

RECEIVED

2:24 pm, Aug 24, 2009

Alameda County
Environmental Health

August 10, 2009

Mr. Jerry Wickham
Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

**Re: Monitoring Well Abandonment Request
76 Station No. 1156
4276 MacArthur Boulevard
Oakland, California**

Dear Mr. Wickham:

This request for monitoring well abandonment has been prepared by Delta Environmental Consultants, Inc. (Delta) on behalf of ConocoPhillips Company (COP).

On July 22, 2009 TRC attempted to monitor and sample groundwater monitoring well MW-6 located on the western side of MacArthur Boulevard (see attached figure) as part of the 3rd quarter 2009 event. **During this time, it was discovered that the City of Oakland had paved over the well during maintenance activities on MacArthur Boulevard (see attached photograph). As such, well MW-6 was not monitored or sampled during the event, and will not be monitored and sampled during all future events.**

In response to the incident, Delta has reviewed historical groundwater analytical data for well MW-6 (attached), which indicated non-reportable concentrations of TPHg since installation in the fourth quarter 2001. Additionally, well MW-8 to the north of MW-6 has had non-reportable concentrations of TPHg since installation in the first quarter 2008.

Groundwater flow directions at the site have historically been to the west/southwest (Rose diagram attached). During the 2nd quarter 2009, and nine of the previous eleven quarters, groundwater flow direction was interpreted to be to the southwest. Based on the current flow direction, monitoring wells MW-6 and MW-8 are located cross-gradient of the site.

Additionally, well MW-5 is located north across MacArthur Boulevard. **Delta believes that groundwater data collected from this well should be sufficient in monitoring of the groundwater plume to the west/northwest (side-gradient) of the site.** Based on the groundwater analytical data since installation of MW-6 and MW-8, it appears the "zero line" of



a member of



the TPHg and MTBE plumes occur in the immediate vicinity of well MW-5 and is stable.

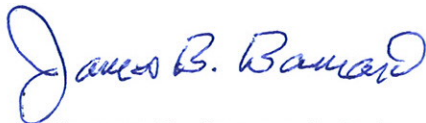
Based on the discontinued status of well MW-6, the side-gradient nature of wells MW-6 and MW-8 to the site, the groundwater analytical data for wells MW-6 and MW-8 since installation, and the proximity of well MW-5 to wells WM-6 and MW-8, **Delta requests that the Alameda County Health Care Services grants permission to discontinue sampling and abandon groundwater monitoring wells MW-6 and MW-8 in accordance with all Alameda County rules and regulations.**

If you have any questions regarding this request or the data presented in this request, please contact James Barnard at (916) 503-1279.

Sincerely,
Delta Consultants



Stephen Meninger
Project Geologist



James B. Barnard, P.G.
Project Manager
California Registered Professional Geologist No. 7478



cc: Mr. Terry Grayson, ConocoPhillips (electronic copy)

