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Nicole M. Arceneaux
Project Manager
Marketing Business Unit

Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 790-6912
Nicole.arceneaux@chevron.com

March 5, 2015

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

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

I have reviewed the attached report dated March 5, 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: First Quarter 2015 Groundwater Monitoring Report by AECOM

AECOM
2020 L Street
Suite 400
Sacramento, CA 95811
www.aecom.com

916 414-5800 tel
916 414-5850 fax

March 5, 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: First Quarter 2015 Groundwater Monitoring Report
Unocal No. 5781 (351640)
3535 Pierson Street, Oakland, California
Fuel Leak Case No. RO0000253

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 first 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 first quarter of 2015.

Groundwater Monitoring Field Data

On January 20, 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**). Copies of the groundwater gauging logs are included in **Attachment A**. The groundwater elevation data collected from well MW-A was not used in contouring because the well is screened in the deeper aquifer. The depth to groundwater at the site ranged from 11.61 to 17.95 feet below the top of well casings with calculated elevations ranging from 136.84 to 143.01 feet above mean sea level. The groundwater flow direction is to the southwest with a calculated average hydraulic gradient of approximately 0.05 feet per foot (**Figure 2**).

Groundwater Sampling and Analytical Results

On January 20, 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. To verify that the pre-purge samples were representative of groundwater conditions both pre-purge and post-purge (after purging a minimum of three well volumes) were submitted for analysis. Temperature, pH, and electrical conductivity readings were recorded during purging, and copies of those purge logs are presented in **Attachment A**.

The groundwater samples were submitted to BC Laboratories, Inc. (BC Labs) of Bakersfield, California. Two BC Labs analytical reports dated February 5, 2015, are 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, 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 880 micrograms per liter (µg/L) (pre-purge) and 1,800 µg/L (post-purge), with the laboratory report noting that the chromatogram is not typical of diesel.
- TPH-GRO was detected for MW-5 at 9,100 µg/L (pre-purge) and 10,000 µg/L (post-purge).
- MTBE was detected in the groundwater samples collected from MW-5 at 2.2 µg/L (pre-purge) and 2.0 µg/L (post-purge), MW-6 at 0.83 µg/L (post-purge), and MW-8 at 1.4 µg/L (pre-purge) and 1.1 µg/L (post-purge).
- Toluene, ethylbenzene, and total xylenes were detected in the groundwater sample collected from MW-5 at 0.65 µg/L (pre-purge) and 0.54 µg/L (post-purge), 85 µg/L (both pre and post-purge), and 400 µg/L (pre-purge) and 370 µg/L (post-purge), respectively. Historical concentrations of toluene, ethylbenzene, and total xylenes detected for MW-5 have shown an overall decreasing trend.

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

Approximately 38.5 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, and MW-9 are historically non-detect for most analytes.
- MW-5 continues to show elevated petroleum hydrocarbon concentrations; however, the concentrations observed in early 2015 have generally been the lowest observed to date.
- MTBE was detected at a maximum of 2.2 µg/L in the MW-5 pre-purge sample.
- The analytical data show an insignificant difference between the pre- and post-purge samples.

Future Activities

Groundwater Monitoring

Based on recharge rates of all site wells, all future groundwater samples will all be collected post-purge and AECOM will coordinate monitoring and sampling activities as per the established schedule. AECOM will submit quarterly groundwater monitoring and sampling reports.

Additional Activity

AECOM will complete the site assessment detailed in the work plan approved by ACEH on January 8, 2015, during the second quarter of 2015.

Remarks/Signatures

The interpretations in this report represent AECOM's professional opinions and are based, in part, on the information supplied by Gettler-Ryan and BC Labs. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended. If you have any questions regarding this project, please contact James Harms at (916) 414-5800.

Sincerely,

James Harms
Project Manager

Jessica M. Law, PG
Senior Geologist
Stamped: 3/05/2015

ccs: Ms. 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	Groundwater Elevation Contour Map – First Quarter 2015
Figure 3	Groundwater Concentration Map – First Quarter 2015

Attachments

Attachment A Groundwater Monitoring Field Sheets
Attachment B BC Laboratories, Inc. Analytical Reports

Tables

Table 1
Current Groundwater Monitoring Data and Analytical Results
RO253, 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-1	154.79	1/20/2015	17.95	136.84	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-A-2	154.79	1/20/2015	--	--	--	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-4-1	153.48	1/20/2015	11.98	141.50	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-4-2	153.48	1/20/2015	--	--	--	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-5-1	153.66	1/20/2015	12.24	141.42	0	880 (A52)	9,100	<0.50	0.65	85	400	
MW-5-2	153.66	1/20/2015	--	--	--	1,800 (A52)	10,000	<0.50	0.54	85	370	
MW-6-1	154.62	1/20/2015	11.61	143.01	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-6-2	154.62	1/20/2015	--	--	--	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-7-1	155.38	1/20/2015	14.13	141.25	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-7-2	155.38	1/20/2015	--	--	--	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-8-1	153.71	1/20/2015	13.28	140.43	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-8-2	153.71	1/20/2015	--	--	--	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-9-1	153.37	1/20/2015	11.80	141.57	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-9-2	153.37	1/20/2015	--	--	--	<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 8260B

TPH-DRO analyzed by Luft/TPHd method with silica gel cleanup

TPH-GRO analyzed by Environmental Protection Agency Method 8015B

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

ID = Identification

TOC = Top of casing

ft = Feet

DTW = Depth to water

GWE = Groundwater elevation

µg/L = Micrograms per liter

LNAPL = Light non-aqueous phase liquid

(A52) = Chromatogram not typical of diesel

Well ID-1 = pre-purge sample

Well ID-2 = post-purge sample

B = Benzene

T = Toluene

E = Ethylbenzene

X = Total xylenes

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

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

-- = Not analyzed/applicable

Table 2
Current Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
MW-A-1	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-A-2	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-4-1	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-4-2	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-5-1	1/20/2015	2.2	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-5-2	1/20/2015	2.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-6-1	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-6-2	1/20/2015	0.83	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-7-1	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-7-2	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-8-1	1/20/2015	1.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-8-2	1/20/2015	1.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-9-1	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-9-2	1/20/2015	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50

NOTES:
Oxygenate compounds analyzed by Environmental Protection Agency Method 8260B

<# = Analyte not detected at or above indicated laboratory practical quantitation limit
ID = Identification
µg/L = Micrograms per liter
MTBE = Methyl t-butyl ether
TBA = t-butyl alcohol
DIPE = Diisopropyl ether
ETBE = Ethyl t-butyl ether
TAME = t-amyl methyl ether
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
Well ID-1 = pre-purge sample
Well ID-2 = post-purge sample

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

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

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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 (cont.)	154.79	10/4/2012	17.52	137.27	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	1/23/2013	15.08	139.71	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	4/22/2013	15.60	139.19	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	7/31/2013	16.42	138.37	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	10/17/2013	16.57	138.22	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	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	
pre-purge	**154.79**	**1/20/2015**	**17.95**	**136.84**	**0**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
post-purge	**154.79**	**1/20/2015**	**--**	**--**	**--**	**<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	
pre-purge	**153.48**	**1/20/2015**	**11.98**	**141.50**	**0**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
post-purge	**153.48**	**1/20/2015**	**--**	**--**	**--**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	

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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-5	153.66	6/16/2010	11.95	141.71	0	3,000	29,000	580	6,800	850	7,200	
	153.66	9/29/2010	13.67	139.99	0	64,000	29,000	220	4,100	2,500	23,000	
	153.66	12/21/2010	11.17	142.49	0	11,000	50,000	81	4,800	2,200	22,000	
	153.66	3/10/2011	11.35	142.31	0	4,900	48,000	69	3,600	1,700	20,000	
	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	137.94	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	
	153.659999	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 (A52)	6,600	<0.50	0.97	84	330	
	153.66	10/21/2014	17.03	136.63	0	3,000 (A52)	27,000	<0.50	40	370	2,900	
pre-purge	**153.66**	**1/20/2015**	**12.24**	**141.42**	**0**	**880 (A52)**	**9,100**	**<0.50**	**0.65**	**85**	**400**	
post-purge	**153.66**	**1/20/2015**	**--**	**--**	**--**	**1,800 (A52)**	**10,000**	**<0.50**	**0.54**	**85**	**370**	
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	

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

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-6 (cont.)	154.62	10/17/2013	16.83	137.79	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	2/24/2014	15.22	139.40	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	4/17/2014	11.43	143.19	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	7/18/2014	14.96	139.66	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	10/21/2014	16.70	137.92	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
pre-purge	**154.62**	**1/20/2015**	**11.61**	**143.01**	**0**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
post-purge	**154.62**	**1/20/2015**	**--**	**--**	**--**	**<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	143.31001	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	06/07/2011	12.59	142.79	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	08/18/2011	14.37	141.01	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	10/04/2011	15.22	140.16	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	01/24/2012	15.32	140.06	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	04/06/2012	13.09	142.29	0	<49	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	07/02/2012	14.42	140.96	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	10/4/2012	16.20	139.18	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	1/23/2013	13.27	142.11	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	4/22/2013	14.30	141.08	0	<50	52	<0.50	<0.50	<0.50	<1.0	
	155.38	7/31/2013	16.30	139.08	0	Insufficient Water to Sample						
	155.38	10/17/2013	16.77	138.61	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	2/24/2014	15.33	140.05	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	4/17/2014	13.82	141.56	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	7/18/2014	15.70	139.68	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	10/21/2014	16.67	138.71	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
pre-purge	**155.38**	**1/20/2015**	**14.13**	**141.25**	**0**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
post-purge	**155.38**	**1/20/2015**	**--**	**--**	**--**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
MW-8	153.71	12/21/2010	11.63	142.08001	0	81	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	3/10/2011	11.38	142.33001	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	

