Nicole M. Arceneaux
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Marketing Business Unit

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January 27, 2016

RECEIVED
By Alameda County Environmental Health 9:51 am, Feb 01, 2016

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

Re: **Unocal No. 5781 (351640)**
3535 Pierson Street, Oakland, California
Fuel Leak Case No. RO0000253
GeoTracker Global ID #T0600101467

I have reviewed the attached report dated January 27, 2016.

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

Nicole Arceneaux
Project Manager

Attachment: Fourth Quarter 2015 Groundwater Monitoring Report by AECOM

AECOM
1220 Avenida Acaso
Camarillo, CA 93012
www.aecom.com

805.388.3775 tel
805.388.3557 fax

January 27, 2016

Mr. Keith Nowell
Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577
(*via internet upload*)

Subject: **Fourth Quarter 2015 Groundwater Monitoring Report**
Unocal No. 5781 (351640)
3535 Pierson Street, Oakland, California
Fuel Leak Case No. RO0000253
GeoTracker Global ID #T0600101467

Dear Mr. Nowell,

On behalf of Chevron Environmental Management Company's (EMC's) affiliate, Union Oil Company of California ("Union Oil"), AECOM is pleased to present the fourth quarter 2015 groundwater monitoring report for the site located at 3535 Pierson Street in Oakland, California (site) (**Figure 1**). The locations of the former and current site features are illustrated on **Figure 2**. Quarterly groundwater monitoring is 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 sample results collected from wells associated with the site during the fourth quarter of 2015.

Groundwater Monitoring Field Data

On December 22, 2015, Gettler-Ryan measured and recorded the depth to groundwater for the seven site monitoring wells (MW-A and MW-4 through MW-9). These depths were converted to groundwater elevations and used to construct a groundwater elevation contour map (**Figure 2** and **Table 1**). A copy of the groundwater gauging logs is included in **Attachment A**. The groundwater elevation for well MW-A was not used in contouring because the well is screened in the deeper aquifer. The depth to groundwater at the site ranged from 10.50 (MW-9) to 18.50 (MW-A) feet below the top of well casings with calculated elevations ranging from 136.29 (MW-A) to 141.84 (MW-5) feet above mean sea level. The groundwater flow direction ranges from west to north/northeast with a hydraulic gradient of 0.04 feet per foot. The groundwater elevation at MW-A was excluded from calculation of the hydraulic gradient, but it appears to indicate a groundwater divide that runs from northwest to southeast across the site (**Figure 2**).

Groundwater Sampling and Analytical Results

On December 22, 2015, Gettler-Ryan collected groundwater samples from monitoring wells MW-A and MW-4 through MW-9. The site wells historically have poor recharge; therefore, pre-purge samples are collected and if a well does not recharge within 2 hours, the pre-purge sample is submitted for analysis. Temperature, pH, and electrical conductivity readings were recorded during purging, and a copy of the purge logs is presented in **Attachment A**.

The groundwater samples were submitted to BC Laboratories, Inc. (BC Labs) of Bakersfield, California. The BC Labs analytical report dated January 11, 2016, is included as **Attachment B**. Groundwater samples were analyzed for the following based on historical trends at each monitoring well:

- Total petroleum hydrocarbons-diesel range organics (TPH-DRO) by Leaking underground fuel tank (Luft)/TPHd method with silica gel cleanup;
- Total petroleum hydrocarbons-gasoline range organics (TPH-GRO) by Environmental Protection Agency (EPA) Method 8015B;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8260B; and
- Fuel oxygenates, including methyl t-butyl ether (MTBE), t-amyl Methyl ether (TAME), t-Butyl alcohol (TBA), diisopropyl ether (DIPE), and ethyl t-butyl ether (ETBE), ethanol, 1,2-dibromoethane (EDB), and 1,2-dichloroethane (EDC) by EPA Method 8260B.

Analytical results are presented in **Tables 1 and 2** for this quarterly groundwater monitoring event. The following presents a brief summary of the sample analytical results:

- Benzene, toluene, ETBE, DIPE, TAME, EDB, EDC, TBA, and ethanol were not detected in any of the groundwater samples analyzed, except for MW-5 with benzene at 16 micrograms per liter (µg/L) and toluene at 63 µg/L.
- MTBE was reported for MW-6 at 4.7 µg/L and MW-8 at 1.1 µg/L.
- TPH-DRO was reported for MW-5 at 1,700 µg/L with the laboratory report noting that the chromatogram is not typical of diesel.
- TPH-GRO was detected for MW-5 at 5,600 µg/L.
- Ethylbenzene and total xylenes were detected in the groundwater sample collected from MW-5 at 53 µg/L and 320 µg/L, respectively. Historical concentrations of ethylbenzene and total xylenes detected for MW-5 have shown an overall decreasing trend.

A summary of historical groundwater analytical data through December 2015 is presented in **Tables 3 through 5**.

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.

During the fourth quarter of 2012, 0.39 feet of free product/light non-aqueous phase liquid (LNAPL) was observed in well MW-5. Free product/LNAPL has not been observed in MW-5 since that time.

Conclusions

The sample results from the groundwater monitoring activities at the site indicate the following.

- MW-A, MW-4, MW-6, MW-7, MW-8, and MW-9 are historically nondetect for most analytes.
- MW-5 continues to show elevated petroleum hydrocarbon concentrations.

Future Activities

Groundwater Monitoring

AECOM will coordinate monitoring and sampling activities as per the established schedule. AECOM will submit quarterly groundwater monitoring and sampling reports.

Additional Activity

On December 16, 2015, AECOM submitted an updated site conceptual model (SCM). The SCM identifies delineation of groundwater impacts to the east of MW-5 as a data gap. Preparation of a groundwater investigation work plan is planned. The groundwater investigation is intended to close

the data gap and provide the additional information needed by the agency for a case closure determination.

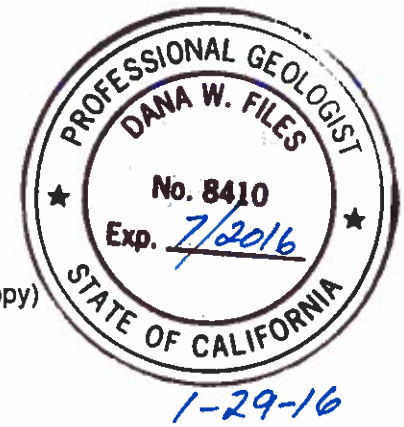
Remarks/Signatures

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 Chad Roper at (805) 764-4027.

Sincerely,

Chad Roper, PhD
Project Manager

Dana Files, PG No. 8410
Project Geologist



1-29-16

ccs: Nicole M. Arceneaux, EMC (via electronic copy)
DeLong Liu, United Brothers Enterprise, Inc., property owner (via paper copy)

Enclosures:

Tables
- Table 1 - Current Groundwater Monitoring Data and Analytical Results
- Table 2 - Current Groundwater Analytical Results - Oxygenate Compounds
- Table 3 - Historical Groundwater Monitoring Data and Analytical Results
- Table 4 - Historical Groundwater Analytical Results - Oxygenate Compounds
- Table 5 - Additional Historical Analytical Results

Figures
- Figure 1 - Site Location Map
- Figure 2 - Fourth Quarter 2015 Groundwater Elevation Map
- Figure 3 - Fourth Quarter 2015 Groundwater Analytical Data Map

Charts
- Chart 1 - Hydrograph for Well MW-A
- Chart 2 - Hydrograph for Well MW-4
- Chart 3 - Hydrograph for Well MW-5
- Chart 4 - Hydrograph for Well MW-6
- Chart 5 - Hydrograph for Well MW-7
- Chart 6 - Hydrograph for Well MW-8
- Chart 7 - Hydrograph for Well MW-9

Attachments
- Attachment A - Groundwater Monitoring Field Sheets
- Attachment B - BC Laboratories, Inc. Analytical Report

Tables

Table 1
Current Groundwater Monitoring Data and Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
MW-A	154.79	12/22/2015	18.50	136.29	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-4	153.48	12/22/2015	12.38	141.10	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-5	153.66	12/22/2015	11.82	141.84	0	1,700	5,600	16	63	53	320	
MW-6	154.62	12/22/2015	15.55	139.07	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-7	155.38	12/22/2015	15.58	139.80	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-8	153.71	12/22/2015	12.90	140.81	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-9	153.37	12/22/2015	10.50	139.32	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
QA	--	12/22/2015	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	

NOTES:

* TOC and GWE are in feet above mean sea level

BTEX compounds analyzed by Environmental Protection Agency Method (EPA) 8260B

TPH-DRO analyzed by Leaking Underground Fueld Tank (Luft)/TPHd Method with silica gel cleanup

TPH-GRO analyzed by Environmental Protection Agency Method 8015B

µg/L = Micrograms per liter

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

-- = Not analyzed/applicable

B = Benzene

DTW = Depth to water below TOC

E = Ethylbenzene

ft = Feet

GWE = Groundwater elevation

ID = Identification

LNAPL = Light non-aqueous phase liquid

QA = Quality assurance/trip blank

T = Toluene

TOC = Top of casing

TPH-DRO = Total petroleum hydrocarbons as diesel/diesel range organics

TPH-GRO = Total petroleum hydrocarbons as gasoline/gasoline range organics

X = Total xylenes

Table 2
Current Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
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-A	12/22/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-4	12/22/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-5	12/22/2015	<5.0	<100	<2,500	<5.0	<5.0	<5.0	<5.0	<5.0
MW-6	12/22/2015	4.7	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-7	12/22/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-8	12/22/2015	1.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-9	12/22/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
QA	12/22/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50

NOTES:
Oxygenate compounds analyzed by Environmental Protection Agency Method 8260B
µg/L = Micrograms per liter
<# = Analyte not detected at or above indicated laboratory practical quantitation limit
DIPE = Diisopropyl ether
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
ETBE = Ethyl t-butyl ether
ID = Identification
MTBE = Methyl t-butyl ether
QA = Quality assurance/trip blank
TAME = t-amyl methyl ether
TBA = t-butyl alcohol

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
MW-A	--	12/18/1990	--	--	--	73	ND	ND	ND	ND	ND	
	--	5/3/1991	--	--	--	ND	ND	ND	ND	ND	ND	
	--	8/7/1991	--	--	--	ND	ND	ND	ND	ND	ND	
	--	11/8/1991	--	--	--	ND	ND	ND	ND	ND	ND	
	151.80	2/6/1992	19.88	131.92	0	ND	ND	ND	ND	ND	ND	
	151.80	8/4/1992	18.95	132.85	0	ND	ND	ND	ND	ND	0.51	
	151.80	2/10/1993	17.71	134.09	0	ND	ND	ND	ND	ND	ND	
	151.80	2/10/1994	15.25	136.55	0	ND	ND	ND	0.52	ND	0.92	
	151.80	2/9/1995	15.68	136.12	0	ND	ND	ND	ND	ND	ND	
	151.80	2/6/1996	12.52	139.28	0	120	ND	ND	ND	ND	2.1	
	151.80	2/5/1997	13.01	138.79	0	61	ND	ND	ND	ND	ND	
	151.80	2/2/1998	11.91	139.89	0	ND	ND	ND	ND	ND	ND	
	151.80	2/22/1999	11.24	140.56	0	ND	ND	ND	ND	ND	ND	
	151.80	2/26/2000	12.16	139.64	0	ND	ND	ND	1.01	ND	ND	
	151.80	3/7/2001	11.91	139.89	0	131	ND	ND	ND	ND	ND	
	151.80	2/22/2002	14.08	137.72	0	<50	<50	<0.50	<0.50	<0.50	<0.50	
	151.80	2/22/2003	14.41	137.39	0	93	<50	<0.50	<0.50	<0.50	<0.50	
	151.80	2/3/2004	14.32	137.48	0	60	<50	<0.50	<0.50	<0.50	<0.50	
	151.80	2/18/2005	14.21	137.59	0	<50	<50	<0.50	<0.50	<0.50	<0.50	
	151.80	3/29/2006	12.72	139.08	0	<200	<50	<0.30	<0.30	<0.30	<0.60	
	151.80	3/28/2007	13.98	137.82	0	92	<50	<0.30	<0.30	<0.30	<0.60	
	151.80	3/22/2008	12.68	139.12	0	<50	<50	<0.30	<0.30	<0.30	<0.60	
	151.80	3/27/2009	14.35	137.45	0	53	<50	<0.30	<0.30	<0.30	<0.60	
	151.80	3/23/2010	19.55	132.25	0	<58	--	--	--	--	--	
	154.79	6/16/2010	17.85	136.94	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	9/29/2010	15.50	139.29	0	<1200	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	12/21/2010	14.43	140.36	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	3/10/2011	17.70	137.09	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	06/07/2011	13.92	140.87	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	08/18/2011	18.83	135.96	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	10/04/2011	14.67	140.12	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	01/24/2012	16.75	138.04	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	04/06/2012	17.14	137.65	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	07/02/2012	14.79	140.00	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	10/4/2012	17.52	137.27	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	1/23/2013	15.08	139.71	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	4/22/2013	15.60	139.19	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	7/31/2013	16.42	138.37	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	10/17/2013	16.57	138.22	0	<50	<50	<0.50	<0.50	<0.50	<1.0	