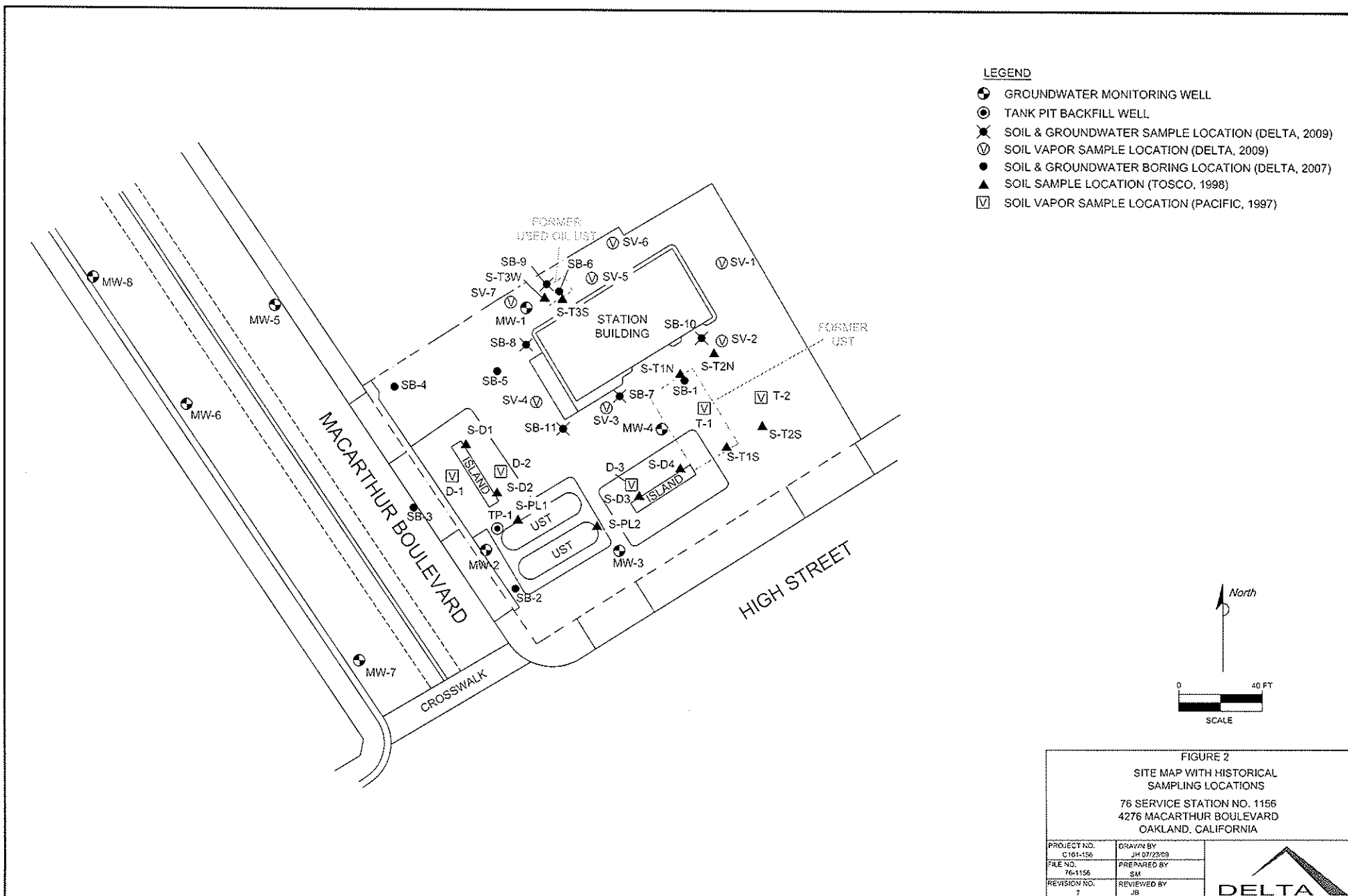
Attachments

Attachment A – Site Plan with Monitoring Well Locations

Attachment B – Photograph of well MW-6

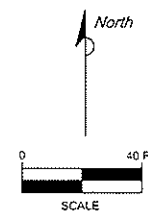
Attachment C – Historical Groundwater Analytical Data for Wells MW-6 and MW-8

Attachment D – Rose Diagram



LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- ⊙ TANK PIT BACKFILL WELL
- ⊗ SOIL & GROUNDWATER SAMPLE LOCATION (DELTA, 2009)
- ⊕ SOIL VAPOR SAMPLE LOCATION (DELTA, 2009)
- SOIL & GROUNDWATER BORING LOCATION (DELTA, 2007)
- ▲ SOIL SAMPLE LOCATION (TOSCO, 1998)
- ⊞ SOIL VAPOR SAMPLE LOCATION (PACIFIC, 1997)



<p>FIGURE 2 SITE MAP WITH HISTORICAL SAMPLING LOCATIONS 76 SERVICE STATION NO. 1156 4276 MACARTHUR BOULEVARD OAKLAND, CALIFORNIA</p>	
PROJECT NO. C 101-156	DRAWN BY JH 07/23/09
FILE NO. 164156	PREPARED BY SM
REVISION NO. 7	REVIEWED BY JB

