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October 14, 2015

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

RECEIVED

By Alameda County Environmental Health 11:04 am, Oct 16, 2015

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 October 14, 2015.

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

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

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

Sincerely,

Nicole Arceneaux
Project Manager

Attachment: Third Quarter 2015 Groundwater Monitoring Report by AECOM

October 14, 2015

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

Subject: Third 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 third 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 third quarter of 2015.

Groundwater Monitoring Field Data

On September 7, 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 data collected from well MW-A were not used in contouring because the well is screened in the deeper aquifer. The depth to groundwater at the site ranged from 13.18 (MW-4) to 18.18 (MW-A) feet below the top of well casings with calculated elevations ranging from 136.61 (MW-A) to 140.30 (MW-4) feet above mean sea level. The groundwater flow direction is northeast with a hydraulic gradient of 0.02 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 September 7, 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 September 30, 2015, is included as **Attachment B**.

Groundwater samples were analyzed for the following based on historical trends at each monitoring well:

- Total petroleum hydrocarbons as diesel range organics (TPH-DRO) by Luft/TPHd method with silica gel cleanup;
- Total petroleum hydrocarbons as 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 **Table 1**, **Table 2**, and **Figure 3** for this quarterly groundwater monitoring event. The following presents a brief summary of the sample analytical results:

- Benzene, toluene, MTBE, ETBE, DIPE, TAME, EDB, EDC, TBA, and ethanol were not detected in any of the groundwater samples analyzed.
- TPH-DRO was reported for MW-5 at 3,800 micrograms per liter ($\mu\text{g}/\text{L}$) with the laboratory report noting that the chromatogram is not typical of diesel.
- TPH-GRO was detected for MW-5 at 4,100 $\mu\text{g}/\text{L}$.
- Ethylbenzene and total xylenes were detected in the groundwater sample collected from MW-5 at 130 $\mu\text{g}/\text{L}$ and 540 $\mu\text{g}/\text{L}$, 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 September 2015 is presented in **Tables 3 through 5**.

Approximately 38.25 gallons of purge water was generated during the groundwater monitoring event. The purge water and decontamination water generated during sampling activities were transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.

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.
- MTBE was not detected in any sample.

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 June 16, 2015, AECOM completed the site assessment detailed in the work plan approved by Alameda County Health Care Services Agency, Environmental Health Services on January 8, 2015. The results of the assessment were presented in the Site Assessment Report submitted on July 14, 2015. The site conceptual model will be updated with the results to identify any remaining data gaps.

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

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 - Third Quarter 2015 Groundwater Elevation Map
- Figure 3 - Third Quarter 2015 Groundwater Analytical Data Map

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 (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	9/7/2015	18.18	136.61	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-4	153.48	9/7/2015	13.18	140.30	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-5	153.66	9/7/2015	16.63	137.03	0	3,800	4,100	<5.0	<5.0	130	540	
MW-6	154.62	9/7/2015	16.08	138.54	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-7	155.38	9/7/2015	16.17	139.21	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-8	153.71	9/7/2015	14.19	139.52	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-9	153.37	9/7/2015	14.05	139.32	0	<50	<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 Fuel Tank/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

E = Ethylbenzene

ft = Feet

GWE = Groundwater elevation

ID = Identification

LNAPL = Light non-aqueous phase liquid

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 ($\mu\text{g/L}$)	TBA ($\mu\text{g/L}$)	ETHANOL ($\mu\text{g/L}$)	DIPE ($\mu\text{g/L}$)	ETBE ($\mu\text{g/L}$)	TAME ($\mu\text{g/L}$)	EDB ($\mu\text{g/L}$)	EDC ($\mu\text{g/L}$)
MW-A	9/7/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-4	9/7/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-5	9/7/2015	<5.0	<100	<2,500	<5.0	<5.0	<5.0	<5.0	<5.0
MW-6	9/7/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-7	9/7/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-8	9/7/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-9	9/7/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50

NOTES:

Oxygenate compounds analyzed by Environmental Protection Agency Method 8260B

$\mu\text{g/L}$ = 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

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*	DATE	DTW	GWE*	LNAPL	TPH-DRO	TPH-GRO	B	T	E	X	COMMENTS
	(ft)		(ft)	(ft)	(ft)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
MW-A	--	12/18/1990	--	--	--	73	ND	ND	ND	ND	ND	ND
	--	5/3/1991	--	--	--	ND	ND	ND	ND	ND	ND	ND
	--	8/7/1991	--	--	--	ND	ND	ND	ND	ND	ND	ND
	--	11/8/1991	--	--	--	ND	ND	ND	ND	ND	ND	ND
151.80	2/6/1992	19.88	131.92	0	ND	ND	ND	ND	ND	ND	ND	ND
151.80	8/4/1992	18.95	132.85	0	ND	ND	ND	ND	ND	ND	0.51	
151.80	2/10/1993	17.71	134.09	0	ND	ND	ND	ND	ND	ND	ND	ND
151.80	2/10/1994	15.25	136.55	0	ND	ND	ND	ND	0.52	ND	0.92	
151.80	2/9/1995	15.68	136.12	0	ND	ND	ND	ND	ND	ND	ND	ND
151.80	2/6/1996	12.52	139.28	0	120	ND	ND	ND	ND	ND	ND	2.1
151.80	2/5/1997	13.01	138.79	0	61	ND	ND	ND	ND	ND	ND	ND
151.80	2/2/1998	11.91	139.89	0	ND	ND	ND	ND	ND	ND	ND	ND
151.80	2/22/1999	11.24	140.56	0	ND	ND	ND	ND	ND	ND	ND	ND
151.80	2/26/2000	12.16	139.64	0	ND	ND	ND	ND	1.01	ND	ND	ND
151.80	3/7/2001	11.91	139.89	0	131	ND	ND	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	<0.50	<0.50
151.80	2/22/2003	14.41	137.39	0	93	<50	<0.50	<0.50	<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	<0.50	<0.50
151.80	2/18/2005	14.21	137.59	0	<50	<50	<0.50	<0.50	<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	<0.30	<0.30	<0.60
151.80	3/28/2007	13.98	137.82	0	92	<50	<0.30	<0.30	<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	<0.30	<0.30	<0.60
151.80	3/27/2009	14.35	137.45	0	53	<50	<0.30	<0.30	<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	<0.50	<0.50	<1.0
154.79	9/29/2010	15.50	139.29	0	<1200	<50	<0.50	<0.50	<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	<0.50	<0.50	<1.0
154.79	3/10/2011	17.70	137.09	0	<50	<50	<0.50	<0.50	<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	<0.50	<0.50	<1.0
154.79	08/18/2011	18.83	135.96	0	<40	<50	<0.50	<0.50	<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	<0.50	<0.50	<1.0
154.79	01/24/2012	16.75	138.04	0	<40	<50	<0.50	<0.50	<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	<0.50	<0.50	<1.0
154.79	07/02/2012	14.79	140.00	0	<40	<50	<0.50	<0.50	<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	<0.50	<0.50	<1.0
154.79	1/23/2013	15.08	139.71	0	<50	<50	<0.50	<0.50	<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	<0.50	<0.50	<1.0

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3535 Pierson Street
Oakland, California

WELL ID	TOC*	DATE	DTW	GWE*	LNAPL	TPH-DRO	TPH-GRO	B	T	E	X	COMMENTS
	(ft)		(ft)	(ft)	(ft)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
	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	
	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	
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	
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	

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

WELL ID	TOC*	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	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	
	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	
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	

