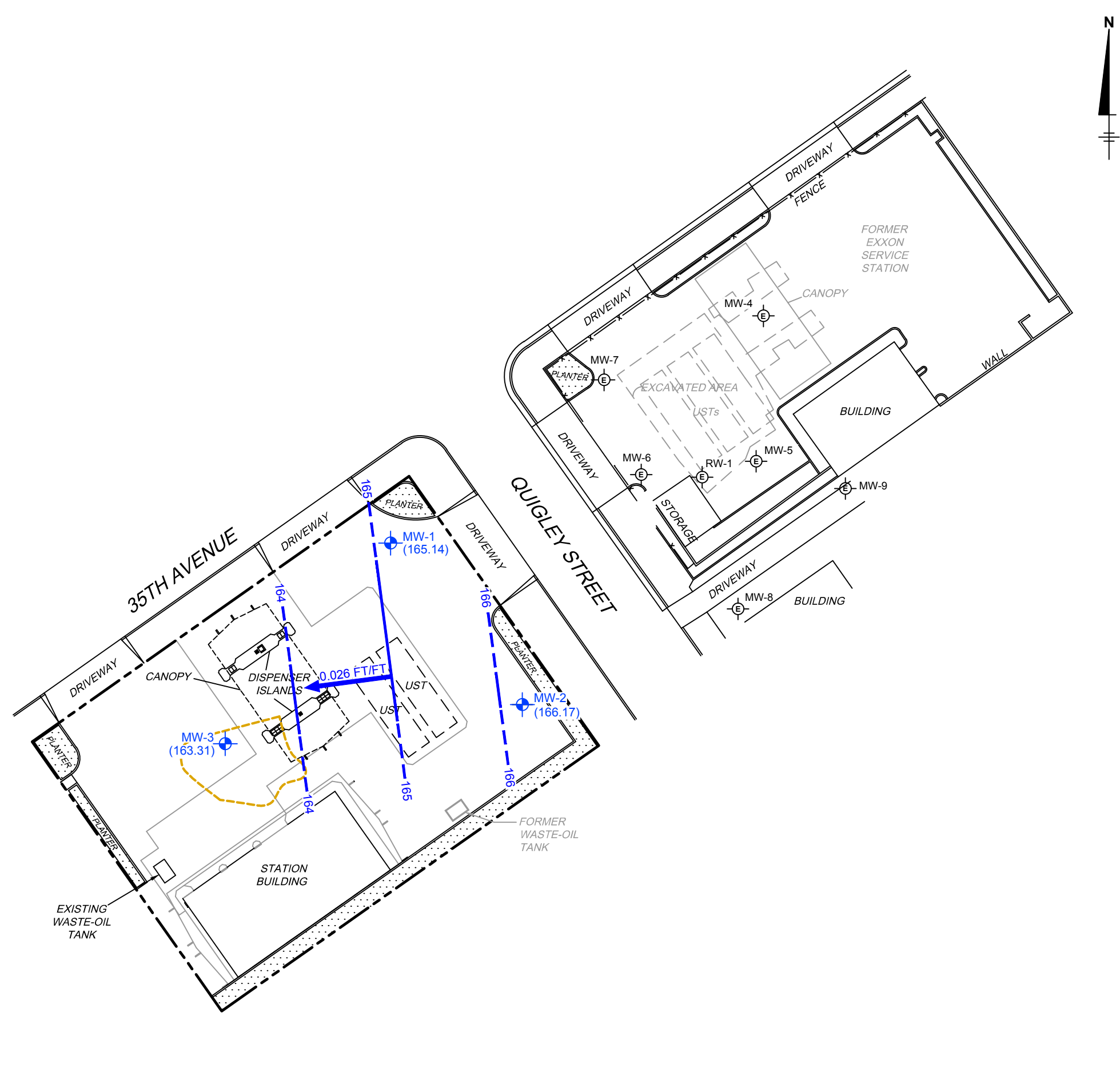
UNOCAL No. 6129 (351639) 3420 35TH AVENUE OAKLAND, CALIFORNIA	
SITE LOCATION MAP	
	Design & Consultancy for natural and built assets
FIGURE	1



