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By Alameda County Environmental Health at 2:04 pm, Jan 29, 2015



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January 27, 2015

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

Re: **Unocal No. 6129 (351639)**
3420 35th Avenue, Oakland, California
ACEH Fuel Leak Case No. RO0000058
GeoTracker Global ID T0600101465

I have reviewed the attached report dated January 27, 2015.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local agency/Regional Board guidelines have been followed. This report was prepared by AECOM, upon whose assistance and advice I have relied.

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

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Nicole M. Arceneaux".

Nicole M. Arceneaux
Project Manager

Attachment: Second Semi-Annual 2014 Groundwater Monitoring Report by AECOM

January 27, 2015

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: Second Semi-Annual 2014 Groundwater Monitoring Report
Unocal No. 6129 (351639)
3420 35th Avenue, Oakland, California
Fuel Leak Case No. R00000058
GeoTracker Global ID T0600101465

Dear Mr. Nowell,

On behalf of Chevron Environmental Management Company's (EMC's) affiliate, Union Oil Company of California ("Union Oil"), AECOM has prepared the second semi-annual 2014 groundwater monitoring report for the site located at 3420 35th Avenue in Oakland, California (site) (**Figure 1**). The locations of former and current site features are illustrated on **Figure 2**. The second semi-annual 2014 groundwater monitoring event was conducted to evaluate the distribution of petroleum hydrocarbon constituents in groundwater beneath the site. Groundwater sampling was performed by Gettler-Ryan Inc. (Gettler-Ryan) of Dublin, California. This report summarizes results of the sampling event conducted on November 19, 2014.

Groundwater Monitoring Field Data

On November 19, 2014 the depth to groundwater was measured in three monitoring wells (MW-1 through MW-3) at the site. Groundwater measurements were converted to groundwater elevations (**Table 1**). The depth to groundwater at the site ranged from 30.22 to 31.50 feet below the top of well casings (158.36 to 159.34 feet above mean sea level). The groundwater flow direction was calculated to the southwest with an average hydraulic gradient of approximately 0.010 feet per foot (**Figure 2**). Copies of the groundwater gauging logs are included in **Attachment A**.

Groundwater Sampling and Analytical Results

On November 19, 2014, groundwater samples were collected from monitoring wells MW-1 through MW-3, after first purging a minimum of three well volumes at each well. Temperature, pH, oxidation reduction potential, dissolved oxygen, and electrical conductivity readings were recorded during purging, and copies of those purge logs are presented in **Attachment A**.

Laboratory analysis of the groundwater samples was performed by BC Laboratories, Inc. (BC Labs) of Bakersfield, California. The BC Labs analytical report dated December 2, 2014, is included as **Attachment B**. Groundwater samples were analyzed for the following, based on historical trends at each monitoring well:

- Total petroleum hydrocarbons as gasoline (TPH-g) by Luft-GC/MS method (TPH-g is reported as total purgeable petroleum hydrocarbons [TPPH] in laboratory analytical report);

- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260B; and
- Fuel oxygenates, including Methyl t-butyl ether (MTBE), t-Amyl Methyl ether (TAME), t-Butyl Alcohol (TBA), Diisopropyl ether (DIPE), Ethyl t-butyl ether (ETBE), ethanol, 1,2-Dibromoethane (EDB), and 1,2-Dichloroethane (EDC) by EPA Method 8260B.

Analytical results for the second semi-annual 2014 groundwater monitoring event are consistent with previous reporting periods (**Table 1**, **Table 2**, and **Figure 3**). The following presents a brief summary of the analytical sample results:

- BTEX, ETBE, TAME, EDB, EDC, TBA, and ethanol were not detected in the groundwater samples collected from MW-1, MW-2, and MW-3;
- TPH-g was detected in the groundwater samples collected from MW-1, MW-2, and MW-3 at 130 µg/L, 430 µg/L, and 180 µg/L, respectively. However, the laboratory flagged the results as TPH-g is entirely due to MTBE and is not a true TPH-g value;
- MTBE was detected in the groundwater samples collected from MW-1, MW-2, and MW-3 at 180 µg/L, 980 µg/L, and 250 µg/L, respectively;
- DIPE was detected in the groundwater sample collected from MW-2 at 31 µg/L. DIPE was not detected in the groundwater samples collected from MW-1 and MW-3.

A summary of historical groundwater analytical data is presented in **Tables 3 and 4**. Groundwater analytical data from the upgradient former Exxon service station are included in **Attachment C**.

Approximately 17 gallons of purge water was generated during the second semi-annual 2014 groundwater monitoring and sampling event. The purge water and decontamination water generated during sampling activities were transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.

Conclusions and Recommendations

Based on the results of historical groundwater monitoring and analytical results of groundwater sampling conducted at the site, AECOM provides the following conclusions and recommendations:

- No BTEX was detected.
- Groundwater levels appear to fluctuate on a seasonal basis with the highest groundwater elevations generally recorded during the first and second quarters and the lowest elevations recorded during the third and fourth quarters.
- Reported TPHg concentrations are currently, and have historically been, noted as being entirely due to MTBE.
- MTBE and oxygenate concentrations fluctuate seasonally, but are generally stable or declining.
- TPH-g and MTBE concentrations historically have been higher at the upgradient former Exxon service station in their downgradient wells MW-5, MW-6, and RW-1.

AECOM recommends the cessation of groundwater monitoring activities as the case undergoes closure review. Meetings between ACEH, EMC, and AECOM have indicated that the site is a likely candidate for closure. AECOM will submit a revised focused site conceptual model and case closure summary during the first quarter 2015.

Remarks/Signatures

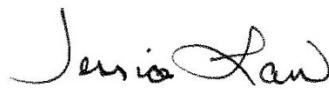
The interpretations in this report represent AECOM's professional opinions and are based, in part, on the information supplied by Gettler-Ryan and BC labs. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

If you have any questions regarding this project, please contact James Harms at (916) 414-5800.

Sincerely,



James Harms
Project Manager


Jessica Law, PG #8840
Project Geologist
Stamped: 01/27/2015

ccs: Ms. Nicole Arceneaux, EMC (via electronic copy)
Son Nguyen & Le Pham, Nguyen/Pham Family Trust, property owner (via paper copy)

Enclosures:

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Figures

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| Figure 2 | Groundwater Elevation Map, First Semi-Annual 2014 |
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Attachments

- | | |
|--------------|---|
| Attachment A | Groundwater Monitoring and Sampling Field Data Sheets |
| Attachment B | BC Labs Analytical Report |
| Attachment C | Former Exxon Service Station Data Tables |

TABLES

Table 1
Current Groundwater Monitoring Data and Analytical Results
Unocal No. 6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
MW-1	190.79	11/19/2014	31.50	159.29	0	130 ¹	<0.50	<0.50	<0.50	<1.0	
MW-2	190.80	11/19/2014	31.46	159.34	0	430 ¹	<0.50	<0.50	<0.50	<1.0	
MW-3	188.58	11/19/2014	30.22	158.36	0	180 ¹	<0.50	<0.50	<0.50	<1.0	

NOTES:

* TOC and GWE are in feet above mean sea level.

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

BTEX compounds analyzed by Environmental Protection Agency Method 8260B

TPH-g analyzed by Luft-GC/MS method

ID = Identification

TOC = Top of casing

ft = Feet

DTW = Depth to water

GWE = Groundwater elevation

µg/L = Micrograms per liter

LNAPL = Light Non-Aqueous Phase Liquid

¹ = TPH-g does not exhibit a "gasoline" pattern. TPH-g is entirely due to MTBE.

B = Benzene

T = Toluene

E = Ethylbenzene

X = Total Xylenes

TPH-g = Total Petroleum Hydrocarbons as Gasoline

TPH-g reported as TPPH (total purgeable petroleum hydrocarbons) by laboratory

Table 2
Current Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
MW-1	11/19/2014	180 ¹	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-2	11/19/2014	980 ¹	<10	<250	<0.50	31	<0.50	<0.50	<0.50
MW-3	11/19/2014	250 ¹	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50

NOTES:

Oxygenate compounds analyzed by Environmental Protection Agency Method 8260B

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

ID = Identification

µg/L = Micrograms per liter

MTBE = Methyl t-butyl ether

TBA = T-butyl alcohol

DIPE = Diisopropyl ether

ETBE = Ethyl t-butyl ether

TAME = T-amyl methyl ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

¹ = PQLs and MDLs are raised due to sample dilution.