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

WELL ID	TOC*	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	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	
	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	
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	
MW-8	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	
	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	

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

WELL ID	TOC*	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
	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	
	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	
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	

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

WELL ID	TOC*	DATE	DTW	GWE*	LNAPL	TPH-DRO	TPH-GRO	B	T	E	X	COMMENTS
	(ft)		(ft)	(ft)	(ft)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	

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

E = Ethylbenzene

ft = Feet

GWE = Groundwater elevation

ID = Identification

LNAPL = Light non-aqueous phase liquid

ND = Non-detect

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	<0.50	--	--	--	--
	1/23/2013	0.55	<10	<250	<0.50	<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	<0.50	--	--	--	--
	7/31/2013	<0.50	<10	<250	<0.50	<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	<0.50	--	--	--	--

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	DATE	MTBE ($\mu\text{g/L}$)	TBA ($\mu\text{g/L}$)	ETHANOL ($\mu\text{g/L}$)	DIPE ($\mu\text{g/L}$)	ETBE ($\mu\text{g/L}$)	TAME ($\mu\text{g/L}$)	EDB ($\mu\text{g/L}$)	EDC ($\mu\text{g/L}$)	METHANOL ($\mu\text{g/L}$)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)
	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	--	--	--	--	--
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	--	--	--	--	--
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

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	DATE	MTBE ($\mu\text{g/L}$)	TBA ($\mu\text{g/L}$)	ETHANOL ($\mu\text{g/L}$)	DIPE ($\mu\text{g/L}$)	ETBE ($\mu\text{g/L}$)	TAME ($\mu\text{g/L}$)	EDB ($\mu\text{g/L}$)	EDC ($\mu\text{g/L}$)	METHANOL ($\mu\text{g/L}$)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)
	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	--	--	--	--	--
	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	--	--	--	--	--
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	<0.50	--	--	--	--
	9/7/2015	<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 ($\mu\text{g/L}$)	TBA ($\mu\text{g/L}$)	ETHANOL ($\mu\text{g/L}$)	DIPE ($\mu\text{g/L}$)	ETBE ($\mu\text{g/L}$)	TAME ($\mu\text{g/L}$)	EDB ($\mu\text{g/L}$)	EDC ($\mu\text{g/L}$)	METHANOL ($\mu\text{g/L}$)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)
MW-7	12/21/2010	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	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	--	--	--	--	--
	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	--	--	--	--	--
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	--	--	--	--	--

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)	ETBEE (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)
	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	--	--	--	--	--
	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	--	--	--	--	--
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	--	--	--	--	--
	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	--	--	--	--	--

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	DATE	MTBE ($\mu\text{g/L}$)	TBA ($\mu\text{g/L}$)	ETHANOL ($\mu\text{g/L}$)	DIPE ($\mu\text{g/L}$)	ETBE ($\mu\text{g/L}$)	TAME ($\mu\text{g/L}$)	EDB ($\mu\text{g/L}$)	EDC ($\mu\text{g/L}$)	METHANOL ($\mu\text{g/L}$)	METHANE (mg/L)	FERROUS IRON (AS N) (mg/L)	NITRATE (mg/L)	SULFATE (mg/L)
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NOTES:

Free product correlates to light non-aqueous phase liquid

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

MTBE = Methyl t-butyl ether

ND = Non-detect

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-dIFLUOROMETHANE ($\mu\text{g/L}$)	1,1-DCA ($\mu\text{g/L}$)	1,1-DCE ($\mu\text{g/L}$)	cis-1,2-DCE ($\mu\text{g/L}$)	trans-1,2-DCE ($\mu\text{g/L}$)	1,2-DICHLOROPROPANE ($\mu\text{g/L}$)	cis-1,3-DICHLOROPROPANE ($\mu\text{g/L}$)
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-TETRACHLOROETHANE ($\mu\text{g/L}$)	TETRACHLOROETHENE ($\mu\text{g/L}$)	TRICHLOROTRIFLUOROETHANE ($\mu\text{g/L}$)	1,1,1-TRICHLOROETHANE ($\mu\text{g/L}$)	1,1,2-TRICHLOROETHANE ($\mu\text{g/L}$)	TRICHLOROFLUOROMETHANE ($\mu\text{g/L}$)	VINYL CHLORIDE ($\mu\text{g/L}$)
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
	2/18/2005	ND<0.50	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

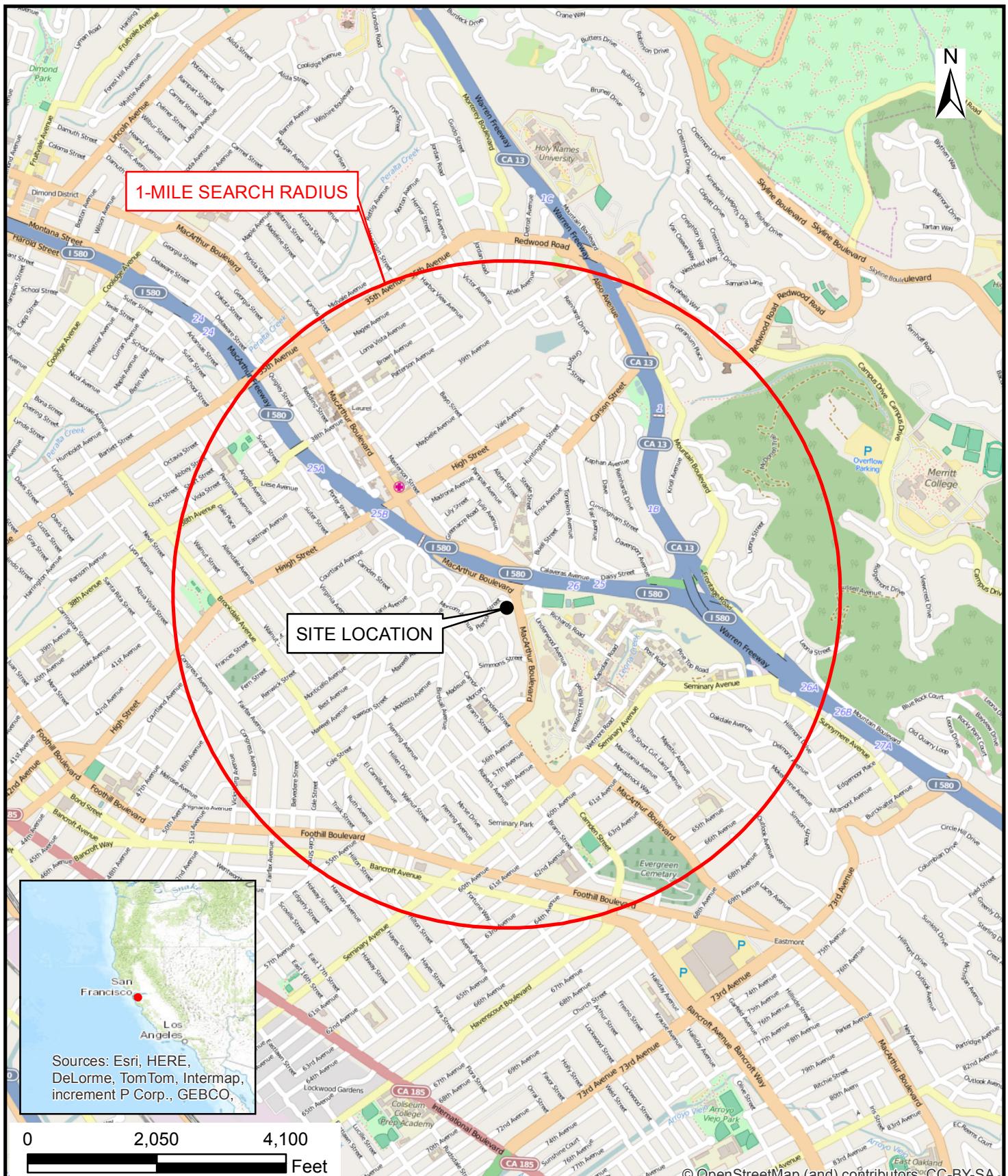
NOTES:

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

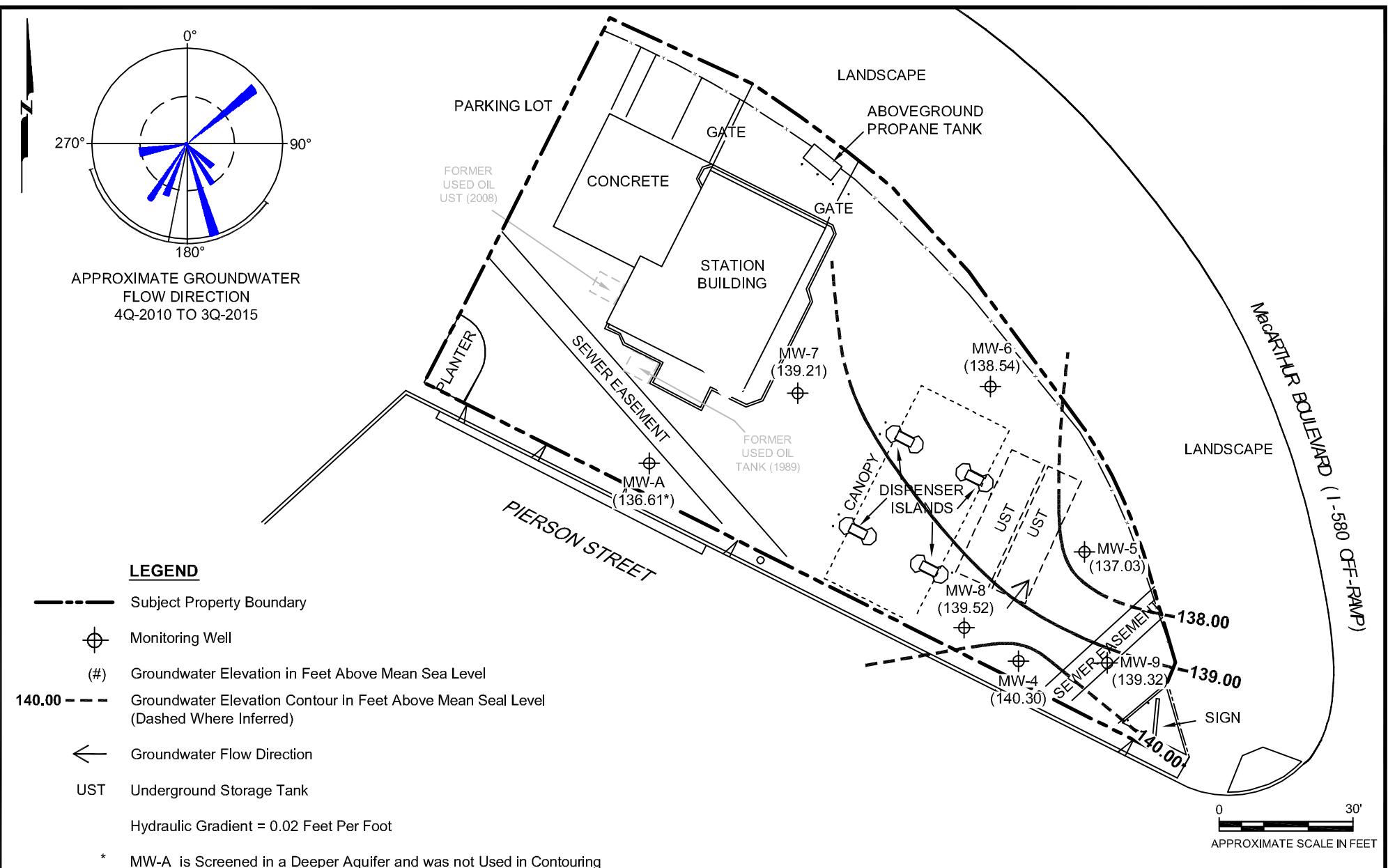
ID = Identification

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

Figures



AECOM	SITE LOCATION MAP	FIGURE NUMBER:	
Unocal No. 5781 (351640) 3535 Pierson Street Oakland, California			
DRAWN BY: T. Quiroz	DATE: 09/30/2015	PROJECT NUMBER: 60338852	SHEET NUMBER: 1 of 1



THIRD QUARTER 2015 GROUNDWATER ELEVATION MAP

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

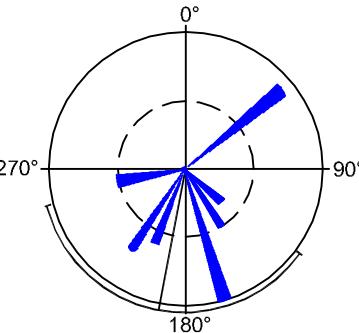
SCALE:	DATE:	PROJECT NUMBER:
1" = 30'	09/30/2015	60338852

AECOM
1220 AVENIDA ACASO
Camarillo, California 93012
PHONE: 805.388.3775
FAX: 805.388.3557
WEB: [HTTP://WWW.AECOM.COM](http://WWW.AECOM.COM)

