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Alameda County
Environmental Health



December 4, 2008

VIA ALAMEDA COUNTY FTP SITE

Mr. Steven Plunkett
Alameda County Environmental Health
1331 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: **Groundwater Monitoring Report – Second Half 2008**
5175 Broadway Street
Oakland, California
ACEH Fuel Leak Case No. RO#0000139

Dear Mr. Plunkett:

On behalf of Rockridge Heights LLC, Pangea Environmental Services, Inc., has prepared this *Groundwater Monitoring Report – Second Half 2008*. The report describes groundwater monitoring, sampling, and other site activities.

The report will be uploaded to the Alameda County ftp site. As requested, Pangea will not submit a hard copy of this report to Alameda County Environmental Health.

If you have any questions or comments, please call me at (510) 435-8664.

Sincerely,
Pangea Environmental Services, Inc.

A handwritten signature in blue ink, appearing to read "Bob Clark-Riddell".

Bob Clark-Riddell, P.E.
Principal Engineer

Attachment: *Groundwater Monitoring Report – Second Half 2008*

cc: Rockridge Heights, LLC, C/O Gary Feiner, 34 Schooner Hill, Oakland, California 94618
SWRCB Geotracker (Electronic copy)

PANGEA Environmental Services, Inc.



GROUNDWATER MONITORING REPORT – SECOND HALF 2008

5175 Broadway
Oakland, California

December 4, 2008

Prepared for:

Rockridge Heights, LLC
C/O Gary Feiner
34 Schooner Hill
Oakland, California 94618


Prepared by:

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, California 94612

Written by:


Morgan Gillies
Project Manager




Bob Clark-Riddell, P.E.
Principal Engineer

PANGEA Environmental Services, Inc.

INTRODUCTION

On behalf of Rockridge Heights, LLC, Pangea Environmental Services, Inc. (Pangea) conducted groundwater monitoring and sampling at the subject site (Figure 1). The purpose of the monitoring and sampling is to evaluate dissolved contaminant concentrations, determine the groundwater flow direction, and inspect site wells for separate-phase hydrocarbons (SPH). Current groundwater analytical results and elevation data are shown on Figures 2 and 3. Current and historical data are summarized on Table 1.

SITE BACKGROUND

The subject property is located at 5175 Broadway Street, at the southwest corner of the intersection of Broadway and Coronado Avenue in Oakland, California in Alameda County (Figure 1). The site is approximately 0.6 miles south-southeast of Highway 24 and approximately 2.3 miles east of Interstate 80 and the San Francisco Bay. The property is relatively flat lying, with a slight slope to the south-southwest, and lies at an elevation of approximately 160 feet above mean sea level. Topographic relief in the area surrounding the site also slopes generally towards the south-southwest. The western site boundary is the top of an approximately 10 foot high retaining wall that separates the site from an adjacent apartment complex.

The property has been vacant since 1979 and was formerly occupied by an Exxon Service Station used for fuel sales and automobile repair. The site is approximately 13,200 square feet in area with about 10% of the area occupied by a vacant station/garage structure. The majority of the ground surface is paved with concrete and/or asphalt, although the former tank location is not paved. Land use to the west and northwest is residential, including apartment buildings and single family homes. Properties to the northeast, east and south of the site are commercial. The site and adjacent properties are shown on Figure 2.

Environmental compliance work commenced when the site USTs were removed in January 1990. Three 8,000-gallon steel single-walled USTs, associated piping, and a 500-gallon steel single-walled waste oil tank were removed. Tank Project Engineering, Inc. (TPE) conducted the tank removal and observed holes in all four tanks. Approximately 700 tons of contaminated soil was excavated during tank removal and was subsequently remediated and reused for onsite backfill by TPE. In April 1990, TPE installed and sampled monitoring wells MW-1, MW-2 and MW-3. In June 1991, Soil Tech Engineering (STE), subsequently renamed Environmental Soil Tech Consultants (ESTC) installed monitoring wells STMW-4 and STMW-5. Groundwater monitoring was conducted on the site intermittently until October 2002. Golden Gate Tank Removal (GGTR) performed additional assessment in January and February 2006. In June 2006, the property was purchased by Rockridge Heights, LLC. Pangea commenced quarterly groundwater monitoring at the site in July 2006. MTBE is not considered to be a contaminant of concern because use of the site for fuel sales

predates widespread use of MTBE in gasoline and because analytical results have not show significant detections of MTBE.

In January and March 2007, Pangea installed twelve wells (MW-2C, MW-3A, MW-3C, MW-4A, MW-5A, MW-5B, MW-5C, MW-6A, MW-7B, MW-7C, MW-8A and MW-8C) and three offsite soil borings to help define the vertical and lateral extent of groundwater contamination. Pangea also abandoned four monitoring wells (MW-2, MW-3, STMW-4 and STMW-5) to reduce the risk of vertical contaminant migration and improve the quality of monitoring data. New wells installed at the site were categorized according to the depths of their screen intervals. Shallow (A-zone) wells have screen intervals of approximately 10 to 15 feet bgs, which generally straddle the top of the water table and are generally screened in surficial fill and alluvium. Intermediate-depth (B-zone) wells are screened at approximately 15 to 20 feet bgs, either in surficial strata or underlying fractured bedrock, while deep (C-zone) wells are generally screened at approximately 20 to 25 feet bgs and into fractured bedrock. Well MW-1 is screened across both the A-zone and B-zone.

In April 2007, Pangea performed a dual-phase extraction (DPE) pilot test to evaluate whether DPE is an appropriate remedial technology to remove residual hydrocarbons from beneath the site. In July 2007, Pangea submitted an Interim Remedial Action Plan for site corrective action.