- LEGEND:**
- SUBJECT PROPERTY BOUNDARY
 - MW-1 [Symbol] GROUNDWATER MONITORING WELL
 - MW-4 [Symbol] FORMER EXXON SERVICE STATION MONITORING WELL
 - - - 1991 EXCAVATION BOUNDARY
 - UST UNDERGROUND STORAGE TANK



UNOCAL No. 6129 (351639) 3420 35TH AVENUE OAKLAND, CALIFORNIA	
SITE PLAN	
ARCADIS <small>Design & Consultancy for natural and built assets</small>	FIGURE 2



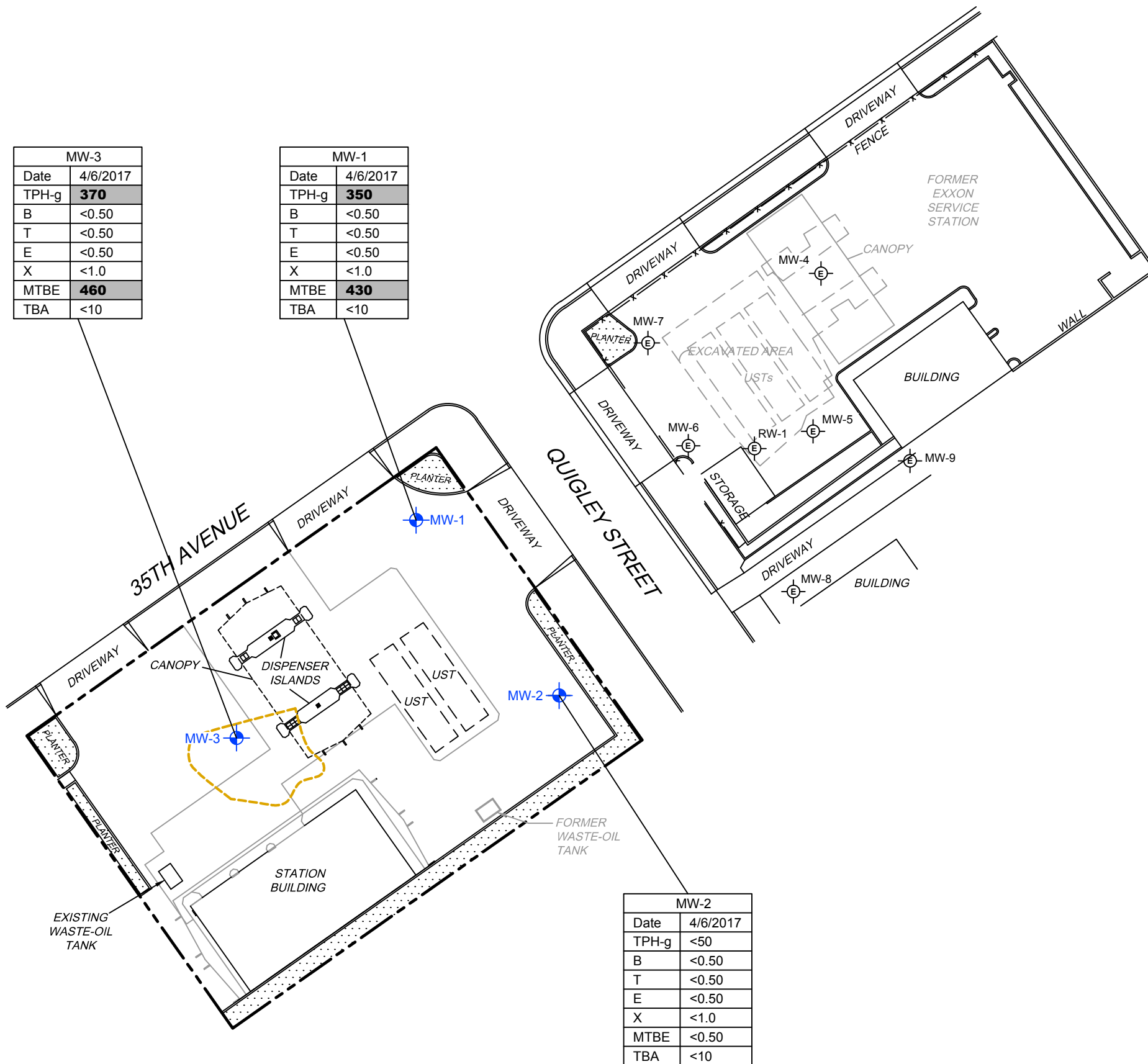
- LEGEND:**
- SUBJECT PROPERTY BOUNDARY
 - MW-1 GROUNDWATER MONITORING WELL
 - MW-4 FORMER EXXON SERVICE STATION MONITORING WELL
 - - - 1991 EXCAVATION BOUNDARY
 - UST UNDERGROUND STORAGE TANK
 - APPROXIMATE DIRECTION OF GROUNDWATER FLOW
 - 166 - - - GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
 - (166.17) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
 - 0.026 FT/FT APPROXIMATE HYDRAULIC GRADIENT (FOOT/FOOT)