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

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-8 (cont.)	153.71	04/06/2012	11.35	142.36	0	160	270	<0.50	3.7	7.8	91	
	153.71	07/02/2012	12.50	141.21	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	10/4/2012	13.89	139.82	0	<50	<50	<0.50	<0.50	<0.50	2.4	
	153.71	1/23/2013	13.06	140.65	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	4/22/2013	12.82	140.89	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	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	
pre-purge	**153.71**	**1/20/2015**	**13.28**	**140.43**	**0**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
post-purge	**153.71**	**1/20/2015**	**--**	**--**	**--**	**<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	

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

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-9 (cont.)	153.37	10/21/2014	14.32	139.05	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
pre-purge	**153.37**	**1/20/2015**	**11.80**	**141.57**	**0**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	
post-purge	**153.37**	**1/20/2015**	**--**	**--**	**--**	**<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 8260B

TPH-DRO analyzed by Luft/TPHd method with silica gel cleanup

TPH-GRO analyzed by Environmental Protection Agency Method 8015B

Free product correlates to light non-aqueous phase liquid

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

ID = Identification

TOC = Top of casing

ft = Feet

DTW = Depth to water

GWE = Groundwater elevation

µg/L = Micrograms per liter

LNAPL = Light non-aqueous phase liquid

-- = Not analyzed/applicable

B = Benzene

T = Toluene

E = Ethylbenzene

X = Total xylenes

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

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

ND = Non-detect

(A52) = Chromatogram not typical of diesel

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

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)	METHANOL (µg/L)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)
MW-A	12/18/1990	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/3/1991	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/7/1991	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/8/1991	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/1992	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/4/1992	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/10/1993	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/10/1994	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/9/1995	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/1996	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/5/1997	ND	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/1998	ND	--	--	--	--	--	--	--	--	--	--	--	--
	2/22/1999	ND	--	--	--	--	--	--	--	--	--	--	--	--
	2/26/2000	ND	--	--	--	--	--	--	--	--	--	--	--	--
	3/7/2001	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--
	2/22/2002	<0.50	--	--	--	--	--	--	--	--	--	--	--	--
	2/22/2003	<2.0	<100	<500	<2.0	<2.0	<2.0	<2.0	<0.50	--	--	--	--	--
	2/3/2004	<2.0	<5.0	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	2/18/2005	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	3/29/2006	0.54	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	3/28/2007	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	3/22/2008	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	3/27/2009	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	3/23/2010	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/2010	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	9/29/2010	0.63	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	12/21/2010	0.65	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	3/10/2011	0.56	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	06/07/2011	0.57	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	08/18/2011	0.61	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	140	11	69
	10/04/2011	0.72	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	<100	13	69
	01/24/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	04/06/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	07/02/2012	0.56	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/4/2012	0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/23/2013	0.55	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/22/2013	0.59	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/31/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/17/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	**--**	**--**	**--**	**--**	**--**
	2/24/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	**--**	**--**	**--**	**--**	**--**
	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/18/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/21/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
pre-purge	**1/20/2015**	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	--	--	--	--	--
post-purge	**1/20/2015**	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	--	--	--	--	--

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-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	--	--	--	--	--
pre-purge	**1/20/2015**	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	--	--	--	--	--
post-purge	**1/20/2015**	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	--	--	--	--	--
MW-5	6/16/2010	<50	<1000	<25000	<50	<50	<50	<50	<50	<100	--	--	--	--
	9/29/2010	52	<1000	<25000	<50	<50	<50	<50	<50	<1000	--	--	--	--
	12/21/2010	<50	<1000	<25000	<50	<50	<50	<50	<50	<100	--	--	--	--
	3/10/2011	<50	<1000	<25000	<50	<50	<50	<50	<50	<100	--	--	--	--
	06/07/2011	24	150	330	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	08/18/2011	56	44	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	9.7	15,000	<0.44	<1.0
	10/04/2011	42	<250	<6,200	<12	<12	<12	<12	<12	<100	1.9	17,000	<0.44	1.3
	01/24/2012	<25	<500	<12,000	<25	<25	<25	<25	<25	--	--	--	--	--
	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	--	--	--	--	--
pre-purge	**1/20/2015**	**2.2**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	--	--	--	--	--
post-purge	**1/20/2015**	**2.0**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	--	--	--	--	--
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	--	--	--	--

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-6 (cont.)	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	**--**	**--**	**--**	**--**	**--**
pre-purge	**1/20/2015**	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**--**	**--**	**--**	**--**	**--**
post-purge	**1/20/2015**	**0.83**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**--**	**--**	**--**	**--**	**--**
MW-7	12/21/2010	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	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	--	--	--	--	--
pre-purge	**1/20/2015**	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	--	--	--	--	--
post-purge	**1/20/2015**	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	--	--	--	--	--
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	--	--	--	--	--

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-8 (cont.)	4/22/2013	0.88	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/31/2013	0.79	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/17/2013	0.78	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	**--**	**--**	**--**	**--**	**--**
	2/24/2014	1.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/17/2014	1.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/18/2014	0.94	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/21/2014	2.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
pre-purge	**1/20/2015**	**1.4**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**--**	**--**	**--**	**--**	**--**
post-purge	**1/20/2015**	**1.1**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**--**	**--**	**--**	**--**	**--**
MW-9	12/21/2010	1.2	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	3/10/2011	0.90	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	06/07/2011	1.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	08/18/2011	2.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.001	<500	2.7	47
	10/04/2011	2.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	<200	3.2	47
	01/24/2012	1.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	04/06/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	07/02/2012	2.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/4/2012	1.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/23/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/22/2013	0.83	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/31/2013	1.8	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/17/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	**--**	**--**	**--**	**--**	**--**
	2/24/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/18/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/21/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
pre-purge	**1/20/2015**	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	--	--	--	--	--
post-purge	**1/20/2015**	**<0.50**	**<10**	**<250**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	--	--	--	--	--

NOTES:

Oxygenate compounds analyzed by Environmental Protection Agency Method 8260B

Free product correlates to light non-aqueous phase liquid

<# = Analyte not detected at or above indicated laboratory practical quantitation limit
ID = Identification
mg/L = Milograms per liter
µg/L = Micrograms per liter
ND = Non-detect
MTBE = Methyl t-butyl ether
TBA = t-butyl alcohol
DIPE = Diisopropyl ether
ETBE = Ethyl t-butyl ether
TAME = t-amyl methyl ether
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
-- = Not analyzed/applicable

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

WELL ID	DATE	Dichloro-difluoro-methane (µg/L)	1,1-DCA (µg/L)	1,1-DCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,2-Dichloro-propane (µg/L)	cis-1,3-Dichloro-propene (µg/L)
MW-A	2/3/2004	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	2/18/2005	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/29/2006	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/28/2007	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/22/2008	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/27/2009	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

WELL ID	DATE	1,1,2,2-Tetrachloro-ethane (µg/L)	Tetrachloro-ethene (PCE) (µg/L)	Trichloro-trifluoro-ethane (µg/L)	1,1,1-Trichloro-ethane (µg/L)	1,1,2-Trichloro-ethane (µg/L)	Trichloro-ethene (TCE) (µg/L)	Trichloro-fluoro-methane (µg/L)	Vinyl chloride (µg/L)
MW-A	2/3/2004	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50
	2/18/2005	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50
	3/29/2006	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/28/2007	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/22/2008	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/27/2009	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

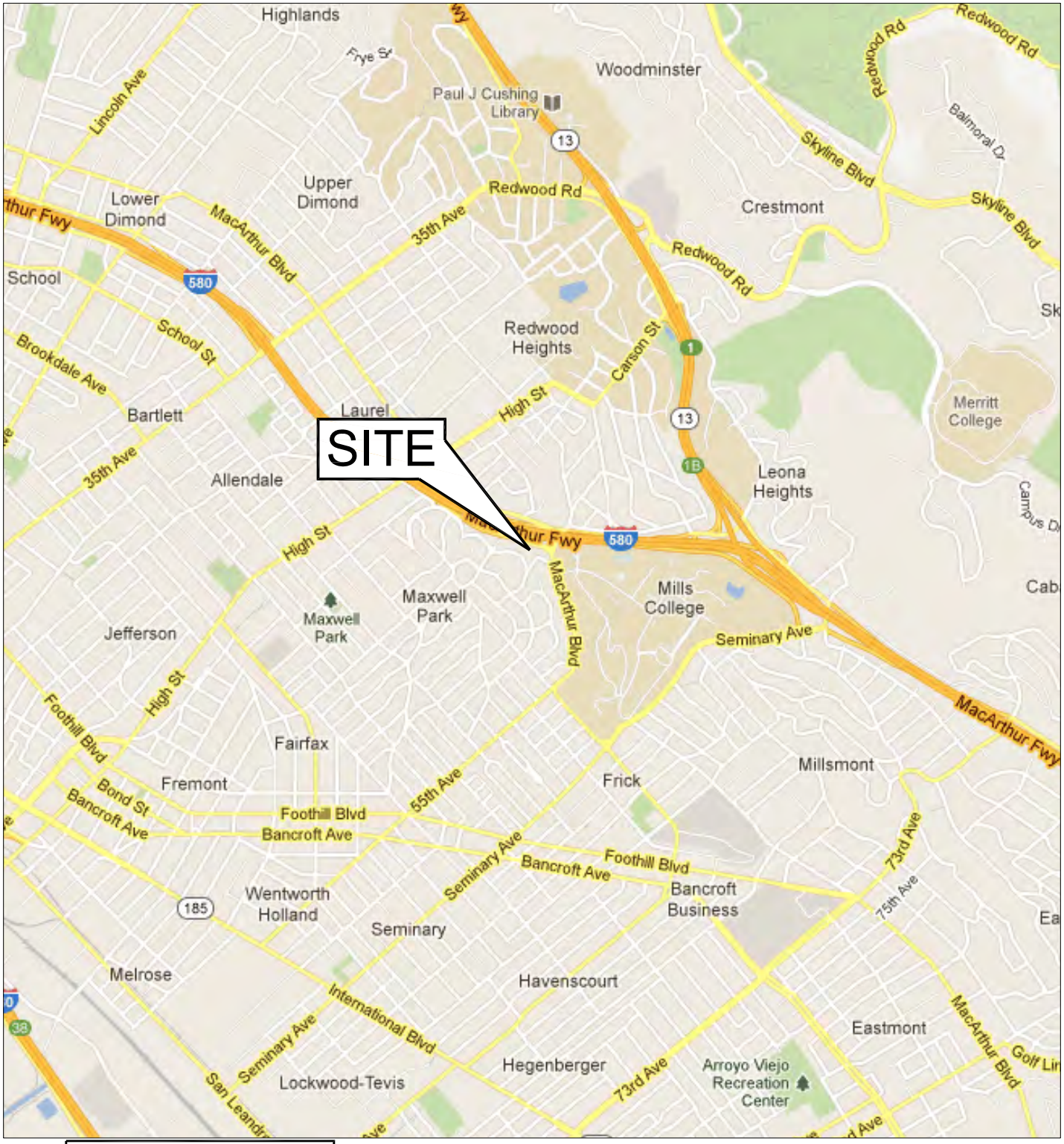
NOTES:

µg/L = Micrograms per liter

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

ID = Identification

Figures



North

0 1100 2200 FT

SCALE

FIGURE 1

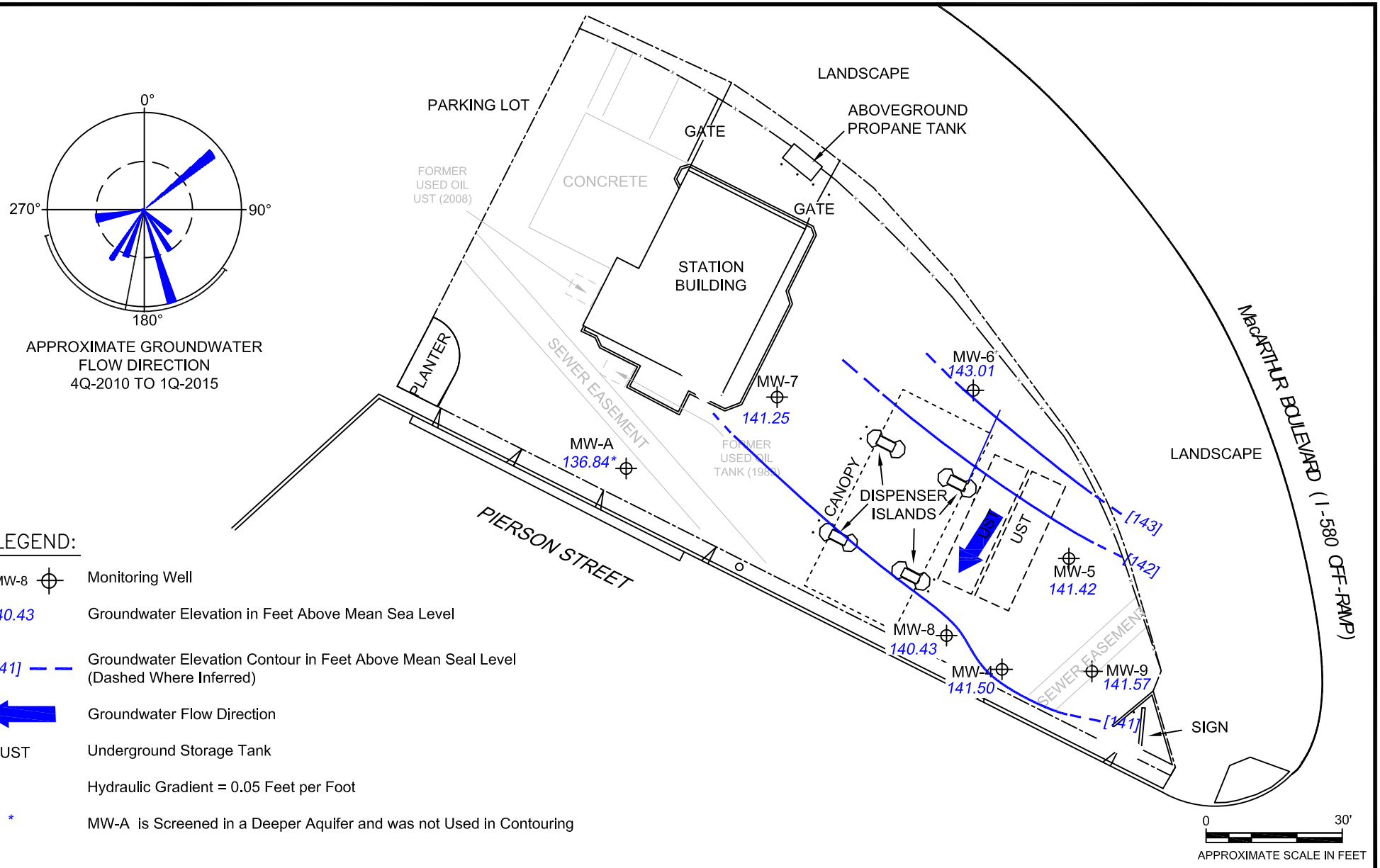
SITE LOCATION MAP

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

PROJECT NO.	DRAWN BY 04/15/2014
FILE NO. 351640	PREPARED BY CD
REVISION NO.	REVIEWED BY JH

AECOM

SOURCE: Google Maps (R) dated July 24, 2012



Base map created by Delta Consultants, Inc.

GROUNDWATER ELEVATION CONTOUR MAP - FIRST QUARTER 2015

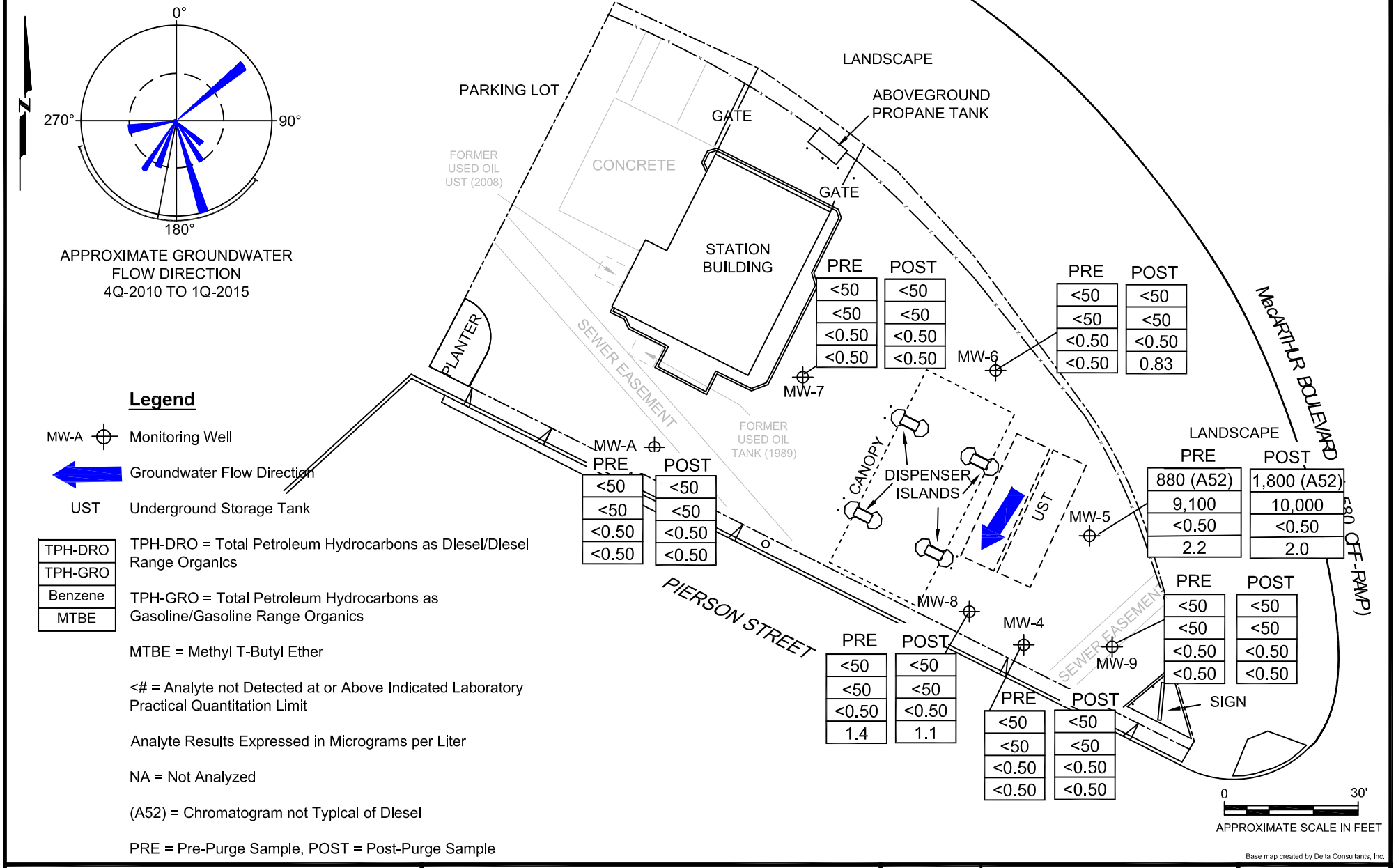
RO253, Unocal No. 5781 (351640)
3535 Pierson Street, Oakland, California

SCALE:	DATE:	PROJECT NUMBER:
1" = 30'	2/23/2015	60338852

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

DESIGNED BY:	REVISIONS				FIGURE NUMBER:
	NO.:	DESCRIPTION:	DATE:	BY:	2
DRAWN BY: JH					
CHECKED BY: JL					
APPROVED BY: JH					

P:\ENV\01231-CHEVRON\76PRODUCTS_TRANSFER_SITES\351640_5781_OAKLAND\7.0 DELIVERABLES\7.2 CADD\1Q15\FIGURE 2_GWE_351640_1Q15.DWG



Legend

MW-A — Monitoring Well

Groundwater Flow Direction

UST — Underground Storage Tank

TPH-DRO
TPH-GRO
Benzene
MTBE

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

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

MTBE = Methyl T-Butyl Ether

<# = Analyte not Detected at or Above Indicated Laboratory Practical Quantitation Limit

Analyte Results Expressed in Micrograms per Liter

NA = Not Analyzed

(A52) = Chromatogram not Typical of Diesel

PRE = Pre-Purge Sample, POST = Post-Purge Sample

Base map created by Delta Consultants, Inc.

