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April 22, 2013

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

RECEIVED

By Alameda County Environmental Health at 8:56 am, May 02, 2013

**Re: Former Unocal Service Station No. 5484 (351812)
18950 Lake Chabot Road, Castro Valley, California**

I have reviewed the attached report dated April 22, 2013.

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

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

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

Sincerely,

A handwritten signature in black ink that reads "Roya C. Kambin". The signature is fluid and cursive.

Roya Kambin
Project Manager

Attachment: *First Semi-Annual 2013 Groundwater Monitoring Report* by AECOM

April 22, 2013

Mr. Keith Nowell
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

**Subject: First Annual 2013 Groundwater Monitoring Report
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road, Castro Valley, California**

Dear Mr. Nowell,

On behalf of Chevron Environmental Management Company, for itself and as Attorney-in-Fact for Union Oil Company of California (hereinafter "EMC"), AECOM has been authorized by EMC to prepare the first annual 2013 groundwater monitoring report for the site located at 18950 Lake Chabot Road, Castro Valley, California (site) (**Figure 1**). The locations of former and current site features are illustrated on **Figure 2**. Annual groundwater monitoring is intended to evaluate the distribution of petroleum hydrocarbon constituents in groundwater beneath the site. Groundwater sampling was performed by Gettler-Ryan Inc. (GR) of Dublin, California. This report summarizes sample results collected from the site on March 8, 2013.

Groundwater Monitoring Field Data

Depth to groundwater was measured in four monitoring wells, MW-2, MW-5, MW-6, and MW-7 on March 8, 2013, and converted to groundwater elevation (**Table 1**). Temperature, pH, and electrical conductivity readings were collected during purging. Copies of the groundwater sampling/purge logs are included in **Attachment A**. The groundwater flow direction was calculated to flow to the south with an average hydraulic gradient of approximately 0.15 feet per foot (**Figure 2**). The depth to groundwater ranged from 5.53 to 7.85 feet below the top of well casings, and groundwater elevation ranged from 220.05 to 235.91 feet above mean sea level. A summary of historical groundwater elevations is presented in **Table 2**.

Groundwater Sampling and Analytical Results

Groundwater samples were collected from monitoring wells MW-2, MW-5, MW-6, and MW-7 on March 8, 2013. Laboratory analyses were performed by BC Laboratories, Inc. (BC Labs) of Bakersfield, California. The BC Labs analytical report dated March 20, 2013, is included as **Attachment B**. Samples were analyzed for the following analytes based on historic trends for each monitoring well:

- Benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by United States Environmental Protection Agency (USEPA) Method 8260B;
- MTBE by USEPA Method 8021;
- Total petroleum hydrocarbons as gasoline (TPH-g) by USEPA Method 8015B;
- Volatile Organic Compounds (VOCs) by USEPA Method 8260B; and
- Halogenated VOCs by USEPA Method 8270C.

Analytical results for this groundwater monitoring event are consistent with previous reporting periods (**Tables 1 and 2**). A map depicting dissolved concentrations of TPH-g, benzene, MTBE, and tertiary butyl alcohol (TBA) in groundwater on March 8, 2013, is included as **Figure 3**. The following presents a brief summary of the analytical sample results:

- TPHg was detected in one sample at 1,900 micrograms per liter ($\mu\text{g/L}$) (MW-7).
- MTBE by USEPA Method 8021 was detected in two samples at 2.7 $\mu\text{g/L}$ (MW-2) and 42 $\mu\text{g/L}$ (MW-7). The concentration for MW-7 is above the ESL of 5.0 $\mu\text{g/L}$.
- MTBE by USEPA Method 8260B was detected in three samples at 4.7 $\mu\text{g/L}$ (MW-2), 0.87 $\mu\text{g/L}$ (MW-5), and 25 $\mu\text{g/L}$ (MW-7). The concentration for MW-7 is above the Environmental Screening Level (ESL) of 5.0 $\mu\text{g/L}$.

A summary of current groundwater analytical data is presented in **Tables 1 and 2**. Additional historical analytical data are presented in **Table 3 and 4**.

Approximately 8 gallons of groundwater was generated during purging activities. Purged water was transported by Clean Harbors Environmental Services to Evergreen Oil located in Newark, California as non-hazardous waste.

Conclusions and Recommendations

The sample results of the groundwater monitoring activities at the site indicate the following:

- MTBE was detected at a concentration slightly above the ESL of 5.0 $\mu\text{g/L}$ for MW-7.
- Based on analytical results from this and previous sampling events, dissolved hydrocarbons in groundwater are adequately delineated.

Future Activities

AECOM will submit a conceptual site model (CSM) that includes a preferential pathway survey and sensitive receptor survey by the end of the second quarter of 2013.

Remarks/Signatures

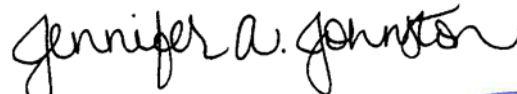
The interpretations in this report represent AECOM's professional opinions and are based, in part, on the information supplied by GR. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time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

If you have any questions regarding this project, please contact either of the undersigned at (916) 361-6400.

Sincerely,



James Harms
Project Manager



Jennifer Johnston, P.E.
Project Engineer



cc: Roya Kambin, EMC (*electronic copy*)
Abdi Fugfugosh and Shukri Noor, property owners

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

Figures

Figure 1	Site Location Map
Figure 2	Groundwater Elevation Contour Map
Figure 3	Groundwater Analytical Data Map

Attachments

Attachment A	March 8, 2013, Groundwater Data Field Sheets
Attachment B	BC Laboratories Analytical Report #1304923

TABLES

Table 1
Current Groundwater Monitoring Data and Analytical Results
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
MW-2	231.66	03/08/13	5.53	226.13	0	<50	<0.30	<0.30	<0.30	<0.60	
MW-5	227.90	03/08/13	7.85	220.05	0	<50	<0.30	<0.30	<0.30	<0.60	
MW-6	241.74	03/08/13	5.83	235.91	0	<50	<0.30	<0.30	<0.30	<0.60	
MW-7	234.13	03/08/13	7.65	226.48	0	1,900	5.8	<1.5	3.9	<3.0	

NOTES:

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

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

TOC = Top of casing

LNAPL = Light Non-Aqueous Phase Liquid

ft = Feet

DTW = Depth to water below TOC

GWE = Groundwater elevation

µg/L = Micrograms per liter

ID = Identification

TPH-g = Total Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

Table 2
Current Groundwater Analytical Results - Oxygenate Compounds
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

WELL ID	DATE	MTBE 8021 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	Naphthalene (µg/L)	2-Methyl naphthalene (µg/L)	3&4-Methyl phenol (µg/L)
MW-2	03/08/13	2.7	4.7	47	<0.50	<2.0	<2.0	<2.0
MW-5	03/08/13	<1.0	0.87	<10	<0.50	<2.0	<2.0	<2.0
MW-6	03/08/13	<1.0	<0.50	<10	<0.50	<2.0	<2.0	<2.0
MW-7	03/08/13	42	25	480	<0.50	41	25	4.9

NOTES:

Oxygenate compounds analyzed by US Environmental Protection Agency Method 8260B.

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

µg/L = Micrograms per liter

MTBE = Methyl tertiary-butyl ether

TBA = Tertiary-butyl alcohol

1,2-DCA = 1,2-Dichloroethane

ID = Identification

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-d (µg/L)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-2	229.47	05/23/91	--	--	--	--	ND	ND	ND	ND	ND	
	229.47	09/20/91	--	--	--	--	ND	ND	ND	ND	ND	
	229.47	12/19/91	--	--	--	--	140	0.66	ND	0.64	1.2	
	229.47	03/20/92	--	--	--	--	120	ND	ND	ND	ND	
	229.47	06/18/92	--	--	--	--	140	ND	ND	ND	ND	
	229.47	09/10/92	--	--	--	--	61	ND	ND	ND	ND	
	229.47	12/10/92	--	--	--	--	100	ND	ND	ND	ND	
	229.47	03/10/93	4.69	224.78	0	--	110	ND	ND	ND	ND	
	229.47	06/09/93	5.85	223.62	0	--	120	ND	ND	ND	ND	
	228.88	09/09/93	6.59	222.29	0	--	210	ND	ND	ND	ND	
	228.88	12/09/93	6.94	221.94	0	--	96	ND	ND	ND	ND	
	228.88	03/03/94	4.91	223.97	0	--	240	ND	ND	ND	ND	
	228.88	06/03/94	5.71	223.17	0	--	190	ND	ND	ND	ND	
	228.88	09/02/94	7.05	221.83	0	--	720	ND	ND	ND	4.6	
	228.88	12/01/94	6.98	221.90	0	--	200	0.7	ND	0.58	ND	
	228.88	03/01/95	4.60	224.28	0	--	ND	ND	ND	ND	ND	
	228.88	06/01/95	4.65	224.23	0	--	420	ND	ND	ND	ND	
	228.88	09/05/95	5.66	223.22	0	--	ND	ND	0.8	ND	0.74	
	228.88	12/05/95	6.32	222.56	0	--	ND	ND	ND	ND	ND	
	228.88	04/11/96	4.22	224.66	0	--	--	--	--	--	--	
	228.88	03/13/97	6.58	222.30	0	--	--	--	--	--	--	
	228.88	03/02/98	5.18	223.70	0	--	--	--	--	--	--	
	228.88	03/25/99	4.84	224.04	0	--	--	--	--	--	--	
	228.88	03/07/00	4.92	223.96	0	--	--	--	--	--	--	
	228.88	03/28/01	4.37	224.51	0	--	--	--	--	--	--	
	228.88	03/09/02	4.29	224.59	0	--	--	--	--	--	--	
	228.88	03/24/03	4.24	224.64	0	--	--	--	--	--	--	
	228.88	03/26/04	4.66	224.22	0	--	--	--	--	--	--	
	228.88	03/17/05	4.08	224.80	0	--	--	--	--	--	--	
	228.88	03/31/06	4.06	224.82	0	--	--	--	--	--	--	
	228.88	02/16/07	4.87	224.01	0	--	--	--	--	--	--	
	228.88	01/21/08	4.83	224.05	0	--	--	--	--	--	--	
	231.66	02/25/09	4.32	227.34	0	--	260	0.64	<0.30	6.9	<0.60	
231.66	06/12/09	5.00	226.66	0	--	--	--	--	--	--		

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-d (µg/L)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments	
MW-2 cont.	231.66	08/19/09	--	--	--	--	--	--	--	--	--		
	231.66	11/06/09	5.62	226.04	0	--	--	--	--	--	--		
	231.66	01/13/10	5.02	226.64	0	--	470	0.65	0.67	4.1	3.3		
	231.66	03/30/11	4.80	226.86	0	--	<50	0.37	<0.30	6.4	<0.60		
	231.66	03/30/12	5.17	226.49	0	--	<50	<0.30	<0.30	<0.30	<0.60		
	231.66	03/08/13	5.53	226.13	0	--	<50	<0.30	<0.30	<0.30	<0.60		
MW-4	228.08	05/23/91	--	--	--	--	ND	ND	ND	ND	ND		
	228.08	09/20/91	--	--	--	--	--	--	--	--	--		
	228.08	12/19/91	--	--	--	--	ND	ND	ND	ND	ND		
	228.08	03/20/92	--	--	--	--	--	--	--	--	--		
	228.08	06/18/92	--	--	--	--	ND	0.41	0.84	ND	0.55		
	228.08	09/10/92	--	--	--	--	--	--	--	--	--		
	228.08	12/10/92	--	--	--	--	ND	ND	ND	ND	ND		
	228.08	03/10/93	7.24	220.84	0	--	ND	ND	ND	ND	ND		
	228.08	06/09/93	8.79	219.29	0	--	ND	ND	ND	ND	ND		
	227.77	09/09/93	9.91	217.86	0	--	ND	ND	ND	ND	ND		
	227.77	12/09/93	--	--	--	--	--	--	--	--	--		
	227.77	03/03/94	6.98	220.79	0	--	ND	ND	ND	ND	ND		
	227.77	06/03/94	8.26	219.51	0	--	ND	ND	ND	ND	ND		
	227.77	09/02/94	10.08	217.69	0	--	ND	ND	ND	ND	ND		
	227.77	12/01/94	10.01	217.76	0	--	ND	ND	ND	ND	ND		
	227.77	03/01/95	7.29	220.48	0	--	ND	ND	1.1	ND	0.75		
	227.77	06/01/95	7.65	220.12	0	--	ND	ND	0.78	ND	1.7		
	227.77	09/05/95	9.27	218.50	0	--	ND	ND	0.7	ND	0.71		
	227.77	12/05/95	9.92	217.85	0	--	ND	ND	ND	ND	ND		
	227.77	04/11/96	7.55	220.22	0	--	ND	ND	ND	ND	ND		
	227.77	03/13/97	9.84	217.93	0	--	ND	ND	ND	ND	ND		
	227.77	03/02/98	8.84	218.93	0	--	ND	ND	ND	ND	ND		
	227.77	03/25/99	7.46	220.31	0	--	ND	ND	ND	ND	ND		
	227.77	03/07/00	7.58	220.19	0	--	ND	ND	1.11	ND	ND		
	227.77	03/28/01	7.62	220.15	0	--	ND	ND	ND	ND	ND		
	227.77	03/09/02	6.64	221.13	0	--	270	3.1	<1.0	5	<1.0		
	227.77	03/24/03	--	--	--	--	--	--	--	--	--	--	