UNOCAL No. 6129 (351639)
 3420 35TH AVENUE
 OAKLAND, CALIFORNIA

**GROUNDWATER ELEVATION
 CONTOUR MAP
 APRIL 6, 2017**

ARCADIS Design & Consultancy
for natural and
built assets

FIGURE
3



MW-3	
Date	4/6/2017
TPH-g	370
B	<0.50
T	<0.50
E	<0.50
X	<1.0
MTBE	460
TBA	<10

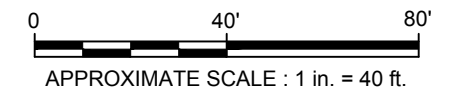
MW-1	
Date	4/6/2017
TPH-g	350
B	<0.50
T	<0.50
E	<0.50
X	<1.0
MTBE	430
TBA	<10

MW-2	
Date	4/6/2017
TPH-g	<50
B	<0.50
T	<0.50
E	<0.50
X	<1.0
MTBE	<0.50
TBA	<10



- LEGEND:**
- SUBJECT PROPERTY BOUNDARY
 - MW-1 GROUNDWATER MONITORING WELL
 - MW-4 FORMER EXXON SERVICE STATION MONITORING WELL
 - - - 1991 EXCAVATION BOUNDARY
 - UST UNDERGROUND STORAGE TANK
 - (<0.50) NOT DETECTED AT OR ABOVE LABORATORY METHOD DETECTION LIMIT
 - (µg/L) MICROGRAMS PER LITER
 - BOLD** VALUE EXCEEDS LABORATORY REPORTING LIMITS

SAMPLE ID	
Date	SAMPLE COLLECTION DATE
TPH-g	TOTAL PETROLEUM HYDROCARBONS, GASOLINE RANGE (µg/L)
B	BENZENE (µg/L)
T	TOLUENE (µg/L)
E	ETHYLBENZENE (µg/L)
X	TOTAL XYLENES (µg/L)
MTBE	METHYL TERT-BUTYL ETHER (µg/L)
TBA	TERTIARY BUTYL ALCOHOL (µg/L)



UNOCAL No. 6129 (351639)
3420 35TH AVENUE
OAKLAND, CALIFORNIA

FIRST SEMI-ANNUAL GROUNDWATER ANALYTICAL MAP 2017

Design & Consultancy
for natural and built assets

FIGURE
4

ATTACHMENT A

Field Data Sheets and General Procedures





GETTLER-RYAN INC.



TRANSMITTAL

April 13, 2017
G-R #17155640

TO: Mr. Samuel Miles
Arcadis
1100 Olive Way, Suite 800
Seattle, Washington 98101

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

RE: **Chevron Facility**
#351639/6129
3420 35th Avenue
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package First Semi Annual Event of April 6, 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/351639 6129

WELL CONDITION STATUS SHEET

Client/ Facility #: **Chevron #351639 / 6129**
 Site Address: **3420 35Th Avenue**
 City: **Oakland, CA**

Job #: **17155640**
 Event Date: **4-6-17**
 Sampler: **ML**

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-1	OK	→	→	→	→	→	→	N	N	Enco 12" 2	
MW-2	OK	→	→	1-B	OK	→	→	↓	↓		
MW-3	OK	→	→	2-S	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 #351639 / 6129 Job Number: 17155640
 Site Address: 3420 35Th Avenue Event Date: 4-6-17 (inclusive)
 City: Oakland, CA Sampler: ML