In August 2007, Pangea installed three offsite monitoring wells (MW-9A, MW-9C and MW-10A) and conducted subslab vapor sampling in the commercial building located immediately south of the site. The purpose of the offsite well installation was to determine the downgradient extent of contaminant migration, and to help evaluate downgradient effects of any future remediation conducted onsite. The purpose of the subslab vapor sampling was to determine whether vapor migrating from underlying groundwater had impacted soil vapor. Soil gas sampling was also conducted near the southern and western edge of the property. Soil gas sampling and offsite monitoring well installation is described in Pangea's *Soil Gas Sampling and Well Installation Report* dated October 23, 2007. Further subslab/soil gas sampling was conducted at the two adjacent properties in June 2008 and reported in Pangea's *Additional Soil Gas Sampling Report* dated July 14, 2008.

In response to a letter from ACEH dated June 10, 2008, Pangea submitted a *Revised Site Conceptual Model and Corrective Action Plan* (Revised CAP) dated July 23, 2008. ACEH commented on the Revised CAP in a letter dated July 31, 2008 and Pangea prepared a *Corrective Action Plan Addendum* dated August 11, 2008 to address ACEH comments. In a letter dated August 22, 2008, ACEH approved the CAP and Addendum as a 'Draft CAP' and initiated the public-participation process.

GROUNDWATER MONITORING AND SAMPLING

On September 12, 2008, Pangea conducted groundwater monitoring and sampling at the site. Site monitoring wells were gauged for depth-to-water and inspected for separate-phase hydrocarbons (SPH). To obtain water levels representative of the piezometric surface, technicians removed all well caps (allowing water levels to equilibrate) the night prior to sampling. Groundwater samples were collected from all site monitoring wells this quarter except well MW-5A, which contained insufficient water to collect a sample.

Prior to sample collection, approximately three casing volumes of water were purged using disposable bailers, an electric submersible pump, or a clean PVC bailer (although fewer casing volumes were purged if the well dewatered). During well purging, field technicians measured the pH, temperature and conductivity of the water. A groundwater sample was collected from each well with a disposable bailer and decanted into the appropriate containers supplied by the analytical laboratory. Groundwater samples were labeled, placed in protective plastic bags, and stored on crushed ice at or below 4° C. All samples were transported under chain-of-custody to the State-certified analytical laboratory. Purge water was stored onsite in DOT-approved 55-gallon drums. Groundwater monitoring field data sheets, including purge volumes and field parameter measurements, are presented in Appendix A.

MONITORING RESULTS

Current and historical groundwater elevation and analytical data are described below and summarized on Table 1, Figure 2 and Figure 3. To facilitate data evaluation, well construction details are summarized on Table 2. Groundwater samples were analyzed for total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015C with silica gel cleanup; total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015C; and benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8021B. Samples were analyzed by McCampbell Analytical, Inc., of Pittsburg, California, a State-certified laboratory. The laboratory analytical report is included in Appendix B.

Groundwater Flow Direction

Based on depth-to-water data collected September 12, 2008, shallow groundwater (A-zone) flows generally southwards to southwestwards throughout most of the site and in the area downgradient from the site, as shown on Figure 2. The relatively high groundwater elevations measured in well MW-6A suggest that shallow groundwater is mounded in the former UST excavation and that the local flow direction radiates outwards away from the former excavation area towards the northeast corner of the site in the direction of MW-4A. These observations are interpreted as indicating that the unpaved former UST excavation has acted as a collector for rainwater and that the asphalt pavement covering the remainder of the site serves to reduce

infiltration elsewhere while directing rainwater to the unpaved UST excavation area. The current inferred flow direction in shallow groundwater is generally consistent with previous monitoring results.

Groundwater flow in deep groundwater (C-zone) is generally south to southwestwards at approximately the same gradient as the A-zone wells, as shown on Figure 3. Generally, the elevation of the piezometric surface for C-zone wells is lower than elevations for A-zone wells, indicating that a downward gradient is present. The inferred flow direction is generally consistent with previous monitoring results.

Hydrocarbon Distribution in Groundwater

No measurable thickness of separate-phase hydrocarbons (SPH) was observed in any monitoring wells this quarter, although an immeasurable sheen was observed by the field technician in monitoring wells MW-1, MW-4A, MW-7B and MW-7C. During previous quarterly monitoring, a thin layer of SPH had been measured in well STMW-4, but no measurable SPH were detected this quarter in well MW-4A, which was installed in the drilled out borehole of STMW-4 but screened over a shallower depth interval than STMW-4. Monitoring well MW-5A had insufficient water to sample this quarter.

The maximum TPHg and TPHd concentrations detected this quarter were 110,000 µg/L and 120,000 µg/L, respectively, in shallow well MW-4A. The maximum benzene concentration was 2,100 µg/L in shallow well MW-3A. The only hydrocarbon detected in the three downgradient offsite monitoring wells was 1.2 µg/L benzene in MW-9A. *Historic low* concentrations of TPHg (130 µg/L) and benzene (7.1 µg/L) were detected in well MW-2C. *Historic low* concentrations of benzene were also detected in wells MW-3A (2,100 µg/L) and MW-7B (450 µg/L). A *historic low* concentration of TPHd (11,000 µg/L) was detected in well MW-3C. Hydrocarbon concentrations were within historic ranges in all other site wells.