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Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	154.79	2/24/2014	17.33	137.46	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	4/17/2014	16.65	138.14	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	7/18/2014	18.02	136.77	0	--	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	10/21/2014	18.41	136.38	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	1/20/2015	17.95	136.84	0	<50	<50	<0.50	<0.50	<0.50	<1.0	pre-purge
	154.79	1/20/2015	--	--	--	<50	<50	<0.50	<0.50	<0.50	<1.0	post-purge
	154.79	6/3/2015	18.70	136.09	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	9/7/2015	18.18	136.61	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	**12/22/2015**	**18.50**	**136.29**	**0**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
MW-4	153.48	6/16/2010	11.13	142.35	0	<50	58	<0.50	9.7	1.3	16	
	153.48	9/29/2010	12.62	140.86	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	12/21/2010	11.17	142.31	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	3/10/2011	10.57	142.91	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	06/07/2011	10.94	142.54	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	08/18/2011	12.07	141.41	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	10/04/2011	12.70	140.78	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	01/24/2012	12.40	141.08	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	04/06/2012	11.10	142.38	0	<40	390	<0.50	3.8	11	150	
	153.48	07/02/2012	12.14	141.34	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	10/4/2012	13.43	140.05	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	1/23/2013	11.64	141.84	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	4/22/2013	12.22	141.26	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	7/31/2013	13.24	140.24	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	10/17/2013	13.85	139.63	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	2/24/2014	13.06	140.42	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	4/17/2014	11.96	141.52	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	7/18/2014	12.90	140.58	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	10/21/2014	13.68	139.80	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	1/20/2015	11.98	141.50	0	<50	<50	<0.50	<0.50	<0.50	<1.0	pre-purge
	153.48	1/20/2015	--	--	--	<50	<50	<0.50	<0.50	<0.50	<1.0	post-purge
	153.48	6/3/2015	12.42	141.06	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	9/7/2015	13.18	140.30	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	**12/22/2015**	**12.38**	**141.10**	**0**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
MW-5	153.66	6/16/2010	11.95	141.71	0	3,000	29,000	580	6,800	850	7,200	
	153.66	9/29/2010	13.67	139.99	0	64,000	29,000	220	4,100	2,500	23,000	
	153.66	12/21/2010	11.17	142.49	0	11,000	50,000	81	4,800	2,200	22,000	
	153.66	3/10/2011	11.35	142.31	0	4,900	48,000	69	3,600	1,700	20,000	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	153.66	06/07/2011	11.45	142.21	0	3,700	40,000	32	2,300	1,500	16,000	
	153.66	08/18/2011	12.30	141.36	0	5,400	30,000	29	1,000	980	7,200	
	153.66	10/04/2011	13.72	139.94	0	20,000	42,000	21	2,400	2,400	20,000	
	153.66	01/24/2012	12.20	141.46	0	46,000	71,000	<25	1,100	1,400	10,000	
	153.66	04/06/2012	11.88	141.78	0	21,000	58,000	9.9	880	660	9,800	
	153.66	07/02/2012	12.75	140.91	0	30,000	53,000	89	590	1,000	12,000	
	153.66	10/4/2012	16.03	137.34	0.39	No Sample Collected - Free Product in Well						
	153.66	1/23/2013	12.02	141.64	0	22,000	54,000	<25	160	1,100	13,000	
	153.66	4/22/2013	12.37	141.29	0	7,600	39,000	0.70	65	330	4,500	
	153.66	7/31/2013	15.62	138.04	0	11,000	35,000	1.0	59	470	3,500	
	153.66	10/17/2013	16.41	137.25	0	<50	86,000	<10	66	770	9,300	
	153.66	2/24/2014	15.27	138.39	0	1,700	3,900	<0.50	4.5	240	1,800	
	153.66	4/17/2014	12.02	141.64	0	960	27,000	<0.50	2.5	160	1,100	
	153.66	7/18/2014	15.28	138.38	0	2,100	6,600	<0.50	0.97	84	330	
	153.66	10/21/2014	17.03	136.63	0	3,000	27,000	<0.50	40	370	2,900	
	153.66	1/20/2015	12.24	141.42	0	880	9,100	<0.50	0.65	85	400	pre-purge
	153.66	1/20/2015	--	--	--	1,800	10,000	<0.50	0.54	85	370	post-purge
	153.66	6/3/2015	14.70	138.96	0	760	5,100	<0.50	<0.50	39	120	
	153.66	9/7/2015	16.63	137.03	0	3,800	4,100	<5.0	<5.0	130	540	
	153.66	**12/22/2015**	**11.82**	**141.84**	**0**	**1,700**	**5,600**	**16**	**63**	**53**	**320**	
MW-6	154.62	12/21/2010	12.10	142.52	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	3/10/2011	11.36	143.26	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	06/07/2011	11.33	143.29	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	08/18/2011	13.00	141.62	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	10/04/2011	14.02	140.60	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	01/24/2012	11.94	142.68	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	04/06/2012	11.39	143.23	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	07/02/2012	11.49	143.13	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	10/4/2012	16.09	138.53	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	1/23/2013	11.41	143.21	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	4/22/2013	11.43	143.19	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	7/31/2013	15.71	138.91	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	10/17/2013	16.83	137.79	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	2/24/2014	15.22	139.40	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	4/17/2014	11.43	143.19	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	7/18/2014	14.96	139.66	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	10/21/2014	16.70	137.92	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	1/20/2015	11.61	143.01	0	<50	<50	<0.50	<0.50	<0.50	<1.0	pre-purge

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	154.62	1/20/2015	--	--	--	<50	<50	<0.50	<0.50	<0.50	<1.0	post-purge
	154.62	6/3/2015	11.76	142.86	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	9/7/2015	16.08	138.54	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	**12/22/2015**	**15.55**	**139.07**	**0**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
MW-7	155.38	12/21/2010	13.46	141.92	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	3/10/2011	12.07	143.31	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	06/07/2011	12.59	142.79	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	08/18/2011	14.37	141.01	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	10/04/2011	15.22	140.16	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	01/24/2012	15.32	140.06	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	04/06/2012	13.09	142.29	0	<49	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	07/02/2012	14.42	140.96	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	10/4/2012	16.20	139.18	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	1/23/2013	13.27	142.11	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	4/22/2013	14.30	141.08	0	<50	52	<0.50	<0.50	<0.50	<1.0	
	155.38	7/31/2013	16.30	139.08	0	Insufficient Water to Sample						
	155.38	10/17/2013	16.77	138.61	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	2/24/2014	15.33	140.05	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	4/17/2014	13.82	141.56	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	7/18/2014	15.70	139.68	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	10/21/2014	16.67	138.71	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	1/20/2015	14.13	141.25	0	<50	<50	<0.50	<0.50	<0.50	<1.0	pre-purge
	155.38	1/20/2015	--	--	--	<50	<50	<0.50	<0.50	<0.50	<1.0	post-purge
	155.38	6/3/2015	15.13	140.25	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	9/7/2015	16.17	139.21	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	**12/22/2015**	**15.58**	**139.80**	**0**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
MW-8	153.71	12/21/2010	11.63	142.08	0	81	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	3/10/2011	11.38	142.33	0	61	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	06/07/2011	11.54	142.17	0	71	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	08/18/2011	12.47	141.24	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	10/04/2011	12.90	140.81	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	01/24/2012	12.52	141.19	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	04/06/2012	11.35	142.36	0	160	270	<0.50	3.7	7.8	91	
	153.71	07/02/2012	12.50	141.21	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	10/4/2012	13.89	139.82	0	<50	<50	<0.50	<0.50	<0.50	2.4	
	153.71	1/23/2013	13.06	140.65	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	4/22/2013	12.82	140.89	0	<50	<50	<0.50	<0.50	<0.50	<1.0	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	153.71	7/31/2013	13.63	140.08	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	10/17/2013	14.48	139.23	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	2/24/2014	13.56	140.15	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	4/17/2014	11.90	141.81	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	7/18/2014	13.78	139.93	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	10/21/2014	14.38	139.33	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	1/20/2015	13.28	140.43	0	<50	<50	<0.50	<0.50	<0.50	<1.0	pre-purge
	153.71	1/20/2015	--	--	--	<50	<50	<0.50	<0.50	<0.50	<1.0	post-purge
	153.71	6/3/2015	12.88	140.83	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	9/7/2015	14.19	139.52	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	**12/22/2015**	**12.90**	**140.81**	**0**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
MW-9	153.37	12/21/2010	10.53	142.84	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	3/10/2011	10.86	142.51	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	06/07/2011	11.36	142.01	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	08/18/2011	12.52	140.85	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	10/04/2011	13.32	140.05	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	01/24/2012	11.23	142.14	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	04/06/2012	10.98	142.39	0	<40	340	<0.50	4.4	9	120	
	153.37	07/02/2012	12.58	140.79	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	10/4/2012	14.31	139.06	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	1/23/2013	11.11	142.26	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	4/22/2013	12.22	141.15	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	7/31/2013	14.10	139.27	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	10/17/2013	14.56	138.81	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	2/24/2014	12.85	140.52	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	4/17/2014	11.73	141.64	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	7/18/2014	13.69	139.68	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	10/21/2014	14.32	139.05	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	1/20/2015	11.80	141.57	0	<50	<50	<0.50	<0.50	<0.50	<1.0	pre-purge
	153.37	1/20/2015	--	--	--	<50	<50	<0.50	<0.50	<0.50	<1.0	post-purge
	153.37	6/3/2015	13.30	140.07	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	9/7/2015	14.05	139.32	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	**12/22/2015**	**10.50**	**139.32**	**0**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
QA	--	1/23/2013	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	
	--	4/22/2013	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	
	--	7/31/2013	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	
	--	10/17/2013	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL THICKNESS (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	--	2/24/2014	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	
	--	4/17/2014	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	
	--	7/18/2014	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	
	--	10/21/2014	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	
	--	9/7/2015	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	
	--	**12/22/2015**	**--**	**--**	**--**	**--**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	

NOTES:

* TOC and GWE are in feet above mean sea level.
Free product correlates to light non-aqueous phase liquid
µg/L = Micrograms per liter
-- = Not analyzed/applicable
<# = Analyte not detected at or above indicated laboratory practical quantitation limit
B = Benzene
DTW = Depth to water below TOC
E = Ethylbenzene
ft = Feet
GWE = Groundwater elevation
ID = Identification
LNAPL = Light non-aqueous phase liquid
ND = Non-detect
QA = Quality assurance/trip blank
T = Toluene
TPH-DRO = Total petroleum hydrocarbons as diesel/diesel range organics
TPH-GRO = Total petroleum hydrocarbons as gasoline/gasoline range organics
TOC = Top of casing
X = Total xylenes