GROUNDWATER CONCENTRATION MAP - FIRST QUARTER 2015

RO253, Unocal No. 5781 (351640)
3535 Pierson Street, Oakland, California

SCALE:	DATE:	PROJECT NUMBER:
1" = 30'	2/23/2015	60338852

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

DESIGNED BY:	
DRAWN BY:	JH
CHECKED BY:	JL
APPROVED BY:	JH

REVISIONS

NO.:	DESCRIPTION:	DATE:	BY:

FIGURE NUMBER: 3

P:\ENV\01231-CHEVRON\76PRODUCTS_TRANSFER_SITES\351640_5781_OAKLAND\7.0 DELIVERABLES\7.2 CADD\1Q15\FIGURE 3 CONC 1Q15_351640.DWG

Attachment A

Groundwater Monitoring Field Sheets

GETTLER-RYAN INC.

TRANSMITTAL

January 30, 2015
G-R #385641

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

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

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

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package **First Quarter Event of January 20, 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: 1-20-15

Sampler: FT

WELL ID	Vault Frame Condition	Gasket/ O-Ring (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Bolt Flanges B=Broken S=Stripped R=Retap	Apron Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) Inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y/(N)	REPLACE CAP Y/(N)	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Y(N)
A	OK									Emco | 8" | 2	
MW-4	OK									Emco | 12" | 2	
MW-5	OK										
MW-6	OK				C						
MW-7	OK										
MW-8	OK										
MW-9	OK				C	OK	OK				

Comments

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

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

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

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

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

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781 Job Number: 385641
Site Address: 3535 Pierson Street Event Date: 1.20.15 (inclusive)
City: Oakland, CA Sampler: FR

Well ID MW- A Date Monitored: 1.20.15
Well Diameter 2/4 in.
Total Depth 45.05 ft.
Depth to Water 17.95 ft.

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

☐ Check if water column is less then 0.50 ft.

27.10 xVF .17 = 4.60 x3 case volume = Estimated Purge Volume: 13.82 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 23.37

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): 1030 Weather Conditions: SUNNY
Sample Time/Date: 1050 / 1.20.15 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: ≈2.5 gpm. Sediment Description: NONE
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 20.10

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS/ mS µmhos/cm)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)
1032	4.5	7.74	872	21.0		
1034	9.0	7.70	867	20.6		
1036	14.0	7.67	861	20.2		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- A	12 x voa vial	YES	HCL	BC LABS	TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)
	12 x 1 liter ambers	YES	NP	BC LABS	TPH-DRO w/sgc(8015M)

COMMENTS: TOOK PRE PURGE SAMPLE @ 1025

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: 1.20.15 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-4 Date Monitored: 1.20.15
Well Diameter 2 (4) in.
Total Depth 24.75 ft.
Depth to Water 11.98 ft. ☐ Check if water column is less then 0.50 ft.

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

12.77 xVF .66 = 8.42 x3 case volume = Estimated Purge Volume: 25.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.53

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

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

Start Time (purge): 1310 Weather Conditions: SUNNY
Sample Time/Date: 1450 / 1.20.15 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: 1.5 gpm. Sediment Description: NONE
Did well de-water? YES If yes, Time: 1318 Volume: 9.0 gal. DTW @ Sampling: 12.26

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1316	8.0	7.85	917	20.6		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	12 x voa vial	YES	HCL	BC LABS	TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)
	12 x 1 liter ambers	YES	NP	BC LABS	TPH-DRO w/sgc(8015M)

COMMENTS: TOOK PRE PURGE SAMPLE @ 1305

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: 1.20.15 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-5 Date Monitored: 1.20.15
Well Diameter 2/(4) in.
Total Depth 19.92 ft.
Depth to Water 12.24 ft.

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

☐ Check if water column is less then 0.50 ft.

7.68 xVF .66 = 5.06 x3 case volume = Estimated Purge Volume: 15.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.77

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

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

Start Time (purge): 1340 Weather Conditions: SUNNY
Sample Time/Date: 1505 / 1.20.15 Water Color: CLEAR Odor: (Y) / N STRONG
Approx. Flow Rate: ✓ gpm. Sediment Description: NONE
Did well de-water? YES If yes, Time: 1350 Volume: 6.0 gal. DTW @ Sampling: 13.02

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1350	5.0	7.42	1426	21.2		
					✓	✓

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5	12 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: TOOK PRE-PURGE SAMPLE @ 1335
SHEEN PRESENT IN WATER.

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: 1.20.15 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW- 6 Date Monitored: 1.20.15
Well Diameter ②/4 in.
Total Depth 19.97 ft.
Depth to Water 11.61 ft. ☐ Check if water column is less then 0.50 ft.

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

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

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.28

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

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

Start Time (purge): 1205 Weather Conditions: SUNNY
Sample Time/Date: 1435 / 1.20.15 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: ✓ gpm. Sediment Description: NONE
Did well de-water? YES If yes, Time: 1212 Volume: 3.0 gal. DTW @ Sampling: 13.22

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS) / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1208	1.5	7.82	921	20.8		
1212	3.0	7.78	917	20.0		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 6	12 x voa vial	YES	HCL	BC LABS	TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)
	12 x 1 liter ambers	YES	NP	BC LABS	TPH-DRO w/sgc(8015M)

COMMENTS: TOOK PRE PURGE SAMPLE @ 1200

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: 1.20.15 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-7 Date Monitored: 1.20.15
Well Diameter 2/4 in.
Total Depth 19.70 ft.
Depth to Water 14.13 ft.

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

☐ Check if water column is less then 0.50 ft.

5.57 xVF .17 = .94 x3 case volume = Estimated Purge Volume: 3.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 15.24

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

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

Start Time (purge): 1110 Weather Conditions: SUNNY
Sample Time/Date: 1405 / 1.20.15 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: ✓ gpm. Sediment Description: NONE
Did well de-water? YES If yes, Time: 1114 Volume: 2.0 gal. DTW @ Sampling: 15.18

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1113	1.5	7.69	795	21.4		
					✓	✓

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	12 x voa vial	YES	HCL	BC LABS	TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)
	12 x 1 liter ambers	YES	NP	BC LABS	TPH-DRO w/sgc(8015M)

COMMENTS: TOOK PAE PUMP SAMPLE @ 1105

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: 1.20.15 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-8
Well Diameter 2/4 in.
Total Depth 19.93 ft.
Depth to Water 13.28 ft.
Date Monitored: 1.20.15

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 then 0.50 ft.

6.65 xVF .17 = 1.13 x3 case volume = Estimated Purge Volume: 3.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.61

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

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

Start Time (purge): 1225 Weather Conditions: CLEAR
Sample Time/Date: 1244 / 1.20.15 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: / gpm. Sediment Description: NONE
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 14.36

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS) / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1228	1.0	7.92	857	20.6		
1231	2.0	7.89	851	20.0		
1234	3.0	7.87	846	19.7	/	/

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8	12 x voa vial	YES	HCL	BC LABS	TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)
	12 x 1 liter ambers	YES	NP	BC LABS	TPH-DRO w/sgc(8015M)

COMMENTS: TOOK PREPURGE SAMPLE @ 1220

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: 1.20.15 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW- 9 Date Monitored: 1.20.15
Well Diameter (2)/ 4 in.
Total Depth 19.68 ft.
Depth to Water 11.80 ft. ☐ Check if water column is less then 0.50 ft.

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

7.88 xVF .17 = 1.33 x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.37

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

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

Start Time (purge): 1135 Weather Conditions: SUNNY
Sample Time/Date: 1420 / 1.20.15 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: / gpm. Sediment Description: NONE
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 13.31

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µS) mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1138	1.5	8.26	859	21.3		
1141	3.0	8.21	852	20.9		
1145	4.0	8.19	847	20.5		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 9	12 x voa vial	YES	HCL	BC LABS	TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)
	12 x 1 liter ambers	YES	NP	BC LABS	TPH-DRO w/sgc(8015M)

COMMENTS: SLOW RECOVERY
TOOK PUR PURGE SAMPLE @ 1130

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

CHAIN OF CUSTODY FORM

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

COC 1 of _____

Union Oil Site ID: TO600101467
Site Global ID: 5781
Site Address: 3535 PIERSON ST OAKLAND, CA
Union Oil PM: NICOLE M. HELGENBERG
Union Oil PM Phone No.: (925) 790-6912 ((510) 363-7354

Charge Code: NWRTB-0 351640 **-0- LAB**

This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.