AECOM

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

2



APPROXIMATE GROUNDWATER
FLOW DIRECTION
4Q-2010 TO 3Q-2015

Legend

Subject Property Boundary

Monitoring Well

Groundwater Flow Direction

UST Underground Storage Tank

WELL ID ID = Identification

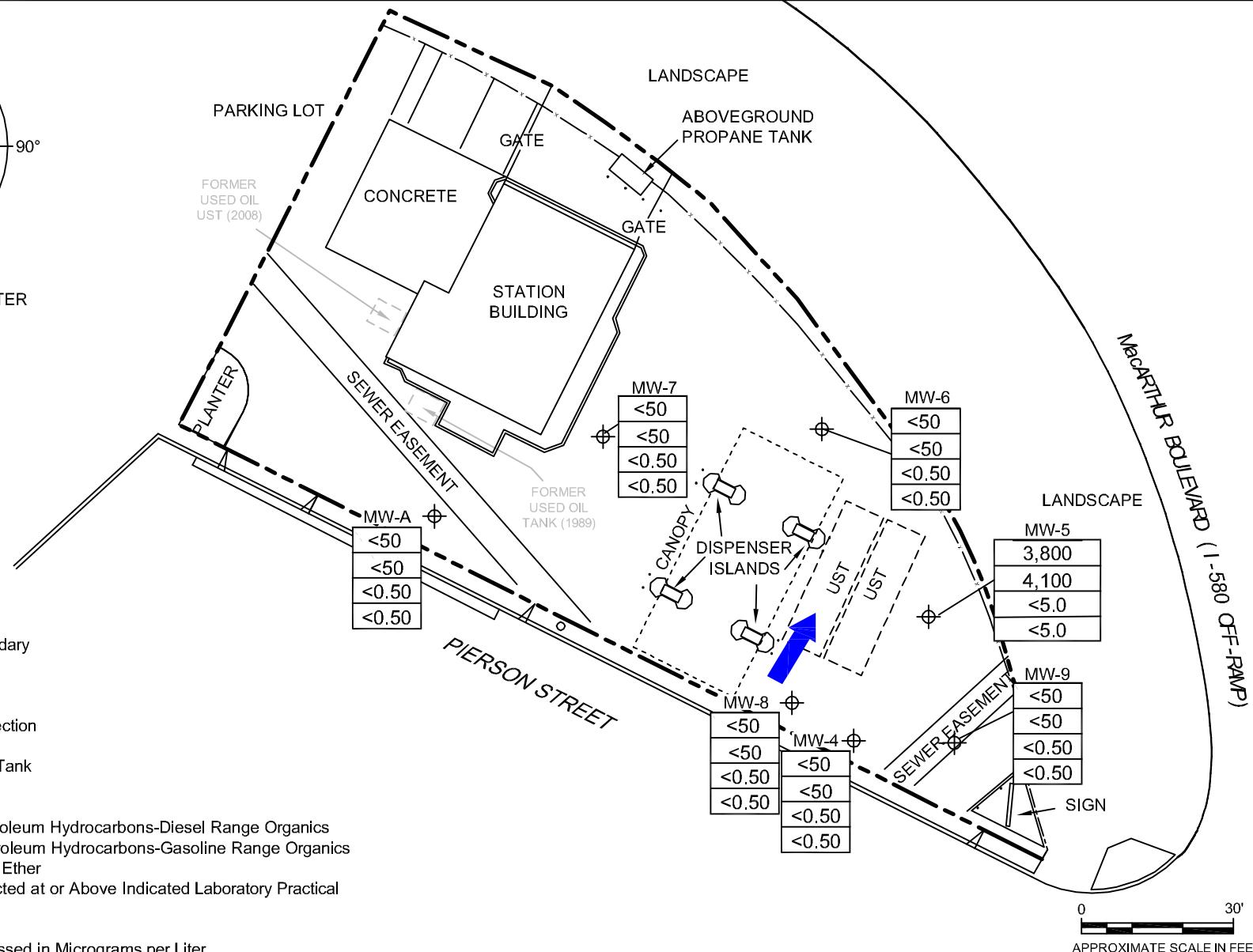
TPH-DRO TPH-DRO = Total Petroleum Hydrocarbons-Diesel Range Organics

TPH-GRO TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Organics

BENZENE MTBE = Methyl t-Butyl Ether

MTBE <# = 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.

THIRD QUARTER 2015 GROUNDWATER ANALYTICAL DATA MAP

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

SCALE: 1" = 30'
DATE: 09/30/2015
PROJECT NUMBER: 60338852

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

AECOM

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

3

Attachment A

**Groundwater Monitoring Field
Sheets**



GETTLER - RYAN INC.

TRANSMITTAL

September 17, 2015
G-R #385641

TO: Mr. Chap Roper
AECOM
10461 Old Placerville Road #170
Sacramento, California 95827

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

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

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Third Quarter Event of September 7, 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: 9.7.15
Sampler: FT

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: 9.7.15 (inclusive)

City: Oakland, CA

Sampler: FT

Well ID MW- A

Date Monitored: 9.7.15

Well Diameter 2 1/4 in.

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

Total Depth 45.05 ft.

Depth to Water 18.18 ft.

Check if water column is less than 0.50 ft.

26.87 xVF .17 = 4.56 x3 case volume = Estimated Purge Volume: 14.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 23.55

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): 1105

Weather Conditions:

Sunny

Sample Time/Date: 1130 19.7.15

Water Color: clear Odor: Y /

Approx. Flow Rate: ≤ 1.5 gpm.

Sediment Description: NONE

Did well de-water? No

If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 23.49

Time (2400 hr.)	Volume (gal.)	pH	Conductivity $\mu\text{s} / \text{mS}$ umhos/cm)	Temperature ($^{\circ}\text{C} / \text{F}$)	D.O. (mg/L)	ORP (mV)
<u>1108</u>	<u>4.5</u>	<u>6.92</u>	<u>1190</u>	<u>21.9</u>		
<u>1111</u>	<u>9.0</u>	<u>6.89</u>	<u>1182</u>	<u>21.6</u>		
<u>1115</u>	<u>14.0</u>	<u>6.96</u>	<u>1175</u>	<u>21.2</u>		

LABORATORY INFORMATION

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

COMMENTS: _____

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? Y / 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: **9.7.15** (inclusive)

City: **Oakland, CA**

Sampler: **FT**

Well ID **MW- 4**

Date Monitored: **9.7.15**

Well Diameter **2 1/4** in.

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

Total Depth **24.75** ft.

Depth to Water **13.18** ft.

Check if water column is less than 0.50 ft.

11.57 xVF **1.66** = **7.63** x3 case volume = Estimated Purge Volume: **23.0** gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: **15.49**

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:

Sample Time/Date: **1145 / 9.7.15**

Water Color: **CLEAR** Odor: **Y / N**

Approx. Flow Rate: **≤ 1.5** gpm.

Sediment Description: **None**

Did well de-water? **yes** If yes, Time: **1201** Volume: **150** gal. DTW @ Sampling: **13.18**

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (10 mS umhos/cm)	Temperature (6 / F)	D.O. (mg/L)	ORP (mV)
1155	7.5	6.67	752	21.8		
1200	15.0	6.64	761	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** DTW READING: **18.18** TIME: **1405**

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: **9.7.15** (inclusive)City: **Oakland, CA**Sampler: **FT**Well ID **MW-5**Date Monitored: **9.7.15**Well Diameter **2 1/4** in.

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

Total Depth **19.92** ft.Depth to Water **16.63** ft. Check if water column is less than 0.50 ft.**3.29** xVF **.66** = **2.17** x3 case volume = Estimated Purge Volume: **7.0** gal.Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: **17.28****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): **1040**Weather Conditions: **Sunny**Sample Time/Date: **1035 / 9.7.15**Water Color: **CLEAR** Odor: **Y/N** **STRONG**Approx. Flow Rate: **/** gpm.Sediment Description: **NONE**Did well de-water? **YES** If yes, Time: **1048** Volume: **2.5** gal. DTW @ Sampling: **16.63**

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ($\mu\text{s}/\text{mS}$ umhos/cm)	Temperature ($^{\circ}\text{C} / \text{F}$)	D.O. (mg/L)	ORP (mV)
1048	2.5	6.46	510	21.8		

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: **18.43** TIME: **1320**

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Lock: _____

Add/Replaced Plug: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

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

Site Address: **3535 Pierson Street**

City: **Oakland, CA**

Job Number: **385641**

Event Date: **9.7.15** (inclusive)

Sampler: **PT**

Well ID: **MW- 6**
 Well Diameter: **2 1/4** in.
 Total Depth: **19.97** ft.
 Depth to Water: **16.08** ft.
 $3.89 \times VF .17 = .66$

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

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: **16.85**

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): **1015**
 Sample Time/Date: **1010 19.7.15**
 Approx. Flow Rate: _____ gpm.
 Did well de-water? **yes** If yes, Time: **1019** Volume: **1.0** gal. DTW @ Sampling: **16.08**

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ($\mu\text{s}/\text{mS}$ umhos/cm)	Temperature ($^{\circ}\text{C} / ^{\circ}\text{F}$)	D.O. (mg/L)	ORP (mV)
1019	1.0	7.04	642	22.4		
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