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	TOC*	DATE	DTW	GWE*	LNAPL	TPH-G	B	T	E	X	Comments
	(ft)		(ft)	(ft)	(ft)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
MW-1	190.79	1/5/1990	32.80	157.99	--	<30	<0.30	<0.30	<0.30	<0.30	
screened	190.79	5/11/1990	31.80	158.99	--	<30	<0.30	7.1	<0.30	<0.30	
24 to 44' bgs	190.79	8/9/1990	32.37	158.42	--	<30	<0.30	<0.30	<0.30	<0.30	
	190.79	11/14/1990	33.32	157.47	--	<30	<0.30	<0.30	<0.30	<0.30	
	190.79	2/12/1991	33.02	157.77	--	<30	0.32	<0.30	<0.30	<0.30	
	190.79	5/9/1991	30.95	159.84	--	<30	<0.30	<0.30	<0.30	<0.30	
	190.79	11/13/2003	--	--	--	180	<1.0	<1.0	<1.0	<2.0	
	190.79	8/27/2004	30.65	160.14	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	11/23/2004	29.35	161.44	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	2/9/2005	26.89	163.90	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	5/17/2005	26.56	164.23	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	7/27/2005	27.33	163.46	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	12/6/2005	29.59	161.20	0	<50	<0.50	0.93	<0.50	1.80	
	190.79	2/21/2006	28.27	162.52	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	6/8/2006	26.07	164.72	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	9/15/2006	28.86	161.93	0	<50	<0.50	<0.50	<0.50	<0.50	
	190.79	12/14/2006	29.49	161.30	0	<50	<0.50	<0.50	<0.50	<0.50	
	190.79	3/28/2007	27.24	163.55	0	<50	<0.50	<0.50	<0.50	<0.50	
	190.79	6/25/2007	28.30	162.49	0	<50	<0.50	<0.50	<0.50	<0.50	
	190.79	9/22/2007	30.61	160.18	0	<50	<0.50	<0.50	<0.50	<0.50	
	190.79	12/14/2007	30.30	160.49	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	3/17/2008	27.22	163.57	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	6/20/2008	30.10	160.69	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	9/11/2008	31.04	159.75	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	11/25/2008	30.88	159.91	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	3/9/2009	27.50	163.29	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	5/28/2009	28.25	162.54	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	12/11/2009	30.60	160.19	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	5/7/2010	26.06	164.73	0	67	<0.50	<0.50	<0.50	<1.0	
	190.79	11/1/2010	30.18	160.61	0	<50	<0.50	<0.50	<0.50	<1.0	
	190.79	5/27/2011	26.87	163.92	0	110	<0.50	<0.50	<0.50	<1.0	
	190.79	11/23/2011	29.14	161.65	0	1,101	<0.50	<0.50	<0.50	<1.0	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	TOC*	DATE	DTW	GWE*	LNAPL	TPH-G	B	T	E	X	Comments
	(ft)		(ft)	(ft)	(ft)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
MW-1 cont.	190.79	5/24/2012	26.58	164.21	0	140	<0.50	<0.50	<0.50	<1.0	
	190.79	10/23/2012	30.51	160.28	0	130	<0.50	<0.50	<0.50	<1.0	
	190.79	5/2/2013	28.30	162.49	0	150 ¹	<0.50	<0.50	<0.50	<1.0	
	190.79	11/13/2013	31.65	159.14	0	240	<0.50	<0.50	<0.50	<1.0	
	190.79	5/12/2014	28.95	161.84	0	98 ¹	<0.50	<0.50	<0.50	<1.0	
	190.79	11/19/2014	31.50	159.29	0	130¹	<0.50	<0.50	<0.50	<1.0	
MW-2 screened	190.80	1/5/1990	33.02	157.78	--	<30	<>0.30	<>0.30	<>0.30	<>0.30	
	190.80	5/11/1990	31.98	158.82	--	<30	<>0.30	<>0.30	<>0.30	<>0.30	
	24 to 44' bgs	190.80	8/9/1990	32.45	158.35	--	<30	<>0.30	<>0.30	<>0.30	<>0.30
		190.80	11/14/1990	33.47	157.33	--	<30	<>0.30	<>0.30	<>0.30	<>0.30
		190.80	2/12/1991	33.15	157.65	--	<30	<>0.30	0.42	<0.30	0.51
		190.80	5/9/1991	30.88	159.92	--	<30	<>0.30	<>0.30	<>0.30	<>0.30
		190.80	11/13/2003	--	--	<2,000	<20	<20	<20	<40	
		190.80	8/27/2004	30.28	160.52	0	950	<5.0	<5.0	<5.0	<10
		190.80	11/23/2004	28.75	162.05	0	53	<0.50	<0.50	<0.50	<1.0
		190.80	2/9/2005	26.08	164.72	0	<500	<0.50	<0.50	<0.50	<1.0
		190.80	5/17/2005	24.53	166.27	0	<50	<0.50	<0.50	<0.50	<1.0
		190.80	7/27/2005	27.51	163.29	0	<500	<5.0	<5.0	<5.0	<10
		190.80	12/6/2005	29.13	161.67	0	340	<0.50	<0.50	<0.50	<1.0
		190.80	2/21/2006	29.23	161.57	0	190	<0.50	<0.50	<0.50	<1.0
		190.80	6/8/2006	25.76	165.04	0	<500	<5.0	<5.0	<5.0	<10
		190.80	9/15/2006	29.17	161.63	0	<500	<5.0	<5.0	<5.0	<5.0
		190.80	12/14/2006	29.11	161.69	0	520	<0.50	<0.50	<0.50	<0.50
		190.80	3/28/2007	26.68	164.12	0	290	<0.50	<0.50	<0.50	<0.50
		190.80	6/25/2007	25.91	164.89	0	<50	<0.50	<0.50	<0.50	<0.50
		190.80	9/22/2007	30.18	160.62	0	400	<0.50	<0.50	<0.50	<0.50
		190.80	12/14/2007	29.96	160.84	0	400	<0.50	<0.50	<0.50	<1.0
		190.80	3/17/2008	26.74	164.06	0	570	<5.0	<5.0	<5.0	<10
		190.80	6/20/2008	29.78	161.02	0	580	<0.50	<0.50	<0.50	<1.0
		190.80	9/11/2008	30.62	160.18	0	220	<0.50	<0.50	<0.50	<1.0
		190.80	11/25/2008	30.48	160.32	0	500	<0.50	<0.50	<0.50	<1.0
		190.80	3/9/2009	25.75	165.05	0	910	<5.0	<5.0	<5.0	<10
		190.80	5/28/2009	27.71	163.09	0	460	<0.50	<0.50	<0.50	<1.0

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	TOC*	DATE	DTW	GWE*	LNAPL	TPH-G	B	T	E	X	Comments
	(ft)		(ft)	(ft)	(ft)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
MW-2 cont.	190.80	12/11/2009	29.80	161.00	0	640	<5.0	<5.0	<5.0	<10	
	190.80	5/7/2010	25.11	165.69	0	600	<1.0	<1.0	<1.0	<2.0	
	190.80	11/1/2010	29.90	160.90	0	140	<0.50	<0.50	<0.50	<1.0	
	190.80	5/27/2011	26.44	164.36	0	560	<0.50	<0.50	<0.50	<1.0	
	190.80	11/23/2011	28.53	162.27	0	830	<0.50	<0.50	<0.50	<1.0	
	190.80	5/24/2012	25.97	164.83	0	1,000	<0.50	<0.50	<0.50	<1.0	
	190.80	10/23/2012	30.14	160.66	0	750	<0.50	<0.50	<0.50	<1.0	
	190.80	5/2/2013	27.14	163.66	0	290 ¹	<0.50	<0.50	<0.50	<1.0	
	190.80	11/13/2013	31.37	159.43	0	1,200	<0.50	<0.50	<0.50	<1.0	
	190.80	5/12/2014	28.49	162.31	0	260	<0.50	<0.50	<0.50	<1.0	
	190.80	11/19/2014	31.46	159.34	0	430¹	<0.50	<0.50	<0.50	<1.0	
MW-3 screened 23 to 43' bgs	188.58	1/5/1990	31.88	156.70	--	<30	<0.30	<0.30	<0.30	<0.30	
	188.58	5/11/1990	31.25	157.33	--	<30	<0.30	<0.30	<0.30	<0.30	
	188.58	8/9/1990	31.53	157.05	--	<30	<0.30	<0.30	<0.30	<0.30	
	188.58	11/14/1990	33.30	155.28	--	<30	<0.30	<0.30	<0.30	<0.30	
	188.58	2/12/1991	32.05	156.53	--	<30	<0.30	<0.30	<0.30	<0.30	
	188.58	5/9/1991	30.37	158.21	--	<30	<0.30	<0.30	<0.30	<0.30	
	188.58	11/13/2003	--	--	--	2,600	<20	<20	<20	<40	
	188.58	8/27/2004	29.61	158.97	0	1,700	<10	<10	<10	<20	
	188.58	11/23/2004	28.48	160.10	0	1,500	<10	<10	<10	<20	
	188.58	2/9/2005	26.45	162.13	0	<1,000	<0.50	<0.50	<0.50	<1.0	
	188.58	5/17/2005	25.61	162.97	0	<1,000	<0.50	<0.50	<0.50	<1.0	
	188.58	7/27/2005	27.35	161.23	0	<1,000	<10	<10	<10	<20	
	188.58	12/6/2005	28.78	159.80	0	430	<0.50	1.6	<0.50	3.6	
	188.58	2/21/2006	28.91	159.67	0	420	<0.50	<0.50	<0.50	<1.0	
	188.58	6/8/2006	25.97	162.61	0	<1,200	<12	<12	<12	<25	
	188.58	9/15/2006	28.73	159.85	0	<1,200	<12	<12	<12	<12	
	188.58	12/14/2006	28.62	159.96	0	<1,000	<10	<10	<10	<10	
	188.58	3/28/2007	26.69	161.89	0	500	<1.0	<1.0	<1.0	<1.0	
	188.58	6/25/2007	26.74	161.84	0	270	<0.50	<0.50	<0.50	<0.50	
	188.58	9/22/2007	29.57	159.01	0	500	<0.50	<0.50	<0.50	<0.50	
	188.58	12/14/2007	29.30	159.28	0	270	<0.50	<0.50	<0.50	<1.0	
	188.58	3/17/2008	26.82	161.76	0	220	<0.50	<0.50	<0.50	<1.0	
	188.58	6/20/2008	29.10	159.48	0	490	<0.50	<0.50	<0.50	<1.0	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	TOC*	DATE	DTW	GWE*	LNAPL	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-3 cont.											
188.58	9/11/2008	29.89	158.69	0	630	<5.0	<5.0	<5.0	<5.0	<10	
188.58	11/25/2008	29.74	158.84	0	380	<0.50	<0.50	<0.50	<0.50	<1.0	
188.58	3/9/2009	25.56	163.02	0	310	<0.50	<0.50	<0.50	<0.50	<1.0	
188.58	5/28/2009	27.55	161.03	0	410	<0.50	<0.50	<0.50	<0.50	<1.0	
188.58	12/11/2009	29.10	159.48	0	220	<0.50	<0.50	<0.50	<0.50	<1.0	
188.58	5/7/2010	25.72	162.86	0	360	<0.50	<0.50	<0.50	<0.50	<1.0	
188.58	11/1/2010	29.29	159.29	0	120	<0.50	<0.50	<0.50	<0.50	<1.0	
188.58	5/27/2011	26.53	162.05	0	340	<0.50	<0.50	<0.50	<0.50	<1.0	
188.58	5/24/2012	25.95	162.63	0	660	<0.50	<0.50	<0.50	<0.50	<1.0	
188.58	10/23/2012	29.39	159.19	0	480	<0.50	<0.50	<0.50	<0.50	<1.0	
188.58	5/2/2013	26.98	161.60	0	130 ¹	<0.50	<0.50	<0.50	<0.50	<1.0	
188.58	11/13/2013	30.28	158.30	0	110	<0.50	<0.50	<0.50	<0.50	<1.0	
188.58	5/12/2014	27.93	160.65	0	98 ¹	<0.50	<0.50	<0.50	<0.50	<1.0	
188.58	11/19/2014	30.22	158.36	0	180¹	<0.50	<0.50	<0.50	<0.50	<1.0	

NOTES:

* TOC and GWE are in feet above mean sea level.

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

BTEX compounds analyzed by Environmental Protection Agency Method 8260B

TPH-g analyzed by Luft-GC/MS method

ID = Identification

TOC = Top of casing

ft = Feet

DTW = Depth to water

GWE = Groundwater elevation

-- = Not available/Not analyzed

µg/L = Micrograms per liter

LNAPL = Light Non-Aqueous Phase Liquid

bgs = below ground surface

B = Benzene

T = Toluene

E = Ethylbenzene

X = Total Xylenes

TPH-g = Total Petroleum Hydrocarbons as Gasoline

¹ = TPH-g does not exhibit a "gasoline" pattern. TPH-g is entirely due to MTBE.