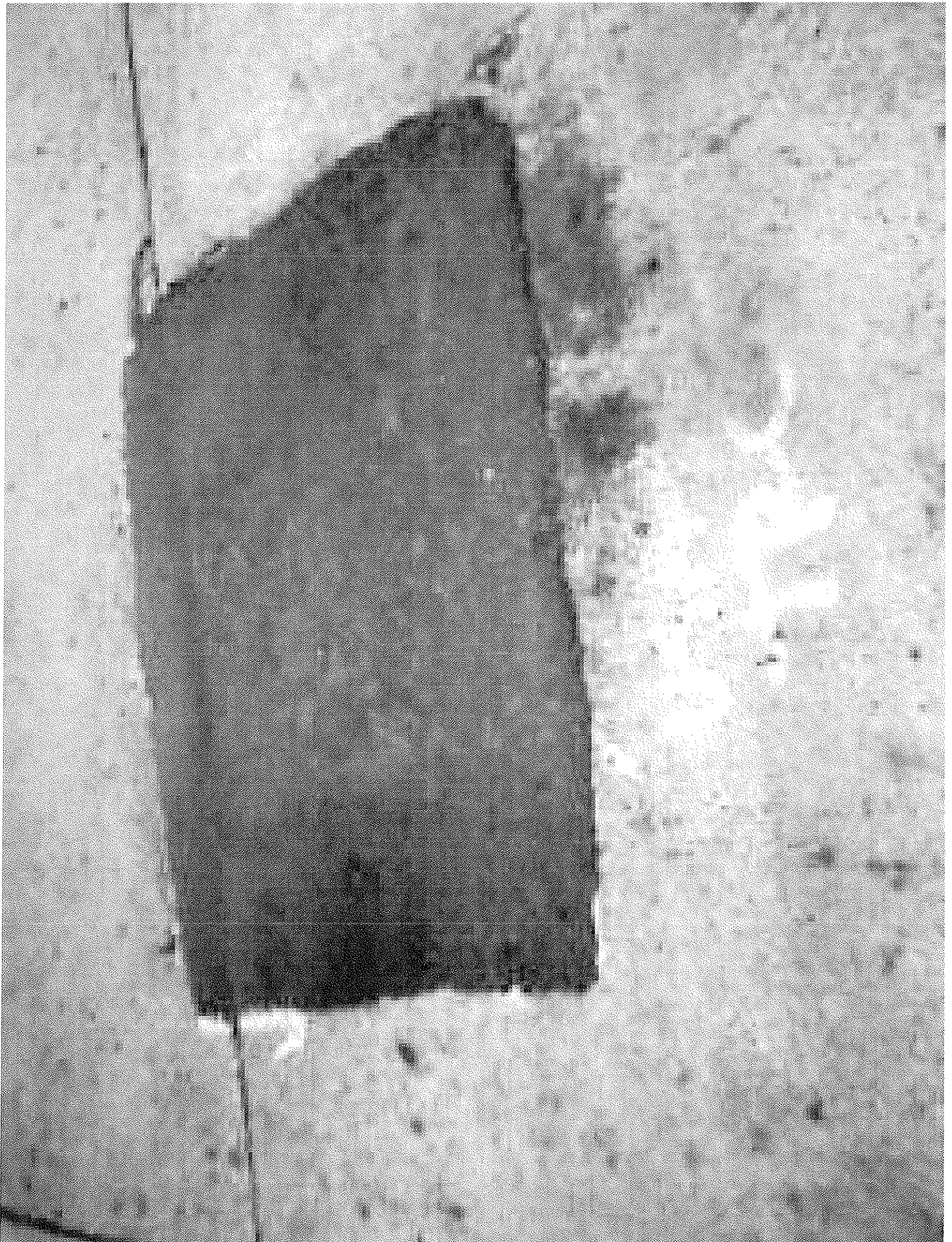


Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1999 Through April 2009
76 Station 1156