Union Oil Consultant: AECOM ENV
Consultant Contact: JAMES HAUMS
Consultant Phone No.: (916) 361-6412
Sampling Company: [redacted] GETTLER-RYAN INC.
Sampled By (PRINT): FRANK TERLINONI
Sampler Signature:

BC Laboratories, Inc.
Project Manager: Molly Meyers
4100 Atlas Court, Bakersfield, CA 93308
Phone No. 661-327-4911

ANALYSES REQUIRED

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

Special Instructions

SAMPLE ID: Field Point Name	Matrix	DTW	Date (yymmdd)	Sample Time	# of Containers	TPH - Diesel by EPA 8015M w/ SGC	TPH - G by [redacted] (8015)	BTEX/MTBE/[redacted] by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	8 OXYS (8260B)					Notes / Comments
QA	W-S-A		150120		2		X	X								
MW-A-1	W-S-A			[redacted] 1025	8	X	X	X			X					PRE-[redacted] PURGE SAMPLES
MW-4-1	W-S-A			[redacted] 1305	8	X	X	X			X					
MW-5-1	W-S-A			[redacted] 1335	8	X	X	X			X					
MW-6-1	W-S-A			[redacted] 1200	8	X	X	X			X					
MW-7-1	W-S-A			[redacted] 1105	8	X	X	X			X					
MW-8-1	W-S-A			[redacted] 1220	8	X	X	X			X					
MW-9-1	W-S-A			[redacted] 1130	8	X	X	X			X					
	W-S-A															
	W-S-A															
	W-S-A															
	W-S-A															

Relinquished By	Company	Date / Time:
Frank Terlinoni	G-R INC	1.21.15 (1235)

Received By	Company	Date / Time:
[illegible]		

Relinquished By	Company	Date / Time:

Received By	Company	Date / Time:
Greg Bryan	BC Lab	1.21.15 1430

Relinquished By	Company	Date / Time:

Received By	Company	Date / Time:

CHAIN OF CUSTODY FORM

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

COC 1 of 1

Union Oil Site ID: T0600101467	Union Oil Consultant: AECOM ENV.
Site Global ID: 5781	Consultant Contact: JAMES HAUMS
Site Address: 3535 PIERSON ST OAKLAND, CA	Consultant Phone No.: (916) 361-6412
	Sampling Company: GETTLER-RYAN INC
Union Oil PM: NICOLE M. AUCENEAUX	Sampled By (PRINT): FRANK TELLINONI
Union Oil PM Phone No.: (925) 790-6412 (510) 363-7354	Sampler Signature:
Charge Code: NWRTB-0 351640 -0- LAB	BC Laboratories, Inc.
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.	**Project Manager: Molly Meyers** 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911

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

Special Instructions

SAMPLE ID						ANALYSES REQUIRED											
Field Point Name	Matrix	DTW	Date (yymmdd)	Sample Time	# of Containers	TPH - Diesel by EPA 8015 M (3550)	TPH - G by [redacted] (8015)	BTEX/MTBE/[redacted] by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	8 OXYS (8260B)						Notes / Comments
QA	W-S-A		150120														
MW-A-2	W-S-A			1050	8	X	X	X			X						
MW-4-2	W-S-A			1450	8	X	X	X			X						
MW-5-2	W-S-A			1505	8	X	X	X			X						
MW-6-2	W-S-A			1435	8	X	X	X			X						
MW-7-2	W-S-A			1405	8	X	X	X			X						
MW-8-2	W-S-A			1244	8	X	X	X			X						
MW-9-2	W-S-A			1420	8	X	X	X			X						
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																

Relinquished By	Company	Date / Time:
Frank Tellinoni	G-R INC	1 21 15 (1235)

Received By	Company	Date / Time:

Relinquished By	Company	Date / Time :

Received By	Company	Date / Time :
Greg Bryan	BC Lab	1-21-15 1430

Relinquished By	Company	Date / Time:

Received By	Company	Date / Time:

Attachment B

BC Laboratories, Inc. Analytical Reports

Date of Report: 02/05/2015

Jim Harms

AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Client Project:	351640
BCL Project:	5781
BCL Work Order:	1501724
Invoice ID:	B195049

Enclosed are the results of analyses for samples received by the laboratory on 1/21/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Molly Meyers

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

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Table of Contents

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CHAIN OF CUSTODY FORM

Union Oil Company of California ■ 6101 Bollinger Canyon Road ■ San Ramon, CA 94583 15-01724 COC 1 of 1

Union Oil Site ID: T0600101467	Union Oil Consultant: AECOM ENV.
Site Global ID: 5781	Consultant Contact: JAMES HAMMS
Site Address: 3535 PIERSON ST. OAKLAND, CA	Consultant Phone No.: (916) 361-6412
Union Oil PM: NICOLE M. ALCENEAUX	Sampling Company: [redacted] GETTLER-RYAN INC
Union Oil PM Phone No.: (925) 790-6912 (510) 363-7354	Sampled By (PRINT): FRANK TERRINONI
Charge Code: NWRTB-0 351640 -0- LAB	Sampler Signature:
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.	BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911

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

Special Instructions

SAMPLE ID						ANALYSES REQUIRED											
Field Point Name	Matrix	DTW	Date (yymmdd)	Sample Time	# of Containers	TPH - Diesel by EPA 8015M SSL	TPH - G by [redacted] (8015)	BTEX/MTBE [redacted] by EPA 8260	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	8 Oxys (8270SIM)						Notes / Comments
-1 QA	W-S-A		150120		2		X	X									
-2 MW-A-1	W-S-A			[redacted] 1025	8	X	X	X			X						
-3 MW-4-1	W-S-A			[redacted] 1305	8	X	X	X			X						
-4 MW-5-1	W-S-A			[redacted] 1335	8	X	X	X			X						
-5 MW-6-1	W-S-A			[redacted] 1200	8	X	X	X			X						
-6 MW-7-1	W-S-A			[redacted] 1105	8	X	X	X			X						
-7 MW-8-1	W-S-A			[redacted] 1220	8	X	X	X			X						
-8 MW-9-1	W-S-A			[redacted] 1130	8	X	X	X			X						
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																

CHK BY MM DISTRIBUTION SPL SAC SUB-OUT

Relinquished By	Company	Date / Time:
Frank Terrinoni	G-RYAN	1.21.15 (1235)
Received By	Company	Date / Time:
GETTLER-RYAN FRIDGE		01-21-15 1235

Relinquished By	Company	Date / Time :
[redacted]	GRYNE	01-21-15 1430
Received By	Company	Date / Time :
Mary Bogan	BCLAB	1-21-15 1430

Relinquished By	Company	Date / Time:
Mary Bogan	BCLAB	1-21-15 1830
Received By	Company	Date / Time:
[redacted]	BCLAB	1-21-15 18:30

REL. [redacted] 1-21-15 2135 1-21-15 2135

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Chain of Custody and Cooler Receipt Form for 1501724 Page 2 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 1 Of 3

Submission #: 15-01724

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

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

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

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: Amber Thermometer ID: 208 Date/Time 4/21/15

Temperature: (A) 1.0 °C / (C) 0.9 °C Analyst Init KIB 2138

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	AB									
40ml VOA VIAL		ABCDEF	ABCDEF	ABCDEF	ABCDEF	ABCDEF	ABCDEF	ABCDEF		
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER		GH				GH		GH		
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:

Sample Numbering Completed By: _____ Date/Time: 4/22/15 @ 1035 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]

A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1501724 Page 3 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 2 Of 3

Submission #: 15-01724

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

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

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

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: Amber Thermometer ID: 208 Date/Time 421115

Temperature: (A) 0.7 °C / (C) 0.6 °C Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER			GH	GH						
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____

Sample Numbering Completed By: AM Date/Time: 1/22/15@1035 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]

A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1501724 Page 4 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 3 Of 3

Submission #: 15-01724

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

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

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

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: Amber Thermometer ID: 208 Date/Time 4/21/15 2137

Temperature: (A) 1.5 °C / (C) 1.4 °C Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER					GH		GH			
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:

Sample Numbering Completed By: AM Date/Time: 4/22/15@1035 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]

A = Actual / C = Corrected

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1501724-01	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	QA-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Trip Blank
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): QA			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1501724-02	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 10:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-A-1-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): MW-A			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1501724-03	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 13:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-1-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101467			
	Location ID (FieldPoint): MW-4			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1501724-04	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 13:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-5-1-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1501724-05	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 12:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-6-1-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-6	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1501724-06	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 11:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-7-1-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-7	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1501724-07	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 12:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-8-1-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-8	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1501724-08	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 11:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-9-1-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-9	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501724-01 | **Client Sample Name:** 5781, QA-W-150120, 1/20/2015 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)	118	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/23/15	01/24/15 02:42	MGC	MS-V5	1	BYA1872

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501724-01 | **Client Sample Name:** 5781, QA-W-150120, 1/20/2015 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)	94.0	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/22/15	01/23/15 21:16	SE1	GC-V9	1	BYA1754

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2020 L St, Suite 400
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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501724-02 | **Client Sample Name:** 5781, MW-A-1-W-150120, 1/20/2015 10:25:00AM

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)	117	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/23/15	01/24/15 03:05	MGC	MS-V5	1	BYA1872

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501724-02 | **Client Sample Name:** 5781, MW-A-1-W-150120, 1/20/2015 10:25:00AM

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)	94.7	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/22/15	01/23/15 21:36	SE1	GC-V9	1	BYA1754

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501724-02 | **Client Sample Name:** 5781, MW-A-1-W-150120, 1/20/2015 10:25:00AM

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)	57.0	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 07:51	MBS	GC-5	1	BYB0236

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501724-03 | **Client Sample Name:** 5781, MW-4-1-W-150120, 1/20/2015 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/23/15	01/24/15 03:28	MGC	MS-V5	1	BYA1872

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501724-03 | **Client Sample Name:** 5781, MW-4-1-W-150120, 1/20/2015 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	97.9	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/22/15	01/23/15 21:57	SE1	GC-V9	1	BYA1754

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501724-03 | **Client Sample Name:** 5781, MW-4-1-W-150120, 1/20/2015 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	60.8	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 08:04	MBS	GC-5	1	BYB0236