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: **17.97** TIME: **1310**

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



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

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

Job Number: **385641**
 Event Date: **9-7-15** (inclusive)
 Sampler: **FT**

Well ID: **MW-7**
 Well Diameter: **2 1/4** in.
 Total Depth: **19.70** ft.
 Depth to Water: **16.17** ft.
~~3.53~~

Date Monitored: **9-7-15**

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 than 0.50 ft.

$$3.53 \times VF .17 = .60$$
 x3 case volume = Estimated Purge Volume: **2.0** gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: **16.87**

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): **0930**
 Sample Time/Date: **0925 / 9-7-15**
 Approx. Flow Rate: _____ gpm.
 Did well de-water? **Yes** If yes, Time: **0934** Volume: **1.0** gal. DTW @ Sampling: **16.17**

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (mS/umhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)
0933	.75	6.85	804	22.7		

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: **17.80** TIME: **1250**

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Lock: _____

Add/Replaced Plug: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781 Job Number: 385641
 Site Address: 3535 Pierson Street Event Date: 9.7.15 (inclusive)
 City: Oakland, CA Sampler: FT

Well ID	<u>MW- 8</u>	Date Monitored:	<u>9.7.15</u>	
Well Diameter	<u>2 1/4</u> in.	Volume 3/4"= 0.02 1"= 0.04 2"= 0.17 3"= 0.38 Factor (VF) 4"= 0.66 5"= 1.02 6"= 1.50 12"= 5.80		
Total Depth	<u>19.93</u> ft.			
Depth to Water	<u>14.19</u> ft.	<input type="checkbox"/> Check if water column is less than 0.50 ft.		
	<u>5.74</u>	x VF <u>.17</u>	= <u>.97</u>	x3 case volume = Estimated Purge Volume: <u>3.0</u> gal.
Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>15.33</u>				
Purge Equipment:				
Disposable Bailer	<input checked="" type="checkbox"/>			
Stainless Steel Bailer	<input type="checkbox"/>			
Stack Pump	<input type="checkbox"/>			
Peristaltic Pump	<input type="checkbox"/>			
QED Bladder Pump	<input type="checkbox"/>			
Other:	<input type="checkbox"/>			
Sampling Equipment:				
Disposable Bailer	<input checked="" type="checkbox"/>			
Pressure Bailer	<input type="checkbox"/>			
Metal Filters	<input type="checkbox"/>			
Peristaltic Pump	<input type="checkbox"/>			
QED Bladder Pump	<input type="checkbox"/>			
Other:	<input type="checkbox"/>			
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): 1214 Weather Conditions: Sunny
 Sample Time/Date: 1240 19.7.15 Water Color: LT. Bew. Odor: Y / N
 Approx. Flow Rate: / gpm. Sediment Description: S-SILTY
 Did well de-water? ND If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 15.27

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (1) / mS umhos/cm	Temperature (1) / F	D.O. (mg/L)	ORP (mV)
<u>1219</u>	<u>1.0</u>	<u>6.71</u>	<u>638</u>	<u>22.1</u>		
<u>1222</u>	<u>2.0</u>	<u>6.69</u>	<u>642</u>	<u>21.9</u>		
<u>1225</u>	<u>3.0</u>	<u>6.67</u>	<u>647</u>	<u>21.7</u>		

LABORATORY INFORMATION

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

COMMENTS: _____

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

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



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781

Site Address: 3535 Pierson Street

City: Oakland, CA

Job Number: 385641

Event Date: 9.7.15 (inclusive)

Sampler: FT

Well ID: MW- 9
 Well Diameter: 2 1/4 in.
 Total Depth: 19.68 ft.
 Depth to Water: 14.05 ft.

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

Check if water column is less than 0.50 ft.

5.63 xVF .17 = .95 x3 case volume = Estimated Purge Volume: 3.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 15.17

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): 0950
 Sample Time/Date: 0945 / 9.7.15
 Approx. Flow Rate: 10 gpm.
 Did well de-water? Yes If yes, Time: 0957 Volume: 2.0 gal. DTW @ Sampling: 14.05

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS mS µmhos/cm)	Temperature (°C / °F)	D.O. (mg/L)	ORP (mV)
<u>0953</u>	<u>1.0</u>	<u>6.57</u>	<u>852</u>	<u>22.3</u>		
<u>0957</u>	<u>2.0</u>	<u>6.55</u>	<u>857</u>	<u>22.1</u>		

LABORATORY INFORMATION

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

COMMENTS: _____

WERE PRE PURGE SAMPLES SUBMITTED TO THE LAB? N DTW READING: 16.28 TIME: 1300

Add/Replaced Gasket: _____

Add/Replaced Bolt: _____

Add/Replaced Lock: _____

Add/Replaced Plug: _____

CHAIN OF CUSTODY FORM

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

COC \ of \

Union Oil Site ID: <u>5781</u>				Union Oil Consultant: <u>AECOM</u>		ANALYSES REQUIRED							
Site Global ID: <u>T0600101467</u>				Consultant Contact: <u>JAMES HAULMS</u>									
Site Address: <u>3535 PIERSON ST.</u> <u>OAKLAND, CA</u>				Consultant Phone No.: <u>(916)361-6412</u>									
Union Oil PM: <u>NICOLE M. ARCEAUX</u>				Sampling Company: <u>GETTLEIL-RYAN</u>									
Union Oil PM Phone No.: <u>(925)790-6912/(510)363-7354</u>				Sampled By (PRINT): <u>FRANK TERLINDEN</u>									
Charge Code: NWRTB-0 <u>351640-0-LAB</u>				Sampler Signature: <u>Frank Terlinden</u>									
<i>This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.</i>				BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911									
SAMPLE ID				Sample Time		# of Containers							
Field Point Name	Matrix	Depth	Date (yymmdd)			TPH - Diesel by EPA 8015	TPH - G by [REDACTED] (8015)	BTEX/MTBE by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	TPH-D10 w/SSC (8015M)	8015M (8260B)	Notes / Comments
QA	W-S-A		150907			X	X	X	X	X	X	X	
MW-A	W-S-A			1130		X	X	X	X	X	X	X	
MW-4	W-S-A			1145		X	X	X	X	X	X	X	
MW-5	W-S-A			1035		X	X	X	X	X	X	X	
MW-6	W-S-A			1010		X	X	X	X	X	X	X	
MW-7	W-S-A			0925		X	X	X	X	X	X	X	
MW-8	W-S-A			1240		X	X	X	X	X	X	X	
MW-9	W-S-A			0945		X	X	X	X	X	X	X	
	W-S-A					X	X	X	X	X	X	X	
	W-S-A					X	X	X	X	X	X	X	
	W-S-A					X	X	X	X	X	X	X	
	W-S-A					X	X	X	X	X	X	X	
Relinquished By	Company	Date / Time:		Relinquished By	Company	Date / Time :		Relinquished By	Company	Date / Time:			
<u>HDL</u>	6-12 Inc.	9-7-15 1600											
Received By	Company	Date / Time:		Received By	Company	Date / Time :		Received By	Company	Date / Time:			
<u>Henry Bogen</u>	B-Lab	9-8-15 1505											

Attachment B

**BC Laboratories, Inc. Analytical
Report**



Date of Report: 09/30/2015

Chad Roper

AECOM

1220 Avenida Acaso
Camarillo, CA 93012

Client Project: 351640

BCL Project: 5781

BCL Work Order: 1522697

Invoice ID: B214425

Enclosed are the results of analyses for samples received by the laboratory on 9/8/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

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

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Chain of Custody and Cooler Receipt Form for 1522697 Page 1 of 2