Shallow (A-zone) groundwater contains petroleum hydrocarbons at elevated concentrations in two primary areas near the former UST excavation: a northern area in the vicinity of well MW-4A, and a southwestern area in the vicinity of wells MW-3A and MW-8A. Prior shallow grab groundwater sampling data also indicates that the southern area of contamination extends to the southern site boundary in the vicinity of wells MW-7B and MW-7C, although *benzene* concentrations are apparently biodegrading quickly in these wells. The low to non-detect concentrations of hydrocarbons in wells MW-9A and MW-10A indicate that offsite migration of petroleum hydrocarbons in shallow groundwater is minimal. The observed distribution of hydrocarbons in A-zone groundwater is presumably due to plume migration radially away from the excavation area, likely caused by mounding of groundwater within the uncapped former UST excavation during the rainy season.

Contaminant distribution in deeper groundwater differs significantly from the distribution of hydrocarbons in shallow groundwater. High levels of contamination within deeper groundwater (B-zone and C-zone) only appear to be present in the vicinity of wells MW-3C, MW-7B and MW-7C in the central and southern portions of the site. Again, the apparent biodegradation of benzene and select other compounds in wells MW-7B and MW-7C suggests that deeper hydrocarbons are attenuating. In addition, the very low concentrations of petroleum hydrocarbons detected in newly installed offsite well MW-9C indicates that offsite plume migration is minimal. Well screen intervals for shallow and deep wells are summarized on Table 2.

Fuel Oxygenate Distribution in Groundwater

No MTBE was detected above reporting limits in any samples obtained from site monitoring wells this quarter. MTBE is not a contaminant of concern at this site both due to the lack of detections, and because the USTs were removed in 1990 prior to widespread use of MTBE as a fuel oxygenate.

OTHER SITE ACTIVITIES

Site Remediation

In a letter dated August 22, 2008, ACEH approved the CAP and Addendum as a 'Draft CAP' and initiated the public-participation process. Since Pangea understands that no comments were received during the public-participation period, the 'Draft CAP' can effectively serve as the 'Final CAP'. However, Pangea is preparing a Final CAP to reflect the revised site development plans. Pangea hopes to conduct active site remediation in January 2009 (well installation) and February/March 2009 (short-term extraction/air sparging), followed by remedial effectiveness monitoring (April/May) and excavation in June 2009.

Groundwater Monitoring

To help control project costs, Pangea has implemented a reduction in groundwater monitoring frequency from quarterly to semi-annually, as recommended in the *Groundwater Monitoring Report - First Quarter 2008*. Several rounds of monitoring data have been obtained from prior and new monitoring wells, and contaminant concentrations appear to be stable to decreasing in groundwater, despite the elevated concentrations in select wells. Pangea anticipates resuming quarterly groundwater monitoring during and after completion of site remediation to facilitate evaluation of remedial effectiveness on site conditions.

The next monitoring event is scheduled for March 2009. However, if two months of active dual-phase extraction and air sparging is conducted in February and March 2009 as tentatively proposed, groundwater monitoring may be delayed until afterwards (April or May) to control cost. Pangea will conduct gauging and sampling of all onsite and offsite groundwater monitoring wells. Groundwater samples will be analyzed for

TPHg/BTEX/MTBE by EPA Method 8015Cm/8021B, and for TPHd by EPA Method 8015C with silica gel cleanup. Pangea will summarize groundwater monitoring activities and results in a groundwater monitoring report.

Electronic Reporting

This report will be uploaded to the Alameda County ftp site. The report, laboratory data, and other applicable information will also be uploaded to the State Water Resource Control Board's Geotracker database. As requested, report hard copies will no longer be provided to the local agencies.

ATTACHMENTS

Figure 1 – Site Location Map

Figure 2 – Groundwater Elevation Contour and Hydrocarbon Concentration Map (Shallow)

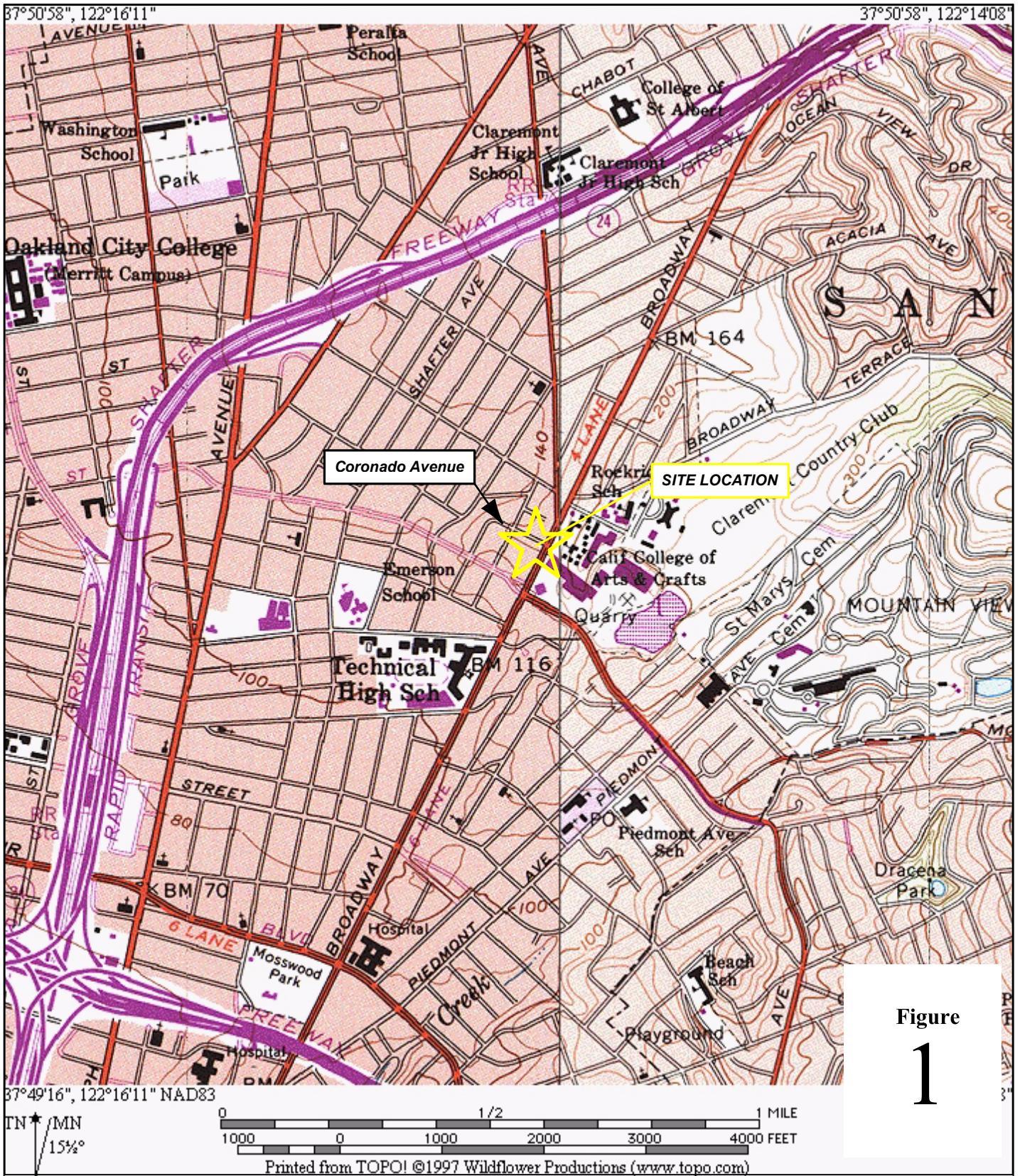
Figure 3 – Groundwater Elevation Contour and Hydrocarbon Concentration Map (Deep)