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
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)	METHANOL (µg/L)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)
MW-A	12/18/1990	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/3/1991	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/7/1991	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/8/1991	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/1992	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/4/1992	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/10/1993	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/10/1994	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/9/1995	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/1996	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/5/1997	ND	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/1998	ND	--	--	--	--	--	--	--	--	--	--	--	--
	2/22/1999	ND	--	--	--	--	--	--	--	--	--	--	--	--
	2/26/2000	ND	--	--	--	--	--	--	--	--	--	--	--	--
	3/7/2001	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--
	2/22/2002	<0.50	--	--	--	--	--	--	--	--	--	--	--	--
	2/22/2003	<2.0	<100	<500	<2.0	<2.0	<2.0	<2.0	<0.50	--	--	--	--	--
	2/3/2004	<2.0	<5.0	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	2/18/2005	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	3/29/2006	0.54	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	3/28/2007	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	3/22/2008	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	3/27/2009	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	3/23/2010	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/2010	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	9/29/2010	0.63	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	12/21/2010	0.65	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	3/10/2011	0.56	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	06/07/2011	0.57	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	08/18/2011	0.61	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	140	11	69
	10/04/2011	0.72	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	<100	13	69
	01/24/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	04/06/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	07/02/2012	0.56	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/4/2012	0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/23/2013	0.55	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/22/2013	0.59	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/31/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/17/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	2/24/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
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)	METHANOL (µg/L)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)
	7/18/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/21/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	6/3/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	9/7/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	12/22/2015	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**--**	**--**	**--**	**--**	**--**
MW-4	6/16/2010	5.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	9/29/2010	7.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	12/21/2010	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	3/10/2011	2.2	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	06/07/2011	1.6	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	08/18/2011	4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.04	<100	4.6	52
	10/04/2011	3.8	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.03	100	4.3	50
	01/24/2012	1.5	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	04/06/2012	2.2	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	07/02/2012	2.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/4/2012	1.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/23/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/22/2013	2.5	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/31/2013	0.95	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/17/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	2/24/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/18/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/21/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	6/3/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	9/7/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	12/22/2015	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**--**	**--**	**--**	**--**	**--**
MW-5	6/16/2010	<50	<1000	<25000	<50	<50	<50	<50	<50	<100	--	--	--	--
	9/29/2010	52	<1000	<25000	<50	<50	<50	<50	<50	<1000	--	--	--	--
	12/21/2010	<50	<1000	<25000	<50	<50	<50	<50	<50	<100	--	--	--	--
	3/10/2011	<50	<1000	<25000	<50	<50	<50	<50	<50	<100	--	--	--	--
	06/07/2011	24	150	330	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	08/18/2011	56	44	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	9.7	15,000	<0.44	<1.0
	10/04/2011	42	<250	<6,200	<12	<12	<12	<12	<12	<100	1.9	17,000	<0.44	1.3
	01/24/2012	<25	<500	<12,000	<25	<25	<25	<25	<25	--	--	--	--	--

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
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)	METHANOL (µg/L)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)
	04/06/2012	12	<120	<3,100	<6.2	<6.2	<6.2	<6.2	<6.2	--	--	--	--	--
	07/02/2012	26	<500	<12,000	<25	<25	<25	<25	<25	--	--	--	--	--
	10/4/2012	No Sample Collected - Free Product in Well												
	1/23/2013	<25	<500	<12,000	<25	<25	<25	<25	<25	--	--	--	--	--
	4/22/2013	2.9	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/31/2013	9.8	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/17/2013	<10	<200	<5,000	<10	<10	<10	<10	<10	--	--	--	--	--
	2/24/2014	1.7	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/17/2014	1.4	310	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/18/2014	3.6	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/21/2014	7.7	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/20/2015	2.2	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/20/2015	2.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	6/3/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	9/7/2015	<5.0	<100	<2,500	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--	--	--
	12/22/2015	**<5.0**	**<100**	**<2,500**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	**--**	**--**	**--**	**--**	**--**
MW-6	12/21/2010	32	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	3/10/2011	4.6	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	06/07/2011	4.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	08/18/2011	2.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.0027	<200	18	66
	10/04/2011	3.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	100	24	78
	01/24/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	04/06/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	07/02/2012	0.56	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/4/2012	0.75	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/23/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/22/2013	0.53	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/31/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/17/2013	16	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	2/24/2014	47	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/18/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/21/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/20/2015	0.83	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	6/3/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	9/7/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	12/22/2015	**4.7**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**--**	**--**	**--**	**--**	**--**
MW-7	12/21/2010	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
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)	METHANOL (µg/L)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)
	3/10/2011	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	06/07/2011	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	08/18/2011	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.0012	<500	3.8	100
	10/04/2011	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	<500	4.2	100
	01/24/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	04/06/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	07/02/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/4/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/23/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/22/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/30/2013	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/17/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	2/24/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/18/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/21/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	6/3/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	9/7/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	12/22/2015	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**--**	**--**	**--**	**--**	**--**
MW-8	12/21/2010	3.9	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	3/10/2011	2.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	06/07/2011	3.6	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	08/18/2011	2.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	140	1.5	65
	10/04/2011	1.5	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	190	2.8	67
	01/24/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	04/06/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	07/02/2012	1.5	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/4/2012	0.69	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/23/2013	1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/22/2013	0.88	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/31/2013	0.79	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/17/2013	0.78	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	2/24/2014	1.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/17/2014	1.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/18/2014	0.94	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/21/2014	2.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/20/2015	1.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/20/2015	1.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
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)	METHANOL (µg/L)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)
	6/3/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	9/7/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	12/22/2015	**1.1**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**--**	**--**	**--**	**--**	**--**
MW-9	12/21/2010	1.2	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	3/10/2011	0.90	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	06/07/2011	1.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	08/18/2011	2.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.001	<500	2.7	47
	10/04/2011	2.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	<200	3.2	47
	01/24/2012	1.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	04/06/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	07/02/2012	2.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/4/2012	1.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/23/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/22/2013	0.83	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/31/2013	1.8	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/17/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	2/24/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/18/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/21/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
pre-purge	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
post-purge	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	6/3/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	9/7/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	12/22/2015	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**--**	**--**	**--**	**--**	**--**
QA	01/23/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	04/22/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	07/31/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/17/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	02/24/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	04/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	07/18/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/21/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	09/07/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	12/22/2015	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**--**	**--**	**--**	**--**	**--**

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
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)	METHANOL (µg/L)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)

NOTES:

Free product correlates to light non-aqueous phase liquid
µg/L = Micrograms per liter
<# = Analyte not detected at or above indicated laboratory practical quantitation limit
-- = Not analyzed/applicable
DIPE = Diisopropyl ether
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
ETBE = Ethyl t-butyl ether
ID = Identification
mg/L = Milograms per liter
MTBE = Methyl t-butyl ether
ND = Non-detect
QA = Quality assurance/trip blank
TAME = t-amyl methyl ether
TBA = t-butyl alcohol

Table 5
Additional Historical Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

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

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

NOTES:

µg/L = Micrograms per liter

ID = Identification

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

Figures

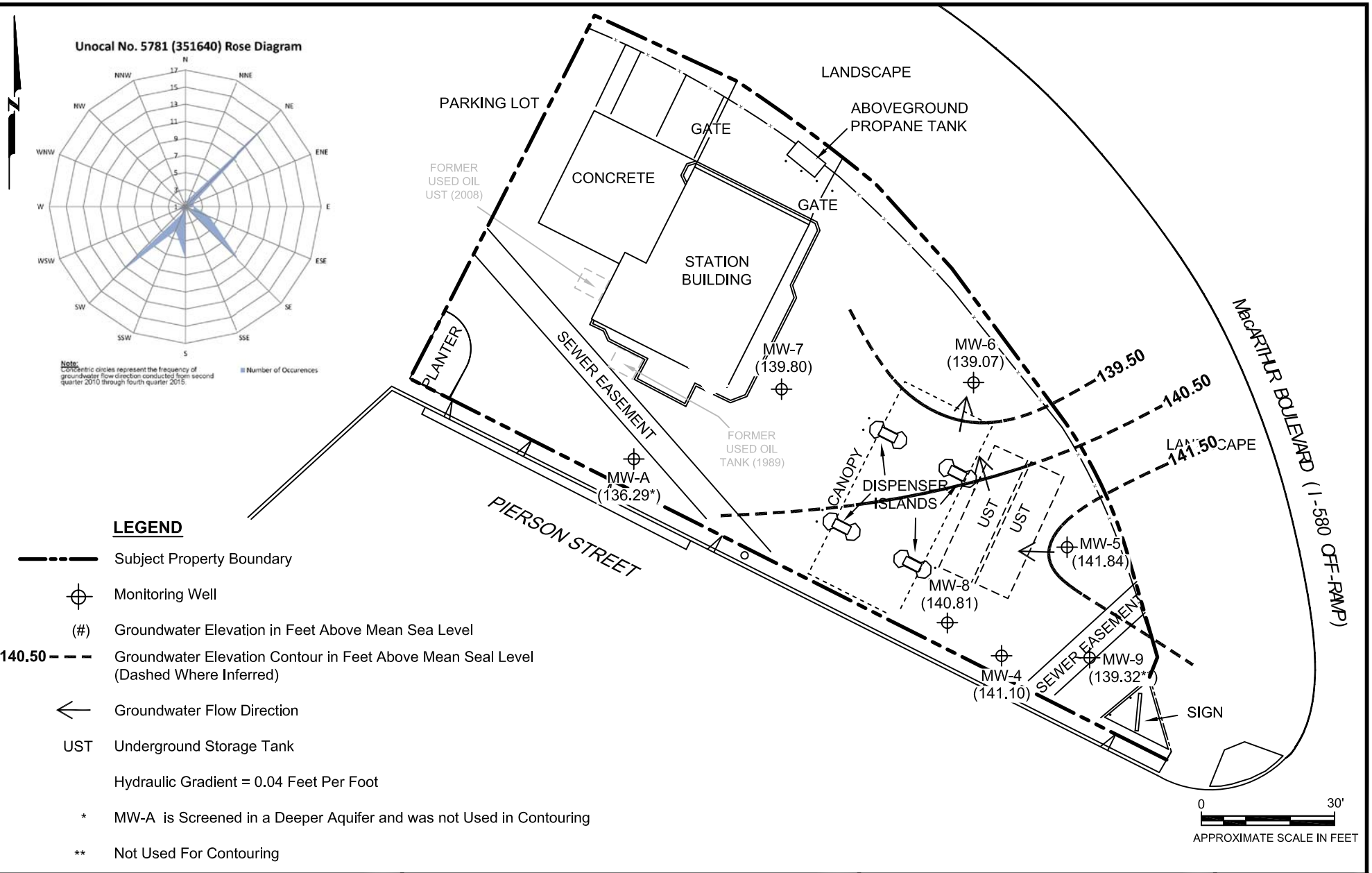
AECOM
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: 805.388.3775
FAX: 805.388.3557
WEB: HTTP://WWW.AECOM.COM

SITE LOCATION MAP

Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

FIGURE NUMBER:
1

DRAWN BY:	DATE:	PROJECT NUMBER:	SHEET NUMBER:
T. Quiroz	09/30/2015	60338852	1 of 1



LEGEND

- Subject Property Boundary
- Monitoring Well
- (#) Groundwater Elevation in Feet Above Mean Sea Level
- 140.50 Groundwater Elevation Contour in Feet Above Mean Seal Level (Dashed Where Inferred)
- Groundwater Flow Direction
- UST Underground Storage Tank
- Hydraulic Gradient = 0.04 Feet Per Foot
- * MW-A is Screened in a Deeper Aquifer and was not Used in Contouring
- ** Not Used For Contouring