Well ID: MW-1 Date Monitored: 4-6-17
 Well Diameter: 2 in.
 Total Depth: 43.48 ft.
 Depth to Water: 25.65 ft. Check if water column is less than 0.50 ft.
17.83 xVF .17 = 3.0 x3 case volume = Estimated Purge Volume: 9 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 29.21

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

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

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

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

Start Time (purge): 1100 Weather Conditions: Cloudy
 Sample Time/Date: 1135 4-6-17 Water Color: cloudy Odor: YTD
 Approx. Flow Rate: _____ gpm. Sediment Description: light
 Did well de-water? no If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 26.46

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (mS μmhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)
<u>1107</u>	<u>3</u>	<u>7.22</u>	<u>613</u>	<u>19.7</u>	<u>PRE: 1.4</u>	<u>PRE: 31</u>
<u>1114</u>	<u>6</u>	<u>7.16</u>	<u>626</u>	<u>20.0</u>	<u>1.5</u>	<u>40</u>
<u>1121</u>	<u>9</u>	<u>7.17</u>	<u>628</u>	<u>20.3</u>	<u>1.4</u>	<u>42</u>
					<u>1.3</u>	<u>39</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)</u>

COMMENTS: _____

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



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351639 / 6129
 Site Address: 3420 35Th Avenue
 City: Oakland, CA

Job Number: 17155640
 Event Date: 4-6-17 (inclusive)
 Sampler: ML

Well ID: MW-2

Date Monitored: 4-6-17

Well Diameter: 2 in.

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

Total Depth: 43.50 ft.

Depth to Water: 24.63 ft. Check if water column is less than 0.50 ft.

18.87 xVF .17 = 3.2 x3 case volume = Estimated Purge Volume: 9.6 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 28.40

Purge Equipment:

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

Sampling Equipment:

Disposable Bailer X
 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): 1240
 Sample Time/Date: 1315 1 4-6-17
 Approx. Flow Rate: - gpm.
 Did well de-water? NO If yes, Time: _____

Weather Conditions: cloudy
 Water Color: light Brown Odor: Y I N
 Sediment Description: light
 Volume: _____ gal. DTW @ Sampling: 25.11

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS mS / cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)
<u>1247</u>	<u>3.5</u>	<u>6.84</u>	<u>587</u>	<u>18.3</u>	PRE: <u>0.8</u>	PRE: <u>-24</u>
<u>1254</u>	<u>7</u>	<u>6.95</u>	<u>597</u>	<u>18.6</u>	<u>1.0</u>	<u>-20</u>
<u>1300</u>	<u>10</u>	<u>6.97</u>	<u>599</u>	<u>18.8</u>	<u>1.1</u>	<u>-18</u>
					<u>1.0</u>	<u>-20</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>3</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)</u>

COMMENTS: _____

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



GETTLER - RYAN Inc.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351639 / 6129 Job Number: 17155640
 Site Address: 3420 35Th Avenue Event Date: 4-6-17 (inclusive)
 City: Oakland, CA Sampler: ML

Well ID: MW-3 Date Monitored: 4-6-17
 Well Diameter: 2 in.
 Total Depth: 39.45 ft.
 Depth to Water: 25.27 ft. Check if water column is less than 0.50 ft.
14.18 x VF .17 = 2.4 x3 case volume = Estimated Purge Volume: 7.2 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 28.10

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

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

Sampling Equipment:
 Disposable Bailer X
 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: cloudy
 Sample Time/Date: 1225 4-6-17 Water Color: cloudy Odor: Y1(N)
 Approx. Flow Rate: _____ gpm. Sediment Description: light
 Did well de-water? no If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 26.01

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (AS) mS (µmhos/cm)	Temperature (° F)	D.O. (mg/L)	ORP (mV)
<u>1156</u>	<u>2.5</u>	<u>7.31</u>	<u>510</u>	<u>19.3</u>	<u>PRE: 1.3</u>	<u>PRE: -11</u>
<u>1202</u>	<u>5</u>	<u>7.37</u>	<u>516</u>	<u>19.6</u>	<u>1.1</u>	<u>-17</u>
<u>1208</u>	<u>7.5</u>	<u>7.39</u>	<u>519</u>	<u>19.8</u>	<u>1.2</u>	<u>-20</u>
					<u>1.0</u>	<u>-19</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3 x voa vial</u>	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)</u>