CHAIN OF CUSTODY FORM

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

Union Oil Site ID: 5781	Union Oil Consultant: AECOM	COC \ of \		
Site Global ID: T06000101447	Consultant Contact: JAMES HAMM			
Site Address: 3535 PLEASON ST. OAKLAND, CA	Consultant Phone No.: (415) 361-6412	Turnaround Time (TAT):		
Union Oil P.M. NICOLE M. ARGENECKY	Sampling Company: GETTELLIC - RYAN	Standard <input checked="" type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours	<input type="checkbox"/> 72 Hours
Union Oil P.M. Phone No.: (415) 740-6912 [510] 363-7354	Sampled By (PRINT): Frank Teranoy	Special Instructions		
Charge Code: NWRTB-0_35144Q-0-LAB	Sampler Signature:	15-22697		
ANALYSES REQUIRED				
TPH-Diesel by EPA 8015 TPH-G by [REDACTED] (8015) BTX/MTBE/ [REDACTED] by EPA 8260B Ethanol by EPA 8260B EPA 8260B Full List with OXYS TPH-Diesel w/ S9c (8260B)				
Notes / Comments				
SAMPLE ID	Matrix	Date (yymmdd)	Sample Time	# of Containers
-1	QA	150907	1130	2
-2	MW-A	V-S-A	1145	8
-3	MW-4	V-S-A	1035	
-4	MW-5	V-S-A	1010	
-5	MW-6	V-S-A	0925	
-6	MW-7	V-S-A	1240	
-7	MW-8	V-S-A	0945	
-8	MW-9	V-S-A		
	W-S-A			
	W-S-A			
	W-S-A			
Relinquished By	Company	Date / Time:	Relinquished By	Company
	James Hamm	9-7-15 1600	James Hamm	BCLABS 9/8/15 1830
Received By	Company	Date / Time:	Received By	Company
	James Hamm	9-8-15 1505	James Hamm	BCLABS 9/8/15 1830
Date / Time: 9/8/15 1830				

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Chain of Custody and Cooler Receipt Form for 1522697 Page 2 of 2

BC LABORATORIES INC.		COOLER RECEIPT FORM								Page <u>1</u> Of <u>1</u>	
Submission #: <u>15-22697</u>											
SHIPPING INFORMATION FedEx <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____				SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____				FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/>			
Refrigerant: <u>Ice</u>		Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/>		Comments:							
Custody Seals	<u>Ice Chest</u> <input type="checkbox"/>	<u>Containers</u> <input type="checkbox"/>	<u>None</u> <input type="checkbox"/>	Comments:							
Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>		Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>									
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		All samples containers intact? Yes <input type="checkbox"/> No <input type="checkbox"/>		Description(s) match COC? Yes <input type="checkbox"/> No <input type="checkbox"/>							
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: <u>0.98</u> Container: <u>Amber</u> Thermometer ID: <u>208</u>		Date/Time <u>9/8/15</u>							
		Temperature: (A) <u>0.4</u> °C / (C) <u>0.5</u> °C		Analyst Init: <u>KMB 2504</u>							
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	<u>094</u>	<u>A/B</u>									
40ml VOA VIAL	<u>096</u>		<u>A>F</u>	<u>A>F</u>	<u>A>F</u>	<u>A>F</u>	<u>A>F</u>	<u>A>F</u>	<u>A>F</u>		
QT EPA 1664											
PT ODOR											
RADIOLOGICAL											
BACTERIOLOGICAL											
40 ml VOA VIAL- 504											
QT EPA 508/608/8080											
QT EPA 515.1/8150											
QT EPA 525											
QT EPA 525 TRAVEL BLANK											
40ml EPA 547											
40ml EPA 531.1											
8oz EPA 548											
QT EPA 549											
QT EPA 8015M											
QT EPA 8270											
8oz / 16oz / 32oz AMBER	<u>X37</u>		<u>G,H</u>	<u>G,H</u>	<u>G,H</u>	<u>G,H</u>	<u>G,H</u>	<u>G,H</u>	<u>G,H</u>		
8oz / 16oz / 32oz JAR											
SOIL SLEEVE											
PCB VIAL											
PLASTIC BAG											
TEDLAR BAG											
FERROUS IRON											
ENCORE											
SMART KIT											
SUMMA CANISTER											
Comments: _____											
Sample Numbering Completed By: <u>JDL</u> Date/Time: <u>9/9/15 0210</u> Rev 20 07/24/2015											
A = Actual / C = Corrected											



AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1522697-01	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: QA-W-150907 Sampled By: GRD	Receive Date: 09/08/2015 23:00 Sampling Date: 09/07/2015 00:00 Sample Depth: --- Lab Matrix: Water Sample Type: Trip Blank Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): QA Matrix: W Sample QC Type (SACode): CS Cooler ID:		
1522697-02	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-A-W-150907 Sampled By: GRD	Receive Date: 09/08/2015 23:00 Sampling Date: 09/07/2015 11:30 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-A Matrix: W Sample QC Type (SACode): CS Cooler ID:		
1522697-03	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-4-W-150907 Sampled By: GRD	Receive Date: 09/08/2015 23:00 Sampling Date: 09/07/2015 11:45 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:		

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AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1522697-04	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-5-W-150907 Sampled By: GRD	Receive Date: 09/08/2015 23:00 Sampling Date: 09/07/2015 10:35 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:	
1522697-05	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-6-W-150907 Sampled By: GRD	Receive Date: 09/08/2015 23:00 Sampling Date: 09/07/2015 10:10 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-6 Matrix: W Sample QC Type (SACode): CS Cooler ID:	
1522697-06	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-7-W-150907 Sampled By: GRD	Receive Date: 09/08/2015 23:00 Sampling Date: 09/07/2015 09:25 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-7 Matrix: W Sample QC Type (SACode): CS Cooler ID:	

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AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1522697-07	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-8-W-150907 Sampled By: GRD	Receive Date: 09/08/2015 23:00 Sampling Date: 09/07/2015 12:40 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-8 Matrix: W Sample QC Type (SACode): CS Cooler ID:		
1522697-08	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-9-W-150907 Sampled By: GRD	Receive Date: 09/08/2015 23:00 Sampling Date: 09/07/2015 09:45 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-9 Matrix: W Sample QC Type (SACode): CS Cooler ID:		

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AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1522697-01	Client Sample Name:	5781, QA-W-150907, 9/7/2015 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)	96.7	%	75 - 125 (LCL - UCL)	EPA-8260B				1
Toluene-d8 (Surrogate)	95.0	%	80 - 120 (LCL - UCL)	EPA-8260B				1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)	EPA-8260B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	09/09/15	09/09/15 12:50	SE1	MS-V12	1	BYI0879

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AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1522697-01	Client Sample Name: 5781, QA-W-150907, 9/7/2015 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)	98.0	%	70 - 130 (LCL - UCL)	EPA-8015B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	09/10/15	09/10/15 10:01	AKM	GC-V9	1	BYI0727



AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1522697-02	Client Sample Name:	5781, MW-A-W-150907, 9/7/2015 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)	94.5	%	75 - 125 (LCL - UCL)	EPA-8260B				1
Toluene-d8 (Surrogate)	94.7	%	80 - 120 (LCL - UCL)	EPA-8260B				1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)	EPA-8260B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	09/09/15	09/09/15 13:07	SE1	MS-V12	1	BYI0879

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AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1522697-02	Client Sample Name: 5781, MW-A-W-150907, 9/7/2015 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)	89.0	%	70 - 130 (LCL - UCL)	EPA-8015B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	09/10/15	09/10/15 10:42	AKM	GC-V9	1	BYI0727