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Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-d (µg/L)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-4 cont.	227.77	03/26/04	--	--	--	--	--	--	--	--	--	
	227.77	03/17/05	--	--	--	--	--	--	--	--	--	
	227.77	03/31/06	--	--	--	--	--	--	--	--	--	
	227.77	02/16/07	--	--	--	--	--	--	--	--	--	
	227.77	01/21/08	--	--	--	--	--	--	--	--	--	
Well Destroyed												
MW-4A	232.55	02/25/09	7.45	225.10	0	--	<50	<0.30	<0.30	<0.30	<0.60	
	232.55	06/12/09	--	--	--	--	--	--	--	--	--	
	232.55	08/19/09	--	--	--	--	--	--	--	--	--	
	232.55	11/06/09	6.02	226.53	0	--	<50	<0.30	<0.30	<0.30	<0.60	
	232.55	01/13/10	6.45	226.10	0	--	<50	<0.30	<0.30	<0.30	<0.60	
Well Destroyed												
MW-4B	232.91	02/25/09	8.65	224.26	0	--	<50	<0.30	<0.30	<0.30	<0.60	
	232.91	06/12/09	10.04	222.87	0	--	<50	<0.30	<0.30	<0.30	<0.60	
	232.91	08/19/09	10.25	222.66	0	--	<50	<0.30	<0.30	<0.30	<0.60	
	232.91	11/06/09	9.40	223.51	0	--	<50	<0.30	<0.30	<0.30	<0.60	
	232.91	01/13/10	8.84	224.07	0	--	<50	<0.30	<0.30	<0.30	<0.60	
Well Destroyed												
MW-5	225.42	05/23/91	--	--	--	--	ND	ND	ND	ND	ND	
	225.42	09/20/91	--	--	--	450	ND	ND	ND	ND	ND	
	225.42	10/10/91	--	--	--	ND	--	--	--	--	--	
	225.42	12/19/91	--	--	--	--	ND	ND	ND	ND	ND	
	225.42	03/20/92	--	--	--	170	ND	ND	ND	ND	ND	
	225.42	06/18/92	--	--	--	ND	ND	ND	ND	ND	ND	
	225.42	09/10/92	--	--	--	110	ND	ND	ND	ND	ND	
	225.42	12/10/92	--	--	--	83	ND	ND	ND	ND	ND	
	225.42	03/10/93	7.67	217.75	0	69	ND	ND	ND	ND	ND	
	225.42	06/09/93	8.57	216.85	0	64	ND	ND	ND	ND	ND	
	225.11	09/09/93	9.12	215.99	0	58	ND	ND	ND	ND	ND	
	225.11	12/09/93	9.97	215.14	0	87	ND	ND	ND	ND	ND	
	225.11	03/03/94	7.87	217.24	0	ND	ND	ND	ND	0.71	1.7	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-d (µg/L)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments	
MW-5 cont.	225.11	06/03/94	9.01	216.10	0	80	ND	ND	ND	ND	ND		
	225.11	09/02/94	9.23	215.88	0	130	ND	ND	ND	ND	ND		
	225.11	12/01/94	9.18	215.93	0	79	ND	ND	ND	ND	ND		
	225.11	03/01/95	7.98	217.13	0	ND	ND	ND	ND	ND	ND		
	225.11	06/01/95	8.21	216.90	0	57	ND	ND	ND	ND	ND		
	225.11	09/05/95	9.57	215.54	0	210	ND	ND	0.95	ND	0.87		
	225.11	12/05/95	9.60	215.51	0	170	ND	ND	ND	ND	ND		
	225.11	04/11/96	7.48	217.63	0	--	ND	ND	ND	ND	ND		
	225.11	03/13/97	9.56	215.55	0	--	ND	ND	ND	ND	ND		
	225.11	03/02/98	8.96	216.15	0	--	ND	ND	ND	ND	ND		
	225.11	03/25/99	7.53	217.58	0	--	ND	ND	ND	ND	ND		
	225.11	03/07/00	7.49	217.62	0	--	ND	ND	1.13	ND	ND		
	225.11	03/28/01	6.83	218.28	0	--	ND	ND	ND	ND	ND		
	225.11	03/09/02	5.85	219.26	0	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
	225.11	03/24/03	5.90	219.21	0	--	561	<0.50	<0.50	<0.50	<0.50	<1.0	
	225.11	03/26/04	6.93	218.18	0	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
	225.11	03/17/05	6.08	219.03	0	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
	225.11	03/31/06	5.51	219.60	0	--	<50	<0.50	<0.50	1.7	<1.0	<1.0	
	225.11	02/16/07	6.05	219.06	0	--	<50	<0.30	<0.30	<0.30	<0.30	<0.60	
	225.11	01/21/08	7.43	217.68	0	--	<50	<0.30	<0.30	<0.30	<0.30	<0.60	
	227.90	02/25/09	6.31	221.59	0	--	<50	<0.30	<0.30	<0.30	<0.30	<0.60	
	227.90	06/12/09	7.88	220.02	0	--	--	--	--	--	--	--	
	227.90	08/19/09	--	--	--	--	--	--	--	--	--	--	
	227.90	11/06/09	8.42	219.48	0	--	--	--	--	--	--	--	
	227.90	01/13/10	7.43	220.47	0	--	<50	<0.30	0.48	<0.30	<0.30	1.7	
227.90	03/30/11	5.47	222.43	0	--	<50	<0.30	<0.30	<0.30	<0.30	<0.60		
227.90	03/30/12	5.54	222.36	0	--	<50	<0.30	<0.30	<0.30	<0.30	<0.60		
227.90	03/08/13	7.85	220.05	0	0	--	<50	<0.30	<0.30	<0.30	<0.60		
MW-6	239.38	05/23/91	--	--	--	--	ND	ND	ND	ND	ND		
	239.38	09/20/91	--	--	--	--	--	--	--	--	--		
	239.38	12/19/91	--	--	--	--	ND	ND	ND	ND	ND		
	--	06/18/92	--	--	--	--	ND	ND	ND	ND	ND		
	239.38	12/10/92	--	--	--	--	ND	ND	ND	ND	ND		

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-d (µg/L)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-6 cont.	239.38	03/10/93	5.32	234.06	0	--	--	--	--	--	--	
	239.38	06/09/93	5.94	233.44	0	--	ND	ND	ND	ND	ND	
	239.04	09/09/93	6.82	232.22	0	--	--	--	--	--	--	
	239.04	12/09/93	7.43	231.61	0	--	150	ND	ND	ND	1.7	
	239.04	03/03/94	6.45	232.59	0	--	--	--	--	--	--	
	239.04	06/03/94	5.81	233.23	0	--	ND	ND	ND	ND	ND	
	239.04	09/02/94	6.98	232.06	0	--	--	--	--	--	--	
	239.04	12/01/94	6.92	232.12	0	--	ND	ND	ND	ND	ND	
	239.04	03/01/95	5.17	233.87	0	--	--	--	--	--	--	
	239.04	06/01/95	4.76	234.28	0	--	ND	ND	0.7	ND	1.7	
	239.04	09/05/95	5.69	233.35	0	--	--	--	--	--	--	
	239.04	12/05/95	6.75	232.29	0	--	ND	ND	ND	ND	ND	
	239.04	04/11/96	4.28	234.76	0	--	--	--	--	--	--	
	239.04	03/13/97	7.05	231.99	0	--	--	--	--	--	--	
	239.04	03/02/98	5.14	233.90	0	--	--	--	--	--	--	
	239.04	03/25/99	5.05	233.99	0	--	--	--	--	--	--	
	239.04	03/07/00	5.15	233.89	0	--	--	--	--	--	--	
	239.04	03/28/01	5.17	233.87	0	--	--	--	--	--	--	
	239.04	03/09/02	5.13	233.91	0	--	--	--	--	--	--	
	239.04	03/24/03	5.13	233.91	0	--	--	--	--	--	--	
	239.04	03/26/04	5.10	233.94	0	--	--	--	--	--	--	
	239.04	03/17/05	4.09	234.95	0	--	--	--	--	--	--	
	239.04	03/31/06	2.99	236.05	0	--	--	--	--	--	--	
	239.04	02/16/07	4.07	234.97	0	--	--	--	--	--	--	
	239.04	01/21/08	4.47	234.57	0	--	--	--	--	--	--	
	241.74	02/25/09	3.73	238.01	0	--	<50	<0.30	<0.30	<0.30	<0.60	
	241.74	06/12/09	5.25	236.49	0	--	--	--	--	--	--	
	241.74	08/19/09	--	--	--	--	--	--	--	--	--	
	241.74	11/06/09	5.64	236.10	0	--	--	--	--	--	--	
	241.74	01/13/10	5.34	236.40	0	--	54	<0.30	0.83	<0.30	3.7	
	241.74	03/30/11	4.72	237.02	0	--	<50	<0.30	<0.30	<0.30	<0.60	
	241.74	03/30/12	4.99	236.75	0	--	<50	<0.30	<0.30	<0.30	<0.60	
	241.74	03/08/13	5.83	235.91	0	--	<50	<0.30	<0.30	<0.30	<0.60	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-d (µg/L)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-7	231.66	05/23/91	--	--	--	540	3,000	160	1.2	25	120	
	231.66	09/20/91	--	--	--	580	1,400	160	0.75	89	130	
	231.66	12/19/91	--	--	--	770	3,900	240	2.4	280	270	
	231.66	03/20/92	--	--	--	3,200	11,000	980	ND	990	1,600	
	231.66	06/18/92	--	--	--	990	5,500	340	4.2	380	410	
	231.66	09/10/92	--	--	--	290	2,100	160	1.9	140	150	
	231.66	12/10/92	--	--	--	200	1,200	28	ND	37	13	
	231.66	03/10/93	7.69	223.97	0	1,100	4,400	310	ND	300	330	
	231.66	06/09/93	8.59	223.07	0	830	4,600	430	ND	510	430	
	231.39	09/09/93	10.11	221.28	0	550	2,600	160	19	250	120	
	231.39	12/09/93	10.65	220.74	0	250	980	54	4.6	71	5.6	
	231.39	03/03/94	8.17	223.22	0	1,400	9,300	290	ND	590	400	
	231.39	06/03/94	8.73	222.66	0	2,000	9,400	380	5	820	240	
	231.39	09/02/94	11.00	220.39	0	490	3,800	77	ND	180	42	
	231.39	12/01/94	10.95	220.44	0	260	3,100	80	ND	250	190	
	231.39	03/01/95	8.03	223.36	0	1,900	3,300	200	3.9	300	350	
	231.39	06/01/95	7.92	223.47	0	1,600	3,900	170	ND	400	430	
	231.39	09/05/95	8.61	222.78	0	ND	710	32	ND	85	33	
	231.39	12/05/95	9.69	221.70	0	110	400	23	ND	34	16	
	231.39	12/08/95	9.59	221.80	0	--	--	--	--	--	--	
	231.39	04/11/96	7.31	224.08	0	--	1,500	52	ND	160	130	
	231.39	03/13/97	9.48	221.91	0	--	460	13	ND	31	4	
	231.39	03/02/98	7.93	223.46	0	--	1,800	63	ND	240	60	
	231.39	03/25/99	7.25	224.14	0	--	380	6.4	ND	10	4.9	
	231.39	03/07/00	7.12	224.27	0	--	199	3.51	ND	3.3	0.697	
	231.39	03/28/01	6.92	224.47	0	--	734	19.6	0.514	23.3	6.13	
	231.39	03/09/02	6.48	224.91	0	--	<50	<0.50	<0.50	<0.50	<0.50	
	231.39	03/24/03	6.42	224.97	0	--	--	<10	<10	<10	<20	
	231.39	03/26/04	7.25	224.14	0	--	2,800	34	<25	120	33	
	231.39	03/17/05	7.02	224.37	0	--	2,700	<5.0	<5.0	160	15	
	231.39	03/31/06	6.74	224.65	0	--	450	8.7	<2.5	33	<5.0	
	231.39	02/16/07	6.95	224.44	0	--	1,600	11	<0.30	61	4.2	
	231.39	01/21/08	7.21	224.18	0	--	1,300	11	<0.60	45	<1.2	
	234.13	02/25/09	6.61	227.52	0	--	1,000	15	0.7	70	<0.60	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-d (µg/L)	TPH-g (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-7 cont.	234.13	06/12/09	7.51	226.62	0	--	--	--	--	--	--	
	234.13	08/19/09	--	--	--	--	--	--	--	--	--	
	234.13	11/06/09	8.18	225.95	0	--	--	--	--	--	--	
	234.13	01/13/10	7.50	226.63	0	--	1,800	10	2.4	60	6.4	
	234.13	03/30/11	6.27	227.86	0	--	680	4.9	0.41	7.2	0.77	
	234.13	03/30/12	7.13	227.00	0	--	1,900	13	0.87	16	1.9	
	234.13	03/08/13	7.65	226.48	0	--	1,900	5.8	<1.5	3.9	<3.0	

NOTES:

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

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

TOC = Top of casing

LNAPL = Light Non-Aqueous Phase Liquid

ft = Feet

fbg = feet below grade

DTW = Depth to water below TOC

GWE = Groundwater elevation

-- = Not available

µg/L = Micrograms per liter

J = Estimated value. The result is greater than the method detection limit and less than the practical quantitation limit

ID = Identification

TPH-d = Total Petroleum Hydrocarbons as Diesel

TPH-g = Total Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

WELL ID	DATE	MTBE 8021 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	Naphthalene (µg/L)	2-Methyl naphthalene (µg/L)	3&4-Methyl phenol (µg/L)
MW-2	05/23/91	--	--	--	--	--	--	--	--	--	--	--
	09/20/91	--	--	--	--	--	--	--	--	--	--	--
	12/19/91	--	--	--	--	--	--	--	--	--	--	--
	03/20/92	--	--	--	--	--	--	--	--	--	--	--
	06/18/92	--	--	--	--	--	--	--	--	--	--	--
	09/10/92	110	--	--	--	--	--	--	--	--	--	--
	12/10/92	170	--	--	--	--	--	--	--	--	--	--
	03/10/93	350	--	--	--	--	--	--	--	--	--	--
	06/09/93	300	--	--	--	--	--	--	--	--	--	--
	09/09/93	--	--	--	--	--	--	--	--	--	--	--
	12/09/93	--	--	--	--	--	--	--	--	--	--	--
	03/03/94	--	--	--	--	--	--	--	--	--	--	--
	06/03/94	--	--	--	--	--	--	--	--	--	--	--
	09/02/94	--	--	--	--	--	--	--	--	--	--	--
	12/01/94	--	--	--	--	--	--	--	--	--	--	--
	03/01/95	--	--	--	--	--	--	--	--	--	--	--
	06/01/95	--	--	--	--	--	--	--	--	--	--	--
	09/05/95	--	--	--	--	--	--	--	--	--	--	--
	12/05/95	390	--	--	--	--	--	--	--	--	--	--
	04/11/96	--	--	--	--	--	--	--	--	--	--	--
	03/13/97	--	--	--	--	--	--	--	--	--	--	--
	03/02/98	--	--	--	--	--	--	--	--	--	--	--
	03/25/99	--	--	--	--	--	--	--	--	--	--	--
	03/07/00	--	--	--	--	--	--	--	--	--	--	--
	03/28/01	--	--	--	--	--	--	--	--	--	--	--
	03/09/02	--	--	--	--	--	--	--	--	--	--	--
	03/24/03	--	--	--	--	--	--	--	--	--	--	--
	03/26/04	--	--	--	--	--	--	--	--	--	--	--
	03/17/05	--	--	--	--	--	--	--	--	--	--	--
	03/31/06	--	--	--	--	--	--	--	--	--	--	--
	02/16/07	--	--	--	--	--	--	--	--	--	--	--
	01/21/08	--	--	--	--	--	--	--	--	--	--	--
	02/25/09	220	270	--	--	--	--	--	--	<0.50	<2.0	<2.0
06/12/09	--	--	--	--	--	--	--	--	--	--	--	--
08/19/09	--	--	--	--	--	--	--	--	--	--	--	--
11/06/09	--	--	--	--	--	--	--	--	--	--	--	--
01/13/10	260	350	--	--	--	--	--	--	--	<2.0	<2.0	--
03/30/11	46	47	--	--	--	--	--	--	--	--	--	--
03/30/12	17	19	150	--	--	--	--	--	<0.50	--	--	--
03/08/13	2.7	4.7	47	--	--	--	--	--	<0.50	<2.0	<2.0	<2.0
MW-4	05/23/91	--	--	--	--	--	--	--	--	--	--	--
	09/20/91	--	--	--	--	--	--	--	--	--	--	--
	12/19/91	--	--	--	--	--	--	--	--	--	--	--
	03/20/92	--	--	--	--	--	--	--	--	--	--	--
	06/18/92	--	--	--	--	--	--	--	--	--	--	--
	09/10/92	--	--	--	--	--	--	--	--	--	--	--
	12/10/92	--	--	--	--	--	--	--	--	--	--	--
	03/10/93	--	--	--	--	--	--	--	--	--	--	--
	06/09/93	--	--	--	--	--	--	--	--	--	--	--
	09/09/93	--	--	--	--	--	--	--	--	--	--	--
	12/09/93	--	--	--	--	--	--	--	--	--	--	--
	03/03/94	--	--	--	--	--	--	--	--	--	--	--
	06/03/94	--	--	--	--	--	--	--	--	--	--	--
	09/02/94	--	--	--	--	--	--	--	--	--	--	--
	12/01/94	--	--	--	--	--	--	--	--	--	--	--
03/01/95	--	--	--	--	--	--	--	--	--	--	--	
06/01/95	--	--	--	--	--	--	--	--	--	--	--	
09/05/95	--	--	--	--	--	--	--	--	--	--	--	