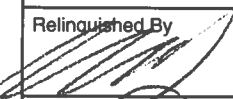

COMMENTS: _____

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

CHAIN OF CUSTODY FORM

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

COC 1 of 1

Union Oil Site ID: <u>6129</u>				Union Oil Consultant: <u>AKCADIS</u>				ANALYSES REQUIRED																	
Site Global ID: <u>T0600101465</u>				Consultant Contact: <u>SAMUEL MILES</u>				TPH - Diesel by EPA 8015	TPH - G by GC/MS	BTEX/MTBE by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	<u>OXYS (5760B)</u>											Turnaround Time (TAT): Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/>	
Site Address: <u>3470 35th AVE OAKLAND CA</u>				Consultant Phone No.: <u>206-776-4720</u>																				Special Instructions	
Union Oil PM: <u>JAMES P KIERNAN</u>				Sampling Company: <u>Gettler Ryan</u>																					
Union Oil PM Phone No.: <u>925-842-5220</u>				Sampled By (PRINT): <u>Mike Lombak</u>																					
Charge Code: <u>NWRB-0 351639 -0-LAB</u>				Sampler Signature: 																					
<p><small>This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.</small></p>				<p>BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911</p>																					
SAMPLE ID				Sample Time		# of Containers																			
Field Point Name	Matrix	Depth	Date (yymmdd)																						
<u>QA</u>	<u>W-S-A</u>		<u>170406</u>			<u>2</u>																			
<u>MW-1</u>	<u>W-S-A</u>		<u>↓</u>	<u>1135</u>		<u>3</u>																			
<u>MW-2</u>	<u>W-S-A</u>		<u>↓</u>	<u>1315</u>		<u>3</u>																			
<u>MW-3</u>	<u>W-S-A</u>		<u>↓</u>	<u>1225</u>		<u>3</u>																			
	<u>W-S-A</u>																								
	<u>W-S-A</u>																								
	<u>W-S-A</u>																								
	<u>W-S-A</u>																								
	<u>W-S-A</u>																								
	<u>W-S-A</u>																								
	<u>W-S-A</u>																								
	<u>W-S-A</u>																								
Relinquished By  Company <u>Gettler Rgn</u> Date / Time: <u>170406 1415</u>				Relinquished By  Company <u>AKCADIS</u> Date / Time: <u>4-6-17 1530</u>				Relinquished By _____ Company _____ Date / Time: _____																	
Received By <u>GETTLER-RYAN FUDGE</u> Company <u>AKCADIS</u> Date / Time: <u>4-6-17 1415</u>				Received By <u>James Begon</u> Company <u>AKCADIS</u> Date / Time: <u>4-6-17 15100</u>				Received By _____ Company _____ Date / Time: _____																	

ATTACHMENT B

Laboratory Report and Chain-of-Custody Documentation





Date of Report: 04/12/2017

Samuel Miles

Arcadis

1100 Olive Way, Suite 800
Seattle, WA 98102

Client Project: 351639
BCL Project: 6129
BCL Work Order: 1709217
Invoice ID: B264402

Enclosed are the results of analyses for samples received by the laboratory on 4/6/2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

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

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17-09217 of 1

CHAIN OF CUSTODY FORM
Union Oil Company of California 6101 Bollinger Canyon Road San Ramon, CA 94583

Union Oil Site ID: 6129
 Site Global ID: TOL000101465
 Site Address: 3470 35th AVE
 OAKLAND CA
 Union Oil PM: JAMES P KIEFMAN
 Union Oil PM Phone No.: 925-842-3220
 Charge Code: NWRFB-0351639-0-LAB
 This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.