FOURTH QUARTER 2015 GROUNDWATER ELEVATION MAP

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

SCALE:	DATE:	PROJECT NUMBER:
1" = 30'	01/26/2016	60338852

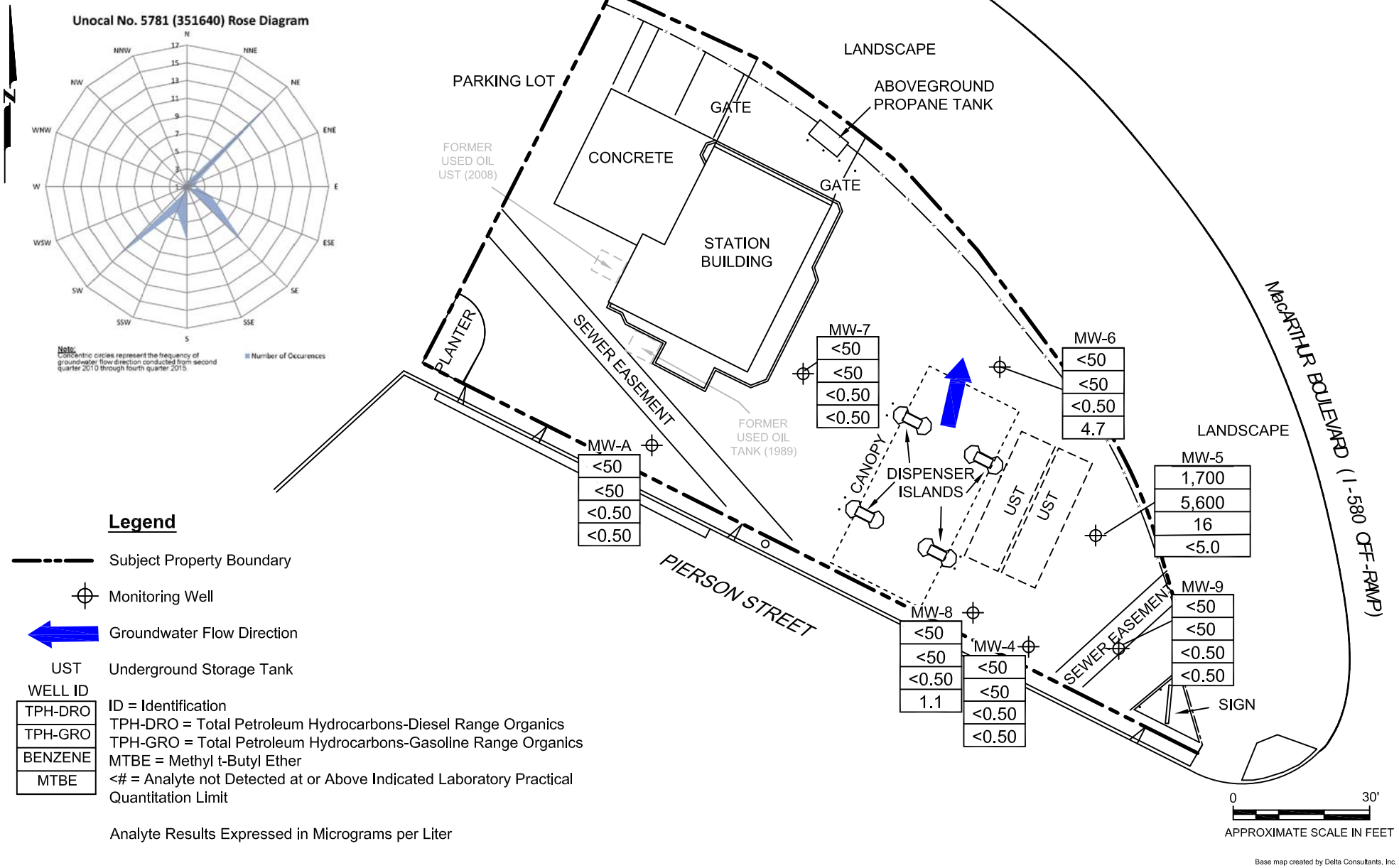
AECOM
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: 805.388.3775
FAX: 805.388.3557
WEB: HTTP://WWW.AECOM.COM

DESIGNED BY:	
DRAWN BY:	TQ
CHECKED BY:	DF
APPROVED BY:	CR

REVISIONS			
NO.:	DESCRIPTION:	DATE:	BY:

FIGURE NUMBER: 2

J:\CLIENT-PROJECTS\76_PRODUCTS\3516640_5781_OAKLAND_3535_PIERSON_ST\7.0 DELIVERABLES\7.2 CADD\GWR\2015\4Q15\CADD\FIGURE 2_GWE_351640_4Q15.DWG



Legend

- Subject Property Boundary
- Monitoring Well
- Groundwater Flow Direction
- UST — Underground Storage Tank

WELL ID
TPH-DRO
TPH-GRO
BENZENE
MTBE

ID = Identification
TPH-DRO = Total Petroleum Hydrocarbons-Diesel Range Organics
TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Organics
MTBE = Methyl t-Butyl Ether
<# = Analyte not Detected at or Above Indicated Laboratory Practical Quantitation Limit

Analyte Results Expressed in Micrograms per Liter

Base map created by Delta Consultants, Inc.

FOURTH QUARTER 2015 GROUNDWATER ANALYTICAL DATA MAP

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

SCALE:	DATE:	PROJECT NUMBER:
1" = 30'	01/26/2016	60338852

AECOM
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: 805.388.3775
FAX: 805.388.3557
WEB: HTTP://WWW.AECOM.COM

DESIGNED BY:	REVISIONS				FIGURE NUMBER:
	NO.:	DESCRIPTION:	DATE:	BY:	3
DRAWN BY: TQ					
CHECKED BY: DF					
APPROVED BY: CR					

J:\CLIENT-PROJECTS\76_PRODUCTS\351640_5781_OAKLAND_3535_PIERSON_ST\7.0 DELIVERABLES\7.2 CADD\GWR\2015\4Q15\CADD\FIGURE 3 CONC 4Q15_351640.DWG