Table 1 – Groundwater Analytical Data

Table 2 – Well Construction Details

Appendix A – Groundwater Monitoring Field Data Sheets

Appendix B – Laboratory Analytical Report



Former Exxon Station
5175 Broadway
Oakland, California



Site Location Map

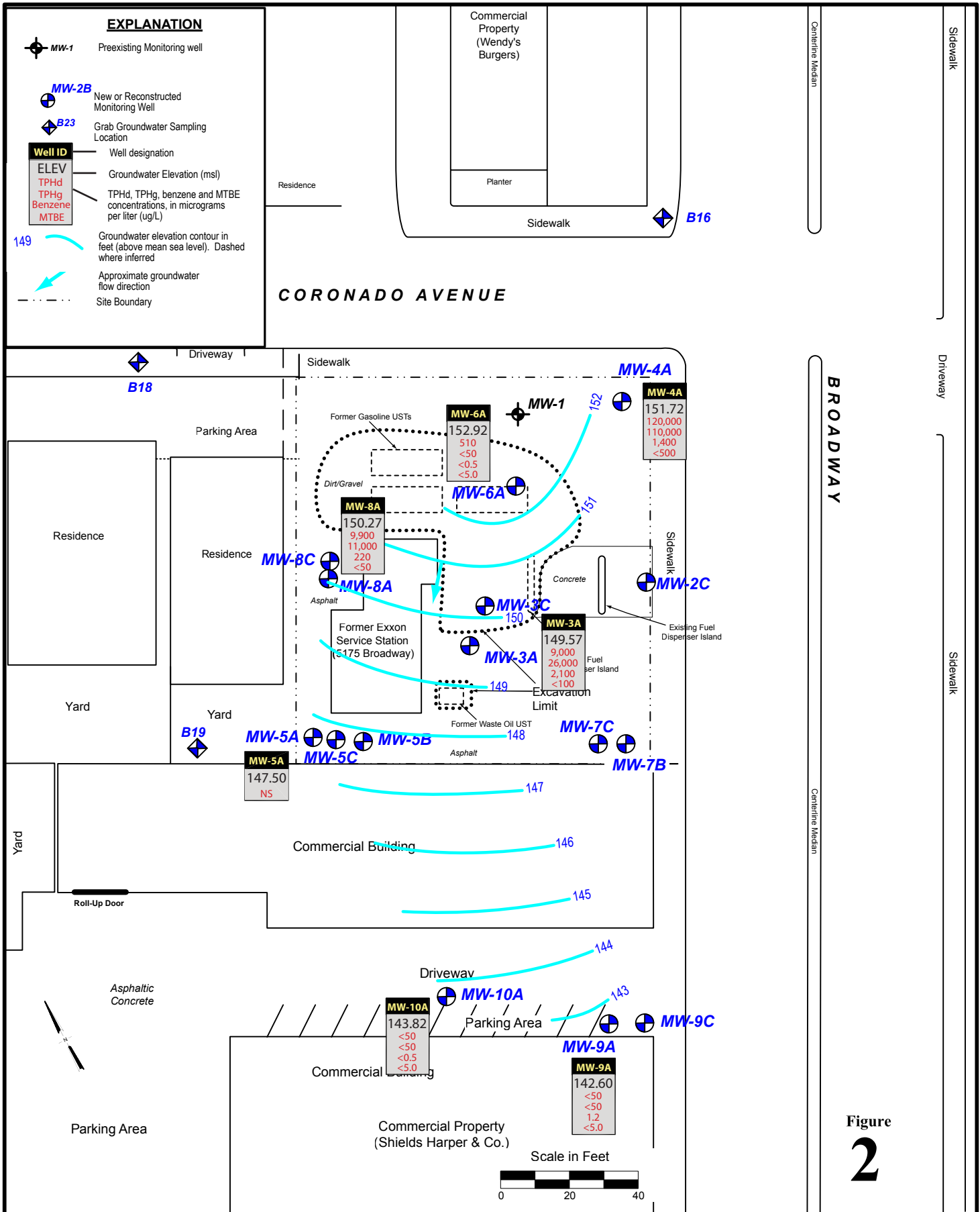


Figure
2

Former Exxon Station
5175 Broadway
Oakland, California

Groundwater Elevation Contour and Hydrocarbon Concentration Map (Shallow)
September 12, 2008