AECOM
1220 Avenida Acaso
Camarillo, CA 93012

Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID:	1522697-02	Client Sample Name: 5781, MW-A-W-150907, 9/7/2015 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)	53.4	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run			Dilution	QC	Batch ID
			Date/Time	Analyst	Instrument			
1	Luft/TPHd	09/15/15	09/22/15 10:47	RSM	GC-5	1		BYI2128

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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1522697-03	Client Sample Name:	5781, MW-4-W-150907, 9/7/2015 11:45:00AM					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND			1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND			1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND			1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND			1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND			1
Toluene	ND	ug/L	0.50	EPA-8260B	ND			1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND			1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260B	ND			1
t-Butyl alcohol	ND	ug/L	10	EPA-8260B	ND			1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260B	ND			1
Ethanol	ND	ug/L	250	EPA-8260B	ND			1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND			1
1,2-Dichloroethane-d4 (Surrogate)	97.5	%	75 - 125 (LCL - UCL)	EPA-8260B				1
Toluene-d8 (Surrogate)	94.6	%	80 - 120 (LCL - UCL)	EPA-8260B				1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)	EPA-8260B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	09/09/15	09/09/15 13:25	SE1	MS-V12	1	BYI0879

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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1522697-03	Client Sample Name: 5781, MW-4-W-150907, 9/7/2015 11:45:00AM						
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)	103	%	70 - 130 (LCL - UCL)	EPA-8015B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	09/10/15	09/10/15 11:02	AKM	GC-V9	1	BYI0727



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1220 Avenida Acaso
Camarillo, CA 93012

Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID:	1522697-03	Client Sample Name: 5781, MW-4-W-150907, 9/7/2015 11:45:00AM						
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)	54.8	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run			Dilution	QC	Batch ID
			Date/Time	Analyst	Instrument			
1	Luft/TPHd	09/15/15	09/22/15 11:01	RSM	GC-5	1		BYI2128



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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1522697-04	Client Sample Name: 5781, MW-5-W-150907, 9/7/2015 10:35:00AM						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	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	130	ug/L	5.0	EPA-8260B	ND	A01		1
Methyl t-butyl ether	ND	ug/L	5.0	EPA-8260B	ND	A01		1
Toluene	ND	ug/L	5.0	EPA-8260B	ND	A01		1
Total Xylenes	540	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)	95.7	%	75 - 125 (LCL - UCL)	EPA-8260B				1
Toluene-d8 (Surrogate)	93.6	%	80 - 120 (LCL - UCL)	EPA-8260B				1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)	EPA-8260B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	09/09/15	09/09/15 17:23	SE1	MS-V12	10	BYI0879

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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1522697-04	Client Sample Name: 5781, MW-5-W-150907, 9/7/2015 10:35:00AM						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	4100	ug/L	1000		EPA-8015B	ND	A01	1
a,a,a-Trifluorotoluene (FID Surrogate)	118	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	09/10/15	09/10/15 17:58	AKM	GC-V9	20	BYI1036

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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID:	1522697-04	Client Sample Name: 5781, MW-5-W-150907, 9/7/2015 10:35:00AM						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	3800	ug/L	500		Luft/TPHd	ND	A01,A52	1
Tetracosane (Surrogate)	52.4	%	40 - 140 (LCL - UCL)		Luft/TPHd		A01	1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd		A01	1

Run #	Method	Prep Date	Run			Dilution	QC	Batch ID
			Date/Time	Analyst	Instrument			
1	Luft/TPHd	09/15/15	09/22/15 12:51	RSM	GC-5	10		BYI2128

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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1522697-05	Client Sample Name:	5781, MW-6-W-150907, 9/7/2015 10:10:00AM					
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)	95.6	%	75 - 125 (LCL - UCL)	EPA-8260B				1
Toluene-d8 (Surrogate)	97.5	%	80 - 120 (LCL - UCL)	EPA-8260B				1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)	EPA-8260B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	09/09/15	09/09/15 13:43	SE1	MS-V12	1	BYI0879

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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1522697-05	Client Sample Name: 5781, MW-6-W-150907, 9/7/2015 10:10:00AM						
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)	86.0	%	70 - 130 (LCL - UCL)	EPA-8015B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	09/10/15	09/10/15 11:22	AKM	GC-V9	1	BYI1036

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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID:	1522697-05	Client Sample Name: 5781, MW-6-W-150907, 9/7/2015 10:10:00AM						
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)	62.2	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run			Dilution	QC	Batch ID
			Date/Time	Analyst	Instrument			
1	Luft/TPHd	09/15/15	09/22/15 11:57	RSM	GC-5	1		BYI2128



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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1522697-06	Client Sample Name:	5781, MW-7-W-150907, 9/7/2015 9:25:00AM					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND			1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND			1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND			1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND			1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND			1
Toluene	ND	ug/L	0.50	EPA-8260B	ND			1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND			1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260B	ND			1
t-Butyl alcohol	ND	ug/L	10	EPA-8260B	ND			1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260B	ND			1
Ethanol	ND	ug/L	250	EPA-8260B	ND			1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND			1
1,2-Dichloroethane-d4 (Surrogate)	96.9	%	75 - 125 (LCL - UCL)	EPA-8260B				1
Toluene-d8 (Surrogate)	94.9	%	80 - 120 (LCL - UCL)	EPA-8260B				1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)	EPA-8260B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	09/09/15	09/09/15 14:01	SE1	MS-V12	1	BYI0879

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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1522697-06	Client Sample Name: 5781, MW-7-W-150907, 9/7/2015 9:25:00AM						
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)	105	%	70 - 130 (LCL - UCL)	EPA-8015B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	09/10/15	09/10/15 11:43	AKM	GC-V9	1	BYI1036



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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID:	1522697-06	Client Sample Name: 5781, MW-7-W-150907, 9/7/2015 9:25:00AM						
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)	59.3	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run			Dilution	QC	Batch ID
			Date/Time	Analyst	Instrument			
1	Luft/TPHd	09/15/15	09/22/15 12:10	RSM	GC-5	1		BYI2128

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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1522697-07	Client Sample Name: 5781, MW-8-W-150907, 9/7/2015 12:40:00PM						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND			1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND			1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND			1
Ethylbenzene	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)	98.0	%	75 - 125 (LCL - UCL)	EPA-8260B				1
Toluene-d8 (Surrogate)	91.5	%	80 - 120 (LCL - UCL)	EPA-8260B				1
4-Bromofluorobenzene (Surrogate)	90.6	%	80 - 120 (LCL - UCL)	EPA-8260B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	09/09/15	09/09/15 14:19	SE1	MS-V12	1	BYI0879

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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1522697-07	Client Sample Name: 5781, MW-8-W-150907, 9/7/2015 12:40:00PM						
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)	81.0	%	70 - 130 (LCL - UCL)	EPA-8015B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	09/10/15	09/10/15 12:03	AKM	GC-V9	1	BYI1036



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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID:	1522697-07	Client Sample Name: 5781, MW-8-W-150907, 9/7/2015 12:40:00PM						
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)	56.6	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run			Dilution	QC	Batch ID
			Date/Time	Analyst	Instrument			
1	Luft/TPHd	09/15/15	09/22/15 12:24	RSM	GC-5	1		BYI2128