Charts

Chart 1 - Hydrograph for Well MW-A

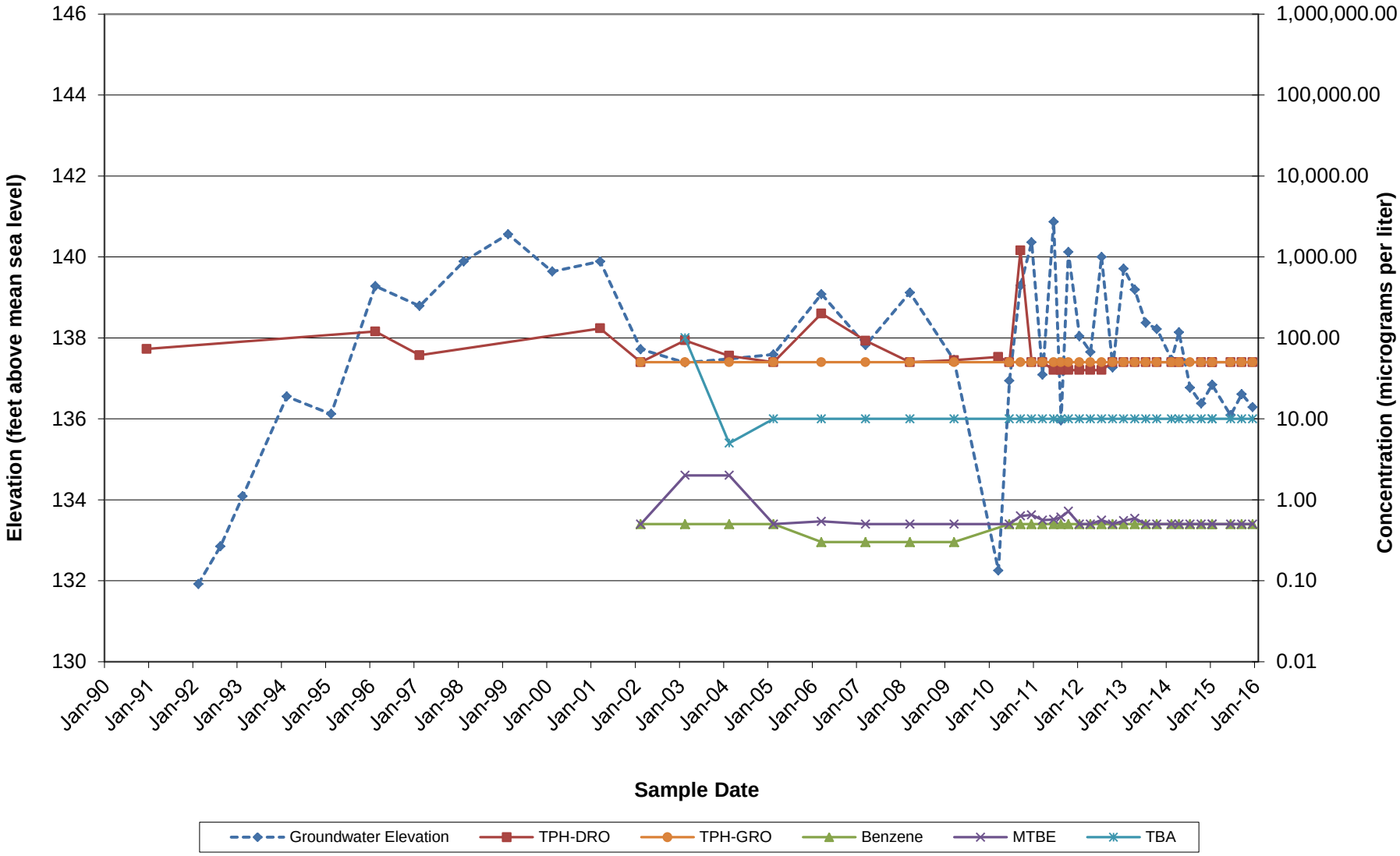


Chart 2 - Hydrograph for Well MW-4

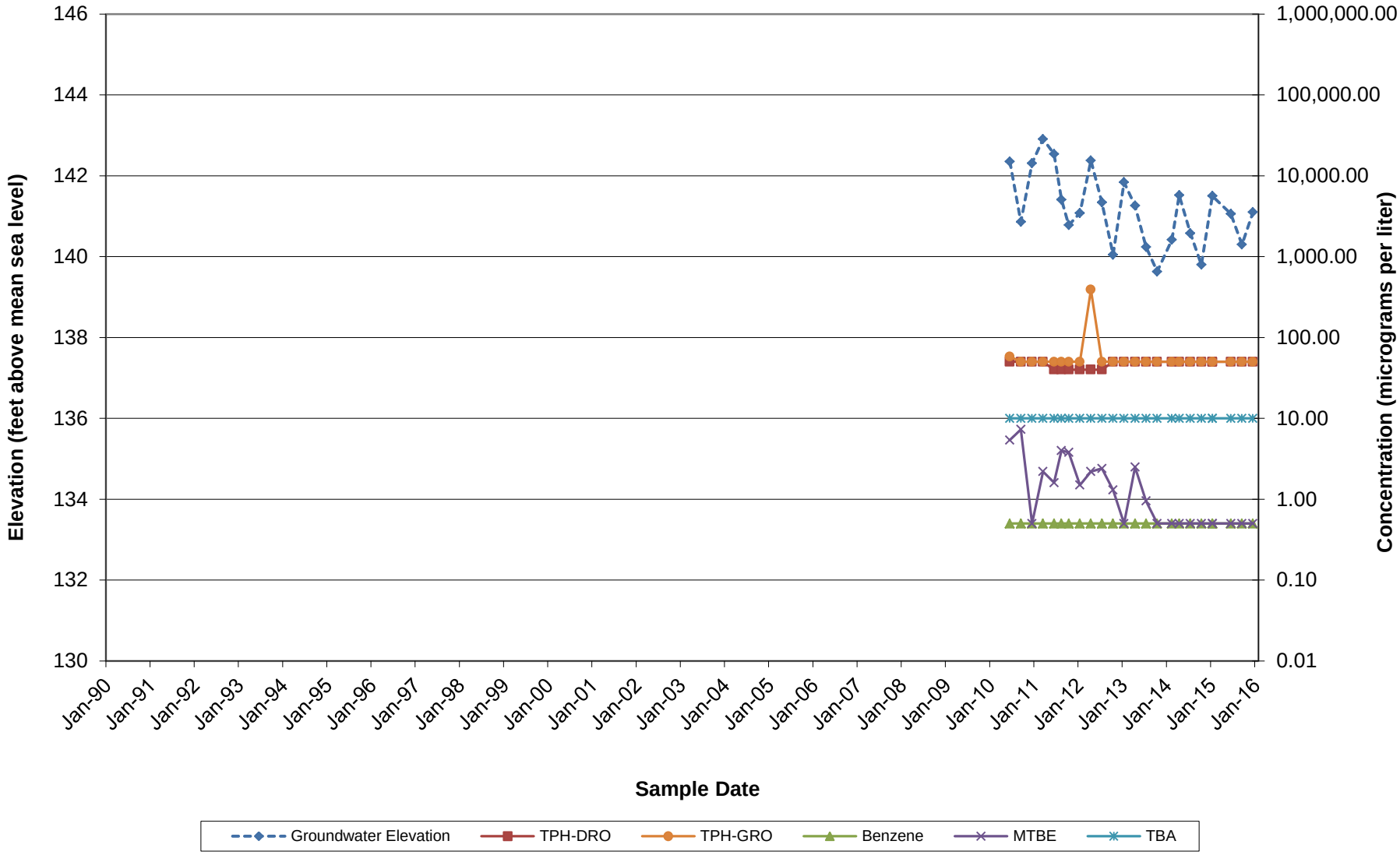


Chart 3 - Hydrograph for Well MW-5

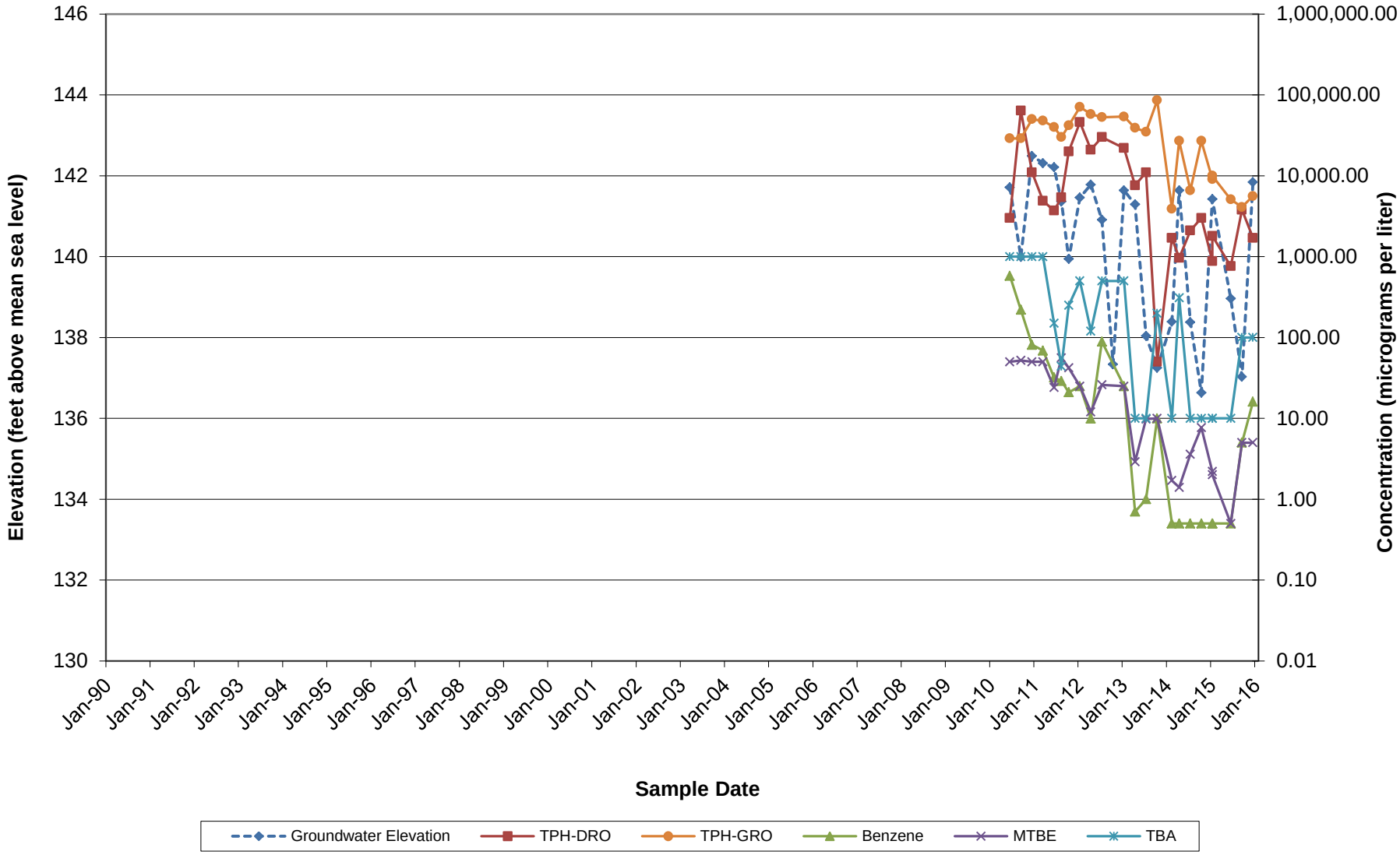


Chart 4 - Hydrograph for Well MW-6

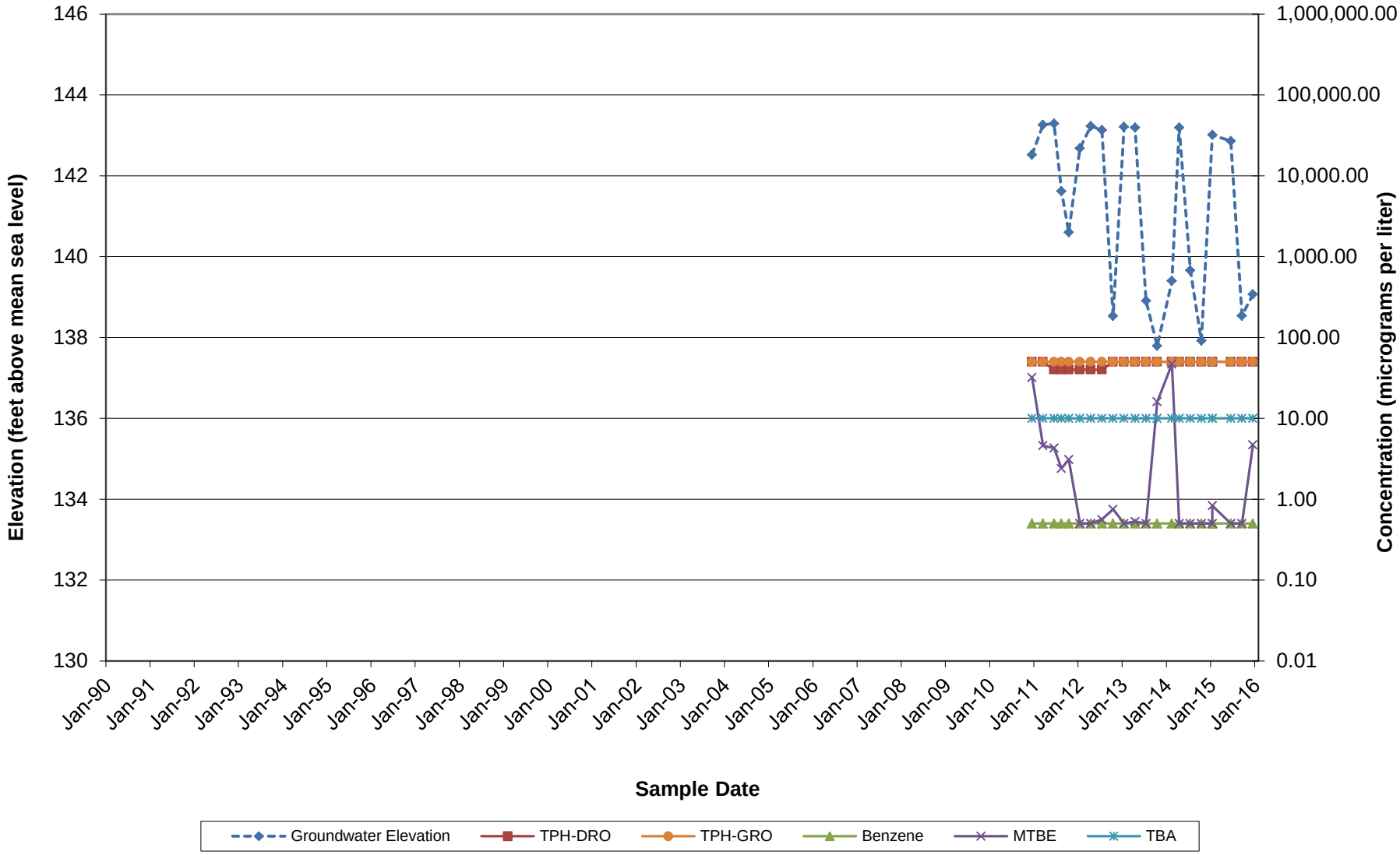


Chart 5 - Hydrograph for Well MW-7

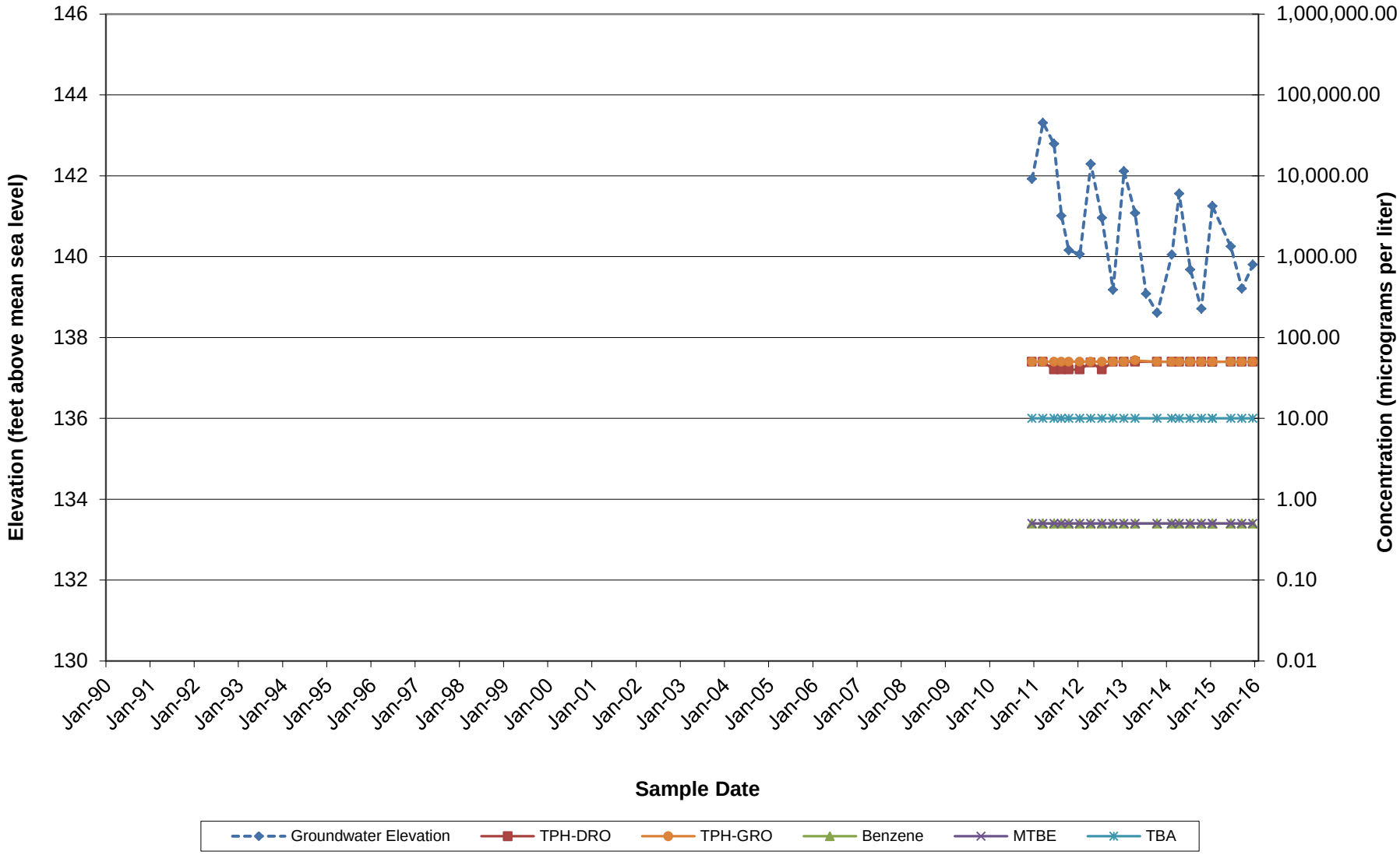


Chart 6 - Hydrograph for Well MW-8

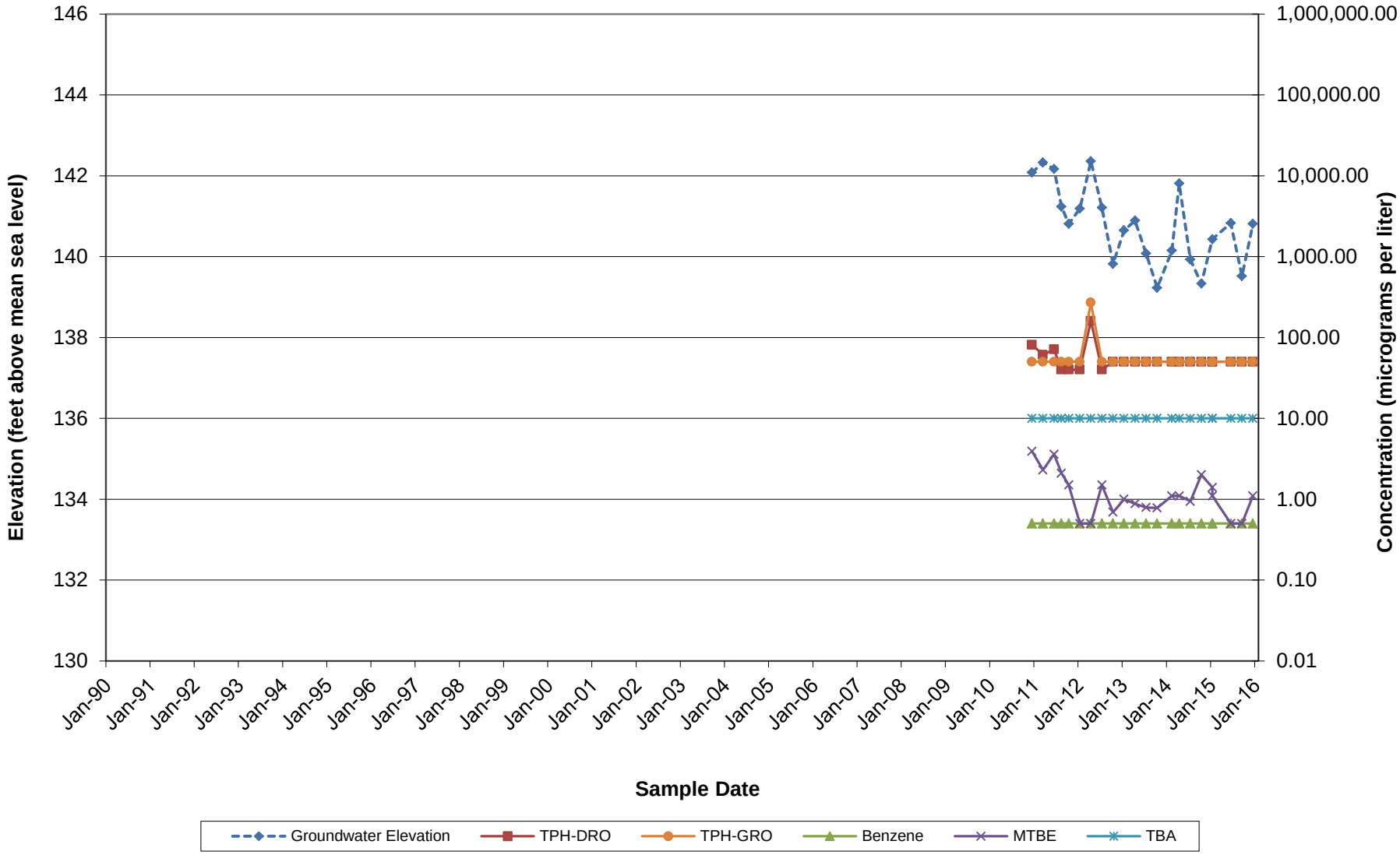
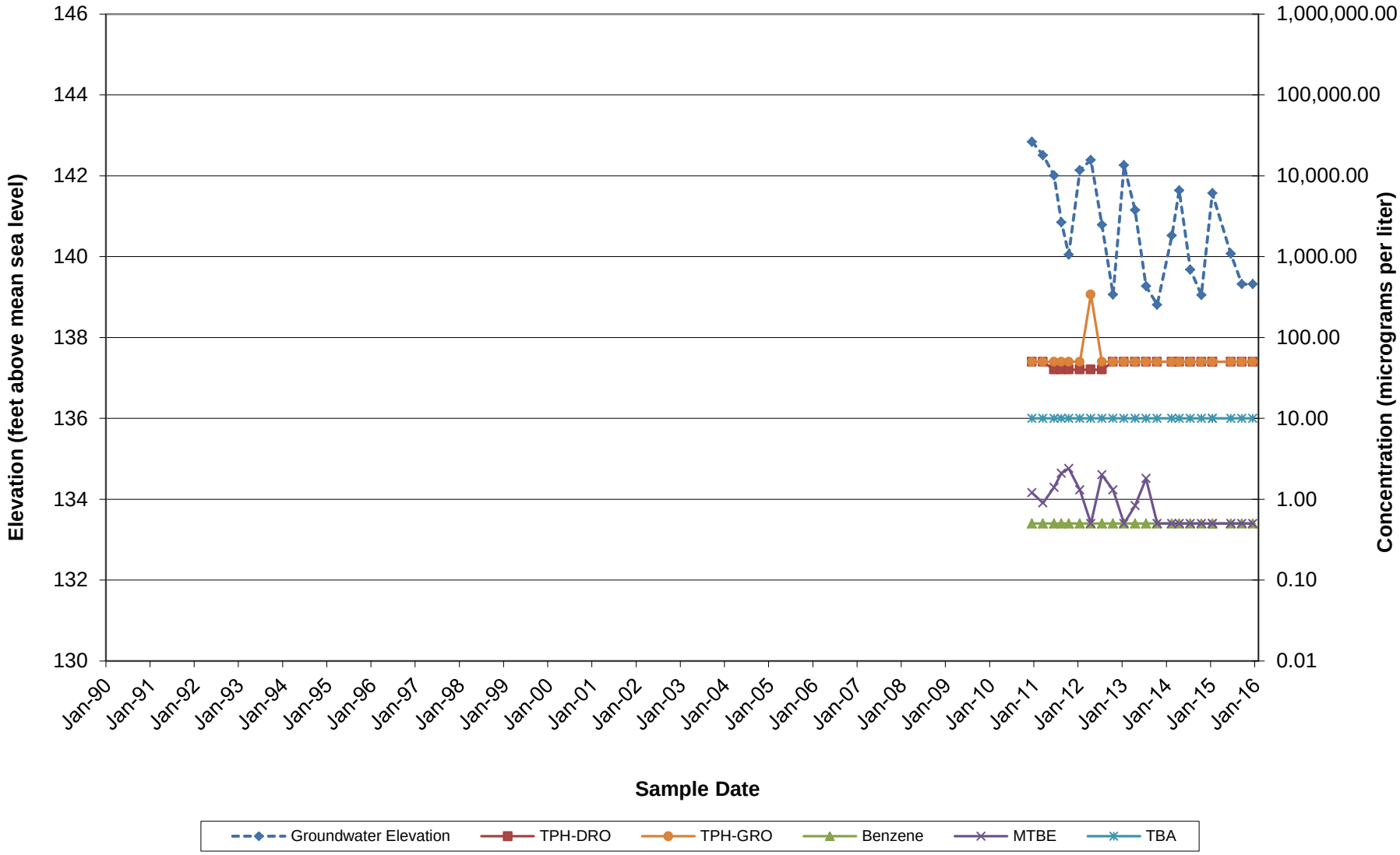


Chart 7 - Hydrograph for Well MW-9



Attachment A

Groundwater Monitoring Field Sheets

GETTLER-RYAN INC.

TRANSMITTAL

December 31, 2015
G-R #385641

TO: Mr. Chap Roper
AECOM
1220 Avenida Acaso
Camarillo, California 93012

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

RE: Chevron Facility
#351640/5781
3535 Pierson Street
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package **Fourth Quarter Event of December 22, 2015**

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/351640 5781

WELL CONDITION STATUS SHEET

Client/
Facility #: **Chevron #351640 / 5781**

Site Address: **3535 Pierson Street**

City: **Oakland, CA**

Job #: **385641**

Event Date: 12.22.15

Sampler: FT

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

Comments

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

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

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

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

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

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781 Job Number: 385641
Site Address: 3535 Pierson Street Event Date: 12.22.15 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW- A Date Monitored: 12-22-15
Well Diameter (2) 4 in.
Total Depth 45.05 ft.
Depth to Water 18.50 ft.

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

☐ Check if water column is less then 0.50 ft.

26.55 xVF .17 = 4.51 x3 case volume = Estimated Purge Volume: 14.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 23.81

Purge Equipment:

Disposable Bailer	
Stainless Steel Bailer	
Stack Pump	✓
Peristaltic Pump	
QED Bladder Pump	
Other:	

Sampling Equipment:

Disposable Bailer	✓
Pressure Bailer	
Metal Filters	
Peristaltic Pump	
QED Bladder Pump	
Other:	

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

Start Time (purge): 1150 Weather Conditions: Cloudy
Sample Time/Date: 1215 / 12-22-15 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: 1.5 gpm. Sediment Description: NONE
Did well de-water? No If yes, Time: Volume: gal. DTW @ Sampling: 23.65

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1153	4.5	6.96	825	20.9		
1156	9.0	6.93	819	21.1		
1200	14.0	6.90	812	21.5	✓	✓

LABORATORY INFORMATION

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

COMMENTS:

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