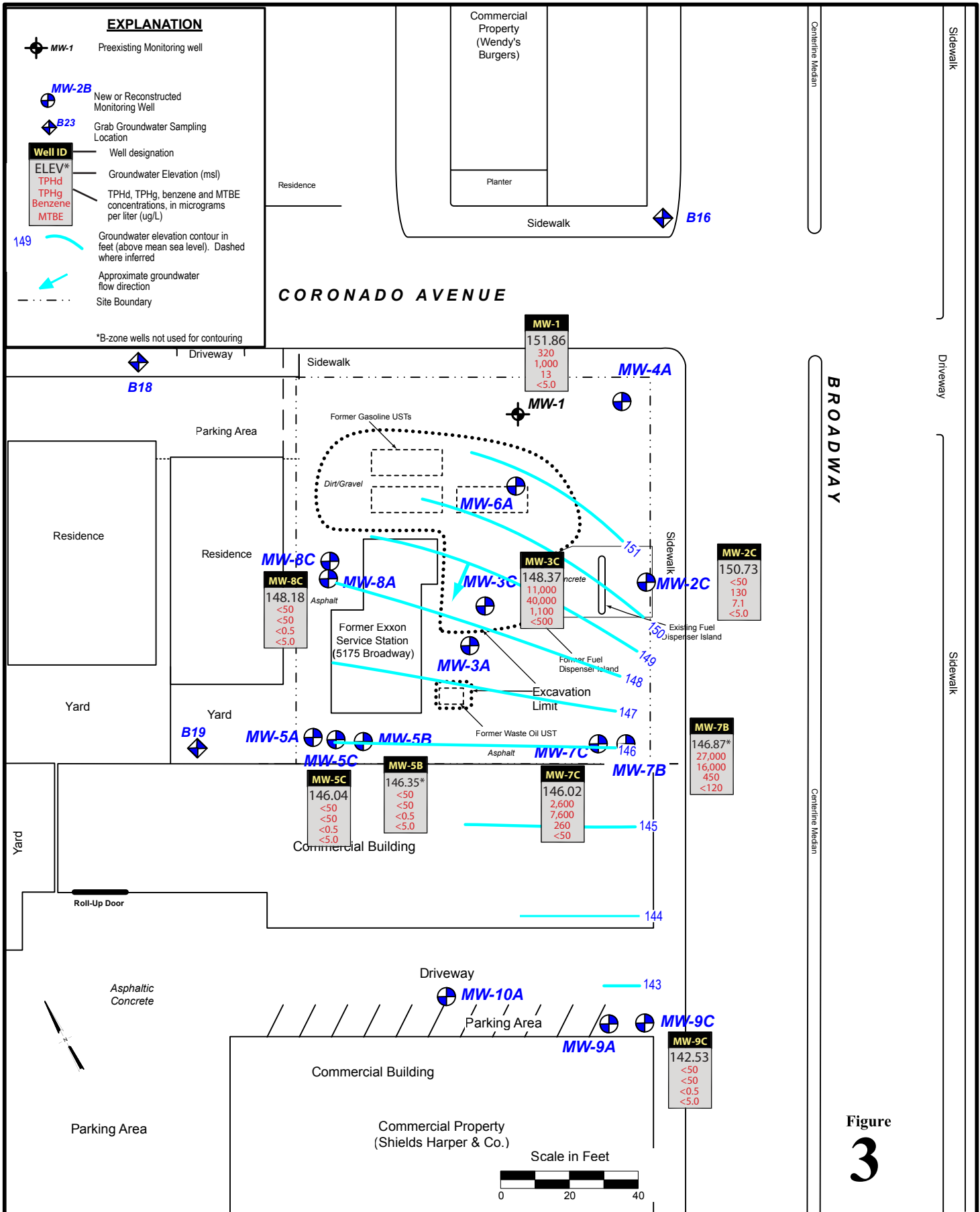


Figure
3

Former Exxon Station
5175 Broadway
Oakland, California

Groundwater Elevation Contour and
Hydrocarbon Concentration Map (Deep)
September 12, 2008