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501724-04 | **Client Sample Name:** 5781, MW-5-1-W-150120, 1/20/2015 1:35:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	**85**	**ug/L**	**5.0**		**EPA-8260B**	ND	**A01**	2
Methyl t-butyl ether	**2.2**	**ug/L**	**0.50**		**EPA-8260B**	ND		1
Toluene	**0.65**	**ug/L**	**0.50**		**EPA-8260B**	ND		1
Total Xylenes	**400**	**ug/L**	**10**		**EPA-8260B**	ND	**A01**	2
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)	119	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	122	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	116	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	105	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/23/15	01/24/15 03:50	MGC	MS-V5	1	BYA1872
2	EPA-8260B	01/23/15	01/26/15 14:57	MGC	MS-V5	10	BYA1872

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501724-04 | **Client Sample Name:** 5781, MW-5-1-W-150120, 1/20/2015 1:35:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	**9100**	**ug/L**	**500**		**EPA-8015B**	ND	**A01**	1
a,a,a-Trifluorotoluene (FID Surrogate)	95.8	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/26/15	01/27/15 00:01	SE1	GC-V9	10	BYA1885

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501724-04 | **Client Sample Name:** 5781, MW-5-1-W-150120, 1/20/2015 1:35:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	**880**	**ug/L**	**50**		**Luft/TPHd**	ND	**A52**	1
Tetracosane (Surrogate)	40.2	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 08:52	MBS	GC-5	1	BYB0236

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501724-05 | **Client Sample Name:** 5781, MW-6-1-W-150120, 1/20/2015 12:00:00PM

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)	112	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	107	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/23/15	01/24/15 04:13	MGC	MS-V5	1	BYA1872

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501724-05 | **Client Sample Name:** 5781, MW-6-1-W-150120, 1/20/2015 12:00:00PM

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)	94.7	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/22/15	01/23/15 22:17	SE1	GC-V9	1	BYA1754

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501724-05 | **Client Sample Name:** 5781, MW-6-1-W-150120, 1/20/2015 12:00:00PM

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)	63.2	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 09:05	MBS	GC-5	1	BYB0236

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501724-06 | **Client Sample Name:** 5781, MW-7-1-W-150120, 1/20/2015 11:05:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.8	%	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	01/23/15	01/24/15 04:36	MGC	MS-V5	1	BYA1873

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501724-06 | **Client Sample Name:** 5781, MW-7-1-W-150120, 1/20/2015 11:05:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	90.7	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/22/15	01/23/15 22:37	SE1	GC-V9	1	BYA1754

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501724-06 | **Client Sample Name:** 5781, MW-7-1-W-150120, 1/20/2015 11:05:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	50.6	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 09:18	MBS	GC-5	1	BYB0236

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Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501724-07 | **Client Sample Name:** 5781, MW-8-1-W-150120, 1/20/2015 12:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	**1.4**	**ug/L**	**0.50**		**EPA-8260B**	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/23/15	01/24/15 04:58	MGC	MS-V5	1	BYA1873

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501724-07 | **Client Sample Name:** 5781, MW-8-1-W-150120, 1/20/2015 12:20:00PM

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)	94.6	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/22/15	01/23/15 22:57	SE1	GC-V9	1	BYA1754

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501724-07 | **Client Sample Name:** 5781, MW-8-1-W-150120, 1/20/2015 12:20:00PM

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)	50.8	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 09:30	MBS	GC-5	1	BYB0236

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501724-08 | **Client Sample Name:** 5781, MW-9-1-W-150120, 1/20/2015 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)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/23/15	01/24/15 05:21	MGC	MS-V5	1	BYA1873

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501724-08 | **Client Sample Name:** 5781, MW-9-1-W-150120, 1/20/2015 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)	92.7	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/23/15	01/23/15 23:18	SE1	GC-V9	1	BYA1885

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501724-08 | **Client Sample Name:** 5781, MW-9-1-W-150120, 1/20/2015 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)	49.7	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 10:09	MBS	GC-5	1	BYB0236

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYA1872						
Benzene	BYA1872-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BYA1872-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BYA1872-BLK1	ND	ug/L	0.50		
Ethylbenzene	BYA1872-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BYA1872-BLK1	ND	ug/L	0.50		
Toluene	BYA1872-BLK1	ND	ug/L	0.50		
Total Xylenes	BYA1872-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BYA1872-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BYA1872-BLK1	ND	ug/L	10		
Diisopropyl ether	BYA1872-BLK1	ND	ug/L	0.50		
Ethanol	BYA1872-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BYA1872-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	**BYA1872-BLK1**	**115**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYA1872-BLK1**	**98.7**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYA1872-BLK1**	**91.0**	%	**80 - 120 (LCL - UCL)**		
QC Batch ID: BYA1873						
Benzene	BYA1873-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BYA1873-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BYA1873-BLK1	ND	ug/L	0.50		
Ethylbenzene	BYA1873-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BYA1873-BLK1	ND	ug/L	0.50		
Toluene	BYA1873-BLK1	ND	ug/L	0.50		
Total Xylenes	BYA1873-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BYA1873-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BYA1873-BLK1	ND	ug/L	10		
Diisopropyl ether	BYA1873-BLK1	ND	ug/L	0.50		
Ethanol	BYA1873-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BYA1873-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	**BYA1873-BLK1**	**114**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYA1873-BLK1**	**97.4**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYA1873-BLK1**	**99.7**	%	**80 - 120 (LCL - UCL)**		

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Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYA1872										
Benzene	BYA1872-BS1	LCS	25.340	25.000	ug/L	101		70 - 130		
Toluene	BYA1872-BS1	LCS	26.020	25.000	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYA1872-BS1	LCS	10.320	10.000	ug/L	103		75 - 125		
Toluene-d8 (Surrogate)	BYA1872-BS1	LCS	9.9300	10.000	ug/L	99.3		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYA1872-BS1	LCS	9.7100	10.000	ug/L	97.1		80 - 120		
QC Batch ID: BYA1873										
Benzene	BYA1873-BS1	LCS	25.370	25.000	ug/L	101		70 - 130		
Toluene	BYA1873-BS1	LCS	25.810	25.000	ug/L	103		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYA1873-BS1	LCS	11.090	10.000	ug/L	111		75 - 125		
Toluene-d8 (Surrogate)	BYA1873-BS1	LCS	10.080	10.000	ug/L	101		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYA1873-BS1	LCS	10.330	10.000	ug/L	103		80 - 120		

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Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYA1872	Used client sample: N										
Benzene	MS	501363-02RE´	1.1000	248.40	250.00	ug/L		98.9		70 - 130	A01
	MSD	501363-02RE´	1.1000	229.50	250.00	ug/L	7.9	91.4	20	70 - 130	A01
Toluene	MS	501363-02RE´	17.500	272.40	250.00	ug/L		102		70 - 130	A01
	MSD	501363-02RE´	17.500	255.80	250.00	ug/L	6.3	95.3	20	70 - 130	A01
1,2-Dichloroethane-d4 (Surrogate)	MS	501363-02RE´	ND	9.7700	10.000	ug/L		97.7		75 - 125	
	MSD	501363-02RE´	ND	9.5300	10.000	ug/L	2.5	95.3		75 - 125	
Toluene-d8 (Surrogate)	MS	501363-02RE´	ND	9.7600	10.000	ug/L		97.6		80 - 120	
	MSD	501363-02RE´	ND	9.9400	10.000	ug/L	1.8	99.4		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	501363-02RE´	ND	10.110	10.000	ug/L		101		80 - 120	
	MSD	501363-02RE´	ND	9.9200	10.000	ug/L	1.9	99.2		80 - 120	
QC Batch ID: BYA1873	Used client sample: N										
Benzene	MS	1501426-01	2.0100	25.220	25.000	ug/L		92.8		70 - 130	
	MSD	1501426-01	2.0100	28.150	25.000	ug/L	11.0	105	20	70 - 130	
Toluene	MS	1501426-01	ND	23.580	25.000	ug/L		94.3		70 - 130	
	MSD	1501426-01	ND	27.060	25.000	ug/L	13.7	108	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1501426-01	ND	11.280	10.000	ug/L		113		75 - 125	
	MSD	1501426-01	ND	10.680	10.000	ug/L	5.5	107		75 - 125	
Toluene-d8 (Surrogate)	MS	1501426-01	ND	10.130	10.000	ug/L		101		80 - 120	
	MSD	1501426-01	ND	10.080	10.000	ug/L	0.5	101		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1501426-01	ND	10.430	10.000	ug/L		104		80 - 120	
	MSD	1501426-01	ND	10.510	10.000	ug/L	0.8	105		80 - 120	

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Project Number: 351640
Project Manager: Jim Harms

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: BYA1754						
Gasoline Range Organics (C4 - C12)	BYA1754-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	**BYA1754-BLK1**	**91.2**	%	**70 - 130 (LCL - UCL)**		
QC Batch ID: BYA1885						
Gasoline Range Organics (C4 - C12)	BYA1885-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	**BYA1885-BLK1**	**100**	%	**70 - 130 (LCL - UCL)**		

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYA1754										
Gasoline Range Organics (C4 - C12)	BYA1754-BS1	LCS	1103.9	1000.0	ug/L	110		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BYA1754-BS1	LCS	36.312	40.000	ug/L	90.8		70 - 130		
QC Batch ID: BYA1885										
Gasoline Range Organics (C4 - C12)	BYA1885-BS1	LCS	1101.8	1000.0	ug/L	110		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BYA1885-BS1	LCS	38.331	40.000	ug/L	95.8		70 - 130		

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYA1754	Used client sample: N										
Gasoline Range Organics (C4 - C12)	MS	1428224-95	ND	928.43	1000.0	ug/L		92.8		70 - 130	
	MSD	1428224-95	ND	924.64	1000.0	ug/L	0.4	92.5	20	70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1428224-95	ND	36.965	40.000	ug/L		92.4		70 - 130	
	MSD	1428224-95	ND	34.649	40.000	ug/L	6.5	86.6		70 - 130	
QC Batch ID: BYA1885	Used client sample: N										
Gasoline Range Organics (C4 - C12)	MS	1428224-94	ND	985.51	1000.0	ug/L		98.6		70 - 130	
	MSD	1428224-94	ND	1094.3	1000.0	ug/L	10.5	109	20	70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1428224-94	ND	39.030	40.000	ug/L		97.6		70 - 130	
	MSD	1428224-94	ND	39.796	40.000	ug/L	1.9	99.5		70 - 130	