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781 Job Number: 385641
Site Address: 3535 Pierson Street Event Date: 12.22.15 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-4 Date Monitored: 12.22.15
Well Diameter 2 (4) in.
Total Depth 24.75 ft.
Depth to Water 12.38 ft.

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

☐ Check if water column is less then 0.50 ft.

12.37 xVF .66 = 8.16 x3 case volume = Estimated Purge Volume: 24.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.85

Purge Equipment:		Sampling Equipment:	
Disposable Bailer		Disposable Bailer	✓
Stainless Steel Bailer		Pressure Bailer	
Stack Pump	✓	Metal Filters	
Peristaltic Pump		Peristaltic Pump	
QED Bladder Pump		QED Bladder Pump	
Other:		Other:	

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

Start Time (purge): 1235 Weather Conditions: Ft. Rain
Sample Time/Date: 1230 / 12.22.15 Water Color: Clear Odor: Y / (N)
Approx. Flow Rate: ≈ 2.0 gpm. Sediment Description:
Did well de-water? Yes If yes, Time: 1244 Volume: 12.0 gal. DTW @ Sampling: 12.38

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1239	8.0	6.77	537	21.0		
1243	12.0	6.80	545	21.4		

LABORATORY INFORMATION

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

COMMENTS:

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) N DTW READING: 12.38 TIME: 1230

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781 Job Number: 385641
Site Address: 3535 Pierson Street Event Date: 12.22.15 (inclusive)
City: Oakland, CA Sampler: FS

Well ID MW- 5 Date Monitored: 12-22-15
Well Diameter 2 (4) in.
Total Depth 19.92 ft.
Depth to Water 11.82 ft. ☐ Check if water column is less then 0.50 ft.

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

8.10 xVF .66 = 5.34 x3 case volume = Estimated Purge Volume: 16.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.44

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

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

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

Start Time (purge): 1445 Weather Conditions: CLOUDY
Sample Time/Date: 1440 / 12-22-15 Water Color: CLEAR Odor: (Y) / N MODERATE
Approx. Flow Rate: 12.0 gpm. Sediment Description: NONE
Did well de-water? YES If yes, Time: 1450 Volume: 8.0 gal. DTW @ Sampling: 11.82

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1448	5.5	6.62	921	21.1		

LABORATORY INFORMATION

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

COMMENTS:

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) / N DTW READING: 11.82 TIME: 1440

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781 | Job Number: 385641
Site Address: 3535 Pierson Street | Event Date: 12-22-15 (inclusive)
City: Oakland, CA | Sampler: FT

Well ID: MW- 6 | Date Monitored: 12-22-15
Well Diameter: (2)/ 4 in.
Total Depth: 19.97 ft.
Depth to Water: 15.55 ft. ☐ Check if water column is less then 0.50 ft.