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (Luft) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-5 continued														
04/06/05	169.18	0.95	0.00	168.23	0.54	830	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	600	760	
07/08/05	169.18	1.49	0.00	167.69	-0.54	ND<500	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	570	630	
10/07/05	169.18	1.92	0.00	167.26	-0.43	540	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	530	490	
01/27/06	169.18	2.03	0.00	167.15	-0.11	490	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	580	610	
04/28/06	169.18	1.02	0.00	168.16	1.01	430	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	590	520	
07/28/06	169.18	1.57	0.00	167.61	-0.55	480	--	0.34	ND<0.30	ND<0.30	ND<0.60	440	420	
10/27/06	169.18	2.20	0.00	166.98	-0.63	420	--	0.34	ND<0.30	ND<0.30	ND<0.60	460	390	
01/10/07	169.18	1.57	0.00	167.61	0.63	390	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	430	420	
04/13/07	169.18	1.89	0.00	167.29	-0.32	170	--	3.8	5.9	1.5	3.8	160	120	
07/19/07	169.18	1.92	0.00	167.26	-0.03	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	19	23	
10/08/07	169.18	2.28	0.00	166.90	-0.36	200	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	310	280	
01/09/08	169.18	1.09	0.00	168.09	1.19	150	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	170	170	Gauged on 1/18/08
04/04/08	169.18	1.72	0.00	167.46	-0.63	210	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	--	260	
07/03/08	169.18	2.27	0.00	166.91	-0.55	260	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	--	360	
10/03/08	169.18	2.80	0.00	166.38	-0.53	200	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	--	240	
01/22/09	169.18	2.45	0.00	166.73	0.35	130	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	--	170	
04/13/09	169.18	1.81	0.00	167.37	0.64	190	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	--	190	
MW-6 (Screen Interval in feet: 5.0-25.0)														
10/03/01	169.04	2.87	0.00	166.17	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	200	270	
01/28/02	169.04	1.82	0.00	167.22	1.05	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
04/25/02	169.04	2.01	0.00	167.03	-0.19	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
07/18/02	169.04	2.44	0.00	166.60	-0.43	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<2.0	
10/07/02	169.04	2.72	0.00	166.32	-0.28	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	ND<2.0	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1999 Through April 2009
76 Station 1156

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-6 continued														
01/06/03	169.04	1.90	0.00	167.14	0.82	ND<50	--	0.62	1.2	1.2	3.5	ND<2.0	ND<2.0	
04/07/03	169.04	2.02	0.00	167.02	-0.12	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	46	46	
07/07/03	169.04	2.21	0.00	166.83	-0.19	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	ND<2.0	
10/09/03	169.04	2.71	0.00	166.33	-0.50	ND<50	ND<50	0.95	3.0	1.4	5.5	--	ND<2.0	Sampled for TPH-G by 8015M on 11/14/03.
01/14/04	169.04	2.00	0.00	167.04	0.71	ND<50	--	ND<0.50	0.57	ND<0.50	0.64	ND<5.0	ND<2.0	
04/28/04	169.04	2.18	0.00	166.86	-0.18	ND<50	--	0.39	0.78	ND<0.3	ND<0.6	ND<1	ND<0.5	
07/12/04	169.04	2.69	0.00	166.35	-0.51	ND<50	--	ND<0.3	ND<0.3	ND<0.3	ND<0.6	6.4	ND<0.5	
10/25/04	169.04	2.46	0.00	166.58	0.23	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	0.57	
01/17/05	169.04	1.54	0.00	167.50	0.92	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	
04/06/05	169.04	1.15	0.00	167.89	0.39	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	
07/08/05	169.04	1.05	0.00	167.99	0.10	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	
10/07/05	169.04	1.90	0.00	167.14	-0.85	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
01/27/06	169.04	1.32	0.00	167.72	0.58	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
04/28/06	169.04	0.00	0.00	169.04	1.32	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
07/28/06	169.04	1.68	0.00	167.36	-1.68	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
10/27/06	169.04	1.98	0.00	167.06	-0.30	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
01/10/07	169.04	1.60	0.00	167.44	0.38	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
04/13/07	169.04	2.01	0.00	167.03	-0.41	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
07/19/07	169.04	1.96	0.00	167.08	0.05	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
10/08/07	169.04	2.35	0.00	166.69	-0.39	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	0.80	
01/09/08	169.04	1.10	0.00	167.94	1.25	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	Gauged on 1/18/08
04/04/08	169.04	1.60	0.00	167.44	-0.50	ND<50	--	ND<0.30	0.40	ND<0.30	0.71	--	ND<0.50	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1999 Through April 2009
76 Station 1156