Union Oil Consultant: ARCADES
 Consultant Contact: SAMUEL MILES
 Consultant Phone No.: 206-726-4720
 Sampling Company: Gettler Ryan
 Sampled By (PRINT): Mike Lombard
 Sampler Signature: [Signature]
 BC Laboratories, Inc.
 Project Manager: Molly Meyers
 4100 Atlas Court, Bakersfield, CA 93308
 Phone No. 661-327-4911

Field Point Name	Matrix	Depth	Date (yymmdd)	Sample Time	# of Containers	ANALYSES REQUIRED						Notes / Comments
						TPH - Diesel by EPA 8015	TPH - G by GC/MS	BTEX/MTBE/ PAH by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	8 OXYS (8260B)	
1 QA	W-SA		170406	1135	2	X	X	X	X	X		
2 MW-1	W-SA			1315	3	X	X	X	X	X		
3 MW-2	W-SA			1225	3	X	X	X	X	X		
4 MW-3	W-SA				3	X	X	X	X	X		
	W-SA											
	W-SA											
	W-SA											
	W-SA											
	W-SA											
	W-SA											
	W-SA											
	W-SA											
	W-SA											

Relinquished By: [Signature] Company: Gettler Ryan Date / Time: 170400 1415
 Received By: [Signature] Company: Ryan Ryan Labs Date / Time: 4-6-17 15:40
 REC. [Signature] 4/6/17 19:00

Relinquished By: [Signature] Company: BCLDB Date / Time: 4/6/17
 Received By: [Signature] Company: 4/6 2230

CHAIN OF CUSTODY
SUB-DUT

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.



BC LABORATORIES INC.		COOLER RECEIPT FORM				Page <u>1</u> Of <u>1</u>					
Submission #: <u>17-09217</u>											
SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____			SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____			FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> <u>W</u> / S					
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments: _____											
Custody Seals Ice Chest <input type="checkbox"/> Containers <input type="checkbox"/> None <input checked="" type="checkbox"/> Comments: _____											
Intact? Yes <input type="checkbox"/> No <input type="checkbox"/> Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>											
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: <u>0.9</u> Container: <u>PE</u> Thermometer ID: <u>207</u>		Date/Time <u>4/6 2230</u>		Analyst Init <u>GSP</u>					
Temperature: (A) <u>0.8</u> °C / (C) <u>1.1</u> °C											
SAMPLE CONTAINERS		SAMPLE NUMBERS									
		1	2	3	4	5	6	7	8	9	10
QT PE UNPRES											
4oz / 8oz / 16oz PE UNPRES											
2oz Cr ⁶											
QT INORGANIC CHEMICAL METALS											
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz											
PT CYANIDE											
PT NITROGEN FORMS											
PT TOTAL SULFIDE											
2oz. NITRATE / NITRITE											
PT TOTAL ORGANIC CARBON											
PT CHEMICAL OXYGEN DEMAND											
PIA PHENOLICS											
40ml VOA VIAL TRAVEL BLANK		AB									
40ml VOA VIAL		ABC	ABC	ABC							
QT EPA 1664											
PT ODOR											
RADIOLOGICAL											
BACTERIOLOGICAL											
10 ml VOA VIAL- 504											
QT EPA 508/608/8080											
QT EPA 515.1/8150											
YT EPA 525											
YT EPA 525 TRAVEL BLANK											
0ml EPA 547											
0ml EPA 531.1											
oz EPA 548											
YT EPA 549											
YT EPA 8015M											
YT EPA 8270											
oz / 16oz / 32oz AMBER											
oz / 16oz / 32oz JAR											
OIL SLEEVE											
CB VIAL											
LASTIC BAG											
EDLAR BAG											
ERROUS IRON											
NCORE											
VART KIT											
JMMA CANISTER											

Comments: _____

Sample Numbering Completed By: M Date/Time: 4-6 2342 Rev 21 05/23/2016

= Actual / C = Corrected (S:\WPDoc\WordPerfect\LAB_DOC\FORMS\ISAMRECrev 20)

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Arcadis
1100 Olive Way, Suite 800
Seattle, WA 98102

Reported: 04/12/2017 12:59
Project: 6129
Project Number: 351639
Project Manager: Samuel Miles

Laboratory / Client Sample Cross Reference

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

1709217-01	COC Number: --- Project Number: 6129 Sampling Location: --- Sampling Point: QA-W-170406 Sampled By: GRD	Receive Date: 04/06/2017 22:30 Sampling Date: 04/06/2017 00:00 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101465 Location ID (FieldPoint): QA Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1709217-02	COC Number: --- Project Number: 6129 Sampling Location: --- Sampling Point: MW-1-W-170406 Sampled By: GRD	Receive Date: 04/06/2017 22:30 Sampling Date: 04/06/2017 11:35 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101465 Location ID (FieldPoint): MW-1 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1709217-03	COC Number: --- Project Number: 6129 Sampling Location: --- Sampling Point: MW-2-W-170406 Sampled By: GRD	Receive Date: 04/06/2017 22:30 Sampling Date: 04/06/2017 13:15 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101465 Location ID (FieldPoint): MW-2 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