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

WELL ID	DATE	MTBE 8021 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	Naphthalene (µg/L)	2-Methyl naphthalene (µg/L)	3&4-Methyl phenol (µg/L)
MW-4 cont.	12/05/95	0.68	--	--	--	--	--	--	--	--	--	--
	04/11/96	ND	--	--	--	--	--	--	ND	ND	ND	--
	03/13/97	ND	--	--	--	--	--	--	ND	ND	ND	--
	03/02/98	ND	--	--	--	--	--	--	ND	--	--	--
	03/25/99	7.6	--	--	--	--	--	--	ND	ND	ND	--
	03/07/00	ND	--	--	--	--	--	--	ND	ND	ND	--
	03/28/01	ND	--	--	--	--	--	--	ND	ND	ND	--
	03/09/02	1,200	--	--	--	--	--	--	<2.5	<5.0	<5.0	--
	03/24/03	--	--	--	--	--	--	--	--	--	--	--
	03/26/04	--	--	--	--	--	--	--	--	--	--	--
	03/17/05	--	--	--	--	--	--	--	--	--	--	--
	03/31/06	--	--	--	--	--	--	--	--	--	--	--
	02/16/07	--	--	--	--	--	--	--	--	--	--	--
	01/21/08	--	--	--	--	--	--	--	--	--	--	--
	Well Destroyed											
MW-4A	02/25/09	<1.0	<0.50	--	--	--	--	--	<0.50	<2.0	<2.0	<2.0
	06/12/09	--	--	--	--	--	--	--	--	--	--	--
	08/19/09	--	--	--	--	--	--	--	--	--	--	--
	11/06/09	<1.0	<0.50	<10	--	--	--	--	<0.50	<2.0	<2.0	--
	01/13/10	<1.0	<0.50	<10	--	--	--	--	<0.50	<2.0	<2.0	--
Well Destroyed												
MW-4B	02/25/09	<1.0	<0.50	--	--	--	--	--	<0.50	<2.0	<2.0	<2.0
	06/12/09	<1.0	<0.50	<10	--	--	--	--	<0.50	<2.0	<2.0	<2.0
	08/19/09	<1.0	<0.50	<10	--	--	--	--	<0.50	<2.0	<2.0	<2.0
	11/06/09	<1.0	<0.50	<10	--	--	--	--	<0.50	<2.0	<2.0	--
	01/13/10	<1.0	<0.50	<10	--	--	--	--	<0.50	<2.0	<2.0	--
Well Destroyed												
MW-5	05/23/91	--	--	--	--	--	--	--	--	--	--	--
	09/20/91	--	--	--	--	--	--	--	--	--	--	--
	10/10/91	--	--	--	--	--	--	--	--	--	--	--
	12/19/91	--	--	--	--	--	--	--	--	--	--	--
	03/20/92	--	--	--	--	--	--	--	--	--	--	--
	06/18/92	--	--	--	--	--	--	--	--	--	--	--
	09/10/92	--	--	--	--	--	--	--	--	--	--	--
	12/10/92	--	--	--	--	--	--	--	--	--	--	--
	03/10/93	--	--	--	--	--	--	--	ND	ND	ND	--
	06/09/93	--	--	--	--	--	--	--	ND	--	--	--
	09/09/93	--	--	--	--	--	--	--	ND	--	--	--
	12/09/93	--	--	--	--	--	--	--	ND	--	--	--
	03/03/94	ND	--	--	--	--	--	--	ND	--	--	--
	06/03/94	--	--	--	--	--	--	--	ND	--	--	--
	09/02/94	--	--	--	--	--	--	--	ND	--	--	--
	12/01/94	--	--	--	--	--	--	--	ND	--	--	--
	03/01/95	--	--	--	--	--	--	--	ND	--	--	--
	06/01/95	--	--	--	--	--	--	--	ND	--	--	--
	09/05/95	--	--	--	--	--	--	--	ND	--	--	--
	12/05/95	27	--	--	--	--	--	--	ND	--	--	--
	04/11/96	56	--	--	--	--	--	--	ND	ND	ND	--
	03/13/97	ND	--	--	--	--	--	--	ND	ND	ND	--
	03/02/98	ND	--	--	--	--	--	--	ND	--	--	--
	03/25/99	3.9	--	--	--	--	--	--	ND	ND	ND	--
	03/07/00	ND	--	--	--	--	--	--	ND	ND	ND	--
03/28/01	ND	--	--	--	--	--	--	ND	ND	ND	--	
03/09/02	<5.0	--	--	--	--	--	--	<0.50	<5.0	<0.50	--	
03/24/03	--	<2.0	--	--	--	--	--	<0.50	<2.0	<2.0	--	
03/26/04	<5.0	--	--	--	--	--	--	<0.50	<2.0	<2.0	--	

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

WELL ID	DATE	MTBE 8021 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	Naphthalene (µg/L)	2-Methyl naphthalene (µg/L)	3&4-Methyl phenol (µg/L)	
MW-5 cont.	03/17/05	<5.0	--	--	--	--	--	--	<0.50	--	--	--	
	03/31/06	--	2.9	--	--	--	--	<0.50	<0.50	<2.1	<2.1	--	
	02/16/07	1.5	2.6	--	--	--	--	--	<0.50	<2.0	<2.0	<2.0	
	01/21/08	<1.0	1.3	--	--	--	--	--	<0.50	<2.0	<2.0	<2.0	
	02/25/09	1.5	2.1	--	--	--	--	--	<0.50	<2.0	<2.0	<2.0	
	06/12/09	--	--	--	--	--	--	--	--	--	--	--	
	08/19/09	--	--	--	--	--	--	--	--	--	--	--	
	11/06/09	--	--	--	--	--	--	--	--	--	--	--	
	01/13/10	1.3	1.9	<10	--	--	--	--	<0.50	<2.0	<2.0	--	
	03/30/11	1.1	1.9	<10	--	--	--	--	8.4	<2.0	<2.0	<2.0	
	03/30/12	1.2	2.4	<10	--	--	--	--	--	<0.50	<2.0	<2.0	
	03/08/13	<1.0	0.87	<10	--	--	--	--	--	<0.50	<2.0	<2.0	
	MW-6	05/23/91	--	--	--	--	--	--	--	--	--	--	--
09/20/91		--	--	--	--	--	--	--	--	--	--	--	
12/19/91		--	--	--	--	--	--	--	--	--	--	--	
06/18/92		--	--	--	--	--	--	--	--	--	--	--	
12/10/92		--	--	--	--	--	--	--	--	--	--	--	
03/10/93		--	--	--	--	--	--	--	--	--	--	--	
06/09/93		--	--	--	--	--	--	--	--	--	--	--	
09/09/93		--	--	--	--	--	--	--	--	--	--	--	
12/09/93		--	--	--	--	--	--	--	--	--	--	--	
03/03/94		--	--	--	--	--	--	--	--	--	--	--	
06/03/94		--	--	--	--	--	--	--	--	--	--	--	
09/02/94		--	--	--	--	--	--	--	--	--	--	--	
12/01/94		--	--	--	--	--	--	--	--	--	--	--	
03/01/95		--	--	--	--	--	--	--	--	--	--	--	
06/01/95		--	--	--	--	--	--	--	--	--	--	--	
09/05/95		--	--	--	--	--	--	--	--	--	--	--	
12/05/95		1.4	--	--	--	--	--	--	--	--	--	--	
04/11/96		--	--	--	--	--	--	--	--	--	--	--	
03/13/97		--	--	--	--	--	--	--	--	--	--	--	
03/02/98		--	--	--	--	--	--	--	--	--	--	--	
03/25/99		--	--	--	--	--	--	--	--	--	--	--	
03/07/00		--	--	--	--	--	--	--	--	--	--	--	
03/28/01		--	--	--	--	--	--	--	--	--	--	--	
03/09/02		--	--	--	--	--	--	--	--	--	--	--	
03/24/03		--	--	--	--	--	--	--	--	--	--	--	
03/26/04		--	--	--	--	--	--	--	--	--	--	--	
03/17/05		--	--	--	--	--	--	--	--	--	--	--	
03/31/06		--	--	--	--	--	--	--	--	--	--	--	
02/16/07		--	--	--	--	--	--	--	--	--	--	--	
01/21/08		--	--	--	--	--	--	--	--	--	--	--	
02/25/09		<1.0	<0.50	--	--	--	--	--	--	--	<2.0	<2.0	<2.0
06/12/09		--	--	--	--	--	--	--	--	--	--	--	--
08/19/09		--	--	--	--	--	--	--	--	--	--	--	--
11/06/09	--	--	--	--	--	--	--	--	<0.50	--	--	--	
01/13/10	<1.0	<0.50	<10	--	--	--	--	--	<0.50	<2.0	<2.0	--	
03/30/11	<1.0	<0.50	<10	--	--	--	--	--	<0.50	<2.0	<2.0	<2.0	
03/30/12	<1.0	<0.50	<10	--	--	--	--	--	<0.50	<2.0	<2.0	<2.0	
03/08/13	<1.0	<0.50	<10	--	--	--	--	--	<0.50	<2.0	<2.0	<2.0	
MW-7	05/23/91	--	--	--	--	--	--	--	3.4	--	--	--	
	09/20/91	--	--	--	--	--	--	--	ND	--	--	--	
	12/19/91	--	--	--	--	--	--	--	3.1	--	--	--	
	03/20/92	--	--	--	--	--	--	--	ND	--	--	--	
	06/18/92	--	--	--	--	--	--	--	ND	--	--	--	
	09/10/92	--	--	--	--	--	--	--	2.3	--	--	--	
	12/10/92	--	--	--	--	--	--	--	2	--	--	--	

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

WELL ID	DATE	MTBE 8021 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	Naphthalene (µg/L)	2-Methyl naphthalene (µg/L)	3&4-Methyl phenol (µg/L)
MW-7 cont.	03/10/93	--	--	--	--	--	--	--	1.3	83	19	--
	06/09/93	--	--	--	--	--	--	--	1.3	83	19	--
	09/09/93	--	--	--	--	--	--	--	1.5	48	11	--
	12/09/93	--	--	--	--	--	--	--	1.5	15	ND	--
	03/03/94	1.7	--	--	--	--	--	--	1.7	130	34	--
	06/03/94	--	--	--	--	--	--	--	1.4	61	18	--
	09/02/94	--	--	--	--	--	--	--	1.1	ND	ND	--
	12/01/94	--	--	--	--	--	--	--	1	2.5	ND	--
	03/01/95	--	--	--	--	--	--	--	1.6	120	40	--
	06/01/95	--	--	--	--	--	--	--	1.4	83	13	--
	09/05/95	--	--	--	--	--	--	--	1.8	7	ND	--
	12/05/95	1,600	--	--	--	--	--	--	ND	--	--	--
	12/08/95	--	--	--	--	--	--	--	--	14	ND	--
	04/11/96	1,500	--	--	--	--	--	--	0.75	42	7.6	--
	03/13/97	430	--	--	--	--	--	--	ND	9	ND	--
	03/02/98	790	--	--	--	--	--	--	0.92	--	--	--
	03/25/99	1,200	--	--	--	--	--	--	ND	ND	ND	--
	03/07/00	1,250	--	--	--	--	--	--	ND	ND	ND	--
	03/28/01	1,070	1,260	ND	ND	ND	ND	ND	ND	7.7	ND	--
	03/09/02	<5.0	--	--	--	--	--	--	<0.50	<5.0	<5.0	--
	03/24/03	--	1,600	--	--	--	--	--	0.98	--	<2.0	--
	03/26/04	1,200	--	--	--	--	--	--	<10	17	23	--
	03/17/05	940	--	--	--	--	--	--	<10	--	--	--
	03/31/06	--	260	--	--	--	--	<2.5	<2.5	6.2	3.1	--
	02/16/07	350	410	--	--	--	--	--	0.66	37	19	<2.0
	01/21/08	250	240	--	--	--	--	--	0.77	40	19	<2.0
	02/25/09	130	170	--	--	--	--	--	<0.50	27	16	<2.0
	06/12/09	--	--	740	--	--	--	--	<0.50	--	--	--
	08/19/09	--	--	790	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
	11/06/09	--	--	160	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--
	01/13/10	240	230	<10	<0.50	<0.50	<0.50	<0.50	<0.50	150	<110	--
	03/30/11	44	58	74	--	--	--	--	<0.50	8.4	2.5	<2.0
	03/30/12	79	<1.0	370	--	--	--	--	<1.0	32	20	2.0
	03/08/13	42	25	480	--	--	--	--	<0.50	41	25	4.9

NOTES:

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

-- = Not available

µg/L = Micrograms per liter

MTBE = Methyl tertiary-butyl ether

TBA = Tertiary-butyl alcohol

DIPE = Diisopropyl ether

ETBE = Ethyl-t-butyl ether

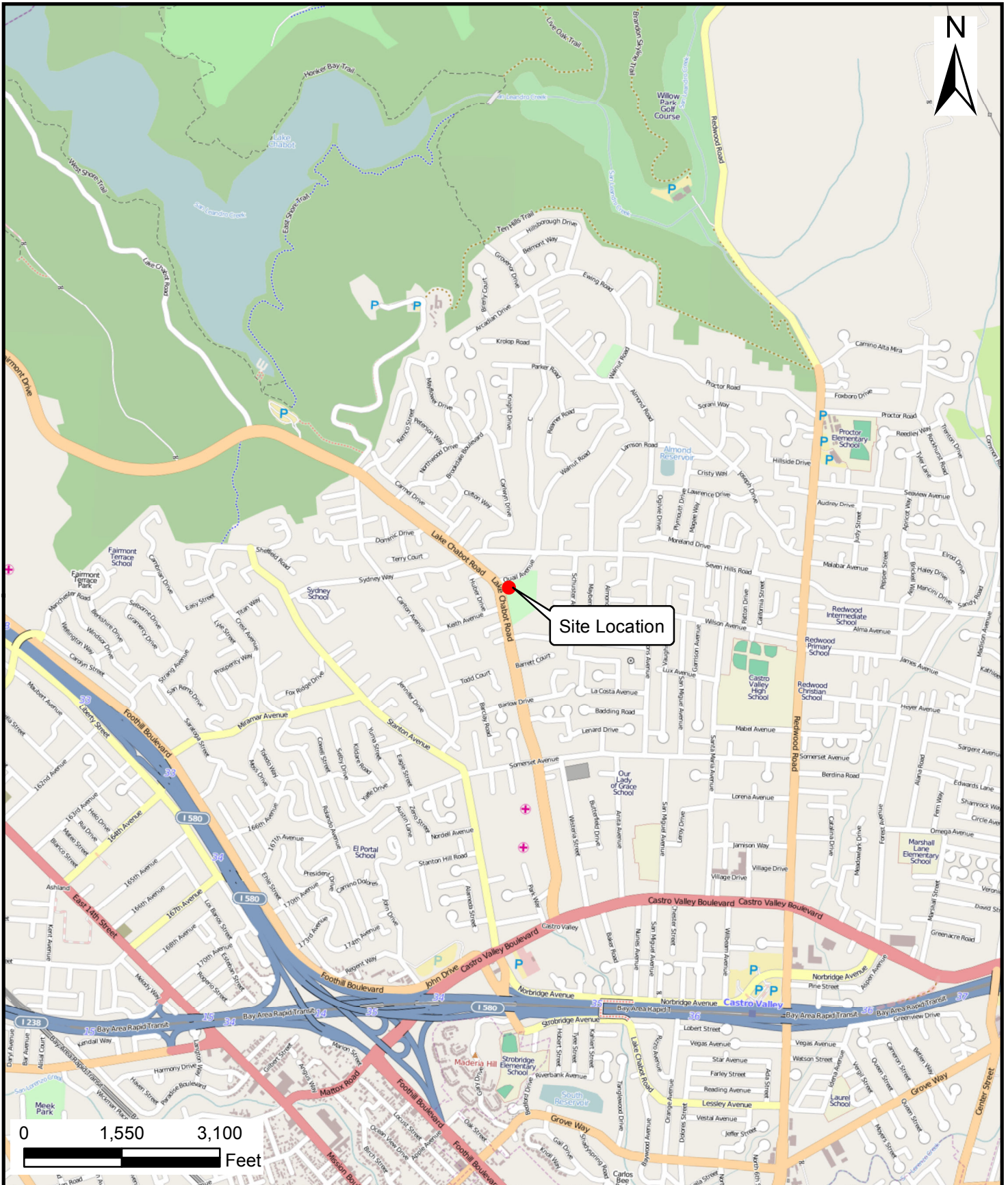
TAME = Tert-amyl methyl ether

EDB = 1,2-Dibromoethane

1,2-DCA = 1,2-Dichloroethane

ID = Identification

FIGURES

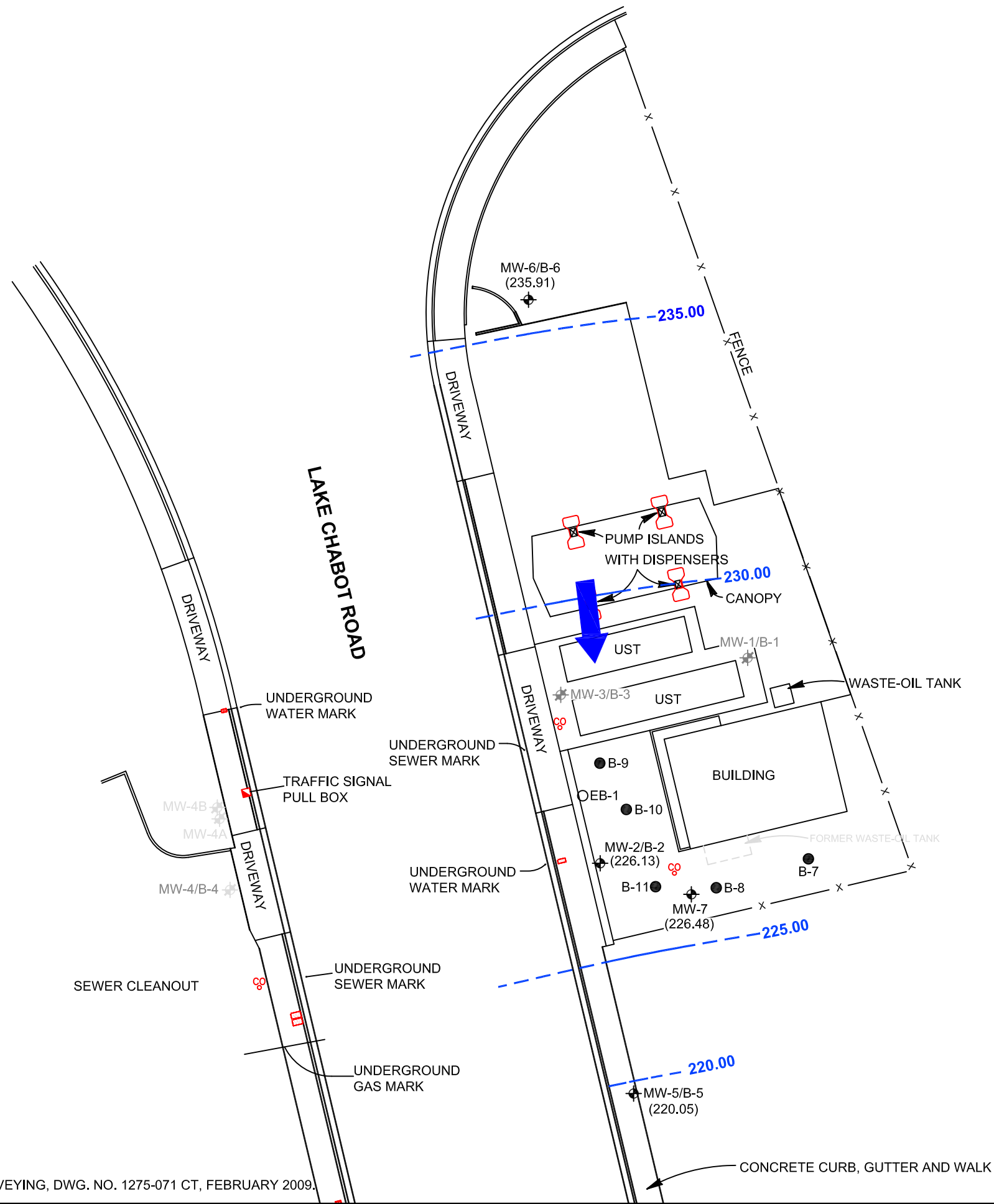


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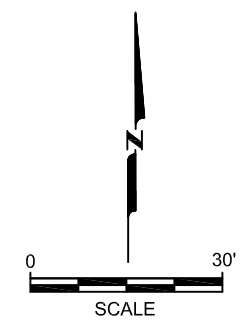
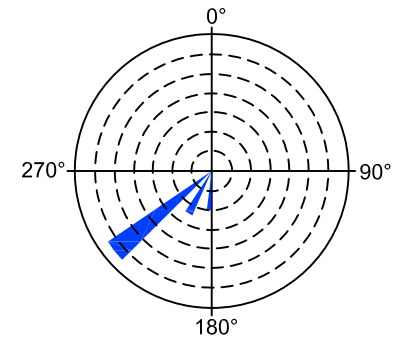
SITE LOCATION MAP			FIGURE NUMBER:
Unocal Service Station #5484 (351812) 18950 Lake Chabot Road Castro Valley, California			1
DRAWN BY:	DATE:	PROJECT NUMBER:	SHEET NUMBER:
T. Quiroz	03/28/2013	60284081	1 of 1

P:\01231-Chevron\76Products_transfer_sites\351812_5484_Castro Valley\7.0 Deliverables\7.2 CADD\1A13\Fig 2 - GW Elevation.dwg Apr 18, 2013 - 9:16am harnsj

SOURCE: MORROW SURVEYING, DWG. NO. 1275-071 CT, FEBRUARY 2009.



- Legend**
- Monitoring Well
 - Destroyed Monitoring Well
 - Soil Boring
 - UST Underground Storage Tank
 - (#) Groundwater Elevation in Feet Above Mean Sea Level
 - Groundwater Contour Line in Feet Above Mean Sea Level (Dashed Where Inferred)
 - Groundwater Flow Direction
- Hydraulic Gradient = 0.15 Feet per Foot



DESIGNED BY:	NO.:	DESCRIPTION:	DATE:	BY:
TQ				
DRAWN BY:				
TQ				
CHECKED BY:				
JH				
APPROVED BY:				
JH				

AECOM

AECOM TECHNICAL SERVICES
10461 OLD PLACERVILLE ROAD, SUITE 170
SACRAMENTO, CALIFORNIA 95827
PHONE: (916) 361-6400
FAX: (916) 361-6401
WEB: HTTP://WWW.AECOM.COM

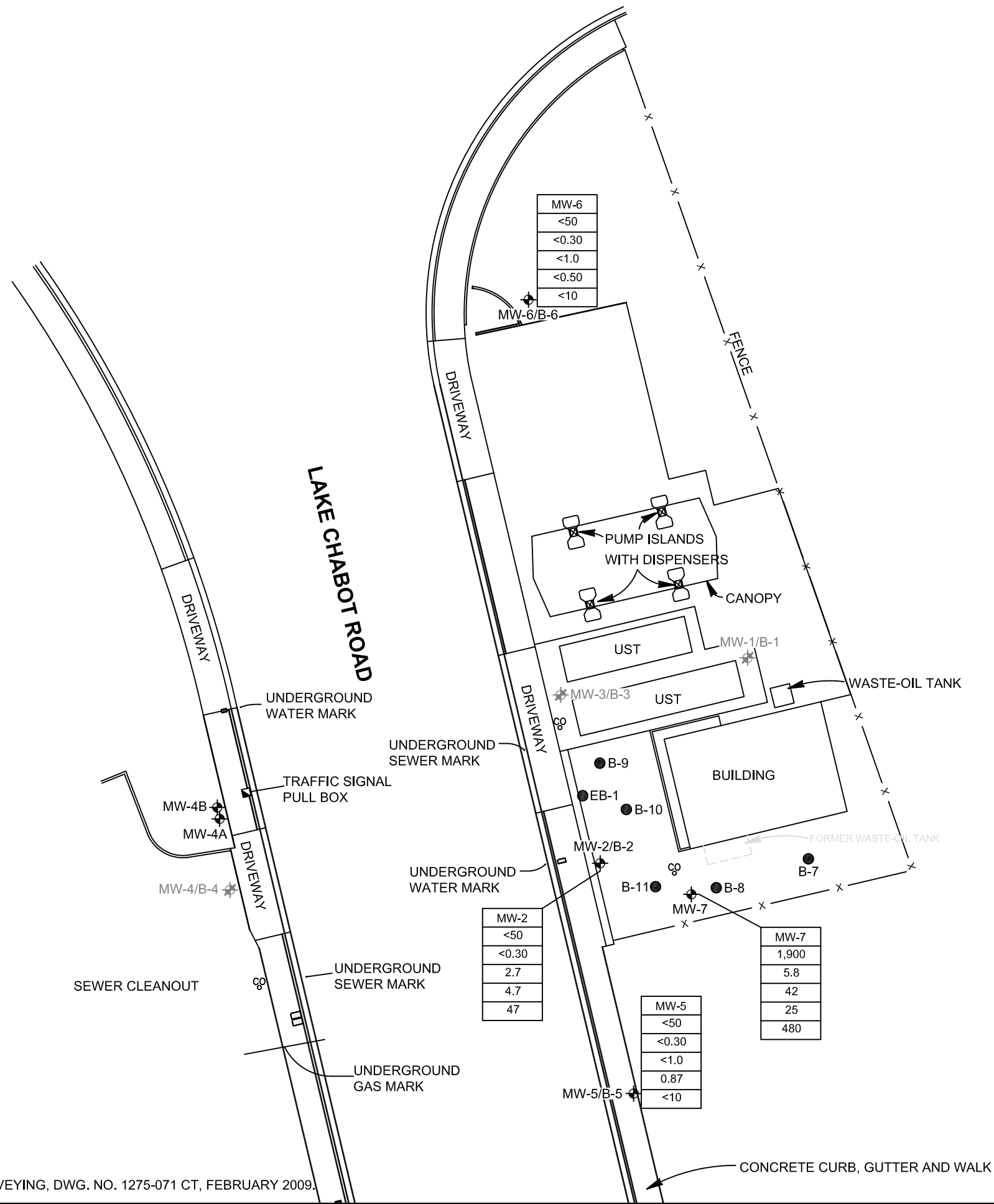
Groundwater Elevation Contour Map
Unocal Service Station #5484 (351812)
18950 Lake Chabot Road
Castro Valley, California

SCALE: 1" = 30'
DATE: 2/12/2013
PROJECT NUMBER: 60284081

FIGURE NUMBER:
2

SHEET NUMBER:
1 of 1

J:\Client\Projects\76_Products\351812-Castro_Valley-18950_Lake_Chabot_Rail7.0_Deliverables\7.2_CADD-Graphics\CADD\Fig 3 - GW Analytical Data.dwg Apr 17, 2013 - 12:58pm quiroz



MW-6
<50
<0.30
<1.0
<0.50
<10

MW-2
<50
<0.30
2.7
4.7
47

MW-5
<50
<0.30
<1.0
0.87
<10

MW-7
1,900
5.8
42
25
480

Legend

- Monitoring Well
- Destroyed Monitoring Well
- Soil Boring
- UST Underground Storage Tank

WELL ID.
TPH-g
Benzene
MTBE 8021
MTBE 8260
TBA

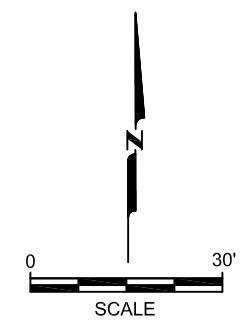
TPH-g = Total Petroleum Hydrocarbons as Gasoline
 MTBE = Methyl Tertiary-Butyl Ether
 TBA = Tertiary-Butyl Alcohol
 <# = Analyte Not Detected At or Above Indicated Laboratory Reporting Limit
 Analyte Concentrations Expressed in Micrograms per Liter

DESIGNED BY:	NO.:	DESCRIPTION:	DATE:	BY:
TQ				
TQ				
JH				
JH				

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Groundwater Analytical Data Map
 Unocal Service Station #5484 (351812)
 18950 Lake Chabot Road
 Castro Valley, California

SCALE: 1" = 30'
 DATE: 03/30/2013
 PROJECT NUMBER: 60284081



SOURCE: MORROW SURVEYING, DWG. NO. 1275-071 CT, FEBRUARY 2009.

FIGURE NUMBER:	3
SHEET NUMBER:	1 of 1

ATTACHMENT A

March 8, 2013, Groundwater Data Field Sheets



GETTLER-RYAN INC.