TPH-g reported as TPPH (total purgeable petroleum hydrocarbons) on some laboratory reports

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
MW-1	1/5/1990	--	--	--	--	--	--	--	--
	5/11/1990	--	--	--	--	--	--	--	--
	8/9/1990	--	--	--	--	--	--	--	--
	11/14/1990	--	--	--	--	--	--	--	--
	2/12/1991	--	--	--	--	--	--	--	--
	5/9/1991	--	--	--	--	--	--	--	--
	11/13/2003	240	<200	<1,000	<4.0	<4.0	<4.0	<4.0	<4.0
	8/27/2004	<0.50	<5.0	<50	<0.50	<1.0	<0.50	<0.50	<0.50
	11/23/2004	<0.50	<5.0	<50	<0.50	<1.0	<0.50	<0.50	<0.50
	2/9/2005	9.3	<5.0	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	5/17/2005	1.9	<5.0	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	7/27/2005	<0.50	<5.0	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	12/6/2005	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	2/21/2006	2.6	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/8/2006	11	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	9/15/2006	1.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/14/2006	3.5	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	3/28/2007	0.64	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/25/2007	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	9/22/2007	4.10	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/14/2007	0.65	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	3/17/2008	14	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	6/20/2008	11	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	9/11/2008	1.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/25/2008	5.8	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	3/9/2009	25	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/28/2009	17	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/11/2009	18	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/7/2010	64	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/1/2010	92	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
MW-1 cont.	5/27/2011	220	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/23/2011	150	41	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/24/2012	190	66	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	10/23/2012	140	47	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/2/2013	270	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/13/2013	270	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/12/2014	170 ¹	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/19/2014	180¹	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-2	1/5/1990	--	--	--	--	--	--	--	--
	5/11/1990	--	--	--	--	--	--	--	--
	8/9/1990	--	--	--	--	--	--	--	--
	11/14/1990	--	--	--	--	--	--	--	--
	2/12/1991	--	--	--	--	--	--	--	--
	5/9/1991	--	--	--	--	--	--	--	--
	11/13/2003	2,100	<4,000	<20,000	<80	<80	<80	<80	<80
	8/27/2004	1,400	<5.0	<500	<5.0	24	<5.0	<5.0	<5.0
	11/23/2004	4.2	<5.0	<50	<0.50	18	<0.50	<0.50	<0.50
	2/9/2005	400	<5.0	<500	<5.0	19	<5.0	<5.0	<5.0
	5/17/2005	330	<5.0	<50	<0.50	12	<0.50	<0.50	<0.50
	7/27/2005	580	140	<500	<5.0	16	<5.0	<5.0	<5.0
	12/6/2005	780	61	<250	<0.50	15	<0.50	<0.50	<0.50
	2/21/2006	340	<10	<250	<0.50	18	<0.50	<0.50	<0.50
	6/8/2006	440	<100	<2,500	<5.0	14	<5.0	<5.0	<5.0
	9/15/2006	570	<100	<2,500	<5.0	17	<5.0	<5.0	<5.0
	12/14/2006	770	27	<250	<0.50	20	<0.50	<0.50	<0.50
	3/28/2007	460	260	<250	<0.50	23	<0.50	<0.50	<0.50
	6/25/2007	1.2	<10	<250	<0.50	23	<0.50	<0.50	<0.50
	9/22/2007	530	<10	<250	<0.50	35	<0.50	<0.50	<0.50
	12/14/2007	930	48	<250	<0.50	24	<0.50	<0.50	<0.50

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
MW-2 cont.	3/17/2008	630	<100	<2,500	<5.0	18	<5.0	<5.0	<5.0
	6/20/2008	1,200	<10	<250	<0.50	16	<0.50	<0.50	<0.50
	9/11/2008	29	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/25/2008	1,500	<10	<250	<0.50	19	<0.50	<0.50	<0.50
	3/9/2009	1,400	<100	<2,500	<5.0	15	<5.0	<5.0	<5.0
	5/28/2009	740	<10	<250	<0.50	20	<0.50	<0.50	<0.50
	12/11/2009	1,300	<100	<2,500	<5.0	19	<5.0	<5.0	<5.0
	5/7/2010	940	<20	<500	<1.0	14	<1.0	<1.0	<1.0
	11/1/2010	730	<10	<250	<0.50	28	<0.50	<0.50	<0.50
	5/27/2011	1,100	210.00	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/23/2011	1,500	400.00	<250	<0.50	9.00	<0.50	<0.50	<0.50
	5/24/2012	1,200	430	<250	<0.50	8.8	<0.50	<0.50	<0.50
	10/23/2012	1,300	420	<250	<0.50	14	<0.50	<0.50	<0.50
	5/2/2013	460	<10	<250	6.2	<0.50	<0.50	<0.50	<0.50
MW-3	11/13/2013	1,300	<10	<250	17	<0.50	<0.50	<0.50	<0.50
	5/12/2014	510 ¹	44	<250	12	<0.50	<0.50	<0.50	<0.50
	11/19/2014	980 ¹	<10	<250	31	<0.50	<0.50	<0.50	<0.50
	1/5/1990	--	--	--	--	--	--	--	--
	5/11/1990	--	--	--	--	--	--	--	--
	8/9/1990	--	--	--	--	--	--	--	--
	11/14/1990	--	--	--	--	--	--	--	--
	2/12/1991	--	--	--	--	--	--	--	--
	5/9/1991	--	--	--	--	--	--	--	--
	11/13/2003	3,700	<4,000	<20,000	<80	<80	<80	<80	<80
	8/27/2004	2,600	<100	<1,000	<10	<20	<10	<10	<10
	11/23/2004	1,800	<100	<1,000	<10	<20	<10	<10	<10
	2/9/2005	2,100	130	<1,000	<10	<10	<10	<10	<10
	5/17/2005	1,200	<100	<1,000	<10	<10	<10	<10	<10
	7/27/2005	1,400	360	<1,000	<10	<10	<10	<10	<10

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
MW-3 cont.	12/6/2005	1,800	160	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	2/21/2006	1,100	88	<250	<0.50	<0.50	0.58	<0.50	<0.50
	6/8/2006	1,000	<250	<6,200	<12	<12	<12	<12	<12
	9/15/2006	1,200	<250	<6,200	<12	<12	<12	<12	<12
	12/14/2006	1,300	<200	<5,000	<10	<10	<10	<10	<10
	3/28/2007	860	500	<500	<1.0	<1.0	<1.0	<1.0	<1.0
	6/25/2007	570	11	<250	<0.50	<0.50	<0.50	<0.50	0.65
	9/22/2007	980	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/14/2007	570	26	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	3/17/2008	520	<10	<250	<0.50	<0.50	<0.50	<0.50	0.65
	6/20/2008	1,300	49	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	9/11/2008	1,200	<100	<2,500	<5.0	<5.0	<5.0	<5.0	<5.0
	11/25/2008	870	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	3/9/2009	720	15	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/28/2009	750	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	12/11/2009	620	63	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/7/2010	660	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/1/2010	490	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/27/2011	890	73	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/24/2012	1,100	300	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	10/23/2012	500	160	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/2/2013	220	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/13/2013	100	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	5/12/2014	160 ¹	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
	11/19/2014	250 ¹	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 6129 (351639)
3420 35th Avenue
Oakland, California

WELL ID	DATE	MTBE ($\mu\text{g/L}$)	TBA ($\mu\text{g/L}$)	ETHANOL ($\mu\text{g/L}$)	DIPE ($\mu\text{g/L}$)	ETBE ($\mu\text{g/L}$)	TAME ($\mu\text{g/L}$)	EDB ($\mu\text{g/L}$)	EDC ($\mu\text{g/L}$)
---------	------	-----------------------------	----------------------------	--------------------------------	-----------------------------	-----------------------------	-----------------------------	----------------------------	----------------------------

NOTES:

Oxygenate compounds analyzed by Environmental Protection Agency Method 8260B

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

ID = Identification

-- = Not available/Not Analyzed

$\mu\text{g/L}$ = Micrograms per liter

MTBE = Methyl t-butyl ether

TBA = T-butyl alcohol

DIPE = Diisopropyl ether

ETBE = Ethyl t-butyl ether

TAME = T-amyl methyl ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

¹ = PQLs and MDLs are raised due to sample dilution.

FIGURES



AECOM

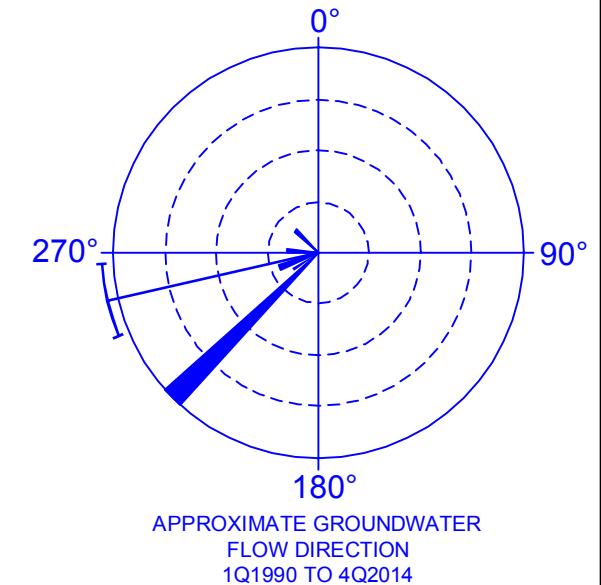
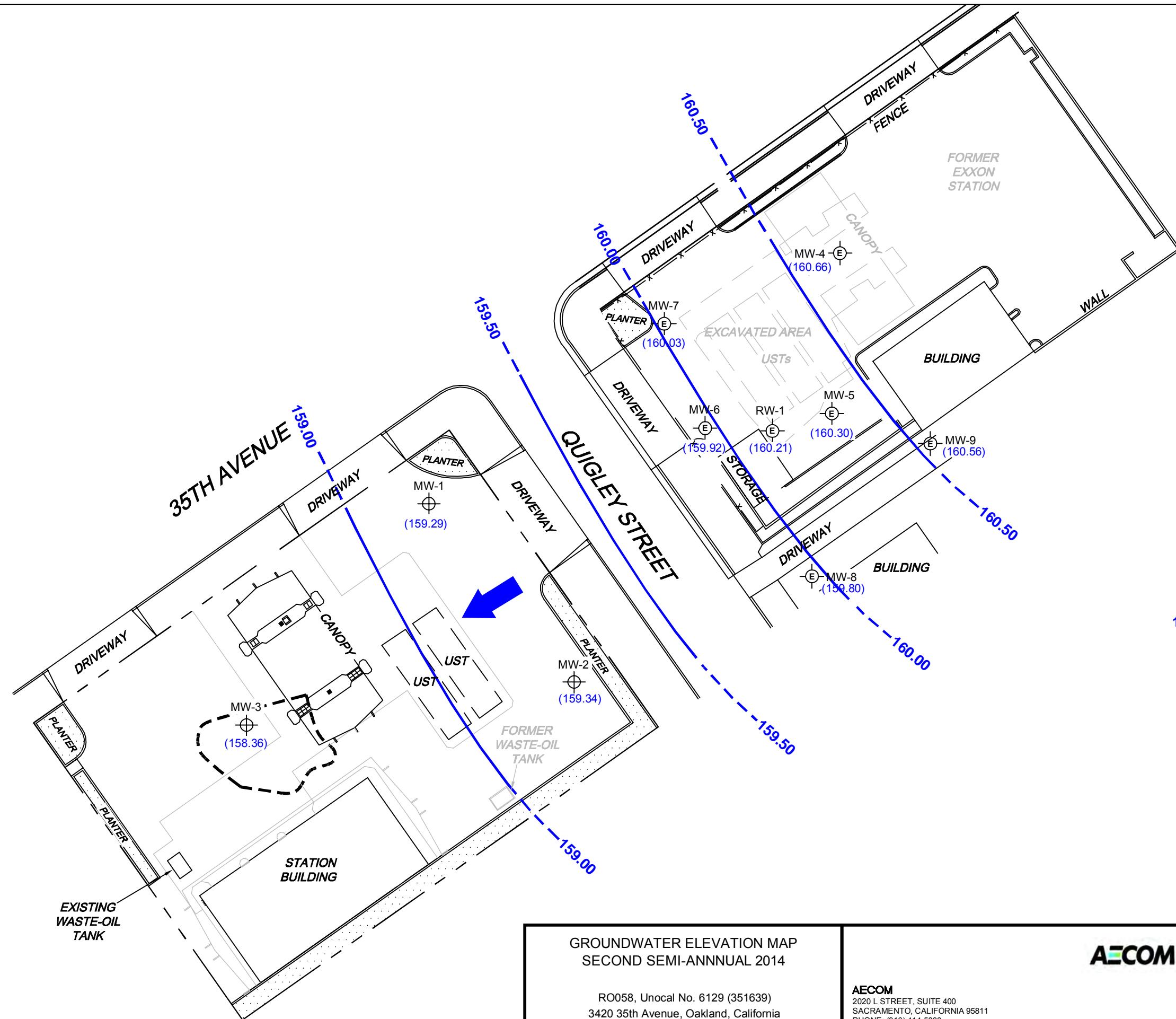
AECOM
2020 L Street, Suite 400
Sacramento, CA 95811
916.414.5800



0 75 150 300
Feet

Figure 1: Site Location Map

RO058, UNOCAL NO. 6129 (351639)
3420 35th AVENUE
OAKLAND, CALIFORNIA



LEGEND

- MW-3 (●) MONITORING WELL
- MW-9 (E) MONITORING WELL (FORMER EXXON PROPERTY)
- 159.00 (—) GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (DASHED WHERE INFERRED)
- ← GROUNDWATER FLOW DIRECTION
- - - 1991 EXCAVATION BOUNDARY
- - - SITE BOUNDARY
- UST UNDERGROUND STORAGE TANK
- (#) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- HYDRAULIC GRADIENT = 0.010 FEET PER FOOT

0 30'
SCALE

Base map created by Delta Consultants, Inc.