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Arcadis
1100 Olive Way, Suite 800
Seattle, WA 98102

Reported: 04/12/2017 12:59
Project: 6129
Project Number: 351639
Project Manager: Samuel Miles

Laboratory / Client Sample Cross Reference

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

1709217-04	COC Number: ---	Receive Date: 04/06/2017 22:30
	Project Number: 6129	Sampling Date: 04/06/2017 12:25
	Sampling Location: ---	Sample Depth: ---
	Sampling Point: MW-3-W-170406	Lab Matrix: Water
	Sampled By: GRD	Sample Type: Water
		Delivery Work Order:
		Global ID: T0600101465
		Location ID (FieldPoint): MW-3
		Matrix: W
		Sample QC Type (SACode): CS
	Cooler ID:	

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

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Arcadis
1100 Olive Way, Suite 800
Seattle, WA 98102

Reported: 04/12/2017 12:59
Project: 6129
Project Number: 351639
Project Manager: Samuel Miles

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1709217-01	Client Sample Name: 6129, QA-W-170406, 4/6/2017 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
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50		Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	94.2	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/07/17	04/07/17 12:42	IO1	MS-V10	1	B[D0611

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1100 Olive Way, Suite 800
Seattle, WA 98102

Reported: 04/12/2017 12:59
Project: 6129
Project Number: 351639
Project Manager: Samuel Miles

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1709217-02	Client Sample Name: 6129, MW-1-W-170406, 4/6/2017 11:35:00AM
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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	430	ug/L	6.2		EPA-8260B	ND	A01	2
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
Total Purgeable Petroleum Hydrocarbons	350	ug/L	50		Luft-GC/MS	ND	A90	1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	95.9	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	97.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/07/17	04/07/17 16:16	IO1	MS-V10	1	B[D0611
2	EPA-8260B	04/10/17	04/10/17 13:30	IO1	MS-V10	12.500	B[D0611

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Seattle, WA 98102

Reported: 04/12/2017 12:59
Project: 6129
Project Number: 351639
Project Manager: Samuel Miles

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1709217-03	Client Sample Name: 6129, MW-2-W-170406, 4/6/2017 1:15:00PM
----------------------------------	--

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	2.0	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
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50		Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.5	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/07/17	04/07/17 16:34	IO1	MS-V10	1	B[D0611

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Reported: 04/12/2017 12:59
Project: 6129
Project Number: 351639
Project Manager: Samuel Miles

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1709217-04	Client Sample Name: 6129, MW-3-W-170406, 4/6/2017 12:25:00PM
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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	460	ug/L	6.2		EPA-8260B	ND	A01	2
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
Total Purgeable Petroleum Hydrocarbons	370	ug/L	50		Luft-GC/MS	ND	A90	1
1,2-Dichloroethane-d4 (Surrogate)	94.2	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	99.0	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	97.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.1	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/07/17	04/07/17 16:52	IO1	MS-V10	1	B[D0611
2	EPA-8260B	04/10/17	04/10/17 13:48	IO1	MS-V10	12.500	B[D0611

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1100 Olive Way, Suite 800
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Reported: 04/12/2017 12:59
Project: 6129
Project Number: 351639
Project Manager: Samuel Miles

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[D0611]						
Benzene	B[D0611-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	B[D0611-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	B[D0611-BLK1	ND	ug/L	0.50		
Ethylbenzene	B[D0611-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	B[D0611-BLK1	ND	ug/L	0.50		
Toluene	B[D0611-BLK1	ND	ug/L	0.50		
Total Xylenes	B[D0611-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	B[D0611-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	B[D0611-BLK1	ND	ug/L	10		
Diisopropyl ether	B[D0611-BLK1	ND	ug/L	0.50		
Ethanol	B[D0611-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	B[D0611-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons	B[D0611-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	B[D0611-BLK1	94.3	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B[D0611-BLK1	99.1	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B[D0611-BLK1	96.6	%	80 - 120 (LCL - UCL)		