TRANSMITTAL

March 19, 2013
G-R #385604

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

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: **Chevron Facility**
#351812/5484
18950 Lake Chabot Road
Castro Valley, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Annual Event of March 8, 2013

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/351812 5484

WELL CONDITION STATUS SHEET

Client/
 Facility #: Chevron #351812 / 5484
 Site Address: 18950 Lake Chabot Road
 City: Castro Valley, CA

Job #: 385604
 Event Date: 3/8/17
 Sampler: SA

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

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 Evergreen Oil located in Newark, California.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351812 / 5484
 Site Address: 18950 Lake Chabot Road
 City: Castro Valley, CA

Job Number: 385604
 Event Date: 3/8/13 (inclusive)
 Sampler: JY

Well ID: MW-2
 Well Diameter: (2) 4 in.
 Total Depth: 19.18 ft.
 Depth to Water: 5.53 ft.
13.65 xVF .17 = 2.32

Date Monitored: 3/8/13

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

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 6.96 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.26

Purge Equipment:

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

Sampling Equipment:

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

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

Start Time (purge): 0700
 Sample Time/Date: 1045 / 3/8/13
 Approx. Flow Rate: - gpm.
 Did well de-water? Yes If yes, Time: 0715 Volume: 5.5 gal. DTW @ Sampling: 7.40

Weather Conditions: clear
 Water Color: cloudy Odor: Y / N
 Sediment Description: none

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - <u>CS</u>)	Temperature (<u>C</u> / F)	D.O. (mg/L)	ORP (mV)
<u>0707</u>	<u>2.5</u>	<u>6.92</u>	<u>1880</u>	<u>19.5</u>	_____	_____
<u>0714</u>	<u>5.0</u>	<u>6.87</u>	<u>1882</u>	<u>19.4</u>	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(8015)/BTEX+MTBE(8021)/TBA(8260B)/ETHANOL(8260B) HVOC's(8010 LIST)(8260)</u>
	<u>2</u> x 1 liter ambers	<u>YES</u>	<u>NP</u>	<u>BC LABS</u>	<u>SVOC's(8270)</u>
	<u>2 x VOAs</u>				<u>Chevron samples</u>

COMMENTS: Very slow Recovery

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: X Add/Replaced Plug: 2"



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351812 / 5484 Job Number: 385604
 Site Address: 18950 Lake Chabot Road Event Date: 3/8/13 (inclusive)
 City: Castro Valley, CA Sampler: JH

Well ID: MW-5 Date Monitored: 3/8/13
 Well Diameter: 2 1/4 in.
 Total Depth: 23.84 ft.
 Depth to Water: 7.85 ft. Check if water column is less than 0.50 ft.
15.99 xVF .66 = 10.55 x3 case volume = Estimated Purge Volume: 31.66 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.04

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

Purge Equipment:

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

Sampling Equipment:

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

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

Start Time (purge): 0735 Weather Conditions: Clear
 Sample Time/Date: 1100 / 3/8/13 Water Color: Cloudy Odor: Y 10
 Approx. Flow Rate: 2 gpm. Sediment Description: L.S.H.
 Did well de-water? Yes If yes, Time: 0747 Volume: 24 gal. DTW @ Sampling: 10.60

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - <u>DS</u>)	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>0740</u>	<u>10</u>	<u>6.90</u>	<u>1146</u>	<u>19.7</u>	_____	_____
<u>0745</u>	<u>20</u>	<u>6.83</u>	<u>1192</u>	<u>19.3</u>	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(8015)/BTEX+MTBE(8021)/TBA(8260B)/ETHANOL(8260B) HVOC's(8010 LIST)(8260)</u>
	<u>2</u> x 1 liter ambers	<u>YES</u>	<u>NP</u>	<u>BC LABS</u>	<u>SVOC's(8270)</u>

COMMENTS: Very slow Recovery

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: X Add/Replaced Plug: 4"



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351812 / 5484 Job Number: 385604
 Site Address: 18950 Lake Chabot Road Event Date: 3/8/13 (inclusive)
 City: Castro Valley, CA Sampler: JH

Well ID: MW-6 Date Monitored: 3/8/13
 Well Diameter: 2 (4) in.
 Total Depth: 26.94 ft.
 Depth to Water: 5.83 ft. Check if water column is less than 0.50 ft.
21.11 xVF .66 = 13.93 x3 case volume = Estimated Purge Volume: 41.79 gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.05

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

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

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

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

Start Time (purge): 0630 Weather Conditions: Clear
 Sample Time/Date: 1030 / 3/8/13 Water Color: clear Odor: Y / 0
 Approx. Flow Rate: 2 gpm. Sediment Description: L.S.M
 Did well de-water? Yes If yes, Time: 0647 Volume: 34 gal. DTW @ Sampling: 8.94

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - 05)	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>0637</u>	<u>14</u>	<u>6.85</u>	<u>1463</u>	<u>19.2</u>		
<u>0644</u>	<u>28</u>	<u>6.77</u>	<u>1522</u>	<u>19.3</u>		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(8015)/BTEX+MTBE(8021)/TBA(8260B)/ETHANOL(8260B) HVOC's(8010 LIST)(8260)</u>
	<u>2</u> x 1 liter ambers	<u>YES</u>	<u>NP</u>	<u>BC LABS</u>	<u>SVOC's(8270)</u>

COMMENTS: Very slow Recovery

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: X Add/Replaced Plug: X 4"



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351812 / 5484
 Site Address: 18950 Lake Chabot Road
 City: Castro Valley, CA

Job Number: 385604
 Event Date: 3/8/13 (inclusive)
 Sampler: JB

Well ID: MW-7
 Well Diameter: 2 1/4 in.
 Total Depth: 19.50 ft.
 Depth to Water: 7.65 ft.
11.85 xVF .17 = 2.01

Date Monitored: 3/8/13

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

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 6.03 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.02

Purge Equipment:

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

Sampling Equipment:

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

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

Start Time (purge): 0800
 Sample Time/Date: 08130 / 3/8/13
 Approx. Flow Rate: _____ gpm.
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Clean
 Water Color: Cloudy Odor: Y / 0
 Sediment Description: L.S.H.
 DTW @ Sampling: 9.80

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm) (S)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>0806</u>	<u>2</u>	<u>7.05</u>	<u>1184</u>	<u>19.2</u>	_____	_____
<u>0814</u>	<u>4</u>	<u>6.95</u>	<u>1246</u>	<u>19.4</u>	_____	_____
<u>0822</u>	<u>6</u>	<u>6.87</u>	<u>1271</u>	<u>19.7</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>6</u> x voa vial	<u>YES</u>	<u>HCL</u>	<u>BC LABS</u>	<u>TPH-GRO(8015)/BTEX+MTBE(8021)/TBA(8260B)/ETHANOL(8260B) HVOC's(8010 LIST)(8260)</u>
	<u>2</u> x 1 liter ambers	<u>YES</u>	<u>NP</u>	<u>BC LABS</u>	<u>SVOC's(8270)</u>

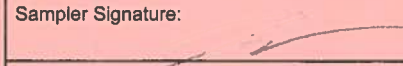
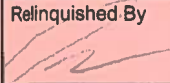

COMMENTS: Very slow Recovery

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: X Add/Replaced Plug: X 2"

CHAIN OF CUSTODY FORM

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

COC 1 of 1

Union Oil Site ID: <u> 5484 - </u>				Union Oil Consultant: <u> AECCM </u>				ANALYSES REQUIRED															
Site Global ID: <u> TC660101453 </u>				Consultant Contact: <u> Jim Harris </u>				TPH - Diesel by EPA 8015	TPH - G by GCMS	BTEX/MTBE/ OXYS by ERA-88888	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	8									Turnaround Time (TAT):	
Site Address: <u> 18950 Lake CH. BOT RD Castro Valley CA </u>				Consultant Phone No.: <u> 916-361-6412 </u>																		Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/>	
Union Oil PM: <u> Rojas Karcow </u>				Sampling Company: <u> TRC GetHr - Kspu </u>				Special Instructions															
Union Oil PM Phone No.: <u> 925-750-6270 </u>				Sampled By (PRINT): <u> Jim Harris </u>																			
Charge Code: <u> NWRB-0 351 C12 -0- LAB </u>				Sampler Signature: 				Notes / Comments															
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.				BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911																			
				SAMPLE ID																			
Field Point Name	Matrix	DTW	Date (yymmdd)	Sample Time	# of Containers																		
<u> QA </u>	<u> W-S-A </u>		<u> 12/26/09 </u>		<u> 2 </u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															
<u> MW-2 </u>	<u> W-S-A </u>		<u> </u>	<u> 1045 </u>	<u> 8 </u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
<u> MW-5 </u>	<u> W-S-A </u>		<u> </u>	<u> 1100 </u>	<u> </u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
<u> MW-6 </u>	<u> W-S-A </u>		<u> </u>	<u> 1130 </u>	<u> </u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
<u> MW-7 </u>	<u> W-S-A </u>		<u> ↓ </u>	<u> 1130 </u>	<u> ↓ </u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
	<u> W-S-A </u>																						
	<u> W-S-A </u>																						
	<u> W-S-A </u>																						
	<u> W-S-A </u>																						
	<u> W-S-A </u>																						
	<u> W-S-A </u>																						
	<u> W-S-A </u>																						
Relinquished By	Company	Date / Time:		Relinquished By	Company	Date / Time:		Relinquished By	Company	Date / Time:													
	<u> G. Kim </u>	<u> 3/8/10 2010 </u>			<u> BC Laboratories, Inc. </u>	<u> 3/8/10 2010 </u>																	
Received By	Company	Date / Time:		Received By	Company	Date / Time:		Received By	Company	Date / Time:													
<u> JETTLEY - RYM </u>	<u> F. ... </u>	<u> 3/13/10 2010 </u>		<u> ... </u>	<u> ... </u>	<u> ... </u>																	

ATTACHMENT B

BC Laboratories Analytical Report #1304923



Date of Report: 03/20/2013

Jim Harms

AECOM

10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Project: 5484
BC Work Order: 1304923
Invoice ID: B142080

Enclosed are the results of analyses for samples received by the laboratory on 3/11/2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014



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Environmental Testing Laboratory Since 1949

MM

CHAIN OF CUSTODY FORM

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

COC 1 of 1

1304923

Union Oil Site ID: 5484	Union Oil Consultant: AECOM	ANALYSES REQUIRED Turnaround Time (TAT): Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/> Special Instructions Notes / Comments
Site Global ID: T06C0101453	Consultant Contact: Jim Haems	
Site Address: 18950 Lake Chabot Rd Castro Valley CA	Consultant Phone No.: 916-361-6412	
Union Oil PM: Roya Kambin	Sampling Company: Gettler-Ryan	
Union Oil PM Phone No.: 925-750-6270	Sampled By (PRINT): Jim Haems	
Charge Code: NWRB-0 35L 812-0-LAB	Sampler Signature:	TPH - Diesel by EPA 8015 TPH - G by 8015 5108 BTEX/MTBE 8015 by 8015 1708 Ethanol by EPA 8260B EPA 8260B Full List with OXYS Hvoc (8107) TRM (8260D) SVOC (8270)
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY. BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911		

SAMPLE ID				Sample Time	# of Containers	TPH - Diesel by EPA 8015	TPH - G by 8015 5108	BTEX/MTBE 8015 by 8015 1708	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS	Hvoc (8107) TRM (8260D)	SVOC (8270)	CHK BY	DISTRIBUTION
Field Point Name	Matrix	DTW	Date (yyymmdd)											
-1	QA	W-S-A	130308		2		X	X						
-2	MW-2	W-S-A		1045	8		X	X	X	X	X	X		
-3	MW-5	W-S-A		1100			X	X	X	X	X	X		
-4	MW-6	W-S-A		1030			X	X	X	X	X	X		
-5	MW-7	W-S-A		1130			X	X	X	X	X	X		
	W-S-A													
	W-S-A													
	W-S-A													
	W-S-A													
	W-S-A													
	W-S-A													

Relinquished By: Company: Gettler-Ryan Date / Time: 3/8/13 2000	Relinquished By: Company: BC LAB Date / Time: 3-11-13 1515	Relinquished By: 1815 Company: BC LAB Date / Time: 3-11-13
Received By: GETTLER-RYAN FEIDGE Company: 03-11-13 0700 Date / Time: 03-11-13 0700	Received By: Nancy Bogan Company: BC LAB Date / Time: 3-11-13 1515	Received By: Company: BC LAB Date / Time: 3-11-13 1815

REL. 3-11-13 21:15
 REC- KOT - 3-11-13 21:15

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Chain of Custody and Cooler Receipt Form for 1304923 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 13 08/17/12 Page 1 Of 1

Submission #: 1304923

SHIPPING INFORMATION: Federal Express, UPS, Hand Delivery, BC Lab Field Service, Other. SHIPPING CONTAINER: Ice Chest, Box, None, Other.

Refrigerant: Ice, Blue Ice, None, Other. Comments:

Custody Seals: Ice Chest, Containers, None. Intact? Yes/No.

All samples received? All samples containers intact? Description(s) match COC?

COC Received YES/NO. Emissivity: 0.95. Container: VOA. Thermometer ID: 807. Date/Time: 3-11-13. Analyst Init: JKW 2140. Temperature: (A) 4.1 C / (C) 4.0 C.

Table with columns for Sample Containers and Sample Numbers (1-10). Rows include various sample types like QT GENERAL MINERAL, PT PE UNPRESERVED, etc.

Comments: Sample Numbering Completed By: BLT Date/Time: 3/12/13 @ 1030. A = Actual / C = Corrected



AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

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

1304923-01	COC Number: --- Project Number: 5484 Sampling Location: --- Sampling Point: QA-W-130308 Sampled By: GRD	Receive Date: 03/11/2013 21:15 Sampling Date: 03/08/2013 00:00 Sample Depth: --- Lab Matrix: Water Sample Type: Trip Blank Delivery Work Order: Global ID: T0600101453 Location ID (FieldPoint): QA Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1304923-02	COC Number: --- Project Number: 5484 Sampling Location: --- Sampling Point: MW-2-W-130308 Sampled By: GRD	Receive Date: 03/11/2013 21:15 Sampling Date: 03/08/2013 10:45 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101453 Location ID (FieldPoint): MW-2 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1304923-03	COC Number: --- Project Number: 5484 Sampling Location: --- Sampling Point: MW-5-W-130308 Sampled By: GRD	Receive Date: 03/11/2013 21:15 Sampling Date: 03/08/2013 11:00 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101453 Location ID (FieldPoint): MW-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--



AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

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

1304923-04	COC Number: --- Project Number: 5484 Sampling Location: --- Sampling Point: MW-6-W-130308 Sampled By: GRD	Receive Date: 03/11/2013 21:15 Sampling Date: 03/08/2013 10:30 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101453 Location ID (FieldPoint): MW-6 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1304923-05	COC Number: --- Project Number: 5484 Sampling Location: --- Sampling Point: MW-7-W-130308 Sampled By: GRD	Receive Date: 03/11/2013 21:15 Sampling Date: 03/08/2013 11:30 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101453 Location ID (FieldPoint): MW-7 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--



AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1304923-01	Client Sample Name: 5484, QA-W-130308, 3/8/2013 12:00:00AM
----------------------------------	---

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.30	EPA-8021B	ND		1
Toluene	ND	ug/L	0.30	EPA-8021B	ND		1
Ethylbenzene	ND	ug/L	0.30	EPA-8021B	ND		1
Methyl t-butyl ether	ND	ug/L	1.0	EPA-8021B	ND		1
Total Xylenes	ND	ug/L	0.60	EPA-8021B	ND		1
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	79.5	%	70 - 130 (LCL - UCL)	EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	85.6	%	70 - 130 (LCL - UCL)	EPA-8015B			2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8021B	03/13/13	03/13/13 21:46	jjh	GC-V9	1	BWC0768
2	EPA-8015B	03/13/13	03/13/13 21:46	jjh	GC-V9	1	BWC0768



AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

Table with 2 columns: BCL Sample ID (1304923-02) and Client Sample Name (5484, MW-2-W-130308, 3/8/2013 10:45:00AM)

Main data table with 8 columns: Constituent, Result, Units, PQL, Method, MB Bias, Lab Qualls, Run #. Lists various chemical compounds and their detection results.