GROUNDWATER ELEVATION MAP
SECOND SEMI-ANNUAL 2014

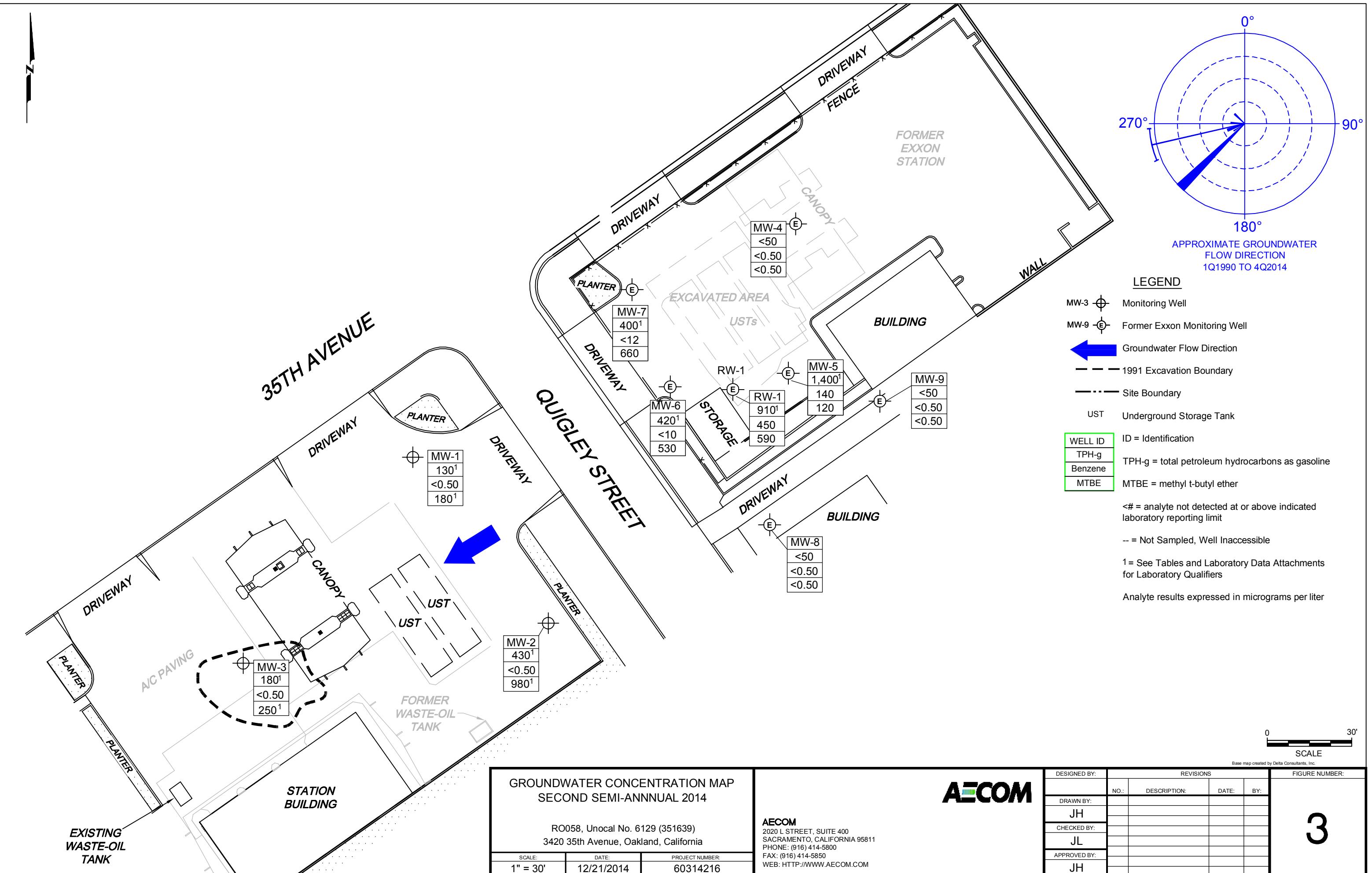
RO058, Unocal No. 6129 (351639)
3420 35th Avenue, Oakland, California

SCALE: 1" = 30' DATE: 12/10/2014 PROJECT NUMBER:
60314216

AECOM
2020 L STREET, SUITE 400
SACRAMENTO, CALIFORNIA 95811
PHONE: (916) 414-5800
FAX: (916) 414-5850
WEB: HTTP://WWW.AECOM.COM

DESIGNED BY:	REVISIONS			FIGURE NUMBER:
NO.:	DESCRIPTION:	DATE:	BY:	
DRAWN BY:	1 PG AND TECH EDITS	12/19/14	JH	
JH				
CHECKED BY:				
JL				
APPROVED BY:				
JH				

2



ATTACHMENT A

**Groundwater Monitoring and Sampling
Field Data Sheets**



GETTLER-RYAN INC.

TRANSMITTAL

December 1, 2014
G-R #385640

TO: Mr. Jim Harms
AECOM
10461 Old Placerville Road #170
Sacramento, California 95827

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 Second Semi-Annual Event of November 19, 2014

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 #: **385640**
Event Date: **11/19/14**
Sampler: **JV**

Comments _____

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

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

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

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

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

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



GETTLER - RYAN INC.

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/Facility#: **Chevron #351639 / 6129**

Site Address: **3420 35Th Avenue**

City: **Oakland, CA**

Job Number: **385640**

Event Date: **11/19/14** (inclusive)

Sampler: **JH**

Well ID **MW- 1**

Well Diameter **2** in.

Total Depth **43.44** ft.

Depth to Water **31.50** ft.

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

Check if water column is less than 0.50 ft.

11.94 xVF **.17** = **2.02** x3 case volume = Estimated Purge Volume: **6.08** gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: **33.88**

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): **0640**

Weather Conditions: **LT Rain**

Sample Time/Date: **0725 / 11/15/14**

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: **33.31**

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (μS / mS mmhos/cm)	Temperature ($^{\circ}\text{C}$ / $^{\circ}\text{F}$)	D.O. (mg/L)	ORP (mV)
0646	2	7.69	598	18.6	1.9	152
0652	4	7.62	584	18.5	1.8	149
0659	6	7.55	572	18.5	1.7	145

LABORATORY INFORMATION

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

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: 385640
 Event Date: 11/19/14 (inclusive)
 Sampler: JH

Well ID MW- 2

Date Monitored: 11/19/14

Well Diameter 2 in.

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

Total Depth 43.59 ft.

Depth to Water 31.46 ft.

12.13

Check if water column is less than 0.50 ft.

xVF .17 = 2.06 x3 case volume = Estimated Purge Volume: 6.18 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 33.88

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): 0750

Weather Conditions: LT Rain

Sample Time/Date: 0835 / 11/19/14

Water Color: Cloudy Odor: Y/N

Approx. Flow Rate: — gpm.

Sediment Description: 1.0 Hr

Did well de-water? N If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 32.25

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ($\mu\text{S} / \text{mS}$ $\mu\text{hos}/\text{cm}$)	Temperature ($^{\circ}\text{C} / ^{\circ}\text{F}$)	D.O. (mg/L)	ORP (mV)
<u>0757</u>	<u>2</u>	<u>7.91</u>	<u>756</u>	<u>18.6</u>	<u>1.7</u>	<u>162</u>
<u>0804</u>	<u>4</u>	<u>7.80</u>	<u>781</u>	<u>18.5</u>	<u>1.6</u>	<u>155</u>
<u>0811</u>	<u>6</u>	<u>7.73</u>	<u>765</u>	<u>18.5</u>	<u>1.5</u>	<u>153</u>
					<u>1.5</u>	<u>148</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
 Site Address: 3420 35Th Avenue
 City: Oakland, CA

Job Number: 385640
 Event Date: 11/19/14 (inclusive)
 Sampler: JH

Well ID MW-3

Well Diameter 2 in.

Total Depth 39.46 ft.

Depth to Water 30.22 ft.

Check if water column is less than 0.50 ft.

9.24 xVF .17 = 1.57 x3 case volume = Estimated Purge Volume: 4.71 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 32.06

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): 0900

Weather Conditions:

LT Rain

Sample Time/Date: 0940 / 11/19/14

Water Color: cloudy Odor: Y / N

Approx. Flow Rate: - gpm.

Sediment Description: L, s, H

Did well de-water? N If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 31.86

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (μS / mS $\mu\text{mhos}/\text{cm}$)	Temperature ($^{\circ}\text{C}$ / $^{\circ}\text{F}$)	D.O. (mg/L)	ORP (mV)
<u>0904</u>	<u>1.5</u>	<u>7.75</u>	<u>739</u>	<u>18.7</u>	<u>2.2</u>	<u>150</u>
<u>0910</u>	<u>3.0</u>	<u>7.68</u>	<u>731</u>	<u>18.6</u>	<u>2.1</u>	<u>143</u>
<u>0915</u>	<u>5.0</u>	<u>7.62</u>	<u>723</u>	<u>18.5</u>	<u>2.0</u>	<u>140</u>
					<u>1.9</u>	<u>136</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</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: _____

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>AECOM</u>	ANALYSES REQUIRED						Turnaround Time (TAT): Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/>			
Site Global ID: <u>T06C0101165</u>				Consultant Contact: <u>JAMES HARVEY</u>	TPH - Diesel by EPA 8015	TPH - G by GC/MS	BTEX/MTBE/OXYs by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS					
Site Address: <u>2420 25th Ave CAKings CA</u>				Consultant Phone No.: <u>716-261-6912</u>										
Union Oil PM: <u>N. Arceneaux</u>				Sampling Company: <u>BC Laboratories, Inc.</u>	Sampled By (PRINT): <u>Jim Harvey</u>	Special Instructions								
Union Oil PM Phone No.: <u>705-790-6912</u>														
Charge Code: NWRTB-0 <u>251639</u> -0-LAB				Sampler Signature: 										
				BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911										
SAMPLE ID				Sample Time		# of Containers		Notes / Comments						
Field Point Name	Matrix	DTW	Date (yymmdd)											
QA	W-S-A		07/19			2		X	X					
MW-1	W-S-A			0725		3		X	X					
MW-2	W-S-A			0825		3		X	X					
MW-3	W-S-A			0910		3		X	X					
	W-S-A													
	W-S-A													
	W-S-A													
	W-S-A													
	W-S-A													
	W-S-A													
	W-S-A													
Relinquished By	Company	Date / Time:		Relinquished By	Company	Date / Time :		Relinquished By	Company	Date / Time:				
	<u>BC Laboratories</u>	<u>07/19 2015</u>			<u>BC Laboratories</u>	<u>07/19 2015</u>								
Received By	Company	Date / Time:		Received By	Company	Date / Time :		Received By	Company	Date / Time:				
	<u>BC Laboratories</u>	<u>07/19 2015</u>			<u>BC Laboratories</u>	<u>07/19 2015</u>								

ATTACHMENT B

BC Labs Analytical Report



Date of Report: 12/02/2014

Jim Harms

AECOM

2020 L St, Suite 400
Sacramento, CA 95811

Client Project: 351639

BCL Project: 6129

BCL Work Order: 1427996

Invoice ID: B189914

Enclosed are the results of analyses for samples received by the laboratory on 11/24/2014. 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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BC

Laboratories, Inc.