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1100 Olive Way, Suite 800
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Reported: 04/12/2017 12:59
Project: 6129
Project Number: 351639
Project Manager: Samuel Miles

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: B[D0611										
Benzene	B[D0611-BS1	LCS	26.650	25.000	ug/L	107		70 - 130		
Toluene	B[D0611-BS1	LCS	25.940	25.000	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B[D0611-BS1	LCS	9.5100	10.000	ug/L	95.1		75 - 125		
Toluene-d8 (Surrogate)	B[D0611-BS1	LCS	9.9600	10.000	ug/L	99.6		80 - 120		
4-Bromofluorobenzene (Surrogate)	B[D0611-BS1	LCS	9.9300	10.000	ug/L	99.3		80 - 120		

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1100 Olive Way, Suite 800
Seattle, WA 98102

Reported: 04/12/2017 12:59
Project: 6129
Project Number: 351639
Project Manager: Samuel Miles

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
QC Batch ID: B[D0611]		Used client sample: N								
Benzene	MS	1705207-52	ND	26.940	25.000	ug/L		108		70 - 130
	MSD	1705207-52	ND	27.440	25.000	ug/L	1.8	110	20	70 - 130
Toluene	MS	1705207-52	ND	26.840	25.000	ug/L		107		70 - 130
	MSD	1705207-52	ND	28.510	25.000	ug/L	6.0	114	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1705207-52	ND	9.1200	10.000	ug/L		91.2		75 - 125
	MSD	1705207-52	ND	9.2500	10.000	ug/L	1.4	92.5		75 - 125
Toluene-d8 (Surrogate)	MS	1705207-52	ND	10.210	10.000	ug/L		102		80 - 120
	MSD	1705207-52	ND	9.9800	10.000	ug/L	2.3	99.8		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1705207-52	ND	9.8400	10.000	ug/L		98.4		80 - 120
	MSD	1705207-52	ND	9.9000	10.000	ug/L	0.6	99.0		80 - 120

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Arcadis
1100 Olive Way, Suite 800
Seattle, WA 98102

Reported: 04/12/2017 12:59
Project: 6129
Project Number: 351639
Project Manager: Samuel Miles

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.
- A90 TPPH does not exhibit a "gasoline" pattern. TPPH is entirely due to MTBE.

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

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<u>Submittal Type:</u>	EDF
<u>Report Title:</u>	1SA2017 SASR - EDF 1709217
<u>Report Type:</u>	Monitoring Report - Semi-Annually
<u>Facility Global ID:</u>	T0600101465
<u>Facility Name:</u>	UNOCAL #6129
<u>File Name:</u>	EDD_BCLabs_1709217_EDF.zip
<u>Organization Name:</u>	ARCADIS
<u>Username:</u>	ARCADIS76
<u>IP Address:</u>	8.39.233.51
<u>Submittal Date/Time:</u>	4/12/2017 1:27:50 PM
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<u>Report Title:</u>	1SA2017 DTW (4/6/17)
<u>Facility Global ID:</u>	T0600101465
<u>Facility Name:</u>	UNOCAL #6129
<u>File Name:</u>	GEO_WELL.zip
<u>Organization Name:</u>	ARCADIS
<u>Username:</u>	ARCADIS76
<u>IP Address:</u>	8.39.233.48
<u>Submittal Date/Time:</u>	5/19/2017 11:22:04 AM
<u>Confirmation Number:</u>	6396638870

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<u>Submittal Type:</u>	GEO_REPORT
<u>Report Title:</u>	First Semi-Annual 2017 Groundwater Monitoring Report
<u>Report Type:</u>	Monitoring Report - Semi-Annually
<u>Report Date:</u>	7/10/2017
<u>Facility Global ID:</u>	T0600101465
<u>Facility Name:</u>	UNOCAL #6129
<u>File Name:</u>	351639 1SA17 GWMR FNL.pdf
<u>Organization Name:</u>	ARCADIS
<u>Username:</u>	ARCADIS76
<u>IP Address:</u>	8.39.233.26
<u>Submittal Date/Time:</u>	7/10/2017 8:02:40 AM
<u>Confirmation Number:</u>	9583945930

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