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AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1304923-02	Client Sample Name: 5484, MW-2-W-130308, 3/8/2013 10:45:00AM
----------------------------------	---

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	118	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	03/13/13	03/14/13 02:28	MGC	MS-V5	1	BWC0782

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
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AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 1304923-02	Client Sample Name: 5484, MW-2-W-130308, 3/8/2013 10:45:00AM
----------------------------------	---

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Acenaphthene	ND	ug/L	2.0	EPA-8270C	ND		1
Acenaphthylene	ND	ug/L	2.0	EPA-8270C	ND		1
Anthracene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[a]anthracene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[b]fluoranthene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[k]fluoranthene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[a]pyrene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[g,h,i]perylene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzoic acid	ND	ug/L	10	EPA-8270C	ND		1
Benzyl alcohol	ND	ug/L	2.0	EPA-8270C	ND		1
Benzyl butyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Chloroethoxy)methane	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Chloroethyl) ether	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Chloroisopropyl)ether	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Ethylhexyl)phthalate	ND	ug/L	4.0	EPA-8270C	ND		1
4-Bromophenyl phenyl ether	ND	ug/L	2.0	EPA-8270C	ND		1
4-Chloroaniline	ND	ug/L	2.0	EPA-8270C	ND		1
2-Chloronaphthalene	ND	ug/L	2.0	EPA-8270C	ND		1
4-Chlorophenyl phenyl ether	ND	ug/L	2.0	EPA-8270C	ND		1
Chrysene	ND	ug/L	2.0	EPA-8270C	ND		1
Dibenzo[a,h]anthracene	ND	ug/L	3.0	EPA-8270C	ND		1
Dibenzofuran	ND	ug/L	2.0	EPA-8270C	ND		1
1,2-Dichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
1,3-Dichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
1,4-Dichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
3,3-Dichlorobenzidine	ND	ug/L	10	EPA-8270C	ND		1
Diethyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
Dimethyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
Di-n-butyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
2,4-Dinitrotoluene	ND	ug/L	2.0	EPA-8270C	ND		1
2,6-Dinitrotoluene	ND	ug/L	2.0	EPA-8270C	ND		1
Di-n-octyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
Fluoranthene	ND	ug/L	2.0	EPA-8270C	ND		1

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10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 1304923-02	Client Sample Name: 5484, MW-2-W-130308, 3/8/2013 10:45:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Fluorene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachlorobutadiene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachlorocyclopentadiene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachloroethane	ND	ug/L	2.0	EPA-8270C	ND		1
Indeno[1,2,3-cd]pyrene	ND	ug/L	2.0	EPA-8270C	ND		1
Isophorone	ND	ug/L	2.0	EPA-8270C	ND		1
2-Methylnaphthalene	ND	ug/L	2.0	EPA-8270C	ND		1
Naphthalene	ND	ug/L	2.0	EPA-8270C	ND		1
2-Nitroaniline	ND	ug/L	2.0	EPA-8270C	ND		1
3-Nitroaniline	ND	ug/L	2.0	EPA-8270C	ND		1
4-Nitroaniline	ND	ug/L	5.0	EPA-8270C	ND		1
Nitrobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
N-Nitrosodi-N-propylamine	ND	ug/L	2.0	EPA-8270C	ND		1
N-Nitrosodiphenylamine	ND	ug/L	2.0	EPA-8270C	ND		1
Phenanthrene	ND	ug/L	2.0	EPA-8270C	ND		1
Pyrene	ND	ug/L	2.0	EPA-8270C	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
4-Chloro-3-methylphenol	ND	ug/L	5.0	EPA-8270C	ND		1
2-Chlorophenol	ND	ug/L	2.0	EPA-8270C	ND		1
2,4-Dichlorophenol	ND	ug/L	2.0	EPA-8270C	ND		1
2,4-Dimethylphenol	ND	ug/L	2.0	EPA-8270C	ND		1
4,6-Dinitro-2-methylphenol	ND	ug/L	10	EPA-8270C	ND		1
2,4-Dinitrophenol	ND	ug/L	10	EPA-8270C	ND		1
2-Methylphenol	ND	ug/L	2.0	EPA-8270C	ND		1
3- & 4-Methylphenol	ND	ug/L	2.0	EPA-8270C	ND		1
2-Nitrophenol	ND	ug/L	2.0	EPA-8270C	ND		1
4-Nitrophenol	ND	ug/L	2.0	EPA-8270C	ND		1
Pentachlorophenol	ND	ug/L	10	EPA-8270C	ND		1
Phenol	ND	ug/L	2.0	EPA-8270C	ND		1
2,4,5-Trichlorophenol	ND	ug/L	5.0	EPA-8270C	ND		1
2,4,6-Trichlorophenol	ND	ug/L	5.0	EPA-8270C	ND		1
2-Fluorophenol (Surrogate)	54.0	%	30 - 120 (LCL - UCL)	EPA-8270C			1

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 1304923-02	Client Sample Name: 5484, MW-2-W-130308, 3/8/2013 10:45:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Phenol-d5 (Surrogate)	52.4	%	12 - 110 (LCL - UCL)	EPA-8270C			1
Nitrobenzene-d5 (Surrogate)	100	%	60 - 130 (LCL - UCL)	EPA-8270C			1
2-Fluorobiphenyl (Surrogate)	98.6	%	55 - 125 (LCL - UCL)	EPA-8270C			1
2,4,6-Tribromophenol (Surrogate)	126	%	40 - 150 (LCL - UCL)	EPA-8270C			1
p-Terphenyl-d14 (Surrogate)	114	%	40 - 150 (LCL - UCL)	EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	03/13/13	03/19/13 22:55	SKC	MS-B2	1	BWC0879



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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1304923-02	Client Sample Name: 5484, MW-2-W-130308, 3/8/2013 10:45:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.30	EPA-8021B	ND		1
Toluene	ND	ug/L	0.30	EPA-8021B	ND		1
Ethylbenzene	ND	ug/L	0.30	EPA-8021B	ND		1
Methyl t-butyl ether	2.7	ug/L	1.0	EPA-8021B	ND		1
Total Xylenes	ND	ug/L	0.60	EPA-8021B	ND		1
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	75.9	%	70 - 130 (LCL - UCL)	EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	73.0	%	70 - 130 (LCL - UCL)	EPA-8015B			2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8021B	03/13/13	03/13/13 23:30	jjh	GC-V9	1	BWC0768
2	EPA-8015B	03/13/13	03/13/13 23:30	jjh	GC-V9	1	BWC0768

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1304923-03	Client Sample Name: 5484, MW-5-W-130308, 3/8/2013 11:00:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Bromodichloromethane	ND	ug/L	0.50	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	EPA-8260B	ND		1
cis-1,3-Dichloropropene	ND	ug/L	0.50	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	EPA-8260B	ND		1
Methyl t-butyl ether	0.87	ug/L	0.50	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1304923-03	Client Sample Name: 5484, MW-5-W-130308, 3/8/2013 11:00:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	120	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.3	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	03/13/13	03/14/13 02:51	MGC	MS-V5	1	BWC0782

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 1304923-03	Client Sample Name: 5484, MW-5-W-130308, 3/8/2013 11:00:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Acenaphthene	ND	ug/L	2.0	EPA-8270C	ND		1
Acenaphthylene	ND	ug/L	2.0	EPA-8270C	ND		1
Anthracene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[a]anthracene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[b]fluoranthene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[k]fluoranthene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[a]pyrene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[g,h,i]perylene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzoic acid	ND	ug/L	10	EPA-8270C	ND		1
Benzyl alcohol	ND	ug/L	2.0	EPA-8270C	ND		1
Benzyl butyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Chloroethoxy)methane	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Chloroethyl) ether	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Chloroisopropyl)ether	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Ethylhexyl)phthalate	ND	ug/L	4.0	EPA-8270C	ND		1
4-Bromophenyl phenyl ether	ND	ug/L	2.0	EPA-8270C	ND		1
4-Chloroaniline	ND	ug/L	2.0	EPA-8270C	ND		1
2-Chloronaphthalene	ND	ug/L	2.0	EPA-8270C	ND		1
4-Chlorophenyl phenyl ether	ND	ug/L	2.0	EPA-8270C	ND		1
Chrysene	ND	ug/L	2.0	EPA-8270C	ND		1
Dibenzo[a,h]anthracene	ND	ug/L	3.0	EPA-8270C	ND		1
Dibenzofuran	ND	ug/L	2.0	EPA-8270C	ND		1
1,2-Dichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
1,3-Dichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
1,4-Dichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
3,3-Dichlorobenzidine	ND	ug/L	10	EPA-8270C	ND		1
Diethyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
Dimethyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
Di-n-butyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
2,4-Dinitrotoluene	ND	ug/L	2.0	EPA-8270C	ND		1
2,6-Dinitrotoluene	ND	ug/L	2.0	EPA-8270C	ND		1
Di-n-octyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
Fluoranthene	ND	ug/L	2.0	EPA-8270C	ND		1

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 1304923-03	Client Sample Name: 5484, MW-5-W-130308, 3/8/2013 11:00:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Fluorene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachlorobutadiene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachlorocyclopentadiene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachloroethane	ND	ug/L	2.0	EPA-8270C	ND		1
Indeno[1,2,3-cd]pyrene	ND	ug/L	2.0	EPA-8270C	ND		1
Isophorone	ND	ug/L	2.0	EPA-8270C	ND		1
2-Methylnaphthalene	ND	ug/L	2.0	EPA-8270C	ND		1
Naphthalene	ND	ug/L	2.0	EPA-8270C	ND		1
2-Nitroaniline	ND	ug/L	2.0	EPA-8270C	ND		1
3-Nitroaniline	ND	ug/L	2.0	EPA-8270C	ND		1
4-Nitroaniline	ND	ug/L	5.0	EPA-8270C	ND		1
Nitrobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
N-Nitrosodi-N-propylamine	ND	ug/L	2.0	EPA-8270C	ND		1
N-Nitrosodiphenylamine	ND	ug/L	2.0	EPA-8270C	ND		1
Phenanthrene	ND	ug/L	2.0	EPA-8270C	ND		1
Pyrene	ND	ug/L	2.0	EPA-8270C	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
4-Chloro-3-methylphenol	ND	ug/L	5.0	EPA-8270C	ND		1
2-Chlorophenol	ND	ug/L	2.0	EPA-8270C	ND		1
2,4-Dichlorophenol	ND	ug/L	2.0	EPA-8270C	ND		1
2,4-Dimethylphenol	ND	ug/L	2.0	EPA-8270C	ND		1
4,6-Dinitro-2-methylphenol	ND	ug/L	10	EPA-8270C	ND		1
2,4-Dinitrophenol	ND	ug/L	10	EPA-8270C	ND		1
2-Methylphenol	ND	ug/L	2.0	EPA-8270C	ND		1
3- & 4-Methylphenol	ND	ug/L	2.0	EPA-8270C	ND		1
2-Nitrophenol	ND	ug/L	2.0	EPA-8270C	ND		1
4-Nitrophenol	ND	ug/L	2.0	EPA-8270C	ND		1
Pentachlorophenol	ND	ug/L	10	EPA-8270C	ND		1
Phenol	ND	ug/L	2.0	EPA-8270C	ND		1
2,4,5-Trichlorophenol	ND	ug/L	5.0	EPA-8270C	ND		1
2,4,6-Trichlorophenol	ND	ug/L	5.0	EPA-8270C	ND		1
2-Fluorophenol (Surrogate)	45.2	%	30 - 120 (LCL - UCL)	EPA-8270C			1

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 1304923-03	Client Sample Name: 5484, MW-5-W-130308, 3/8/2013 11:00:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Phenol-d5 (Surrogate)	45.2	%	12 - 110 (LCL - UCL)	EPA-8270C			1
Nitrobenzene-d5 (Surrogate)	81.8	%	60 - 130 (LCL - UCL)	EPA-8270C			1
2-Fluorobiphenyl (Surrogate)	93.9	%	55 - 125 (LCL - UCL)	EPA-8270C			1
2,4,6-Tribromophenol (Surrogate)	128	%	40 - 150 (LCL - UCL)	EPA-8270C			1
p-Terphenyl-d14 (Surrogate)	140	%	40 - 150 (LCL - UCL)	EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	03/13/13	03/19/13 23:21	SKC	MS-B2	1	BWC0879

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1304923-03	Client Sample Name: 5484, MW-5-W-130308, 3/8/2013 11:00:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.30	EPA-8021B	ND		1
Toluene	ND	ug/L	0.30	EPA-8021B	ND		1
Ethylbenzene	ND	ug/L	0.30	EPA-8021B	ND		1
Methyl t-butyl ether	ND	ug/L	1.0	EPA-8021B	ND		1
Total Xylenes	ND	ug/L	0.60	EPA-8021B	ND		1
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	75.4	%	70 - 130 (LCL - UCL)	EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	79.5	%	70 - 130 (LCL - UCL)	EPA-8015B			2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8021B	03/13/13	03/13/13 23:50	jjh	GC-V9	1	BWC0768
2	EPA-8015B	03/13/13	03/13/13 23:50	jjh	GC-V9	1	BWC0768



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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1304923-04	Client Sample Name: 5484, MW-6-W-130308, 3/8/2013 10:30:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Bromodichloromethane	ND	ug/L	0.50	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	EPA-8260B	ND		1
cis-1,3-Dichloropropene	ND	ug/L	0.50	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1

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10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1304923-04	Client Sample Name: 5484, MW-6-W-130308, 3/8/2013 10:30:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	118	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	99.7	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.9	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	03/13/13	03/14/13 03:13	MGC	MS-V5	1	BWC0782



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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 1304923-04	Client Sample Name: 5484, MW-6-W-130308, 3/8/2013 10:30:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Acenaphthene	ND	ug/L	2.0	EPA-8270C	ND		1
Acenaphthylene	ND	ug/L	2.0	EPA-8270C	ND		1
Anthracene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[a]anthracene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[b]fluoranthene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[k]fluoranthene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[a]pyrene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[g,h,i]perylene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzoic acid	ND	ug/L	10	EPA-8270C	ND		1
Benzyl alcohol	ND	ug/L	2.0	EPA-8270C	ND		1
Benzyl butyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Chloroethoxy)methane	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Chloroethyl) ether	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Chloroisopropyl)ether	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Ethylhexyl)phthalate	ND	ug/L	4.0	EPA-8270C	ND		1
4-Bromophenyl phenyl ether	ND	ug/L	2.0	EPA-8270C	ND		1
4-Chloroaniline	ND	ug/L	2.0	EPA-8270C	ND		1
2-Chloronaphthalene	ND	ug/L	2.0	EPA-8270C	ND		1
4-Chlorophenyl phenyl ether	ND	ug/L	2.0	EPA-8270C	ND		1
Chrysene	ND	ug/L	2.0	EPA-8270C	ND		1
Dibenzo[a,h]anthracene	ND	ug/L	3.0	EPA-8270C	ND		1
Dibenzofuran	ND	ug/L	2.0	EPA-8270C	ND		1
1,2-Dichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
1,3-Dichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
1,4-Dichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
3,3-Dichlorobenzidine	ND	ug/L	10	EPA-8270C	ND		1
Diethyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
Dimethyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
Di-n-butyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
2,4-Dinitrotoluene	ND	ug/L	2.0	EPA-8270C	ND		1
2,6-Dinitrotoluene	ND	ug/L	2.0	EPA-8270C	ND		1
Di-n-octyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
Fluoranthene	ND	ug/L	2.0	EPA-8270C	ND		1