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

4.42 xVF .17 = .75 x3 case volume = Estimated Purge Volume: 2.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.43

Purge Equipment:		Sampling Equipment:	
Disposable Bailer	✓	Disposable Bailer	✓
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Metal Filters	
Peristaltic Pump		Peristaltic Pump	
QED Bladder Pump		QED Bladder Pump	
Other:		Other:	

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

Start Time (purge): 1335 | Weather Conditions: CLOUDY / LT. RAIN
Sample Time/Date: 1335 / 12-22-15 | Water Color: CLEAR | Odor: Y / (N)
Approx. Flow Rate: ~ gpm. | Sediment Description: NONE
Did well de-water? Yes | If yes, Time: 1344 | Volume: 2.0 gal. | DTW @ Sampling: 15.55

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1338	.75	6.89	419	19.8		
1341	1.5	6.88	423	20.0		
1344	2.0	6.86	427	20.3		

LABORATORY INFORMATION

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

COMMENTS:

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) / N DTW READING: 15.55 TIME: 1335

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781 Job Number: 385641
Site Address: 3535 Pierson Street Event Date: 12.22.15 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-7 Date Monitored: 12.22.15
Well Diameter (2)/ 4 in.
Total Depth 19.70 ft.
Depth to Water 15.58 ft.

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

☐ Check if water column is less then 0.50 ft.

4.12 xVF .17 = .70 x3 case volume = Estimated Purge Volume: 2.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.40

Purge Equipment:		Sampling Equipment:	
Disposable Bailer	✓	Disposable Bailer	✓
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Metal Filters	
Peristaltic Pump		Peristaltic Pump	
QED Bladder Pump		QED Bladder Pump	
Other:		Other:	

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

Start Time (purge): 1130 Weather Conditions: Cloudy
Sample Time/Date: 1130 / 12.22.15 Water Color: Clear Odor: Y / (N)
Approx. Flow Rate: ~ gpm. Sediment Description: None
Did well de-water? Yes If yes, Time: 1134 Volume: 1.0 gal. DTW @ Sampling: 15.58

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS/ mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1133	.75	7.11	734	21.3		

LABORATORY INFORMATION

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

COMMENTS:

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) N DTW READING: 15.58 TIME: 1130

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781 Job Number: 385641
Site Address: 3535 Pierson Street Event Date: 12.22.15 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-8 Date Monitored: 12.22.15
Well Diameter (2)/4 in.
Total Depth 19.93 ft.
Depth to Water 12.90 ft.

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

☐ Check if water column is less then 0.50 ft.

7.03 xVF .17 = 1.19 x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.30

Purge Equipment:		Sampling Equipment:	
Disposable Bailer	✓	Disposable Bailer	✓
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Metal Filters	
Peristaltic Pump		Peristaltic Pump	
QED Bladder Pump		QED Bladder Pump	
Other:		Other:	

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

Start Time (purge): 1400 Weather Conditions: CLOUDY / LT. RAIN
Sample Time/Date: 1425 / 12-22-15 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: 14.28

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS) mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1403	1.5	7.10	548	20.5		
1406	3.0	7.08	553	20.8		
1410	4.0	7.06	558	21.0		

LABORATORY INFORMATION

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

COMMENTS:

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

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781 Job Number: 385641
Site Address: 3535 Pierson Street Event Date: 12.22.15 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-9 Date Monitored: 12-22-15
Well Diameter 2/4 in.
Total Depth 19.68 ft.
Depth to Water 10.50 ft. ☐ Check if water column is less then 0.50 ft.

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

9.18 xVF .17 = 1.56 x3 case volume = Estimated Purge Volume: 5.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.33

Purge Equipment:		Sampling Equipment:	
Disposable Bailer	✓	Disposable Bailer	✓
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Metal Filters	
Peristaltic Pump		Peristaltic Pump	
QED Bladder Pump		QED Bladder Pump	
Other:		Other:	

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

Start Time (purge): 1305 Weather Conditions: LT. RAIN
Sample Time/Date: 1305 / 12.22.15 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: ✓ gpm. Sediment Description: NONE
Did well de-water? Yes If yes, Time: 1314 Volume: 5.0 gal. DTW @ Sampling: [redacted] 10.50

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1308	1.5	7.12	553	20.7		
1311	3.0	7.09	558	20.9		
1314	5.0	7.07	564	21.3	✓	✓

LABORATORY INFORMATION

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

COMMENTS:

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? (Y) N DTW READING: 10.50 TIME: 1305

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

CHAIN OF CUSTODY FORM

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

COC 1 of 1

Union Oil Site ID: 5781	Union Oil Consultant: AECOM
Site Global ID: T0600101467	Consultant Contact: CHAD ROSEN
Site Address: 3535 PIEDSON ST. OAKLAND, CA	Consultant Phone No.: (805) 764-4027
	Sampling Company: GETTLER-RYAN INC.
Union Oil PM: NICOLE M. AULENBACH	Sampled By (PRINT): FRANK TELLICIONI
Union Oil PM Phone No: (925) 790-6912 / (510) 363-7354	Sampler Signature:
Charge Code: NWRTB-0 351640 -0- LAB	BC Laboratories, Inc.
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.	Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911

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

Special Instructions

SAMPLE ID						ANALYSES REQUIRED											
Field Point Name	Matrix	Depth	Date (yymmdd)	Sample Time	# of Containers	TPH - Diesel by EPA 8015M W | SGC	TPH - G by (8015)	BTEX/MTBE/ by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	8 Oxys (8260B)						Notes / Comments
QA	W-S-A		151222		2		X	X									
MW-1	W-S-A			1215	8	X	X	X			X						
MW-4	W-S-A			1230													
MW-5	W-S-A			1440													
MW-6	W-S-A			1335													
MW-7	W-S-A			1130													
MW-8	W-S-A			1425													
MW-9	W-S-A			1305													
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																

Relinquished By	Company	Date / Time:
[signature]	G-R INC	12-22-15 (1845)
[signature]	G-R INC	12-23-15 1200

Received By	Company	Date / Time:
GETTLER-RYAN FRIDGE		12-23-15 0700
[signature]	BC LAB	12-23-15 1200

Attachment B

BC Laboratories, Inc. Analytical Report

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 01/11/2016

Chad Roper

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Client Project:	351640
BCL Project:	5781
BCL Work Order:	1532949
Invoice ID:	B223549

Enclosed are the results of analyses for samples received by the laboratory on 12/23/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Molly Meyers

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

Table of Contents

CHAIN OF CUSTODY FORM

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

COC 1 of 1

Union Oil Site ID: 5781	Union Oil Consultant: AECOM
Site Global ID: T0600101467	Consultant Contact: CHAD ROPER
Site Address: 3535 PIERSON ST. OAKLAND, CA	Consultant Phone No.: (805)764-4027
Union Oil PM: NICOLE M. AUCHEAUX	Sampling Company: GETTLER-RYAN INC.
Union Oil PM Phone No: (925)790-6912/(510)363-7354	Sampled By (PRINT): FRANK TELLINGHUISEN
Charge Code: NWRTB-0 351640 -0- LAB	Sampler Signature:
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY. 15-32949	BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911

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

Special Instructions

SAMPLE ID						ANALYSES REQUIRED												
Field Point Name	Matrix	Depth	Date (yymmdd)	Sample Time	# of Containers	TPH - Diesel by EPA 8015M	TPH - G by (8015)	BTEX/MTBE by EPA 8260	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	(8260B) 8 Oxy's							Notes / Comments
-1 QA	W-S-A		151222		2		X	X										
-2 MW-A	W-S-A			1215	8	X	X	X			X							
-3 MW-4	W-S-A			1230														
-4 MW-5	W-S-A			1440														
-5 MW-6	W-S-A			1335														
-6 MW-7	W-S-A			1130														
-7 MW-8	W-S-A			1425														
-8 MW-9	W-S-A			1305														
	W-S-A																	
	W-S-A																	
	W-S-A																	
	W-S-A																	

CHK BY KMP DISTRIBUTION WHITE YELLOW SUB-OUT ☐

Relinquished By	Company	Date / Time:
[signature]	G-R INC.	12.22.15 (1845)
[signature]	GRINC	12-23-15 1200
Doug Bogen	BC Lab	12-23-15 1830

Received By	Company	Date / Time:
GETTLER-RYAN FRIDGE		12-23-15 0700
Doug Bogen	BC Lab	12-23-15 1200
REL. [signature]		12/23/15 1445
[signature]	BCLAB	12/23/15 18:30
		12/23/15 2145

Chain of Custody and Cooler Receipt Form for 1532949 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 15-32949

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

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

Custody Seals: Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: Amber Thermometer ID: 208 Date/Time 12/23/15

Temperature: (A) 0.3 °C / (C) 0.3 °C Analyst Init KIB 2147

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	AB									
40ml VOA VIAL		A-F	A-F	A-F	A-F	A-F	A-F	A-F		
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M		GM	GM	GM	GM	GM	GM	GM		
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:_____

Sample Numbering Completed By: N Date/Time: 12/23/15 1705

A = Actual / C = Corrected

Rev 20 07/24/2015

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

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1532949-01	**COC Number:**	---	**Receive Date:**	12/23/2015 21:45
	Project Number:	5781	**Sampling Date:**	12/22/2015 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	QA-W-151222	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Blank Water
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): QA			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1532949-02	**COC Number:**	---	**Receive Date:**	12/23/2015 21:45
	Project Number:	5781	**Sampling Date:**	12/22/2015 12:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-A-W-151222	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): MW-A			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1532949-03	**COC Number:**	---	**Receive Date:**	12/23/2015 21:45
	Project Number:	5781	**Sampling Date:**	12/22/2015 12:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-W-151222	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): MW-4			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1532949-04	**COC Number:**	---	**Receive Date:**	12/23/2015 21:45
	Project Number:	5781	**Sampling Date:**	12/22/2015 14:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-5-W-151222	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1532949-05	**COC Number:**	---	**Receive Date:**	12/23/2015 21:45
	Project Number:	5781	**Sampling Date:**	12/22/2015 13:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-6-W-151222	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-6	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1532949-06	**COC Number:**	---	**Receive Date:**	12/23/2015 21:45
	Project Number:	5781	**Sampling Date:**	12/22/2015 11:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-7-W-151222	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-7	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1532949-07	**COC Number:**	---	**Receive Date:**	12/23/2015 21:45
	Project Number:	5781	**Sampling Date:**	12/22/2015 14:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-8-W-151222	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): MW-8			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1532949-08	**COC Number:**	---	**Receive Date:**	12/23/2015 21:45
	Project Number:	5781	**Sampling Date:**	12/22/2015 13:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-9-W-151222	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): MW-9			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1532949-01 | **Client Sample Name:** 5781, QA-W-151222, 12/22/2015 12:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	92.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/23/15	12/24/15 12:03	SE1	MS-V10	1	BYL2309

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1532949-01 | **Client Sample Name:** 5781, QA-W-151222, 12/22/2015 12:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	97.5	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	12/29/15	12/29/15 21:14	AKM	GC-V9	1	BYL2594

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1532949-02 | **Client Sample Name:** 5781, MW-A-W-151222, 12/22/2015 12:15:00PM

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	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/24/15	12/24/15 12:22	SE1	MS-V10	1	BYL2441

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1532949-02 | **Client Sample Name:** 5781, MW-A-W-151222, 12/22/2015 12:15:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	95.0	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	12/29/15	12/30/15 07:04	AKM	GC-V9	1	BYL2594

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1532949-02 | **Client Sample Name:** 5781, MW-A-W-151222, 12/22/2015 12:15:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	56.0	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	12/25/15	01/08/16 15:01	RSM	GC-5	1	BZA0093

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1532949-03 | **Client Sample Name:** 5781, MW-4-W-151222, 12/22/2015 12:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/23/15	12/24/15 12:41	SE1	MS-V10	1	BYL2309