Environmental Testing Laboratory Since 1949

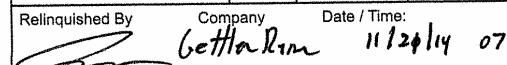
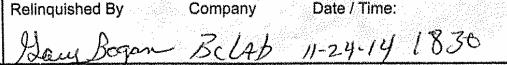
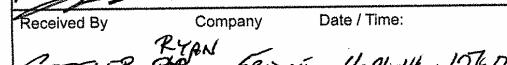
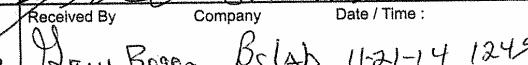
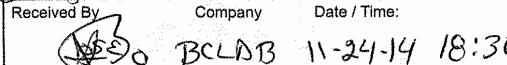
Chain of Custody and Cooler Receipt Form for 1427996 Page 1 of 2

14-27996

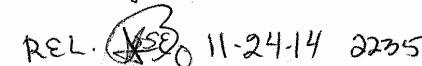
CHAIN OF CUSTODY FORM

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

COC 1 of 1

Union Oil Site ID: 6129		Union Oil Consultant: AECOM		ANALYSES REQUIRED				Turnaround Time (TAT): Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/>	Special Instructions		
Site Global ID: T0600101465		Consultant Contact: James Haarms		EPA 8260B Full List with OXYS	EPA 8260B Full List with OXYS	EPA 8260B Full List with OXYS	EPA 8260B Full List with OXYS				
Site Address: 3420 35th ave OAKLAND CA		Consultant Phone No.: 916-361-6412		<input checked="" type="checkbox"/> BTEX/MBEE/PCB by EPA 8260B	<input checked="" type="checkbox"/> TPH - G by GC/MS	<input checked="" type="checkbox"/> TPH - Diesel by EPA 8015	<input checked="" type="checkbox"/> TPH - Diesel by EPA 8015				
Union Oil PM: N. ARCEAUX		Sampling Company: Gettler Ryan		<input checked="" type="checkbox"/> TPH - Diesel by EPA 8015	<input checked="" type="checkbox"/> TPH - G by GC/MS	<input checked="" type="checkbox"/> TPH - Diesel by EPA 8015	<input checked="" type="checkbox"/> TPH - Diesel by EPA 8015				
Union Oil PM Phone No.: 925-790-6512		Sampled By (PRINT): Jim Haarm		<input checked="" type="checkbox"/> TPH - Diesel by EPA 8015	<input checked="" type="checkbox"/> TPH - G by GC/MS	<input checked="" type="checkbox"/> TPH - Diesel by EPA 8015	<input checked="" type="checkbox"/> TPH - Diesel by EPA 8015				
Charge Code: NWRTB-0 351639-0-LAB				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							
SAMPLE ID				Sample Time	# of Containers					Notes / Comments	
Field Point Name	Matrix	DTW	Date (yymmdd)								
1 QA	W-S-A		141119	-	2	X	X	X			
2 MW-1	W-S-A			0725	3						
3 MW-2	W-S-A			0835	3						
4 MW-3	W-S-A			0940	3						
Relinquished By	Company	Date / Time:		Relinquished By	Company	Date / Time:		Relinquished By	Company	Date / Time:	
	Gettler Ryan	11/21/14 0700			Molly Bogen	11-21-14 1245			Molly Bogen	BCLAB	11-24-14 1830
Received By	Company	Date / Time:		Received By	Company	Date / Time:		Received By	Company	Date / Time:	
	RYAN FRIDGE	11-21-14 1245			Molly Bogen	BCLAB 11-21-14 1245			Molly Bogen	BCLAB	11-24-14 18:30

RNC

REL.  11-24-14 2235

Kathie Beauf 11/24/14 2235



Chain of Custody and Cooler Receipt Form for 1427996 Page 2 of 2

BC LABORATORIES INC.		COOLER RECEIPT FORM					Rev. No. 18	09/04/14	Page <u>1</u> Of <u>1</u>		
Submission #: <u>14-27996</u>											
SHIPPING INFORMATION							SHIPPING CONTAINER		FREE LIQUID		
Federal Express <input type="checkbox"/> UPS <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____							Ice Chest <input type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		YES <input type="checkbox"/> NO <input type="checkbox"/>		
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"/> Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>	Containers <input type="checkbox"/> Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>	None <input type="checkbox"/> Comments: _____							
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		All samples containers intact? Yes <input type="checkbox"/> No <input checked="" 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>0.97</u>		Container: <u>V01</u>		Thermometer ID: <u>208</u>		Date/Time <u>2/25/14</u>			
		Temperature: (A) <u>1.8</u> °C / (C) <u>2.0</u> °C						Analyst Init <u>KJB</u>			
SAMPLE CONTAINERS		SAMPLE NUMBERS									
		1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/GENERAL											
PT PE UNPRESERVED											
QT INORGANIC CHEMICAL METALS											
PT INORGANIC CHEMICAL METALS											
PT CYANIDE											
PT NITROGEN FORMS											
PT TOTAL SULFIDE											
2oz. NITRATE / NITRITE											
PT TOTAL ORGANIC CARBON											
PT TOX											
PT CHEMICAL OXYGEN DEMAND											
PTA PHENOLICS											
40ml VOA VIAL TRAVEL BLANK		<u>A15</u>									
40ml VOA VIAL		<u>A15</u>	<u>A15C</u>	<u>A15C</u>							
QT EPA 413.1, 413.2, 418.1											
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 Amber EPA 548											
QT EPA 549											
QT EPA 632											
QT EPA 8015M											
QT AMBER											
8 OZ. JAR											
32 OZ. JAR											
SOIL SLEEVE											
PCB VIAL											
PLASTIC BAG											
FERROUS IRON											
ENCORE											
SMART KIT											
Summa Canister											

Comments: _____

Sample Numbering Completed By: Cee

A = Actual / C = Corrected

Date/Time: 11/25/14 0955 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]



AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/02/2014 14:56
Project: 6129
Project Number: 351639
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information	
1427996-01	COC Number: --- Project Number: 6129 Sampling Location: --- Sampling Point: QA-W-141119 Sampled By: AECS	Receive Date: 11/24/2014 22:35 Sampling Date: 11/19/2014 00:00 Sample Depth: --- Lab Matrix: Water Sample Type: Trip Blank Delivery Work Order: Global ID: T0600101465 Location ID (FieldPoint): QA Matrix: W Sample QC Type (SACode): CS Cooler ID:
1427996-02	COC Number: --- Project Number: 6129 Sampling Location: --- Sampling Point: MW-1-W-141119 Sampled By: AECS	Receive Date: 11/24/2014 22:35 Sampling Date: 11/19/2014 07:25 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:
1427996-03	COC Number: --- Project Number: 6129 Sampling Location: --- Sampling Point: MW-2-W-141119 Sampled By: AECS	Receive Date: 11/24/2014 22:35 Sampling Date: 11/19/2014 08:35 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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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/02/2014 14:56
Project: 6129
Project Number: 351639
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information	
1427996-04	COC Number: --- Project Number: 6129 Sampling Location: --- Sampling Point: MW-3-W-141119 Sampled By: AECS	Receive Date: 11/24/2014 22:35 Sampling Date: 11/19/2014 09:40 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101465 Location ID (FieldPoint): MW-3 Matrix: W Sample QC Type (SACode): CS Cooler ID:

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/02/2014 14:56
Project: 6129
Project Number: 351639
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1427996-01	Client Sample Name:	6129, QA-W-141119, 11/19/2014 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)	105	%	75 - 125 (LCL - UCL)	EPA-8260B				1
Toluene-d8 (Surrogate)	89.8	%	80 - 120 (LCL - UCL)	EPA-8260B				1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)	EPA-8260B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/26/14	11/26/14 21:19	JMS	MS-V12	1	BXK2371

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/02/2014 14:56
Project: 6129
Project Number: 351639
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1427996-02	Client Sample Name: 6129, MW-1-W-141119, 11/19/2014 7:25:00AM						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND			1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND			1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND			1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND			1
Methyl t-butyl ether	180	ug/L	2.5	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	130	ug/L	50	Luft-GC/MS	ND	A90		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)	EPA-8260B				1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)	EPA-8260B				2
Toluene-d8 (Surrogate)	90.7	%	80 - 120 (LCL - UCL)	EPA-8260B				1
Toluene-d8 (Surrogate)	91.1	%	80 - 120 (LCL - UCL)	EPA-8260B				2
4-Bromofluorobenzene (Surrogate)	110	%	80 - 120 (LCL - UCL)	EPA-8260B				1
4-Bromofluorobenzene (Surrogate)	105	%	80 - 120 (LCL - UCL)	EPA-8260B				2

Run #	Method	Prep Date	Run Date/Time		Analyst	Instrument	Dilution	QC Batch ID
			Date	Time				
1	EPA-8260B	11/26/14	11/27/14	05:15	JMS	MS-V12	1	BXK2371
2	EPA-8260B	11/26/14	11/27/14	04:40	JMS	MS-V12	5	BXK2371

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Sacramento, CA 95811

Reported: 12/02/2014 14:56
Project: 6129
Project Number: 351639
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1427996-03	Client Sample Name: 6129, MW-2-W-141119, 11/19/2014 8:35:00AM						
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	980	ug/L	10	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	31	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	430	ug/L	50	Luft-GC/MS	ND	A90		1
1,2-Dichloroethane-d4 (Surrogate)	114	%	75 - 125 (LCL - UCL)	EPA-8260B				1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)	EPA-8260B				2
Toluene-d8 (Surrogate)	89.8	%	80 - 120 (LCL - UCL)	EPA-8260B				1
Toluene-d8 (Surrogate)	93.6	%	80 - 120 (LCL - UCL)	EPA-8260B				2
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)	EPA-8260B				1
4-Bromofluorobenzene (Surrogate)	98.0	%	80 - 120 (LCL - UCL)	EPA-8260B				2

Run #	Method	Prep Date	Run Date/Time		Analyst	Instrument	Dilution	QC Batch ID
			Date	Time				
1	EPA-8260B	11/26/14	11/27/14	05:51	JMS	MS-V12	1	BXK2371
2	EPA-8260B	11/26/14	11/27/14	04:23	JMS	MS-V12	20	BXK2371