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 1304923-04	Client Sample Name: 5484, MW-6-W-130308, 3/8/2013 10:30:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Fluorene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachlorobutadiene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachlorocyclopentadiene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachloroethane	ND	ug/L	2.0	EPA-8270C	ND		1
Indeno[1,2,3-cd]pyrene	ND	ug/L	2.0	EPA-8270C	ND		1
Isophorone	ND	ug/L	2.0	EPA-8270C	ND		1
2-Methylnaphthalene	ND	ug/L	2.0	EPA-8270C	ND		1
Naphthalene	ND	ug/L	2.0	EPA-8270C	ND		1
2-Nitroaniline	ND	ug/L	2.0	EPA-8270C	ND		1
3-Nitroaniline	ND	ug/L	2.0	EPA-8270C	ND		1
4-Nitroaniline	ND	ug/L	5.0	EPA-8270C	ND		1
Nitrobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
N-Nitrosodi-N-propylamine	ND	ug/L	2.0	EPA-8270C	ND		1
N-Nitrosodiphenylamine	ND	ug/L	2.0	EPA-8270C	ND		1
Phenanthrene	ND	ug/L	2.0	EPA-8270C	ND		1
Pyrene	ND	ug/L	2.0	EPA-8270C	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
4-Chloro-3-methylphenol	ND	ug/L	5.0	EPA-8270C	ND		1
2-Chlorophenol	ND	ug/L	2.0	EPA-8270C	ND		1
2,4-Dichlorophenol	ND	ug/L	2.0	EPA-8270C	ND		1
2,4-Dimethylphenol	ND	ug/L	2.0	EPA-8270C	ND		1
4,6-Dinitro-2-methylphenol	ND	ug/L	10	EPA-8270C	ND		1
2,4-Dinitrophenol	ND	ug/L	10	EPA-8270C	ND		1
2-Methylphenol	ND	ug/L	2.0	EPA-8270C	ND		1
3- & 4-Methylphenol	ND	ug/L	2.0	EPA-8270C	ND		1
2-Nitrophenol	ND	ug/L	2.0	EPA-8270C	ND		1
4-Nitrophenol	ND	ug/L	2.0	EPA-8270C	ND		1
Pentachlorophenol	ND	ug/L	10	EPA-8270C	ND		1
Phenol	ND	ug/L	2.0	EPA-8270C	ND		1
2,4,5-Trichlorophenol	ND	ug/L	5.0	EPA-8270C	ND		1
2,4,6-Trichlorophenol	ND	ug/L	5.0	EPA-8270C	ND		1
2-Fluorophenol (Surrogate)	53.8	%	30 - 120 (LCL - UCL)	EPA-8270C			1

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 1304923-04	Client Sample Name: 5484, MW-6-W-130308, 3/8/2013 10:30:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Phenol-d5 (Surrogate)	51.9	%	12 - 110 (LCL - UCL)	EPA-8270C			1
Nitrobenzene-d5 (Surrogate)	106	%	60 - 130 (LCL - UCL)	EPA-8270C			1
2-Fluorobiphenyl (Surrogate)	110	%	55 - 125 (LCL - UCL)	EPA-8270C			1
2,4,6-Tribromophenol (Surrogate)	131	%	40 - 150 (LCL - UCL)	EPA-8270C			1
p-Terphenyl-d14 (Surrogate)	130	%	40 - 150 (LCL - UCL)	EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	03/13/13	03/19/13 23:46	SKC	MS-B2	1	BWC0879



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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1304923-04	Client Sample Name: 5484, MW-6-W-130308, 3/8/2013 10:30:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.30	EPA-8021B	ND		1
Toluene	ND	ug/L	0.30	EPA-8021B	ND		1
Ethylbenzene	ND	ug/L	0.30	EPA-8021B	ND		1
Methyl t-butyl ether	ND	ug/L	1.0	EPA-8021B	ND		1
Total Xylenes	ND	ug/L	0.60	EPA-8021B	ND		1
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	76.3	%	70 - 130 (LCL - UCL)	EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	80.8	%	70 - 130 (LCL - UCL)	EPA-8015B			2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8021B	03/13/13	03/14/13 00:11	jjh	GC-V9	1	BWC0768
2	EPA-8015B	03/13/13	03/14/13 00:11	jjh	GC-V9	1	BWC0768



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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1304923-05	Client Sample Name: 5484, MW-7-W-130308, 3/8/2013 11:30:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Bromodichloromethane	ND	ug/L	0.50	EPA-8260B	ND		1
Bromoform	ND	ug/L	0.50	EPA-8260B	ND		1
Bromomethane	ND	ug/L	1.0	EPA-8260B	ND		1
Carbon tetrachloride	ND	ug/L	0.50	EPA-8260B	ND		1
Chlorobenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Chloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Chloroform	ND	ug/L	0.50	EPA-8260B	ND		1
Chloromethane	ND	ug/L	0.50	EPA-8260B	ND		1
Dibromochloromethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	EPA-8260B	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	EPA-8260B	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	EPA-8260B	ND		1
cis-1,3-Dichloropropene	ND	ug/L	0.50	EPA-8260B	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	EPA-8260B	ND		1
Methylene chloride	ND	ug/L	1.0	EPA-8260B	ND		1
Methyl t-butyl ether	25	ug/L	0.50	EPA-8260B	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Tetrachloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Trichloroethene	ND	ug/L	0.50	EPA-8260B	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	EPA-8260B	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	EPA-8260B	ND		1
Vinyl chloride	ND	ug/L	0.50	EPA-8260B	ND		1
t-Butyl alcohol	480	ug/L	10	EPA-8260B	ND		1
Ethanol	ND	ug/L	250	EPA-8260B	ND		1

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1304923-05	Client Sample Name: 5484, MW-7-W-130308, 3/8/2013 11:30:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	119	%	75 - 125 (LCL - UCL)	EPA-8260B			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)	EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)	EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	03/13/13	03/14/13 03:36	MGC	MS-V5	1	BWC0782



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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 1304923-05	Client Sample Name: 5484, MW-7-W-130308, 3/8/2013 11:30:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Acenaphthene	ND	ug/L	2.0	EPA-8270C	ND		1
Acenaphthylene	ND	ug/L	2.0	EPA-8270C	ND		1
Anthracene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[a]anthracene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[b]fluoranthene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[k]fluoranthene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[a]pyrene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzo[g,h,i]perylene	ND	ug/L	2.0	EPA-8270C	ND		1
Benzoic acid	ND	ug/L	10	EPA-8270C	ND		1
Benzyl alcohol	ND	ug/L	2.0	EPA-8270C	ND		1
Benzyl butyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Chloroethoxy)methane	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Chloroethyl) ether	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Chloroisopropyl)ether	ND	ug/L	2.0	EPA-8270C	ND		1
bis(2-Ethylhexyl)phthalate	ND	ug/L	4.0	EPA-8270C	ND		1
4-Bromophenyl phenyl ether	ND	ug/L	2.0	EPA-8270C	ND		1
4-Chloroaniline	ND	ug/L	2.0	EPA-8270C	ND		1
2-Chloronaphthalene	ND	ug/L	2.0	EPA-8270C	ND		1
4-Chlorophenyl phenyl ether	ND	ug/L	2.0	EPA-8270C	ND		1
Chrysene	ND	ug/L	2.0	EPA-8270C	ND		1
Dibenzo[a,h]anthracene	ND	ug/L	3.0	EPA-8270C	ND		1
Dibenzofuran	ND	ug/L	2.0	EPA-8270C	ND		1
1,2-Dichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
1,3-Dichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
1,4-Dichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
3,3-Dichlorobenzidine	ND	ug/L	10	EPA-8270C	ND		1
Diethyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
Dimethyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
Di-n-butyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
2,4-Dinitrotoluene	ND	ug/L	2.0	EPA-8270C	ND		1
2,6-Dinitrotoluene	ND	ug/L	2.0	EPA-8270C	ND		1
Di-n-octyl phthalate	ND	ug/L	2.0	EPA-8270C	ND		1
Fluoranthene	ND	ug/L	2.0	EPA-8270C	ND		1

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 1304923-05	Client Sample Name: 5484, MW-7-W-130308, 3/8/2013 11:30:00AM
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Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Fluorene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachlorobutadiene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachlorocyclopentadiene	ND	ug/L	2.0	EPA-8270C	ND		1
Hexachloroethane	ND	ug/L	2.0	EPA-8270C	ND		1
Indeno[1,2,3-cd]pyrene	ND	ug/L	2.0	EPA-8270C	ND		1
Isophorone	ND	ug/L	2.0	EPA-8270C	ND		1
2-Methylnaphthalene	25	ug/L	2.0	EPA-8270C	ND		1
Naphthalene	41	ug/L	2.0	EPA-8270C	ND		1
2-Nitroaniline	ND	ug/L	2.0	EPA-8270C	ND		1
3-Nitroaniline	ND	ug/L	2.0	EPA-8270C	ND		1
4-Nitroaniline	ND	ug/L	5.0	EPA-8270C	ND		1
Nitrobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
N-Nitrosodi-N-propylamine	ND	ug/L	2.0	EPA-8270C	ND		1
N-Nitrosodiphenylamine	ND	ug/L	2.0	EPA-8270C	ND		1
Phenanthrene	ND	ug/L	2.0	EPA-8270C	ND		1
Pyrene	ND	ug/L	2.0	EPA-8270C	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	2.0	EPA-8270C	ND		1
4-Chloro-3-methylphenol	ND	ug/L	5.0	EPA-8270C	ND		1
2-Chlorophenol	ND	ug/L	2.0	EPA-8270C	ND		1
2,4-Dichlorophenol	ND	ug/L	2.0	EPA-8270C	ND		1
2,4-Dimethylphenol	ND	ug/L	2.0	EPA-8270C	ND		1
4,6-Dinitro-2-methylphenol	ND	ug/L	10	EPA-8270C	ND		1
2,4-Dinitrophenol	ND	ug/L	10	EPA-8270C	ND		1
2-Methylphenol	ND	ug/L	2.0	EPA-8270C	ND		1
3- & 4-Methylphenol	4.9	ug/L	2.0	EPA-8270C	ND		1
2-Nitrophenol	ND	ug/L	2.0	EPA-8270C	ND		1
4-Nitrophenol	ND	ug/L	2.0	EPA-8270C	ND		1
Pentachlorophenol	ND	ug/L	10	EPA-8270C	ND		1
Phenol	ND	ug/L	2.0	EPA-8270C	ND		1
2,4,5-Trichlorophenol	ND	ug/L	5.0	EPA-8270C	ND		1
2,4,6-Trichlorophenol	ND	ug/L	5.0	EPA-8270C	ND		1
2-Fluorophenol (Surrogate)	69.2	%	30 - 120 (LCL - UCL)	EPA-8270C			1

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 1304923-05	Client Sample Name: 5484, MW-7-W-130308, 3/8/2013 11:30:00AM
----------------------------------	---

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Phenol-d5 (Surrogate)	60.2	%	12 - 110 (LCL - UCL)	EPA-8270C			1
Nitrobenzene-d5 (Surrogate)	110	%	60 - 130 (LCL - UCL)	EPA-8270C			1
2-Fluorobiphenyl (Surrogate)	110	%	55 - 125 (LCL - UCL)	EPA-8270C			1
2,4,6-Tribromophenol (Surrogate)	135	%	40 - 150 (LCL - UCL)	EPA-8270C			1
p-Terphenyl-d14 (Surrogate)	132	%	40 - 150 (LCL - UCL)	EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	03/13/13	03/20/13 00:12	SKC	MS-B2	0.980	BWC0879

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1304923-05	Client Sample Name: 5484, MW-7-W-130308, 3/8/2013 11:30:00AM
----------------------------------	---

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	5.8	ug/L	1.5	EPA-8021B	ND	A01	1
Toluene	ND	ug/L	1.5	EPA-8021B	ND	A01	1
Ethylbenzene	3.9	ug/L	1.5	EPA-8021B	ND	A01	1
Methyl t-butyl ether	42	ug/L	5.0	EPA-8021B	ND	A01	1
Total Xylenes	ND	ug/L	3.0	EPA-8021B	ND	A01	1
Gasoline Range Organics (C4 - C12)	1900	ug/L	250	EPA-8015B	ND	A01	2
a,a,a-Trifluorotoluene (PID Surrogate)	103	%	70 - 130 (LCL - UCL)	EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	147	%	70 - 130 (LCL - UCL)	EPA-8015B		A19,S09	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-8021B	03/13/13	03/14/13 11:33	jjh	GC-V9	5	BWC0768
2	EPA-8015B	03/13/13	03/14/13 11:33	jjh	GC-V9	5	BWC0768

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWC0782						
Bromodichloromethane	BWC0782-BLK1	ND	ug/L	0.50		
Bromoform	BWC0782-BLK1	ND	ug/L	0.50		
Bromomethane	BWC0782-BLK1	ND	ug/L	1.0		
Carbon tetrachloride	BWC0782-BLK1	ND	ug/L	0.50		
Chlorobenzene	BWC0782-BLK1	ND	ug/L	0.50		
Chloroethane	BWC0782-BLK1	ND	ug/L	0.50		
Chloroform	BWC0782-BLK1	ND	ug/L	0.50		
Chloromethane	BWC0782-BLK1	ND	ug/L	0.50		
Dibromochloromethane	BWC0782-BLK1	ND	ug/L	0.50		
1,2-Dichlorobenzene	BWC0782-BLK1	ND	ug/L	0.50		
1,3-Dichlorobenzene	BWC0782-BLK1	ND	ug/L	0.50		
1,4-Dichlorobenzene	BWC0782-BLK1	ND	ug/L	0.50		
Dichlorodifluoromethane	BWC0782-BLK1	ND	ug/L	0.50		
1,1-Dichloroethane	BWC0782-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BWC0782-BLK1	ND	ug/L	0.50		
1,1-Dichloroethene	BWC0782-BLK1	ND	ug/L	0.50		
cis-1,2-Dichloroethene	BWC0782-BLK1	ND	ug/L	0.50		
trans-1,2-Dichloroethene	BWC0782-BLK1	ND	ug/L	0.50		
1,2-Dichloropropane	BWC0782-BLK1	ND	ug/L	0.50		
cis-1,3-Dichloropropene	BWC0782-BLK1	ND	ug/L	0.50		
trans-1,3-Dichloropropene	BWC0782-BLK1	ND	ug/L	0.50		
Methylene chloride	BWC0782-BLK1	ND	ug/L	1.0		
Methyl t-butyl ether	BWC0782-BLK1	ND	ug/L	0.50		
1,1,2,2-Tetrachloroethane	BWC0782-BLK1	ND	ug/L	0.50		
Tetrachloroethene	BWC0782-BLK1	ND	ug/L	0.50		
1,1,1-Trichloroethane	BWC0782-BLK1	ND	ug/L	0.50		
1,1,2-Trichloroethane	BWC0782-BLK1	ND	ug/L	0.50		
Trichloroethene	BWC0782-BLK1	ND	ug/L	0.50		
Trichlorofluoromethane	BWC0782-BLK1	ND	ug/L	0.50		
1,1,2-Trichloro-1,2,2-trifluoroethane	BWC0782-BLK1	ND	ug/L	0.50		
Vinyl chloride	BWC0782-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BWC0782-BLK1	ND	ug/L	10		
Ethanol	BWC0782-BLK1	ND	ug/L	250		
1,2-Dichloroethane-d4 (Surrogate)	BWC0782-BLK1	114	%	75 - 125 (LCL - UCL)		

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Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWC0782						
Toluene-d8 (Surrogate)	BWC0782-BLK1	98.5	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWC0782-BLK1	97.9	%	80 - 120 (LCL - UCL)		



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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab	Quals
								Percent Recovery	RPD		
QC Batch ID: BWC0782											
Bromodichloromethane	BWC0782-BS1	LCS	21.620	25.000	ug/L	86.5		70 - 130			
Chlorobenzene	BWC0782-BS1	LCS	22.640	25.000	ug/L	90.6		70 - 130			
Chloroethane	BWC0782-BS1	LCS	24.210	25.000	ug/L	96.8		70 - 130			
1,4-Dichlorobenzene	BWC0782-BS1	LCS	21.230	25.000	ug/L	84.9		70 - 130			
1,1-Dichloroethane	BWC0782-BS1	LCS	21.120	25.000	ug/L	84.5		70 - 130			
1,1-Dichloroethene	BWC0782-BS1	LCS	22.060	25.000	ug/L	88.2		70 - 130			
Trichloroethene	BWC0782-BS1	LCS	22.050	25.000	ug/L	88.2		70 - 130			
1,2-Dichloroethane-d4 (Surrogate)	BWC0782-BS1	LCS	9.2500	10.000	ug/L	92.5		75 - 125			
Toluene-d8 (Surrogate)	BWC0782-BS1	LCS	9.9800	10.000	ug/L	99.8		80 - 120			
4-Bromofluorobenzene (Surrogate)	BWC0782-BS1	LCS	9.9000	10.000	ug/L	99.0		80 - 120			

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Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Source Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes QC Batch ID: BWC0782 and Used client sample: N.