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Project: 5781
Project Number: 351640
Project Manager: Jim Harms

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: BYB0236						
Diesel Range Organics (C12 - C24)	BYB0236-BLK1	ND	ug/L	50		
Tetracosane (Surrogate)	**BYB0236-BLK1**	**55.0**	%	**20 - 120 (LCL - UCL)**		
Capric acid (Reverse Surrogate)	BYB0236-BLK1	0	%	0 - 1 (LCL - UCL)		

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Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYB0236										
Diesel Range Organics (C12 - C24)	BYB0236-BS1	LCS	260.55	500.00	ug/L	52.1		20 - 110		
Tetracosane (Surrogate)	BYB0236-BS1	LCS	11.520	20.000	ug/L	57.6		20 - 120		
Capric acid (Reverse Surrogate)	BYB0236-BS1	LCS	ND	100.00	ug/L	0		0 - 1		

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Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYB0236	Used client sample: N										
Diesel Range Organics (C12 - C24)	MS	1428224-65	ND	239.55	500.00	ug/L		47.9		20 - 110	
	MSD	1428224-65	ND	323.42	500.00	ug/L	29.8	64.7	30	20 - 110	
Tetracosane (Surrogate)	MS	1428224-65	ND	11.152	20.000	ug/L		55.8		20 - 120	
	MSD	1428224-65	ND	14.366	20.000	ug/L	25.2	71.8		20 - 120	
Capric acid (Reverse Surrogate)	MS	1428224-65	ND	ND	100.00	ug/L		0		0 - 1	
	MSD	1428224-65	ND	ND	100.00	ug/L		0		0 - 1	

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
A52	Chromatogram not typical of diesel.

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Date of Report: 02/05/2015

Jim Harms

AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Client Project:	351640
BCL Project:	5781
BCL Work Order:	1501725
Invoice ID:	B195050

Enclosed are the results of analyses for samples received by the laboratory on 1/21/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Molly Meyers

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

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Table of Contents

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CHAIN OF CUSTODY FORM

Union Oil Company of California ■ 6101 Bollinger Canyon Road ■ San Ramon, CA 94583 15-01725 COC 1 of 1

Union Oil Site ID: T0600101467	Union Oil Consultant: AECOM ENV.
Site Global ID: 5781	Consultant Contact: JAMES HAUMS
Site Address: 3535 PIEMSON ST. OAKLAND, CA	Consultant Phone No.: (916) 361-6412
Union Oil PM: NICOLE M. ARCENEAUX	Sampling Company: [redacted] GETTLER-RYAN INC
Union Oil PM Phone No.: (925) 790-6912 (510) 363-7354	Sampled By (PRINT): FRANK TENNIWONI
Charge Code: NWRTB-0 351640 -0- LAB	Sampler Signature:
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.	BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911

ANALYSES REQUIRED

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

Special Instructions

SAMPLE ID						TPH - Diesel by EPA 8015M	TPH - G by [redacted] (8015)	BTEX/MTBE/[redacted] by EPA 8260	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	8 OXY's (8260B)						Notes / Comments
Field Point Name	Matrix	DTW	Date (yymmdd)	Sample Time	# of Containers												
QA	W-S-A		150120														
-1 MW-A-2	W-S-A			1050	8	X	X	X			X						
-2 MW-4-2	W-S-A			1450	8	X	X	X			X						
-3 MW-5-2	W-S-A			1505	8	X	X	X			X						
-4 MW-6-2	W-S-A			1435	8	X	X	X			X						
-5 MW-7-2	W-S-A			1405	8	X	X	X			X						
-6 MW-8-2	W-S-A			1244	8	X	X	X			X						
-7 MW-9-2	W-S-A			1420	8	X	X	X			X						
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																

CHK BY DISTRIBUTION SUB-OUT

Relinquished By	Company	Date / Time:
[signature]	G-R INC	1-21-15 (1235)
[signature]	GR INC	01-21-15 1430
Mary Bogan	BCLab	1-21-15 1830

Received By	Company	Date / Time:
GETTLER-RYAN FEDEX		01-21-15 1235
Mary Bogan	BCLab	1-21-15 1430
[signature]	BCLDB	1-21-15 18:30

REL. [signature] 1-21-15 2035 [signature] 1.21.15 2135

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Chain of Custody and Cooler Receipt Form for 1501725 Page 2 of 4

BC LABORATORIES INC. **COOLER RECEIPT FORM** Rev. No. 18 09/04/14 Page 1 Of 3

Submission #: 15-01725

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

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

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

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: Amber Thermometer ID: 208 Date/Time 4/21/15

Temperature: (A) 1.5 °C / (C) 1.4 °C Analyst Init KIB 2137

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	ABCDEF	ABCDEF	ABCDEF	ABCDEF	ABCDEF	ABCDEF	ABCDEF			
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER				GH		GH	GH			
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____

Sample Numbering Completed By: MM Date/Time: 4/22/15@1035 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]

A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1501725 Page 3 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 2 Of 3

Submission #: 15-01725

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

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

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

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

COC Received
☒ YES ☐ NO

Emissivity: 0.95 Container: Amber Thermometer ID: 208 Date/Time 4/21/15

Temperature: (A) 1.0 °C / (C) 0.9 °C Analyst Init KIB 2138

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER	GH				GH					
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____

Sample Numbering Completed By: AM Date/Time: 4/22/15@1035 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]

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Chain of Custody and Cooler Receipt Form for 1501725 Page 4 of 4

BC LABORATORIES INC. **COOLER RECEIPT FORM** Rev. No. 18 09/04/14 Page 3 Of 3

Submission #: 15-01725

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

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

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

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: Amber Thermometer ID: 208 Date/Time 4/21/15

Temperature: (A) 0.7 °C / (C) 0.6 °C Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER		GH	GH							
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____

Sample Numbering Completed By: AM Date/Time: 4/22/15 @ 1035 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1501725-01	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 10:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-A-2-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-A	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1501725-02	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 14:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-2-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1501725-03	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 15:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-5-2-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1501725-04	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 14:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-6-2-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-6	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1501725-05	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 14:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-7-2-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-7	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1501725-06	**COC Number:**	---	**Receive Date:**	01/21/2015 21:35
	Project Number:	5781	**Sampling Date:**	01/20/2015 12:44
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-8-2-W-150120	**Lab Matrix:**	Water
	Sampled By:	GRD	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101467	
			Location ID (FieldPoint): MW-8	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

1501725-07

COC Number: ---
Project Number: 5781
Sampling Location: ---
Sampling Point: MW-9-2-W-150120
Sampled By: GRD

Receive Date: 01/21/2015 21:35
Sampling Date: 01/20/2015 14:20
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
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501725-01 | **Client Sample Name:** 5781, MW-A-2-W-150120, 1/20/2015 10:50:00AM

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	A40	1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	90.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/23/15	01/24/15 08:49	JCC	MS-V14	1	BYA1927

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501725-01 | **Client Sample Name:** 5781, MW-A-2-W-150120, 1/20/2015 10:50:00AM

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	01/23/15	01/24/15 01:20	SE1	GC-V9	1	BYA1885

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501725-01 | **Client Sample Name:** 5781, MW-A-2-W-150120, 1/20/2015 10:50:00AM

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)	52.9	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 10:22	MBS	GC-5	1	BYB0236

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AECOM
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501725-02 | **Client Sample Name:** 5781, MW-4-2-W-150120, 1/20/2015 2:50:00PM

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	A40	1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.7	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	92.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/23/15	01/24/15 09:12	JCC	MS-V14	1	BYA1927

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501725-02 | **Client Sample Name:** 5781, MW-4-2-W-150120, 1/20/2015 2:50:00PM

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)	92.2	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/23/15	01/24/15 01:41	SE1	GC-V9	1	BYA1885

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501725-02 | **Client Sample Name:** 5781, MW-4-2-W-150120, 1/20/2015 2:50:00PM

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)	66.1	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 10:35	MBS	GC-5	1	BYB0236

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501725-03 | **Client Sample Name:** 5781, MW-5-2-W-150120, 1/20/2015 3:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	**85**	**ug/L**	**0.50**		**EPA-8260B**	ND		1
Methyl t-butyl ether	**2.0**	**ug/L**	**0.50**		**EPA-8260B**	ND		1
Toluene	**0.54**	**ug/L**	**0.50**		**EPA-8260B**	ND		1
Total Xylenes	**370**	**ug/L**	**10**		**EPA-8260B**	ND	**A01**	2
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	A40	1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	94.2	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	98.9	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	110	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.7	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/23/15	01/24/15 16:07	JCC	MS-V14	1	BYA1927
2	EPA-8260B	01/23/15	01/26/15 16:53	JCC	MS-V14	10	BYA1927

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501725-03 | **Client Sample Name:** 5781, MW-5-2-W-150120, 1/20/2015 3:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	**10000**	**ug/L**	**500**		**EPA-8015B**	ND	**A01**	1
a,a,a-Trifluorotoluene (FID Surrogate)	83.9	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/26/15	01/27/15 00:22	SE1	GC-V9	10	BYA1885

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501725-03 | **Client Sample Name:** 5781, MW-5-2-W-150120, 1/20/2015 3:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	**1800**	**ug/L**	**250**		**Luft/TPHd**	ND	**A01,A52**	1
Tetracosane (Surrogate)	50.6	%	20 - 120 (LCL - UCL)		Luft/TPHd		A01	1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd		A01	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 11:50	MBS	GC-5	5	BYB0236