Pangea

Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID	Date	Groundwater	Depth	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Dissolved
<i>TOC Elev</i>	Sampled	SPH	Elevation	to Water	$\mu\text{g/L}$								Oxygen
(ft)		(ft)	(ft)	(ft)									mg/L
MW-1	04/30/89	--	--	--	--	200	18	5	2	12	--	--	--
(97.71)	05/17/90	--	88.45	9.26	--	--	--	--	--	--	--	--	--
	09/26/90	--	87.79	9.92	--	1,300	55	31	120	100	--	--	--
	01/14/91	--	88.17	9.54	--	3,100	350	83	86	130	--	--	--
(102.04)	07/03/91	--	92.62	9.42	--	580	32	41	40	55	--	--	--
	11/11/91	--	92.59	9.45	--	330	20	2	2	11	--	--	--
(101.83)	03/04/92	--	93.90	7.93	--	810	11	5	10	23	--	--	--
	06/02/92	--	92.85	8.98	--	2,200	93	32	40	120	--	--	--
	09/28/92	--	92.54	9.29	--	2,900	24	78	19	37	--	--	--
	01/11/93	--	94.27	7.56	--	1,700	5.7	6	11	28	--	--	--
	08/15/94	--	92.64	9.19	--	2,000	120	3	6	16	--	--	--
(97.50)	11/07/96	--	88.77	8.73	270	1,200	3	1.1	1.5	3.8	<0.5	--	--
	02/12/97	--	89.58	7.92	<50	1,800	13	5.7	4.8	17	<0.5	--	--
	06/16/97	--	88.46	9.04	<50	330	27	<0.5	<0.5	1.2	<0.5	--	--
	09/30/97	--	89.94	7.56	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
(97.50)	01/27/98	--	89.54	7.96	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
	04/24/98	--	89.52	7.98	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
	08/17/98	--	88.52	8.98	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
	11/16/98	--	88.60	8.90	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
	02/16/99	--	88.86	8.64	<50	110	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
	05/17/99	--	89.00	8.50	--	280	1.1	0.6	<0.5	<0.5	<0.5	--	--
	08/17/99	--	88.26	9.24	86	790	5.6	4.3	4.5	11	<5.0	--	--
	11/17/99	--	87.06	10.44	--	1,300	3.6	1.9	2.7	6.6	<1.0	--	--
	02/17/00	--	89.02	8.48	--	580	1.1	2.3	3.6	4.9	<5.0	--	--
	05/17/00	--	89.26	8.24	--	1,500	130	6.8	6.1	<5.0	<5.0	--	--
	08/17/00	--	88.73	8.77	--	550	160	<25	<25	<25	<25	--	--
	11/15/00	--	88.46	9.04	--	130	<5.0	<5.0	<5.0	<5.0	<5.0	--	--
	02/16/01	--	89.90	7.60	--	400	26	<5.0	<5.0	<5.0	<5.0	--	--
	01/11/02	--	89.42	8.08	160	600	74	53	14	52	110	--	--
(161.03)	07/01/02	--	152.01	9.02	280	670	25	<5.0	<5.0	<5.0	<5.0	--	--
	10/04/02	--	151.29	9.74	520	1,800	130	7.8	8.1	14	<5.0	--	--
	07/28/06	--	151.93	9.10	86	250	42	1.7	1.4	3.1	<1.0	51	1.5
	10/16/06	--	151.98	9.05	110	390	16	<0.5	1.5	2.2	<0.5	41	1.6
(161.10)	01/09/07	--	152.90	8.20	160	530	21	1.7	2.8	5.1	--	--	0.22
	03/26/07	--	152.84	8.26	--	--	--	--	--	--	--	--	--
	06/24/07	--	152.12	8.98	220	500	24	1.1	2.2	4.2	<5.0	--	--
	09/29/07	--	151.44	9.66	180	540	19	1.2	2.3	5.3	<5.0	--	--
	12/27/07	--	152.60	8.50	200	290	10	0.65	1.2	3.0	<5.0	--	--
	03/15/08	--	152.72	8.38	340	680	24	1.1	1.9	2.9	<10	--	--
	09/12/08	--	151.86	9.24	320	1,000	13	<0.5	0.61	1.4	<5.0	--	--

Pangea

Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID	Date	Groundwater	Depth	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Dissolved		
<i>TOC Elev</i>	Sampled	SPH	Elevation	to Water	$\mu\text{g/L}$									Oxygen	
(ft)		(ft)	(ft)	(ft)										mg/L	
MW-2	04/30/89	--	--	--	--	230	39	18	5	23	--	--	--		
(97.78)	05/17/90	--	87.78	10.00	--	--	--	--	--	--	--	--	--		
	09/29/90	--	86.95	10.83	--	850	970	5	25	47	--	--	--		
	01/14/91	--	87.15	10.63	--	3,100	30	52	24	34	--	--	--		
(102.02)	07/03/91	--	91.94	10.08	--	1,590	30	52	24	34	--	--	--		
	11/11/91	--	91.81	10.21	--	960	320	15	4	29	--	--	--		
	03/04/92	--	93.32	8.70	--	1,500	9.5	8.4	9.8	22	--	--	--		
	06/02/92	--	92.50	9.52	--	2,800	84	41	59	95	--	--	--		
	09/28/92	--	91.93	10.09	--	1,600	47	20	47	97	--	--	--		
	01/11/93	--	93.50	8.52	--	2,500	8.6	10	17	32	--	--	--		
(97.49)	08/15/94	--	87.58	9.91	--	6,000	450	60	100	95	--	--	--		
	11/07/96	--	87.47	10.02	780	4,200	25	4.9	8.1	14	<0.5	--	--		
	02/12/97	--	88.58	8.91	5,700	1,800	16	3.1	3.4	8.8	<0.5	--	--		
	06/16/97	--	87.74	9.75	<50	2,500	22	5.1	7.8	11	<0.5	--	--		
	09/30/97	--	89.60	7.89	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--		
	01/27/98	--	89.11	8.38	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--		
	04/24/98	--	88.81	8.68	1,400	2,100	18	6.5	4.8	21	<0.5	--	--		
	08/17/98	--	87.75	9.74	<50	2,900	5.1	4.5	5.8	17	<0.5	--	--		
	11/16/98	--	87.35	10.14	<50	1,400	2.1	1.9	2.3	4.8	<0.5	--	--		
	02/16/99	--	88.57	8.92	<50	1,600	82	16	<2.5	40	59	--	--		
	05/17/99	--	88.23	9.26	--	8,200	43	73	140	100	<250	--	--		
	08/17/99	--	87.45	10.04	260	2,900	20	81	17	38	<5.0	--	--		
	11/17/99	--	85.97	11.52	<50	2,600	7	3.7	5.3	12.9	<1.0	--	--		
	02/17/00	--	87.99	9.50	--	1,700	3.2	6.8	11	12.3	<5.0	--	--		
	05/17/00	--	88.65	8.84	--	3,800	450	65	110	80	<25	--	--		
	08/17/00	--	88.99	8.50	--	4,300	440	<50	78	<50	<50	--	--		
	11/15/00	--	87.55	9.94	--	5,800	320	41	78	64	<25	--	--		
	02/16/01	--	88.97	8.52	--	2,200	110	20	38	33	<5.0	--	--		
	01/11/02	--	88.67	8.82	620	3,100	280	86	84	110	<50	--	--		
(160.98)	07/01/02	--	151.34	9.64	940	2,600	300	29	45	27	<10	--	--		
	10/04/02	--	150.46	10.52	390	4,000	440	66	140	120	<25	--	--		
	07/28/06	--	150.96	10.02	340	1,300	150	9.9	6	18	<0.5	3.6	0.17		
	10/16/06	--	150.45	10.53	76	150	16	1.0	3.5	2.2	<0.5	1.2	0.19		
	01/09/07	--	151.65	9.33	84	210	27	2.6	8.1	6.8	--	--	0.14		
	01/25/07	--				Well Abandoned									