AECOM
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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1522697-08	Client Sample Name:	5781, MW-9-W-150907, 9/7/2015 9:45:00AM					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260B	ND			1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260B	ND			1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND			1
Ethylbenzene	ND	ug/L	0.50	EPA-8260B	ND			1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND			1
Toluene	ND	ug/L	0.50	EPA-8260B	ND			1
Total Xylenes	ND	ug/L	1.0	EPA-8260B	ND			1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260B	ND			1
t-Butyl alcohol	ND	ug/L	10	EPA-8260B	ND			1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260B	ND			1
Ethanol	ND	ug/L	250	EPA-8260B	ND			1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND			1
1,2-Dichloroethane-d4 (Surrogate)	97.1	%	75 - 125 (LCL - UCL)	EPA-8260B				1
Toluene-d8 (Surrogate)	95.4	%	80 - 120 (LCL - UCL)	EPA-8260B				1
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)	EPA-8260B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	09/09/15	09/09/15 14:37	SE1	MS-V12	1	BYI0879

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1220 Avenida Acaso
Camarillo, CA 93012

Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1522697-08	Client Sample Name: 5781, MW-9-W-150907, 9/7/2015 9:45:00AM						
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)	114	%	70 - 130 (LCL - UCL)	EPA-8015B				1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	09/10/15	09/10/15 12:23	AKM	GC-V9	1	BYI1036



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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID:	1522697-08	Client Sample Name: 5781, MW-9-W-150907, 9/7/2015 9:45:00AM						
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)	55.7	%	40 - 140 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run			Dilution	QC	Batch ID
			Date/Time	Analyst	Instrument			
1	Luft/TPHd	09/15/15	09/22/15 12:38	RSM	GC-5	1		BYI2128

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Reported: 09/30/2015 11:03
Project: 5781
Project Number: 351640
Project Manager: Chad Roper

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: BYI0879						
Benzene	BYI0879-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BYI0879-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BYI0879-BLK1	ND	ug/L	0.50		
Ethylbenzene	BYI0879-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BYI0879-BLK1	ND	ug/L	0.50		
Toluene	BYI0879-BLK1	ND	ug/L	0.50		
Total Xylenes	BYI0879-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BYI0879-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BYI0879-BLK1	ND	ug/L	10		
Diisopropyl ether	BYI0879-BLK1	ND	ug/L	0.50		
Ethanol	BYI0879-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BYI0879-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	BYI0879-BLK1	99.0	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BYI0879-BLK1	93.9	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BYI0879-BLK1	106	%	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	Control Limits		Lab Quals
							RPD	Percent Recovery	
QC Batch ID: BYI0879									
Benzene	BYI0879-BS1	LCS	25.840	25.000	ug/L	103		70 - 130	
Toluene	BYI0879-BS1	LCS	26.140	25.000	ug/L	105		70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BYI0879-BS1	LCS	9.2300	10.000	ug/L	92.3		75 - 125	
Toluene-d8 (Surrogate)	BYI0879-BS1	LCS	9.7000	10.000	ug/L	97.0		80 - 120	
4-Bromofluorobenzene (Surrogate)	BYI0879-BS1	LCS	10.130	10.000	ug/L	101		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	<u>Control Limits</u>		
									RPD	Percent Recovery	Lab Quals
QC Batch ID: BYI0879		Used client sample: N									
Benzene	MS	1521506-27	ND	27.030	25.000	ug/L		108		70 - 130	
	MSD	1521506-27	ND	28.030	25.000	ug/L	3.6	112	20	70 - 130	
Toluene	MS	1521506-27	ND	28.130	25.000	ug/L		113		70 - 130	
	MSD	1521506-27	ND	28.610	25.000	ug/L	1.7	114	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1521506-27	ND	8.8500	10.000	ug/L		88.5		75 - 125	
	MSD	1521506-27	ND	9.0400	10.000	ug/L	2.1	90.4		75 - 125	
Toluene-d8 (Surrogate)	MS	1521506-27	ND	9.9200	10.000	ug/L		99.2		80 - 120	
	MSD	1521506-27	ND	9.9100	10.000	ug/L	0.1	99.1		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1521506-27	ND	10.100	10.000	ug/L		101		80 - 120	
	MSD	1521506-27	ND	10.360	10.000	ug/L	2.5	104		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: BYI0727						
Gasoline Range Organics (C4 - C12)	BYI0727-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	BYI0727-BLK1	84.8	%	70 - 130 (LCL - UCL)		
QC Batch ID: BYI1036						
Gasoline Range Organics (C4 - C12)	BYI1036-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	BYI1036-BLK1	102	%	70 - 130 (LCL - UCL)		



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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
QC Batch ID: BYI0727										
Gasoline Range Organics (C4 - C12)	BYI0727-BS1	LCS	970.28	1000.0	ug/L	97.0		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BYI0727-BS1	LCS	44.081	40.000	ug/L	110		70 - 130		
QC Batch ID: BYI1036										
Gasoline Range Organics (C4 - C12)	BYI1036-BS1	LCS	853.10	1000.0	ug/L	85.3		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BYI1036-BS1	LCS	37.520	40.000	ug/L	93.8		70 - 130		



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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
								Percent Recovery	Percent RPD	Lab Quals
QC Batch ID: BYI0727		Used client sample: N								
Gasoline Range Organics (C4 - C12)	MS	1521506-25	ND	1010.9	1000.0	ug/L		101		70 - 130
	MSD	1521506-25	ND	1039.7	1000.0	ug/L	2.8	104	20	70 - 130
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1521506-25	ND	43.634	40.000	ug/L		109		70 - 130
	MSD	1521506-25	ND	43.880	40.000	ug/L	0.6	110		70 - 130
QC Batch ID: BYI1036		Used client sample: N								
Gasoline Range Organics (C4 - C12)	MS	1521506-26	ND	889.37	1000.0	ug/L		88.9		70 - 130
	MSD	1521506-26	ND	855.70	1000.0	ug/L	3.9	85.6	20	70 - 130
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1521506-26	ND	41.037	40.000	ug/L		103		70 - 130
	MSD	1521506-26	ND	38.978	40.000	ug/L	5.1	97.4		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: BYI2128						
Diesel Range Organics (C12 - C24)	BYI2128-BLK1	ND	ug/L	50		
Tetracosane (Surrogate)	BYI2128-BLK1	55.2	%	40 - 140 (LCL - UCL)		
Capric acid (Reverse Surrogate)	BYI2128-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	Control Limits		Lab Quals
							RPD	Percent Recovery	
QC Batch ID: BYI2128									
Diesel Range Organics (C12 - C24)	BYI2128-BS1	LCS	322.74	500.00	ug/L	64.5		50 - 140	
Tetracosane (Surrogate)	BYI2128-BS1	LCS	15.341	20.374	ug/L	75.3		40 - 140	
Capric acid (Reverse Surrogate)	BYI2128-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	<u>Control Limits</u>		
									RPD	Percent Recovery	Lab Quals
QC Batch ID: BYI2128			Used client sample: N								
Diesel Range Organics (C12 - C24)	MS	1502150-42	ND	255.74	500.00	ug/L		51.1		50 - 140	
	MSD	1502150-42	ND	209.41	500.00	ug/L	19.9	41.9	30	50 - 140	
Tetracosane (Surrogate)	MS	1502150-42	ND	11.291	20.374	ug/L		55.4		40 - 140	
	MSD	1502150-42	ND	9.8980	20.374	ug/L	13.1	48.6		40 - 140	
Capric acid (Reverse Surrogate)	MS	1502150-42	ND	ND	100.00	ug/L		0		0 - 1	
	MSD	1502150-42	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.