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Reported: 12/02/2014 14:56
Project: 6129
Project Number: 351639
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1427996-04	Client Sample Name: 6129, MW-3-W-141119, 11/19/2014 9:40:00AM						
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	250	ug/L	2.5	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	180	ug/L	50	Luft-GC/MS	ND	A90		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)	EPA-8260B				1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)	EPA-8260B				2
Toluene-d8 (Surrogate)	96.0	%	80 - 120 (LCL - UCL)	EPA-8260B				1
Toluene-d8 (Surrogate)	92.4	%	80 - 120 (LCL - UCL)	EPA-8260B				2
4-Bromofluorobenzene (Surrogate)	107	%	80 - 120 (LCL - UCL)	EPA-8260B				1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)	EPA-8260B				2

Run #	Method	Prep Date	Run Date/Time		Analyst	Instrument	Dilution	QC Batch ID
			Date	Time				
1	EPA-8260B	11/26/14	11/27/14	05:33	JMS	MS-V12	1	BXK2371
2	EPA-8260B	11/26/14	11/27/14	04:58	JMS	MS-V12	5	BXK2371

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Reported: 12/02/2014 14:56
Project: 6129
Project Number: 351639
Project Manager: Jim Harms

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: BXK2371						
Benzene	BXK2371-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BXK2371-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BXK2371-BLK1	ND	ug/L	0.50		
Ethylbenzene	BXK2371-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BXK2371-BLK1	ND	ug/L	0.50		
Toluene	BXK2371-BLK1	ND	ug/L	0.50		
Total Xylenes	BXK2371-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BXK2371-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BXK2371-BLK1	ND	ug/L	10		
Diisopropyl ether	BXK2371-BLK1	ND	ug/L	0.50		
Ethanol	BXK2371-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BXK2371-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons	BXK2371-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BXK2371-BLK1	106	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BXK2371-BLK1	92.8	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BXK2371-BLK1	102	%	80 - 120 (LCL - UCL)		

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Reported: 12/02/2014 14:56
Project: 6129
Project Number: 351639
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	Control Limits		Lab Quals
							RPD	Percent Recovery	
QC Batch ID: BXK2371									
Benzene	BXK2371-BS1	LCS	30.300	25.000	ug/L	121		70 - 130	
Toluene	BXK2371-BS1	LCS	31.800	25.000	ug/L	127		70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BXK2371-BS1	LCS	8.7800	10.000	ug/L	87.8		75 - 125	
Toluene-d8 (Surrogate)	BXK2371-BS1	LCS	9.6600	10.000	ug/L	96.6		80 - 120	
4-Bromofluorobenzene (Surrogate)	BXK2371-BS1	LCS	10.680	10.000	ug/L	107		80 - 120	



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Reported: 12/02/2014 14:56
Project: 6129
Project Number: 351639
Project Manager: Jim Harms

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	<u>Control Limits</u>		
									RPD	Percent Recovery	Lab Quals
QC Batch ID: BXK2371		Used client sample: N									
Benzene	MS	1427933-03	ND	25.570	25.000	ug/L		102		70 - 130	
	MSD	1427933-03	ND	25.960	25.000	ug/L	1.5	104	20	70 - 130	
Toluene	MS	1427933-03	ND	28.720	25.000	ug/L		115		70 - 130	
	MSD	1427933-03	ND	29.690	25.000	ug/L	3.3	119	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1427933-03	ND	9.0900	10.000	ug/L		90.9		75 - 125	
	MSD	1427933-03	ND	9.0600	10.000	ug/L	0.3	90.6		75 - 125	
Toluene-d8 (Surrogate)	MS	1427933-03	ND	10.160	10.000	ug/L		102		80 - 120	
	MSD	1427933-03	ND	10.330	10.000	ug/L	1.7	103		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1427933-03	ND	10.400	10.000	ug/L		104		80 - 120	
	MSD	1427933-03	ND	11.070	10.000	ug/L	6.2	111		80 - 120	



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Project: 6129
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Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
A90	TPPH does not exhibit a "gasoline" pattern. TPPH is entirely due to MTBE.

ATTACHMENT C

Former Exxon Service Station Data Tables

TABLE 1 WELL CONSTRUCTION DETAILS,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date Installed	Date Destroyed	Elevation TOC (feet)	Borehole Diameter (inches)	Total Depth of Boring (feet bgs)	Well Depth (feet bgs)	Casing Diameter (inches)	Casing Material	Screened Interval (feet bgs)	Slot Size (inches)	Filter Pack Interval (feet bgs)	Filter Pack Material
MW1	07/15/92	06/00	192.00	11	45	45	4	Sch. 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW2	07/15/92	06/00	194.85	11	45	45	4	Sch. 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW3	07/15/92	06/00	196.90	11	45	45	4	Sch. 40 PVC	25-45	0.010	23-45	2/12 Lonestar Sand
MW4	03/02/09	---	197.62	8	45	45	2	Sch. 40 PVC	35-45	0.020	33-45	#3 Sand
MW5	03/06/09	---	196.35	8	40	40	2	Sch. 40 PVC	30-40	0.020	28-40	#3 Sand
MW6	03/09/09	---	192.41	8	40	39	2	Sch. 40 PVC	29-39	0.020	27-39	#3 Sand
MW7	03/09/09	---	194.34	8	40	40	2	Sch. 40 PVC	30-40	0.020	28-40	#3 Sand
MW8	03/04/09	---	192.96	8	40	40	2	Sch. 40 PVC	30-40	0.020	28-40	#3 Sand
MW9	03/05/09	---	195.16	8	40	40	2	Sch. 40 PVC	30-40	0.020	28-40	#3 Sand
RW1	12/22/11	---	195.15	10	40	40	4	Stainless Steel	25-39.5	0.020	23-40	#2/12 Sand

TOC Top of well casing elevation; datum is mean sea level.

PVC Polyvinyl chloride.

feet bgs Feet below ground surface.

--- Not applicable.

Notes: Data prior to 2013 provided by Cardno ERI.

TABLE 2 CURRENT GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g ($\mu\text{g}/\text{L}$)	Benzene ($\mu\text{g}/\text{L}$)	Toluene ($\mu\text{g}/\text{L}$)	Ethylbenzene ($\mu\text{g}/\text{L}$)	Total Xylenes ($\mu\text{g}/\text{L}$)	MTBE 8260B ($\mu\text{g}/\text{l}$)
MW4	SCREEN INTERVAL (feet bgs) 35-45										
MW4	11/19/14	a 197.62	36.96	160.66	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50
MW5	SCREEN INTERVAL (feet bgs) 30-40										
MW5	11/19/14	a 196.35	36.05	160.30	0.00	1,400 HD	140	2.05	<2.5	4.7	120
MW6	SCREEN INTERVAL (feet bgs) 29-39										
MW6	11/19/14	a 192.41	32.49	159.92	0.00	420 HD	<10	<10	<10	<10	530
MW7	SCREEN INTERVAL (feet bgs) 30-40										
MW7	11/19/14	a 194.34	34.31	160.03	0.00	400 HD	<12	<12	<12	<12	660
MW8	SCREEN INTERVAL (feet bgs) 30-40										
MW8	11/19/14	a 192.96	33.16	159.80	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50
MW9	SCREEN INTERVAL (feet bgs) 30-40										
MW9	11/19/14	a 195.16	34.60	160.56	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50
RW1	SCREEN INTERVAL (feet bgs) 29-39.5										
RW1	11/19/14	a 195.15	34.94	160.21	0.00	910 HD	450	<10	<10	<10	590

TOC Top of casing.

bgs Below ground surface.

LPH Liquid-phase hydrocarbons.

$\mu\text{g}/\text{L}$ Micrograms per liter.

TPH-g Total Petroleum Hydrocarbons as gasoline.

--- Not sampled or not analyzed.

MTBE Methyl tertiary butyl ether.

NA Not available.

NM Not measured.

NC Not calculated.

a Well purged prior to sampling.

b Well inaccessible.

HD Chromat. profile inconsistent with the ref. fuel stds.

Notes: Data prior to 1999 provided by EA Engineering, Science, and Technology. Data prior to 2013 provided by Cardno ERI.

**TABLE 3 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA**

Well Number	Date	Elevation TOC (feet)	Depth to Water TOC (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g ($\mu\text{g/L}$)	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethyl-benzene ($\mu\text{g/L}$)	Total Xylenes ($\mu\text{g/L}$)	MTBE 8260B ($\mu\text{g/l}$)	Total Pb ($\mu\text{g/L}$)	Organic Pb (mg/L)
MW1 SCREEN INTERVAL (feet bgs) 25-45													
MW1	07/15/92	---	Well installed.										
MW1	07/17/92	192.00	33.02	158.98	0.00	67	6.6	6.9	2.0	4.5	---	17	---
MW1	10/22/92	192.00	34.07	157.93	0.00	<50	2.9	<0.5	<0.5	<0.5	---	16	---
MW1	02/04/93	192.00	29.43	162.57	0.00	<50	0.8	<0.5	<0.5	<0.5	---	4	---
MW1	05/03/93	192.00	29.72	162.28	0.00	71	2.8	7.2	2.2	22	---	40	---
MW1	07/30/93	192.00	32.95	159.05	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	5	---
MW1	10/19/93	192.00	34.34	157.66	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	12	---
MW1	02/23/94	192.00	31.72	160.28	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	4	---
MW1	06/06/94	192.00	31.77	160.23	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW1	08/18/94	192.00	33.76	158.24	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	130	---
MW1	11/15/94	192.00	34.08	157.92	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	<100
MW1	02/06/95	192.00	28.50	163.50	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW1	05/10/95	192.00	29.30	162.70	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW1	09/20/99	192.00	33.30	158.70	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<75	<50
MW1	Well destroyed in June 2000.												
MW2 SCREEN INTERVAL (feet bgs) 25-45													
MW2	07/15/92	---	Well installed.										
MW2	07/17/92	194.85	34.65	160.20	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	10/22/92	194.85	35.64	159.21	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	--	---
MW2	02/04/93	194.85	31.13	163.72	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	05/03/93	194.85	31.08	163.77	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	3	---
MW2	07/30/93	194.85	34.34	160.51	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	14	---
MW2	10/19/93	194.85	36.00	158.85	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	02/23/94	194.85	33.92	160.93	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	06/06/94	194.85	33.50	161.35	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW2	08/18/94	194.85	35.38	159.47	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	---
MW2	11/15/94	194.85	35.93	158.92	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	<100
MW2	02/06/95	194.85	30.38	164.47	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW2	05/10/95	194.85	30.77	164.08	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW2	09/20/99	194.85	35.15	159.70	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<75	<0.5
MW2	Well destroyed in June 2000.												
MW3 SCREEN INTERVAL (feet bgs) 25-45													
MW3	07/15/92	---	Well installed.										
MW3	07/17/92	196.90	37.24	159.66	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	50	---
MW3	10/22/92	196.90	35.95	160.95	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	9	---
MW3	02/04/93	196.90	29.85	167.05	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---
MW3	05/03/93	196.90	29.87	167.03	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	3	---
MW3	07/30/93	196.90	33.85	163.05	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	22	---
MW3	10/19/93	196.90	35.89	161.01	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	12	---
MW3	02/23/94	196.90	32.88	164.02	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	25	---