Pangea

Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID <i>TOC Elev</i> (ft)	Date Sampled	SPH (ft)	Groundwater Elevation (ft)	Depth to Water (ft)	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Dissolved Oxygen mg/L
					←-----µg/L-----→									
MW-3	04/30/90	--	--	--	--	56,000	3,600	8,600	1,300	7,200	--	--	--	--
(98.14)	05/17/90	--	85.72	12.42	--	--	--	--	--	--	--	--	--	--
	09/26/90	--	84.64	13.50	--	54,000	5,100	420	1,600	8,000	--	--	--	--
	01/14/91	--	85.56	12.58	--	35,000	2,600	6,600	1,500	5,700	--	--	--	--
(102.46)	07/03/91	--	90.38	12.08	--	33,000	4,120	4,300	1,400	4,800	--	--	--	--
	11/11/91	--	90.17	12.29	--	57,000	3,900	8,400	2,100	14,000	--	--	--	--
(102.18)	03/04/92	--	91.92	10.26	--	57,000	720	870	81	3,100	--	--	--	--
(97.94)	06/02/92	--	86.54	11.40	--	50,000	240	240	220	740	--	--	--	--
	09/28/92	--	85.30	12.64	--	64,000	110	93	97	250	--	--	--	--
	01/11/93	--	87.84	10.10	--	68,000	210	280	360	990	--	--	--	--
	08/15/94	--	85.74	12.20	--	50,000	870	1,200	1,300	3,000	--	--	--	--
	11/07/96	--	85.54	12.40	470	68,000	33	27	63	120	<0.5	--	--	--
	02/12/97	--	87.71	10.23	3,500	25,000	39	43	15	91	<0.5	--	--	--
	06/16/97	--	86.15	11.79	<50	9,700	26	29	45	81	<0.5	--	--	--
	09/30/97	--	88.54	9.40	1,600	6,000	43	36	12	11	<0.5	--	--	--
	01/27/98	--	88.14	9.80	560	380	5.7	4.1	1.7	9.1	<0.5	--	--	--
	04/24/98	--	88.04	9.90	680	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--
	08/17/98	--	86.48	11.46	<50	16,000	200	18	31	82	<0.5	--	--	--
	11/16/98	--	85.54	12.40	<50	68,000	86	54	69	130	<0.5	--	--	--
	02/16/99	--	87.22	10.72	<50	33,000	270	110	<5.0	770	170	--	--	--
	05/17/99	--	87.40	10.54	--	72,000	280	230	320	890	<250	--	--	--
	08/17/99	--	85.99	11.95	1,800	20,000	51	41	61	130	<5.0	--	--	--
	11/17/99	--	84.34	13.60	--	1,700	39	22	31	84	<1.0	--	--	--
	02/17/00	--	87.26	10.68	--	8,800	16	39	74	90	<5.0	--	--	--
	05/17/00	--	87.69	10.25	--	22,000	300	260	410	940	<5.0	--	--	--
	08/17/00	--	86.10	11.84	--	15,000	230	140	470	750	<50	--	--	--
	11/15/00	--	86.12	11.82	--	12,000	250	210	390	700	<25	--	--	--
	02/16/01	--	88.26	9.68	--	7,400	40	72	700	250	<25	--	--	--
	01/11/02	--	88.36	9.58	1,900	9,300	230	200	290	580	<25	--	--	--
(161.43)	07/01/02	--	150.29	11.14	5,200	13,000	230	220	450	890	<13	--	--	--
	10/04/02	--	148.61	12.82	4,900	11,000	280	170	450	730	<25	--	--	--
	07/28/06	--		Not Sampled - Unable to locate well										
	10/16/06	--		Not Sampled - Unable to locate well										
	01/09/07	--		Not Sampled - Unable to locate well										
	01/22/07	--	149.81	11.62	93,000	34,000	770	250	760	2,000	<1,000	--	--	--
	03/16/07	--		Well Abandoned										