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501725-04 | **Client Sample Name:** 5781, MW-6-2-W-150120, 1/20/2015 2:35:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	**0.83**	**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	A40	1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/26/15	01/27/15 18:38	JCC	MS-V14	1	BYA2091

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501725-04 | **Client Sample Name:** 5781, MW-6-2-W-150120, 1/20/2015 2:35:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	90.0	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/23/15	01/24/15 02:01	SE1	GC-V9	1	BYA1885

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501725-04 | **Client Sample Name:** 5781, MW-6-2-W-150120, 1/20/2015 2:35:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	51.4	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 11:00	MBS	GC-5	1	BYB0236

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501725-05 | **Client Sample Name:** 5781, MW-7-2-W-150120, 1/20/2015 2:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND	A40	1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/23/15	01/24/15 16:53	JCC	MS-V14	1	BYA1927

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501725-05 | **Client Sample Name:** 5781, MW-7-2-W-150120, 1/20/2015 2:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	87.9	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/23/15	01/24/15 02:21	SE1	GC-V9	1	BYA1885

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501725-05 | **Client Sample Name:** 5781, MW-7-2-W-150120, 1/20/2015 2:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	67.5	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 11:13	MBS	GC-5	1	BYB0236

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501725-06 | **Client Sample Name:** 5781, MW-8-2-W-150120, 1/20/2015 12:44:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	**1.1**	**ug/L**	**0.50**		**EPA-8260B**	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND	A40	1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/23/15	01/24/15 17:16	JCC	MS-V14	1	BYA1927

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501725-06 | **Client Sample Name:** 5781, MW-8-2-W-150120, 1/20/2015 12:44:00PM

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)	87.9	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/23/15	01/24/15 02:42	SE1	GC-V9	1	BYA1885

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501725-06 | **Client Sample Name:** 5781, MW-8-2-W-150120, 1/20/2015 12:44:00PM

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)	51.0	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 11:25	MBS	GC-5	1	BYB0236

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1501725-07 | **Client Sample Name:** 5781, MW-9-2-W-150120, 1/20/2015 2:20:00PM

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	A40	1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.6	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/23/15	01/24/15 17:39	JCC	MS-V14	1	BYA1927

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1501725-07 | **Client Sample Name:** 5781, MW-9-2-W-150120, 1/20/2015 2:20:00PM

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)	91.2	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/23/15	01/24/15 03:02	SE1	GC-V9	1	BYA1885

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1501725-07 | **Client Sample Name:** 5781, MW-9-2-W-150120, 1/20/2015 2:20:00PM

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)	36.0	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	01/27/15	02/04/15 11:38	MBS	GC-5	1	BYB0236

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYA1927						
Benzene	BYA1927-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BYA1927-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BYA1927-BLK1	ND	ug/L	0.50		
Ethylbenzene	BYA1927-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BYA1927-BLK1	ND	ug/L	0.50		
Toluene	BYA1927-BLK1	ND	ug/L	0.50		
Total Xylenes	BYA1927-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BYA1927-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BYA1927-BLK1	ND	ug/L	10		
Diisopropyl ether	BYA1927-BLK1	ND	ug/L	0.50		
Ethanol	BYA1927-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BYA1927-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	**BYA1927-BLK1**	**89.2**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYA1927-BLK1**	**99.8**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYA1927-BLK1**	**94.0**	%	**80 - 120 (LCL - UCL)**		
QC Batch ID: BYA2091						
Benzene	BYA2091-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BYA2091-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BYA2091-BLK1	ND	ug/L	0.50		
Ethylbenzene	BYA2091-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BYA2091-BLK1	ND	ug/L	0.50		
Toluene	BYA2091-BLK1	ND	ug/L	0.50		
Total Xylenes	BYA2091-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BYA2091-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BYA2091-BLK1	ND	ug/L	10		
Diisopropyl ether	BYA2091-BLK1	ND	ug/L	0.50		
Ethanol	BYA2091-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BYA2091-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	**BYA2091-BLK1**	**102**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYA2091-BLK1**	**96.9**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYA2091-BLK1**	**95.9**	%	**80 - 120 (LCL - UCL)**		

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Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYA1927										
Benzene	BYA1927-BS1	LCS	25.672	25.000	ug/L	103		70 - 130		
Toluene	BYA1927-BS1	LCS	24.844	25.000	ug/L	99.4		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYA1927-BS1	LCS	9.0300	10.000	ug/L	90.3		75 - 125		
Toluene-d8 (Surrogate)	BYA1927-BS1	LCS	9.9200	10.000	ug/L	99.2		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYA1927-BS1	LCS	9.8600	10.000	ug/L	98.6		80 - 120		
QC Batch ID: BYA2091										
Benzene	BYA2091-BS1	LCS	25.603	25.000	ug/L	102		70 - 130		
Toluene	BYA2091-BS1	LCS	24.036	25.000	ug/L	96.1		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYA2091-BS1	LCS	10.240	10.000	ug/L	102		75 - 125		
Toluene-d8 (Surrogate)	BYA2091-BS1	LCS	9.7800	10.000	ug/L	97.8		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYA2091-BS1	LCS	9.4400	10.000	ug/L	94.4		80 - 120		

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Reported: 02/05/2015 15:46
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYA1927	Used client sample: Y - Description: MW-4-2-W-150120, 01/20/2015 14:50										
Benzene	MS	1501725-02	ND	25.635	25.000	ug/L		103		70 - 130	
	MSD	1501725-02	ND	25.828	25.000	ug/L	0.8	103	20	70 - 130	
Toluene	MS	1501725-02	ND	24.716	25.000	ug/L		98.9		70 - 130	
	MSD	1501725-02	ND	25.304	25.000	ug/L	2.4	101	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1501725-02	ND	8.8700	10.000	ug/L		88.7		75 - 125	
	MSD	1501725-02	ND	9.0200	10.000	ug/L	1.7	90.2		75 - 125	
Toluene-d8 (Surrogate)	MS	1501725-02	ND	9.8300	10.000	ug/L		98.3		80 - 120	
	MSD	1501725-02	ND	9.9100	10.000	ug/L	0.8	99.1		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1501725-02	ND	9.8700	10.000	ug/L		98.7		80 - 120	
	MSD	1501725-02	ND	9.6300	10.000	ug/L	2.5	96.3		80 - 120	
QC Batch ID: BYA2091	Used client sample: Y - Description: MW-6-2-W-150120, 01/20/2015 14:35										
Benzene	MS	1501725-04	ND	25.719	25.000	ug/L		103		70 - 130	
	MSD	1501725-04	ND	25.268	25.000	ug/L	1.8	101	20	70 - 130	
Toluene	MS	1501725-04	ND	23.962	25.000	ug/L		95.8		70 - 130	
	MSD	1501725-04	ND	24.167	25.000	ug/L	0.9	96.7	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1501725-04	ND	10.180	10.000	ug/L		102		75 - 125	
	MSD	1501725-04	ND	10.310	10.000	ug/L	1.3	103		75 - 125	
Toluene-d8 (Surrogate)	MS	1501725-04	ND	10.110	10.000	ug/L		101		80 - 120	
	MSD	1501725-04	ND	9.8700	10.000	ug/L	2.4	98.7		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1501725-04	ND	9.5500	10.000	ug/L		95.5		80 - 120	
	MSD	1501725-04	ND	9.5000	10.000	ug/L	0.5	95.0		80 - 120	

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Project: 5781
Project Number: 351640
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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: BYA1885						
Gasoline Range Organics (C4 - C12)	BYA1885-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	**BYA1885-BLK1**	**100**	%	**70 - 130 (LCL - UCL)**		

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYA1885										
Gasoline Range Organics (C4 - C12)	BYA1885-BS1	LCS	1101.8	1000.0	ug/L	110		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BYA1885-BS1	LCS	38.331	40.000	ug/L	95.8		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	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYA1885	Used client sample: N										
Gasoline Range Organics (C4 - C12)	MS	1428224-94	ND	985.51	1000.0	ug/L		98.6		70 - 130	
	MSD	1428224-94	ND	1094.3	1000.0	ug/L	10.5	109	20	70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1428224-94	ND	39.030	40.000	ug/L		97.6		70 - 130	
	MSD	1428224-94	ND	39.796	40.000	ug/L	1.9	99.5		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: BYB0236						
Diesel Range Organics (C12 - C24)	BYB0236-BLK1	ND	ug/L	50		
Tetracosane (Surrogate)	**BYB0236-BLK1**	**55.0**	%	**20 - 120 (LCL - UCL)**		
Capric acid (Reverse Surrogate)	BYB0236-BLK1	0	%	0 - 1 (LCL - UCL)		

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Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYB0236										
Diesel Range Organics (C12 - C24)	BYB0236-BS1	LCS	260.55	500.00	ug/L	52.1		20 - 110		
Tetracosane (Surrogate)	BYB0236-BS1	LCS	11.520	20.000	ug/L	57.6		20 - 120		
Capric acid (Reverse Surrogate)	BYB0236-BS1	LCS	ND	100.00	ug/L	0		0 - 1		

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Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYB0236	Used client sample: N										
Diesel Range Organics (C12 - C24)	MS	1428224-65	ND	239.55	500.00	ug/L		47.9		20 - 110	
	MSD	1428224-65	ND	323.42	500.00	ug/L	29.8	64.7	30	20 - 110	
Tetracosane (Surrogate)	MS	1428224-65	ND	11.152	20.000	ug/L		55.8		20 - 120	
	MSD	1428224-65	ND	14.366	20.000	ug/L	25.2	71.8		20 - 120	
Capric acid (Reverse Surrogate)	MS	1428224-65	ND	ND	100.00	ug/L		0		0 - 1	
	MSD	1428224-65	ND	ND	100.00	ug/L		0		0 - 1	

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Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
A40	Initial calibration linearity criteria not met.
A52	Chromatogram not typical of diesel.

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