TABLE 3 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g ($\mu\text{g/L}$)	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethyl-benzene ($\mu\text{g/L}$)	Total Xylenes ($\mu\text{g/L}$)	MTBE 8260B ($\mu\text{g/l}$)	Total Pb ($\mu\text{g/L}$)	Organic Pb (mg/L)	
MW3	06/06/94	196.90	32.40	164.50	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3	---	
MW3	08/18/94	196.90	35.07	161.83	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	---	
MW3	11/15/94	196.90	35.97	160.93	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	<3.0	<100	
MW3	02/06/95	196.90	28.39	168.51	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	
MW3	05/10/95	196.90	28.90	168.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	
MW3	09/20/99	196.90	34.68	162.22	0.00	75.0	<0.5	11.5	1.8	18.0	1.87	<75	<0.5	
MW3	Well destroyed in June 2000.													
MW4	SCREEN INTERVAL (feet bgs) 35-45													
MW4	03/02/09	---	Well installed.	197.62	30.94	166.68	0.00	<50	<0.50	<0.50	<0.50	<0.50	---	
MW4	03/30/09	197.62		32.00	165.62	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	
MW4	04/02/09	197.62	Well surveyed.	35.43	162.19	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	
MW4	05/28/09	197.62		35.01	162.61	0.00	<50	<0.50	0.83	<0.50	1.1	<0.50	---	
MW4	08/31/09	197.62	34.95	168.51	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	
MW4	12/11/09	197.62	34.95	162.67	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	
MW4	05/07/10	197.62	30.65	166.97	0.00	---	---	---	---	---	---	---	---	
MW4	11/01/10	197.62	33.49	164.13	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	
MW4	05/24/12	197.62	30.02	167.60	0.00	58	0.84	4.4	0.64c	3.5	<0.50	---	---	
MW4	10/31/12	197.62	35.14	162.48	0.00	110	5.3	45	4.2	21	<0.50	---	---	
MW4	05/02/13	e	32.03	165.59	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	
MW4	11/09/13	197.62	36.53	161.09	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	
MW4	05/12/14	a	33.51	164.11	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	
MW4	11/19/14	a	197.62	36.96	160.66	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW5	SCREEN INTERVAL (feet bgs) 30-40													
MW5	03/06/09	---	Well installed.	196.35	30.05	166.30	0.00	4,200	540	140	<12	310	1,900	
MW5	03/30/09	196.35		31.45	164.90	0.00	5,300	890	150	<25	140	3,600	---	
MW5	04/02/09	196.35	Well surveyed.	34.70	161.65	0.00	5,800	550	<100	<100	<100	3,500	---	
MW5	05/28/09	196.35		34.52	161.83	0.00	4,000b	230	<100	<100	<100	3,800	---	
MW5	08/31/09	196.35	30.84	165.51	0.00	2,700b	73	5.3	3.6	6.5	1,700	---	---	
MW5	12/11/09	196.35	33.93	162.42	0.00	2,400b	320	71	21	40	3,400	---	---	
MW5	05/07/10	196.35	31.65	164.70	0.00	---	---	---	---	---	---	---	---	
MW5	11/01/10	196.35	32.58	163.77	0.00	1,900b	72	2.7	3.1	8.1	3,200	---	---	
MW5	05/27/11	a	31.26	166.09	0.00	2,900b	54	31	5.2	17	1,700	---	---	
MW5	11/23/11	196.35	33.94	162.41	0.00	2,200b	220	72	8.7	47	2,700	---	---	
MW5	05/24/12	196.35	31.33	165.02	0.00	2,200b	61	<0.50	3.8	7.9	1,300	---	---	
MW5	10/31/12	c	35.69	160.66	0.00	1,300b	120	<5.0	<5.0	8.8	370	---	---	
MW5	05/02/13	196.35	32.64	163.71	0.00	1,200	120	<5.0	<5.0	<5.0	490	---	---	
MW5	11/09/13	196.35	36.05	160.30	0.00	1,400 HD	140	2.05	<2.5	4.7	120	---	---	

TABLE 3 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g ($\mu\text{g/L}$)	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethyl-benzene ($\mu\text{g/L}$)	Total Xylenes ($\mu\text{g/L}$)	MTBE 8260B ($\mu\text{g/l}$)	Total Pb ($\mu\text{g/L}$)	Organic Pb (mg/L)
MW6 SCREEN INTERVAL (feet bgs) 29-39													
MW6	03/09/09	---	Well installed.										
MW6	03/30/09	192.41	26.94	165.47	0.00	2,800	0.91	<0.50	<0.50	<0.50	4,800	---	---
MW6	04/02/09	192.41	Well surveyed.									---	---
MW6	05/28/09	192.41	28.04	164.37	0.00	2,800	<100	<100	<100	<100	6,000	---	---
MW6	08/31/09	192.41	30.57	161.84	0.00	4,900	<100	<100	<100	<100	6,600	---	---
MW6	12/11/09	192.41	30.78	161.63	0.00	4,900b	<100	<100	<100	<100	6,200	---	---
MW6	05/07/10	192.41	25.42	166.99	0.00	2,900b	2.7	<0.50	0.74c	<1.0	3,700	---	---
MW6	11/01/10	192.41	30.68	161.73	0.00	850b	2.1	<0.50	<0.50	<1.0	6,100	---	---
MW6	05/27/11 a	192.41	27.07	165.34	0.00	---	---	---	---	---	---	---	---
MW6	11/23/11	192.41	29.25	163.16	0.00	1,600b	<0.50	<0.50	<0.50	<1.0	6,400	---	---
MW6	05/24/12	192.41	26.36	166.05	0.00	2,000b	1.3c	9.7	0.97c	5.5	3,400	---	---
MW6	10/31/12	192.41	30.74	161.67	0.00	1,400b	3.8	28	2.2	11	5,400	---	---
MW6	05/02/13	192.41	27.91	164.50	0.00	1,900b	<0.50	<0.50	<0.50	<0.50	2,600	---	---
MW6	11/09/13	192.41	32.15	160.26	0.00	3,600b	<40	<40	<40	<40	4,800	---	---
MW6	05/12/14 a	192.41	29.28	163.13	0.00	190 HD	<5.0	<5.0	<5.0	<5.0	280	---	---
MW6	11/19/14 a	192.41	32.49	159.92	0.00	420 HD	<10	<10	<10	<10	530	---	---
MW7 SCREEN INTERVAL (feet bgs) 30-40													
MW7	03/09/09	---	Well installed.									---	---
MW7	03/30/09	194.34	29.15	165.19	0.00	55	<0.50	<0.50	<0.50	<0.50	66	---	---
MW7	04/02/09	194.34	Well surveyed.									---	---
MW7	05/28/09	194.34	30.16	164.18	0.00	50	<1.0	<1.0	<1.0	<1.0	67	---	---
MW7	08/31/09	194.34	33.31	161.03	0.00	<50	<0.50	0.60	<0.50	<0.50	12	---	---
MW7	12/11/09	194.34	32.71	161.63	0.00	<50	0.78	1.7	0.62	2.4	31	---	---
MW7	05/07/10	194.34	27.54	166.80	0.00	510b	<0.50	<0.50	<0.50	<1.0	700	---	---
MW7	11/01/10	194.34	32.82	161.52	0.00	68b	<0.50	<0.50	<0.50	<1.0	140	---	---
MW7	05/27/11 a	194.34	28.85	165.49	0.00	---	---	---	---	---	---	---	---
MW7	11/23/11	194.34	31.39	162.95	0.00	190b	<0.50	<0.50	<0.50	<1.0	300	---	---
MW7	05/24/12 a	194.34	28.31	166.03	0.00	---	---	---	---	---	---	---	---
MW7	10/31/12	194.34	32.86	161.48	0.00	230b	2.9	21	1.8	9.2	290	---	---
MW7	05/02/13	194.34	29.93	164.41	0.00	570b	<0.50	<0.50	<0.50	<0.50	790	---	---
MW7	11/09/13	194.34	34.23	160.11	0.00	370b	<10	<10	<10	<10	460	---	---
MW7	05/12/14 a	194.34	31.33	163.01	0.00	310 HD	<10	<10	<10	<10	980	---	---
MW7	11/19/14 a	194.34	34.31	160.03	0.00	400 HD	<12	<12	<12	<12	660	---	---
MW8 SCREEN INTERVAL (feet bgs) 30-40													
MW8	03/04/09	---	Well installed.									---	---
MW8	03/30/09	192.96	27.35	165.61	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	04/02/09	192.96	Well surveyed.									---	---
MW8	05/28/09	192.96	28.72	164.24	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW8	08/31/09	192.96	31.93	161.03	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---

TABLE 3 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g ($\mu\text{g/L}$)	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethyl-benzene ($\mu\text{g/L}$)	Total Xylenes ($\mu\text{g/L}$)	MTBE 8260B ($\mu\text{g/l}$)	Total Pb ($\mu\text{g/L}$)	Organic Pb (mg/L)	
MW8	12/11/09	192.96	31.24	161.72	0.00	<50	0.74	1.6	0.59	2.3	<0.50	---	---	
MW8	05/07/10	192.96	25.68	167.28	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	
MW8	11/01/10	192.96	31.18	161.78	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	
MW8	05/27/11	192.96	27.55	165.41	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	
MW8	11/23/11	192.96	29.74	163.22	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	
MW8	05/24/12	192.96	26.93	166.03	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	
MW8	10/31/12	192.96	31.35	161.61	0.00	75	2.5	19	1.7	8.7	<0.50	---	---	
MW8	05/02/13	192.96	28.44	164.52	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	
MW8	11/09/13	192.96	32.89	160.07	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	
MW8	05/12/14	a	192.96	30.27	162.69	0.00	<50	<0.50	<0.50	<0.50	<0.50	---	---	
MW8	11/19/14	a	192.96	33.16	159.80	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
MW9	SCREEN INTERVAL (feet bgs) 30-40													
MW9	03/05/09	---	Well installed.											
MW9	03/30/09	195.16	28.31	166.85	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	
MW9	04/02/09	195.16	Well surveyed.											
MW9	05/28/09	195.16	29.69	165.47	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	
MW9	08/31/09	195.16	33.20	161.96	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	
MW9	12/11/09	195.16	32.62	162.54	0.00	<50	0.73	1.7	0.54	2.2	<0.50	---	---	
MW9	05/07/10	195.16	26.59	168.57	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	
MW9	11/01/10	195.16	32.45	162.71	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	
MW9	05/27/11	195.16	29.62	165.54	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	
MW9	11/23/11	195.16	30.56	164.60	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	
MW9	05/24/12	195.16	27.94	167.22	0.00	<50	<0.50	<0.50	<0.50	<1.0	<0.50	---	---	
MW9	10/31/12	195.16	32.66	162.50	0.00	140	6.9	38	2.7	13	<0.50	---	---	
MW9	05/02/13	195.16	29.58	165.58	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---	
MW9	11/09/13	195.16	Well inaccessible.											
MW9	05/12/14	b	195.16	Well inaccessible.										
MW9	11/19/14	a	195.16	34.60	160.56	0.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
RW1	SCREEN INTERVAL (feet bgs) 29-39.5													
RW1	12/22/11	---	Well installed.											
RW1	12/30/11	195.15	Well surveyed.											
RW1	05/24/12	195.15	28.55	166.60	0.00	5,500b	920	5.9c	51	14	2,500	---	---	
RW1	10/31/12	a	195.15	---	---	---	---	---	---	---	---	---	---	
RW1	05/02/13	c	195.15	30.27	164.88	0.00	4,300b	1,200	<2.5	41	14	2,300	---	
RW1	11/09/13	195.15	34.64	160.51	0.00	810b	210	<10	<10	<10	520	---	---	
RW1	05/12/14	a	195.15	31.54	163.61	0.00	830 HD	450	<10	13	<10	490	---	
RW1	11/19/14	a	195.15	34.94	160.21	0.00	910 HD	450	<10	<10	590	---	---	