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl- benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-6 continued														
07/03/08	169.04	2.19	0.00	166.85	-0.59	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	--	1.4	
10/03/08	169.04	2.78	0.00	166.26	-0.59	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	--	1.8	
01/22/09	169.04	2.35	0.00	166.69	0.43	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	--	1.2	
04/13/09	169.04	1.81	0.00	167.23	0.54	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	--	0.72	
MW-7														
(Screen Interval in feet: 5.0-25.0)														
10/03/01	171.64	7.62	0.00	164.02	--	10000	--	210	ND<50	ND<50	800	35000	40000	
01/28/02	171.64	7.21	0.00	164.43	0.41	ND<1000	--	ND<10	ND<10	ND<10	ND<10	42000	38000	
04/25/02	171.64	7.25	0.00	164.39	-0.04	ND<5000	--	660	ND<50	ND<50	ND<50	42000	45000	
07/18/02	171.64	8.12	0.00	163.52	-0.87	ND<5000	--	130	ND<50	ND<50	ND<50	51000	53000	
10/07/02	171.64	7.71	0.00	163.93	0.41	18000	--	ND<50	ND<50	ND<50	ND<50	33000	38000	
01/06/03	171.64	7.63	0.00	164.01	0.08	410	--	0.61	1.0	0.89	2.9	3900	3100	
04/07/03	171.64	7.58	0.00	164.06	0.05	13000	--	ND<20	ND<20	ND<20	ND<20	32000	28000	
07/07/03	171.64	7.56	0.00	164.08	0.02	990	--	8.2	ND<0.50	1.2	ND<0.50	36000	45000	
10/09/03	171.64	7.72	0.00	163.92	-0.16	6800	ND<13000	ND<130	ND<130	ND<130	ND<250	--	20000	Sampled for TPH-G by 8015M on 11/14/03.
01/14/04	171.64	6.97	0.00	164.67	0.75	19000	--	ND<100	ND<100	ND<100	ND<100	20000	25000	
04/28/04	171.64	8.70	0.00	162.94	-1.73	19000	--	ND<3	ND<3	ND<3	ND<6	30000	21000	
07/12/04	171.64	9.44	0.00	162.20	-0.74	12000	--	28	14	330	200	12000	11000	
10/25/04	171.64	7.23	0.00	164.41	2.21	28000	--	ND<250	ND<250	ND<250	ND<250	13000	14000	
01/17/05	171.64	6.30	0.00	165.34	0.93	15000	--	ND<100	ND<100	ND<100	ND<100	17000	16000	
04/06/05	171.64	5.96	0.00	165.68	0.34	13000	--	ND<100	ND<100	ND<100	ND<100	14000	17000	
07/08/05	171.64	6.45	0.00	165.19	-0.49	ND<10000	--	ND<100	ND<100	ND<100	ND<100	8600	11000	
10/07/05	171.64	6.78	0.00	164.86	-0.33	13000	--	ND<3.0	ND<3.0	ND<3.0	ND<6.0	9400	9800	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1999 Through April 2009
76 Station 1156