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Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWC0879						
Acenaphthene	BWC0879-BLK1	ND	ug/L	2.0		
Acenaphthylene	BWC0879-BLK1	ND	ug/L	2.0		
Anthracene	BWC0879-BLK1	ND	ug/L	2.0		
Benzo[a]anthracene	BWC0879-BLK1	ND	ug/L	2.0		
Benzo[b]fluoranthene	BWC0879-BLK1	ND	ug/L	2.0		
Benzo[k]fluoranthene	BWC0879-BLK1	ND	ug/L	2.0		
Benzo[a]pyrene	BWC0879-BLK1	ND	ug/L	2.0		
Benzo[g,h,i]perylene	BWC0879-BLK1	ND	ug/L	2.0		
Benzoic acid	BWC0879-BLK1	ND	ug/L	10		
Benzyl alcohol	BWC0879-BLK1	ND	ug/L	2.0		
Benzyl butyl phthalate	BWC0879-BLK1	ND	ug/L	2.0		
bis(2-Chloroethoxy)methane	BWC0879-BLK1	ND	ug/L	2.0		
bis(2-Chloroethyl) ether	BWC0879-BLK1	ND	ug/L	2.0		
bis(2-Chloroisopropyl)ether	BWC0879-BLK1	ND	ug/L	2.0		
bis(2-Ethylhexyl)phthalate	BWC0879-BLK1	ND	ug/L	4.0		
4-Bromophenyl phenyl ether	BWC0879-BLK1	ND	ug/L	2.0		
4-Chloroaniline	BWC0879-BLK1	ND	ug/L	2.0		
2-Chloronaphthalene	BWC0879-BLK1	ND	ug/L	2.0		
4-Chlorophenyl phenyl ether	BWC0879-BLK1	ND	ug/L	2.0		
Chrysene	BWC0879-BLK1	ND	ug/L	2.0		
Dibenzo[a,h]anthracene	BWC0879-BLK1	ND	ug/L	3.0		
Dibenzofuran	BWC0879-BLK1	ND	ug/L	2.0		
1,2-Dichlorobenzene	BWC0879-BLK1	ND	ug/L	2.0		
1,3-Dichlorobenzene	BWC0879-BLK1	ND	ug/L	2.0		
1,4-Dichlorobenzene	BWC0879-BLK1	ND	ug/L	2.0		
3,3-Dichlorobenzidine	BWC0879-BLK1	ND	ug/L	10		
Diethyl phthalate	BWC0879-BLK1	ND	ug/L	2.0		
Dimethyl phthalate	BWC0879-BLK1	ND	ug/L	2.0		
Di-n-butyl phthalate	BWC0879-BLK1	ND	ug/L	2.0		
2,4-Dinitrotoluene	BWC0879-BLK1	ND	ug/L	2.0		
2,6-Dinitrotoluene	BWC0879-BLK1	ND	ug/L	2.0		
Di-n-octyl phthalate	BWC0879-BLK1	ND	ug/L	2.0		
Fluoranthene	BWC0879-BLK1	ND	ug/L	2.0		
Fluorene	BWC0879-BLK1	ND	ug/L	2.0		

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Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWC0879						
Hexachlorobenzene	BWC0879-BLK1	ND	ug/L	2.0		
Hexachlorobutadiene	BWC0879-BLK1	ND	ug/L	2.0		
Hexachlorocyclopentadiene	BWC0879-BLK1	ND	ug/L	2.0		
Hexachloroethane	BWC0879-BLK1	ND	ug/L	2.0		
Indeno[1,2,3-cd]pyrene	BWC0879-BLK1	ND	ug/L	2.0		
Isophorone	BWC0879-BLK1	ND	ug/L	2.0		
2-Methylnaphthalene	BWC0879-BLK1	ND	ug/L	2.0		
Naphthalene	BWC0879-BLK1	ND	ug/L	2.0		
2-Nitroaniline	BWC0879-BLK1	ND	ug/L	2.0		
3-Nitroaniline	BWC0879-BLK1	ND	ug/L	2.0		
4-Nitroaniline	BWC0879-BLK1	ND	ug/L	5.0		
Nitrobenzene	BWC0879-BLK1	ND	ug/L	2.0		
N-Nitrosodi-N-propylamine	BWC0879-BLK1	ND	ug/L	2.0		
N-Nitrosodiphenylamine	BWC0879-BLK1	ND	ug/L	2.0		
Phenanthrene	BWC0879-BLK1	ND	ug/L	2.0		
Pyrene	BWC0879-BLK1	ND	ug/L	2.0		
1,2,4-Trichlorobenzene	BWC0879-BLK1	ND	ug/L	2.0		
4-Chloro-3-methylphenol	BWC0879-BLK1	ND	ug/L	5.0		
2-Chlorophenol	BWC0879-BLK1	ND	ug/L	2.0		
2,4-Dichlorophenol	BWC0879-BLK1	ND	ug/L	2.0		
2,4-Dimethylphenol	BWC0879-BLK1	ND	ug/L	2.0		
4,6-Dinitro-2-methylphenol	BWC0879-BLK1	ND	ug/L	10		
2,4-Dinitrophenol	BWC0879-BLK1	ND	ug/L	10		
2-Methylphenol	BWC0879-BLK1	ND	ug/L	2.0		
3- & 4-Methylphenol	BWC0879-BLK1	ND	ug/L	2.0		
2-Nitrophenol	BWC0879-BLK1	ND	ug/L	2.0		
4-Nitrophenol	BWC0879-BLK1	ND	ug/L	2.0		
Pentachlorophenol	BWC0879-BLK1	ND	ug/L	10		
Phenol	BWC0879-BLK1	ND	ug/L	2.0		
2,4,5-Trichlorophenol	BWC0879-BLK1	ND	ug/L	5.0		
2,4,6-Trichlorophenol	BWC0879-BLK1	ND	ug/L	5.0		
2-Fluorophenol (Surrogate)	BWC0879-BLK1	54.7	%	30 - 120 (LCL - UCL)		
Phenol-d5 (Surrogate)	BWC0879-BLK1	42.3	%	12 - 110 (LCL - UCL)		
Nitrobenzene-d5 (Surrogate)	BWC0879-BLK1	108	%	60 - 130 (LCL - UCL)		

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Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWC0879						
2-Fluorobiphenyl (Surrogate)	BWC0879-BLK1	106	%	55 - 125 (LCL - UCL)		
2,4,6-Tribromophenol (Surrogate)	BWC0879-BLK1	132	%	40 - 150 (LCL - UCL)		
p-Terphenyl-d14 (Surrogate)	BWC0879-BLK1	113	%	40 - 150 (LCL - UCL)		



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Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
QC Batch ID: BWC0879										
Acenaphthene	BWC0879-BS1	LCS	49.370	50.000	ug/L	98.7		50 - 120		
1,4-Dichlorobenzene	BWC0879-BS1	LCS	46.730	50.000	ug/L	93.5		50 - 120		
2,4-Dinitrotoluene	BWC0879-BS1	LCS	55.140	50.000	ug/L	110		50 - 120		
Hexachlorobenzene	BWC0879-BS1	LCS	61.470	50.000	ug/L	123		60 - 120		L01
Hexachlorobutadiene	BWC0879-BS1	LCS	41.350	50.000	ug/L	82.7		40 - 110		
Hexachloroethane	BWC0879-BS1	LCS	42.970	50.000	ug/L	85.9		40 - 120		
Nitrobenzene	BWC0879-BS1	LCS	49.340	50.000	ug/L	98.7		50 - 120		
N-Nitrosodi-N-propylamine	BWC0879-BS1	LCS	36.770	50.000	ug/L	73.5		50 - 120		
Pyrene	BWC0879-BS1	LCS	57.600	50.000	ug/L	115		40 - 140		
1,2,4-Trichlorobenzene	BWC0879-BS1	LCS	54.230	50.000	ug/L	108		45 - 120		
4-Chloro-3-methylphenol	BWC0879-BS1	LCS	51.160	50.000	ug/L	102		50 - 120		
2-Chlorophenol	BWC0879-BS1	LCS	40.090	50.000	ug/L	80.2		50 - 120		
2-Methylphenol	BWC0879-BS1	LCS	37.080	50.000	ug/L	74.2		40 - 110		
3- & 4-Methylphenol	BWC0879-BS1	LCS	69.290	100.00	ug/L	69.3		40 - 110		
4-Nitrophenol	BWC0879-BS1	LCS	6.5100	50.000	ug/L	13.0		10 - 110		
Pentachlorophenol	BWC0879-BS1	LCS	51.110	50.000	ug/L	102		30 - 120		
Phenol	BWC0879-BS1	LCS	19.310	50.000	ug/L	38.6		20 - 110		
2,4,6-Trichlorophenol	BWC0879-BS1	LCS	53.890	50.000	ug/L	108		54 - 120		
2-Fluorophenol (Surrogate)	BWC0879-BS1	LCS	43.930	80.000	ug/L	54.9		30 - 120		
Phenol-d5 (Surrogate)	BWC0879-BS1	LCS	32.430	80.000	ug/L	40.5		12 - 110		
Nitrobenzene-d5 (Surrogate)	BWC0879-BS1	LCS	83.700	80.000	ug/L	105		60 - 130		
2-Fluorobiphenyl (Surrogate)	BWC0879-BS1	LCS	88.500	80.000	ug/L	111		55 - 125		
2,4,6-Tribromophenol (Surrogate)	BWC0879-BS1	LCS	104.05	80.000	ug/L	130		40 - 150		
p-Terphenyl-d14 (Surrogate)	BWC0879-BS1	LCS	49.010	40.000	ug/L	123		40 - 150		

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Source Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes a QC Batch ID: BWC0879 and a list of 28 chemical constituents with their respective test results and recovery percentages.

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Reported: 03/20/2013 13:00
Project: 5484
Project Number: 351812
Project Manager: Jim Harms

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
QC Batch ID: BWC0879		Used client sample: N								
2-Fluorophenol (Surrogate)	MS	1225032-76	ND	39.492	80.000	ug/L		49.4	30 - 120	
	MSD	1225032-76	ND	42.790	80.000	ug/L	8.0	53.5	30 - 120	
Phenol-d5 (Surrogate)	MS	1225032-76	ND	31.008	80.000	ug/L		38.8	12 - 110	
	MSD	1225032-76	ND	32.470	80.000	ug/L	4.6	40.6	12 - 110	
Nitrobenzene-d5 (Surrogate)	MS	1225032-76	ND	76.494	80.000	ug/L		95.6	60 - 130	
	MSD	1225032-76	ND	78.880	80.000	ug/L	3.1	98.6	60 - 130	
2-Fluorobiphenyl (Surrogate)	MS	1225032-76	ND	78.214	80.000	ug/L		97.8	55 - 125	
	MSD	1225032-76	ND	81.130	80.000	ug/L	3.7	101	55 - 125	
2,4,6-Tribromophenol (Surrogate)	MS	1225032-76	ND	90.354	80.000	ug/L		113	40 - 150	
	MSD	1225032-76	ND	96.730	80.000	ug/L	6.8	121	40 - 150	
p-Terphenyl-d14 (Surrogate)	MS	1225032-76	ND	38.180	40.000	ug/L		95.4	40 - 150	
	MSD	1225032-76	ND	45.470	40.000	ug/L	17.4	114	40 - 150	



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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: BWC0768						
Benzene	BWC0768-BLK1	ND	ug/L	0.30		
Toluene	BWC0768-BLK1	ND	ug/L	0.30		
Ethylbenzene	BWC0768-BLK1	ND	ug/L	0.30		
Methyl t-butyl ether	BWC0768-BLK1	ND	ug/L	1.0		
Total Xylenes	BWC0768-BLK1	ND	ug/L	0.60		
Gasoline Range Organics (C4 - C12)	BWC0768-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (PID Surrogate)	BWC0768-BLK1	81.6	%		70 - 130 (LCL - UCL)	
a,a,a-Trifluorotoluene (FID Surrogate)	BWC0768-BLK1	82.1	%		70 - 130 (LCL - UCL)	



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Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab	Quals
								Percent Recovery	RPD		
QC Batch ID: BWC0768											
Benzene	BWC0768-BS1	LCS	38.864	40.000	ug/L	97.2		85 - 115			
Toluene	BWC0768-BS1	LCS	38.078	40.000	ug/L	95.2		85 - 115			
Ethylbenzene	BWC0768-BS1	LCS	39.843	40.000	ug/L	99.6		85 - 115			
Methyl t-butyl ether	BWC0768-BS1	LCS	35.606	40.000	ug/L	89.0		85 - 115			
Total Xylenes	BWC0768-BS1	LCS	118.91	120.00	ug/L	99.1		85 - 115			
Gasoline Range Organics (C4 - C12)	BWC0768-BS1	LCS	1048.6	1000.0	ug/L	105		85 - 115			
a,a,a-Trifluorotoluene (PID Surrogate)	BWC0768-BS1	LCS	35.298	40.000	ug/L	88.2		70 - 130			
a,a,a-Trifluorotoluene (FID Surrogate)	BWC0768-BS1	LCS	36.186	40.000	ug/L	90.5		70 - 130			



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Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Type, Source, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits (RPD, Percent Recovery), Lab Quals. Includes data for Benzene, Toluene, Ethylbenzene, Methyl t-butyl ether, Total Xylenes, Gasoline Range Organics, and a,a,a-Trifluorotoluene.

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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.
- A19 Surrogate is high due to matrix interference. Interferences verified through second extraction/analysis.
- L01 The Laboratory Control Sample Water (LCSW) recovery is not within laboratory established control limits.
- S09 The surrogate recovery on the sample for this compound was not within the control limits.