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1532949-03 | **Client Sample Name:** 5781, MW-4-W-151222, 12/22/2015 12:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	93.0	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	12/29/15	12/30/15 07:25	AKM	GC-V9	1	BYL2594

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1532949-03 | **Client Sample Name:** 5781, MW-4-W-151222, 12/22/2015 12:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	56.5	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	12/25/15	01/08/16 15:14	RSM	GC-5	1	BZA0093

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1532949-04 | **Client Sample Name:** 5781, MW-5-W-151222, 12/22/2015 2:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**16**	**ug/L**	**5.0**		**EPA-8260B**	ND	**A01**	1
1,2-Dibromoethane	ND	ug/L	5.0		EPA-8260B	ND	A01	1
1,2-Dichloroethane	ND	ug/L	5.0		EPA-8260B	ND	A01	1
Ethylbenzene	**53**	**ug/L**	**5.0**		**EPA-8260B**	ND	**A01**	1
Methyl t-butyl ether	ND	ug/L	5.0		EPA-8260B	ND	A01	1
Toluene	**63**	**ug/L**	**5.0**		**EPA-8260B**	ND	**A01**	1
Total Xylenes	**320**	**ug/L**	**10**		**EPA-8260B**	ND	**A01**	1
t-Amyl Methyl ether	ND	ug/L	5.0		EPA-8260B	ND	A01	1
t-Butyl alcohol	ND	ug/L	100		EPA-8260B	ND	A01	1
Diisopropyl ether	ND	ug/L	5.0		EPA-8260B	ND	A01	1
Ethanol	ND	ug/L	2500		EPA-8260B	ND	A01	1
Ethyl t-butyl ether	ND	ug/L	5.0		EPA-8260B	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/23/15	12/28/15 19:01	SE1	MS-V10	10	BYL2309

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1532949-04 | **Client Sample Name:** 5781, MW-5-W-151222, 12/22/2015 2:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	**5600**	**ug/L**	**500**		**EPA-8015B**	ND	**A01**	1
a,a,a-Trifluorotoluene (FID Surrogate)	99.4	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	12/29/15	12/30/15 09:07	AKM	GC-V9	10	BYL2594

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1532949-04 | **Client Sample Name:** 5781, MW-5-W-151222, 12/22/2015 2:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	**1700**	**ug/L**	**250**		**Luft/TPHd**	ND	**A01,A52**	1
Tetracosane (Surrogate)	56.0	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	12/25/15	01/08/16 14:33	RSM	GC-5	5	BZA0093

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1532949-05 | **Client Sample Name:** 5781, MW-6-W-151222, 12/22/2015 1:35:00PM

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	**4.7**	**ug/L**	**0.50**		**EPA-8260B**	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/23/15	12/24/15 13:00	SE1	MS-V10	1	BYL2309

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1532949-05 | **Client Sample Name:** 5781, MW-6-W-151222, 12/22/2015 1:35:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	96.1	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	12/29/15	12/30/15 07:45	AKM	GC-V9	1	BYL2594

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1532949-05 | **Client Sample Name:** 5781, MW-6-W-151222, 12/22/2015 1:35:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	67.9	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	12/25/15	01/08/16 15:56	RSM	GC-5	1	BZA0093

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1532949-06 | **Client Sample Name:** 5781, MW-7-W-151222, 12/22/2015 11:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	91.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/23/15	12/24/15 13:21	SE1	MS-V10	1	BYL2309

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1532949-06 | **Client Sample Name:** 5781, MW-7-W-151222, 12/22/2015 11:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	95.3	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	12/29/15	12/30/15 08:05	AKM	GC-V9	1	BYL2594

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1532949-06 | **Client Sample Name:** 5781, MW-7-W-151222, 12/22/2015 11:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	63.1	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	12/25/15	01/08/16 16:10	RSM	GC-5	1	BZA0093

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1532949-07 | **Client Sample Name:** 5781, MW-8-W-151222, 12/22/2015 2:25:00PM

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	**1.1**	**ug/L**	**0.50**		**EPA-8260B**	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	89.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/28/15	12/29/15 11:19	SE1	MS-V10	1	BYL2441

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 01/11/2016 12:29
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1532949-07 | **Client Sample Name:** 5781, MW-8-W-151222, 12/22/2015 2:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	97.1	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	12/30/15	12/30/15 20:50	AKM	GC-V9	1	BYL2594

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Project Number: 351640
Project Manager: Chad Roper

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1532949-07 | **Client Sample Name:** 5781, MW-8-W-151222, 12/22/2015 2:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	72.2	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	12/25/15	01/08/16 16:24	RSM	GC-5	1	BZA0093

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Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1532949-08 | **Client Sample Name:** 5781, MW-9-W-151222, 12/22/2015 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	103	%	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	12/23/15	12/24/15 13:59	SE1	MS-V10	1	BYL2309

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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1532949-08 | **Client Sample Name:** 5781, MW-9-W-151222, 12/22/2015 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	95.5	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	12/29/15	12/30/15 08:46	AKM	GC-V9	1	BYL2594

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Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1532949-08 | **Client Sample Name:** 5781, MW-9-W-151222, 12/22/2015 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	70.2	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	12/25/15	01/08/16 16:38	RSM	GC-5	1	BZA0093

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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: BYL2309						
Benzene	BYL2309-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BYL2309-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BYL2309-BLK1	ND	ug/L	0.50		
Ethylbenzene	BYL2309-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BYL2309-BLK1	ND	ug/L	0.50		
Toluene	BYL2309-BLK1	ND	ug/L	0.50		
Total Xylenes	BYL2309-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BYL2309-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BYL2309-BLK1	ND	ug/L	10		
Diisopropyl ether	BYL2309-BLK1	ND	ug/L	0.50		
Ethanol	BYL2309-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BYL2309-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	**BYL2309-BLK1**	**100**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYL2309-BLK1**	**97.1**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYL2309-BLK1**	**93.7**	%	**80 - 120 (LCL - UCL)**		
QC Batch ID: BYL2441						
Benzene	BYL2441-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BYL2441-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BYL2441-BLK1	ND	ug/L	0.50		
Ethylbenzene	BYL2441-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BYL2441-BLK1	ND	ug/L	0.50		
Toluene	BYL2441-BLK1	ND	ug/L	0.50		
Total Xylenes	BYL2441-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BYL2441-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BYL2441-BLK1	ND	ug/L	10		
Diisopropyl ether	BYL2441-BLK1	ND	ug/L	0.50		
Ethanol	BYL2441-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BYL2441-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	**BYL2441-BLK1**	**111**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYL2441-BLK1**	**99.5**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYL2441-BLK1**	**99.4**	%	**80 - 120 (LCL - UCL)**		

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Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYL2309										
Benzene	BYL2309-BS1	LCS	24.060	25.000	ug/L	96.2		70 - 130		
Toluene	BYL2309-BS1	LCS	24.420	25.000	ug/L	97.7		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYL2309-BS1	LCS	9.9000	10.000	ug/L	99.0		75 - 125		
Toluene-d8 (Surrogate)	BYL2309-BS1	LCS	9.8700	10.000	ug/L	98.7		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYL2309-BS1	LCS	9.5800	10.000	ug/L	95.8		80 - 120		
QC Batch ID: BYL2441										
Benzene	BYL2441-BS1	LCS	23.040	25.000	ug/L	92.2		70 - 130		
Toluene	BYL2441-BS1	LCS	25.230	25.000	ug/L	101		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYL2441-BS1	LCS	10.610	10.000	ug/L	106		75 - 125		
Toluene-d8 (Surrogate)	BYL2441-BS1	LCS	9.9900	10.000	ug/L	99.9		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYL2441-BS1	LCS	9.9300	10.000	ug/L	99.3		80 - 120		

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Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYL2309	Used client sample: N										
Benzene	MS	1532547-01	ND	24.760	25.000	ug/L		99.0		70 - 130	
	MSD	1532547-01	ND	26.260	25.000	ug/L	5.9	105	20	70 - 130	
Toluene	MS	1532547-01	ND	25.200	25.000	ug/L		101		70 - 130	
	MSD	1532547-01	ND	26.940	25.000	ug/L	6.7	108	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1532547-01	ND	9.8100	10.000	ug/L		98.1		75 - 125	
	MSD	1532547-01	ND	9.9000	10.000	ug/L	0.9	99.0		75 - 125	
Toluene-d8 (Surrogate)	MS	1532547-01	ND	9.8400	10.000	ug/L		98.4		80 - 120	
	MSD	1532547-01	ND	9.8300	10.000	ug/L	0.1	98.3		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1532547-01	ND	9.5400	10.000	ug/L		95.4		80 - 120	
	MSD	1532547-01	ND	9.5900	10.000	ug/L	0.5	95.9		80 - 120	
QC Batch ID: BYL2441	Used client sample: Y - Description: MW-A-W-151222, 12/22/2015 12:15										
Benzene	MS	1532949-02	ND	25.250	25.000	ug/L		101		70 - 130	
	MSD	1532949-02	ND	26.540	25.000	ug/L	5.0	106	20	70 - 130	
Toluene	MS	1532949-02	ND	27.880	25.000	ug/L		112		70 - 130	
	MSD	1532949-02	ND	29.000	25.000	ug/L	3.9	116	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1532949-02	ND	10.560	10.000	ug/L		106		75 - 125	
	MSD	1532949-02	ND	10.330	10.000	ug/L	2.2	103		75 - 125	
Toluene-d8 (Surrogate)	MS	1532949-02	ND	10.070	10.000	ug/L		101		80 - 120	
	MSD	1532949-02	ND	9.9400	10.000	ug/L	1.3	99.4		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1532949-02	ND	9.7300	10.000	ug/L		97.3		80 - 120	
	MSD	1532949-02	ND	9.8400	10.000	ug/L	1.1	98.4		80 - 120	

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYL2594						
Gasoline Range Organics (C4 - C12)	BYL2594-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	**BYL2594-BLK1**	**97.2**	%	**70 - 130 (LCL - UCL)**		

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYL2594										
Gasoline Range Organics (C4 - C12)	BYL2594-BS1	LCS	947.60	1000.0	ug/L	94.8		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BYL2594-BS1	LCS	38.177	40.000	ug/L	95.4		70 - 130		

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYL2594	Used client sample: N										
Gasoline Range Organics (C4 - C12)	MS	1532390-15	ND	936.93	1000.0	ug/L		93.7		70 - 130	
	MSD	1532390-15	ND	893.93	1000.0	ug/L	4.7	89.4	20	70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1532390-15	ND	39.135	40.000	ug/L		97.8		70 - 130	
	MSD	1532390-15	ND	35.319	40.000	ug/L	10.3	88.3		70 - 130	

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Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BZA0093						
Diesel Range Organics (C12 - C24)	BZA0093-BLK1	ND	ug/L	50		
Tetracosane (Surrogate)	**BZA0093-BLK1**	**74.1**	%	**40 - 140 (LCL - UCL)**		
Capric acid (Reverse Surrogate)	BZA0093-BLK1	0	%	0 - 1 (LCL - UCL)		

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Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BZA0093										
Diesel Range Organics (C12 - C24)	BZA0093-BS1	LCS	287.13	500.00	ug/L	57.4		20 - 110		
Tetracosane (Surrogate)	BZA0093-BS1	LCS	12.467	20.000	ug/L	62.3		40 - 140		
Capric acid (Reverse Surrogate)	BZA0093-BS1	LCS	ND	100.00	ug/L	0		0 - 1		

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Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BZA0093	Used client sample: N										
Diesel Range Organics (C12 - C24)	MS	1532390-12	ND	330.83	500.00	ug/L		66.2		20 - 110	
	MSD	1532390-12	ND	287.01	500.00	ug/L	14.2	57.4	30	20 - 110	
Tetracosane (Surrogate)	MS	1532390-12	ND	14.802	20.000	ug/L		74.0		40 - 140	
	MSD	1532390-12	ND	12.836	20.000	ug/L	14.2	64.2		40 - 140	
Capric acid (Reverse Surrogate)	MS	1532390-12	ND	ND	100.00	ug/L		0		0 - 1	
	MSD	1532390-12	ND	ND	100.00	ug/L		0		0 - 1	

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Notes And Definitions

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