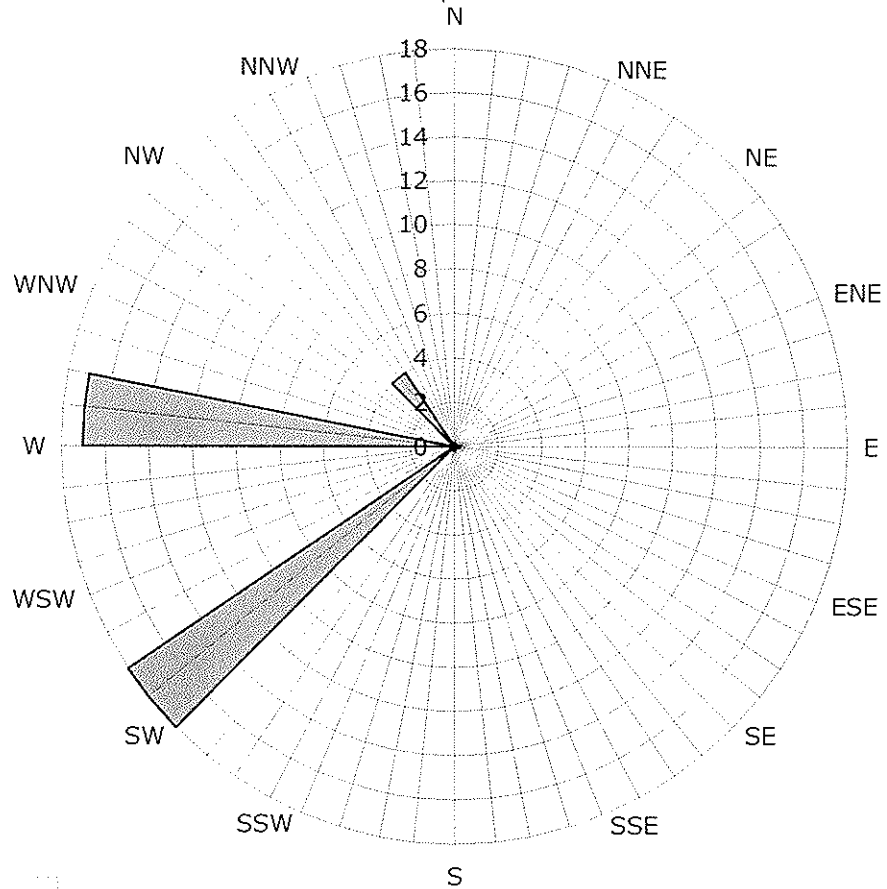
Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (Luft) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-7 continued														
01/27/06	171.64	5.82	0.00	165.82	0.96	8200	--	0.64	1.6	ND<0.30	ND<0.60	9900	7900	
04/28/06	171.64	5.57	0.00	166.07	0.25	6900	--	0.88	1.5	0.34	1.0	9600	11000	
07/28/06	171.64	6.67	0.00	164.97	-1.10	5400	--	5.2	ND<3.0	ND<3.0	ND<6.0	5000	5300	
10/27/06	171.64	6.93	0.00	164.71	-0.26	4500	--	ND<1.5	ND<1.5	ND<1.5	ND<3.0	4700	3700	
01/10/07	171.64	6.41	0.00	165.23	0.52	4000	--	ND<1.2	ND<1.2	ND<1.2	ND<2.4	4400	4400	
04/13/07	171.64	--	--	--	--	--	--	--	--	--	--	--	--	Paved over
07/19/07	171.64	7.10	0.00	164.54	--	2700	--	0.57	ND<0.30	ND<0.30	ND<0.60	2700	3300	
10/08/07	171.64	7.42	0.00	164.22	-0.32	1600	--	0.47	0.49	ND<0.30	ND<0.60	2500	2200	
01/09/08	171.64	5.98	0.00	165.66	1.44	1500	--	0.45	0.49	ND<0.30	ND<0.60	1900	1900	Gauged on 1/18/08
04/04/08	171.64	6.80	0.00	164.84	-0.82	1800	--	0.72	0.58	ND<0.30	ND<0.60	--	2700	
07/03/08	171.64	7.31	0.00	164.33	-0.51	1600	--	0.45	ND<0.30	ND<0.30	ND<0.60	--	2300	
10/03/08	171.64	7.79	0.00	163.85	-0.48	1300	--	0.53	0.59	ND<0.30	ND<0.60	--	1800	
01/22/09	171.64	7.26	0.00	164.38	0.53	890	--	0.43	0.49	ND<0.30	ND<0.60	--	1300	
04/13/09	171.64	6.83	0.00	164.81	0.43	1100	--	0.46	0.30	ND<0.30	ND<0.60	--	1200	
MW-8 (Screen Interval in feet: 15.0-25.0)														
01/18/08	167.97	0.43	0.00	167.54	--	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
04/04/08	167.97	0.55	0.00	167.42	-0.12	ND<50	--	0.76	1.6	0.72	2.3	--	ND<0.50	
07/03/08	167.97	0.91	0.00	167.06	-0.36	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	--	ND<0.50	
10/03/08	167.97	1.71	0.00	166.26	-0.80	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	--	ND<0.50	
01/22/09	167.97	1.59	0.00	166.38	0.12	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	--	ND<0.50	
04/13/09	167.97	0.08	0.00	167.89	1.51	ND<50	--	ND<0.30	ND<0.30	ND<0.30	ND<0.60	--	ND<0.50	

Historic Groundwater Flow Directions

ConocoPhillips Site No. 1156

4276 MacArthur Boulevard

Oakland, California



Groundwater Flow Direction

Legend

Concentric circles represent quarterly monitoring events

Third Quarter 1999 through Second Quarter 2009

39 data points shown