Grab Groundwater Samples

Pit Water	06/14/02	---	---	---	---	5,600	140	840	100	530	12,000	---	---
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TABLE 3 HISTORICAL GROUNDWATER MONITORING DATA,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Elevation TOC (feet)	Depth to Water (feet below TOC)	Groundwater Elevation (feet)	LPH Thickness (feet)	TPH-g ($\mu\text{g/L}$)	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethyl-benzene ($\mu\text{g/L}$)	Total Xylenes ($\mu\text{g/L}$)	MTBE 8260B ($\mu\text{g/l}$)	Total Pb ($\mu\text{g/L}$)	Organic Pb (mg/L)
UST Pit	06/19/02	---	---	---	---	680	2.7	36	18	130	640	---	---
W-38-B11	11/14/07	---	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---
W-15-B12	11/13/07	---	---	---	---	8,400	67	<5.0	140	150	78	---	---
W-40-B13	11/12/07	---	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	0.53	---	---
W-15-B14	11/13/07	---	---	---	---	2,500	1.7	3.0	26	13	16	---	---
W-38-B15	11/15/07	---	---	---	---	18,000	3,400	2,500	330	2,000	12,000	---	---
W-40-B16	11/15/07	---	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	7.7	---	---
W-37-B17	11/13/07	---	---	---	---	630	1.8	<0.50	4.1	1.4	2,200	---	---
W-38-B18	11/12/07	---	---	---	---	4,300	52	<12	56	96	1,400	---	---
W-35-B19	03/03/09	---	---	---	---	4,400	<0.50	<0.50	<0.50	<1.0	7,100	---	---
W-35-B20	03/03/09	---	---	---	---	640	<0.50	<0.50	<0.50	<1.0	440	---	---
W-35-B21	03/03/09	---	---	---	---	<50	<0.50	<0.50	<0.50	<1.0	1.4	---	---

TOC Top of casing.

LPH Liquid-phase hydrocarbons.

TPH-g Total Petroleum Hydrocarbons as gasoline.

MTBE Methyl tertiary butyl ether.

NM Not measured.

bgs Below ground surface.

$\mu\text{g/L}$ Micrograms per liter.

-- Not sampled or not analyzed.

NA Not available.

NC Not calculated.

Total Pb Total lead analyzed using EPA Method 6010.

Organic Pb Organic lead analyzed using CA DHS LUFT method.

a Well purged prior to sampling.

b Well inaccessible.

c Well sampled the following day.

HD Chromat. profile inconsistent with the ref. fuel stdns.

Notes: Data prior to 1999 provided by EA Engineering, Science, and Technology. Data prior to 2013 provided by Cardno ERI.

TABLE 4 GROUNDWATER ANALYTICAL RESULTS FOR DETECTED VOCs,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Depth (feet)	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	Naphthalene (µg/L)
MW1	7/17/1992 - 09/20/1999				Not analyzed for these analytes.					
MW1					Well destroyed in June 2000.					
MW2	7/17/1992 - 09/20/1999				Not analyzed for these analytes.					
MW2					Well destroyed in June 2000.					
MW3	7/17/1992 - 09/20/1999				Not analyzed for these analytes.					
MW3					Well destroyed in June 2000.					
MW4	03/30/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	05/28/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	08/31/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	12/11/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	05/07/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	11/01/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	05/27/11	d	---	---	---	---	---	---	---	---
MW4	11/23/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	05/24/12	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	10/31/12	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	05/03/13	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW4	11/09/13	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW4	05/12/14	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	<1.0
MW5	03/30/09	---	<12	17	<12	450	<12	<12	---	---
MW5	05/28/09	---	<25	<25	<25	530	<25	<25	---	---
MW5	08/31/09	---	<100	<100	<100	<1,000	<100	<100	---	---
MW5	12/11/09	---	<100	<100	<100	2,000	<100	<100	---	---
MW5	05/07/10	---	<25	<25	<25	400	<25	<25	---	---
MW5	11/01/10	---	<50	<50	<50	1,500	<50	<50	---	---
MW5	05/27/11	d	---	---	---	---	---	---	---	---
MW5	11/23/11	---	<50	<50	<50	<500	<50	<50	---	---
MW5	05/24/12	---	<50	<50	<50	1,400	<50	<50	---	---
MW5	10/31/12	---	<50	<50	<50	730	<50	<50	---	---
MW5	05/03/13	---	<20	<20	<20	590	<20	<20	---	---
MW5	11/09/13	---	<5.0	<5.0	<5.0	1,100	<5.0	<5.0	---	---
MW5	05/12/14	---	<5.0	<5.0	<5.0	1,000	<5.0	<5.0	---	<10
MW6	03/30/09	---	<0.50	<0.50	1.3	410	<0.50	0.82	---	---
MW6	05/28/09	---	<100	<100	<100	<1,000	<100	<100	---	---
MW6	08/31/09	---	<100	<100	<100	1,100	<100	<100	---	---
MW6	12/11/09	---	<100	<100	<100	2,600	<100	<100	---	---
MW6	05/07/10	---	<100	<100	<100	<1,000	<100	<100	---	---
MW6	11/01/10	---	<50	<50	<50	2,400	<50	<50	---	---
MW6	05/27/11	d	---	---	---	---	---	---	---	---
MW6	11/23/11	---	<100	<100	<100	<1,000	<100	<100	---	---
MW6	05/24/12	---	<100	<100	<100	2,700	<100	<100	---	---
MW6	10/31/12	---	<100	<100	<100	<1,000	<100	<100	---	---
MW6	05/02/13	---	<40	<40	<40	570	<40	<40	---	---
MW6	11/09/13	---	<40	<40	<40	2,100	<40	<40	---	---
MW6	05/12/14	---	<5.0	<5.0	<5.0	1,700	<5.0	<5.0	---	<10
MW7	03/30/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW7	05/28/09	---	<1.0	<1.0	<1.0	<10	<1.0	<1.0	---	---
MW7	08/31/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW7	12/11/09	---	<0.50	<0.50	<0.50	12	<0.50	<0.50	---	---
MW7	05/07/10	---	<0.50	<0.50	<0.50	130	<0.50	<0.50	---	---

**TABLE 4 GROUNDWATER ANALYTICAL RESULTS FOR DETECTED VOCs,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA**

Well Number	Date	Depth (feet)	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	Naphthalene (µg/L)
MW7	11/01/10	---	<2.5	<2.5	<2.5	27	<2.5	<2.5	---	---
MW7	05/27/11	d	---	---	---	---	---	---	---	---
MW7	11/23/11	---	<5.0	<5.0	<5.0	<50	<5.0	<5.0	---	---
MW7	05/24/12	d	---	---	---	---	---	---	---	---
MW7	10/31/12	---	<5.0	<5.0	<5.0	<50	<5.0	<5.0	---	---
MW7	05/02/13	---	<5.0	<5.0	<5.0	57	<5.0	<5.0	---	---
MW7	11/09/13	---	<10	<10	<10	<200	<10	<10	---	---
MW7	05/12/14	---	<10	<10	<10	<200	<10	<10	---	<20
MW8	03/30/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/28/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	08/31/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	12/11/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/07/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	11/01/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/27/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	11/23/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/24/12	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	10/31/12	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	05/02/13	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW8	11/09/13	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	---
MW8	05/12/14	---	<0.50	<0.50	<0.50	<10	<0.50	<0.50	---	<1.0
MW9	03/30/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/28/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	08/31/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	12/11/09	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/07/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	11/01/10	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/27/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	11/23/11	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/24/12	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	10/31/12	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	05/02/13	---	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	---	---
MW9	11/09/13	---	Well inaccessible.							
RW1	05/24/12	---	<50	<50	<50	1,900	<50	<50	---	---
RW1	10/31/12	d	---	---	---	---	---	---	---	---
RW1	05/03/13	---	<40	<40	<40	880	<40	<40	---	---
RW1	11/09/13	---	<10	<10	<10	1,100	<10	<10	---	---
RW1	05/12/14	---	<10	<10	<10	840	<10	<10	---	<20
Grab Groundwater Samples										
Pit Water	06/14/02	11.5a	---	---	---	---	---	---	---	---
UST Pit	06/19/02	13.5a	---	---	---	---	---	---	---	---
W-38-B11	11/14/07	38	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<50	---
W-15-B12	11/13/07	15	<5.0	<5.0	<5.0	<100	<5.0	<5.0	<500	---
W-40-B13	11/12/07	40	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<50	---
W-15-B14	11/13/07	15	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<100	---
W-38-B15	11/15/07	38	<25	<25	<25	1,900	<25	<25	<2,500	---
W-40-B16	11/15/07	40	<0.50	<0.50	<0.50	<10	<0.50	<0.50	85	---
W-37-B17	11/13/07	37	<0.50	<0.50	<0.50	58	<0.50	<0.50	<50	---
W-38-B18	11/12/07	38	<12	<12	<12	<250	<12	<12	<1,200	---

TABLE 4 GROUNDWATER ANALYTICAL RESULTS FOR DETECTED VOCs,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Date	Depth (feet)	EDB (µg/L)	1,2-DCA (µg/L)	TAME (µg/L)	TBA (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	Naphthalene (µg/L)
W-35-B19	03/03/09	35	<50	<50	<50	<500	<50	<50	<5,000	---
W-35-B20	03/03/09	35	<0.50	<0.50	<0.50	12	<0.50	<0.50	<50	---
W-35-B21	03/03/09	35	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<50	---

EDB 1,2-Dibromoethane analyzed using EPA Method 8260B.

1,2-DCA 1,2-Dichloroethane analyzed using EPA Method 8260B.

TBA Tertiary butyl alcohol analyzed using EPA Method 8260B.

TAME Tertiary amyl methyl ether analyzed using EPA Method 8260B.

ETBE Ethyl tertiary butyl ether analyzed using EPA Method 8260B.

DIPE Di-isopropyl ether analyzed using EPA Method 8260B.

Ethanol Ethanol analyzed using EPA Method 8260B.

µg/L Micrograms per liter.

--- Not sampled/Not analyzed/Not measured/Not applicable.

a Approximate depth to groundwater surface at time of sampling.

d Well inaccessible.

Notes: Data prior to 1999 provided by EA Engineering, Science, and Technology, data prior to 2013 provided by Cardno ERI.

TABLE 5 GROUNDWATER MONITORING PLAN,
FORMER EXXON SERVICE STATION 70234,
3450 35TH AVENUE, OAKLAND, CALIFORNIA

Well Number	Groundwater Gauging Frequency	Groundwater Sampling and Analysis Frequency			
		BTEX	TPH-g	MTBE	TBA
MW4	SA	SA	SA	SA	SA
MW5	SA	SA	SA	SA	SA
MW6	SA	SA	SA	SA	SA
MW7	SA	SA	SA	SA	SA
MW8	SA	SA	SA	SA	SA
MW9	SA	SA	SA	SA	SA
RW1	SA	SA	SA	SA	SA

Notes:

BTEX Benzene, toluene, ethylbenzene, and xylenes.

TPH-g Total Petroleum Hydrocarbons as gasoline.

MTBE Methyl tertiary butyl ether.

TBA Tertiary butyl alcohol.

SA Semiannually (performed during the second and fourth quarters of each year).