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Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID <i>TOC Elev</i> (ft)	Date Sampled	SPH (ft)	Groundwater Elevation (ft)	Depth to Water (ft)	TPHd ←	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA →	Dissolved Oxygen mg/L
STMW-4 (103.58) (101.08) (98.80)	07/03/91	--	92.58	11.00	--	3,100	610	62	39	150	--	--	--	--
	11/11/91	--	92.50	11.08	--	3,600	990	15	2.6	180	--	--	--	--
	03/04/92	--	91.64	9.44	--	5,000	35	20	22	71	--	--	--	--
	06/02/92	--	88.48	10.32	--	13,000	140	45	63	210	--	--	--	--
	09/28/92	--	88.04	10.76	--	40,000	35	20	48	110	--	--	--	--
	01/11/93	--	89.52	9.28	--	24,000	26	88	92	280	--	--	--	--
	08/15/94	--	88.26	10.54	--	9,000	500	34	46	130	--	--	--	--
	11/07/96	--	88.43	10.37	180	13,000	40	2.9	7.8	19	<0.5	--	--	--
	02/12/97	--	89.44	9.36	5,700	5,300	95	5.3	5.9	18	<0.5	--	--	--
	06/16/97	--	88.40	10.40	<50	5,300	37	6.2	1.7	11	<0.5	--	--	--
	09/30/97	--	90.30	8.50	<50	2,700	42	7.7	5.7	26	<0.5	--	--	--
	01/27/98	--	89.90	8.90	300	3,000	60	17	12	49	<0.5	--	--	--
	04/24/98	--	89.30	9.50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--
	08/17/98	--	88.44	10.36	<50	29,000	36	24	59	160	<0.5	--	--	--
	11/16/98	--	88.24	10.56	<50	13,000	26	21	20	41	--	--	--	--
	02/16/99	--	89.16	9.64	<50	32,000	660	16	16	150	<100	--	--	--
	05/17/99	--	88.84	9.96	--	13,000	1600	30	45	78	<250	--	--	--
	08/17/99	--	88.16	10.64	990	12,000	260	22	33	72	<5.0	--	--	--
	11/17/99	--	86.78	12.02	--	7,900	21	12	17	40	<1.0	--	--	--
	02/17/00	--	89.48	9.32	--	4,900	8.9	21	38	50	<5.0	--	--	--
05/17/00	--	89.15	9.65	--	9,600	840	<50	61	<50	<50	--	--	--	
08/17/00	--	88.46	10.34	--	5,100	680	<50	62	<50	<50	--	--	--	
11/15/00	--	88.28	10.52	--	3,900	640	<25	26	27	<25	--	--	--	
02/16/01	--	89.60	9.20	--	5,700	560	<25	<25	<25	<25	--	--	--	
01/11/02	--	89.22	9.58	930	4,900	560	59	25	<25	<250	--	--	--	
(162.13)	07/01/02	--	151.85	10.28	6,700	6,700	470	18	32	45	<13	--	--	--
	10/04/02	--	151.05	11.08	2,900	13,000	590	26	65	110	<25	--	--	--
	07/28/06	0.04	151.53	10.60	39,000	25,000	960	21	73	130	<5.0	65	<5.0	0.22
	10/16/06	0.06	151.30	10.83	14,000	14,000	790	28	81	130	<5.0	30	<5.0	0.26
	01/09/07	0.03	152.20	9.93	Not Sampled - SPH									
01/26/07				Well Abandoned										0.24

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Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID <i>TOC Elev</i> (ft)	Date Sampled	SPH (ft)	Groundwater Elevation (ft)	Depth to Water (ft)	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Dissolved Oxygen mg/L	
←————— μg/L —————→															
STMW-5	07/03/91	--	88.70	13.29	--	690	99	81	19	98	--	--	--	--	
(101.99)	11/11/91	--	87.99	14.00	--	410	61	2.4	1.4	20	--	--	--	--	
(101.36)	03/04/92	--	89.56	11.80	--	460	13	6.5	11	18	--	--	--	--	
	06/02/92	--	88.30	13.06	--	1,800	27	20	21	43	--	--	--	--	
	09/28/92	--	87.32	14.04	--	1,500	14	6.1	18	22	--	--	--	--	
	01/11/93	--	89.75	11.61	--	800	1.8	3	3.1	9.4	--	--	--	--	
	08/15/94	--	87.51	13.85	--	3,000	320	62	34	220	--	--	--	--	
(97.14)	11/07/96	--	83.47	13.67	330	1,200	11	1.7	4.4	13	<0.5	--	--	--	
	02/17/97	--	85.07	12.07	3,700	1,000	11	17	1.7	9.7	<0.5	--	--	--	
	06/19/97	--	83.81	13.33	2,300	950	7.4	1	1	7.2	<0.5	--	--	--	
	09/30/97	--	85.90	11.24	1,100	710	5.8	4	1	1	<0.5	--	--	--	
	01/27/98	--	85.50	11.64	1,100	340	2	1.8	1.6	8.2	<0.5	--	--	--	
	04/24/98	--	85.30	11.84	<50	3,300	12	9.4	8.5	37	<0.5	--	--	--	
	08/17/98	--	83.94	13.20	<50	5,300	26	17	14	39	<0.5	--	--	--	
	11/16/98	--	83.40	13.74	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	
	02/16/99	--	84.92	12.22	<50	950	150	3.8	1.4	14	11	--	--	--	
	05/17/99	--	84.56	12.58	--	2,800	67	9.4	<2.5	16	30	--	--	--	
	08/17/99	--	83.66	13.48	230	2,800	18	17	18	36	<5.0	--	--	--	
	11/17/99	--	82.26	14.88	--	1,600	3.9	2.3	3.2	7.5	<1.0	--	--	--	
	02/17/00	--	84.58	12.56	--	770	1.5	3.2	5.8	7	<5.0	--	--	--	
	05/17/00	--	85.06	12.08	--	4,500	<25	<25	<25	<25	<25	--	--	--	
	08/17/00	--	83.58	13.56	--	2,900	170	64	100	250	<10	--	--	--	
	11/15/00	--	83.86	13.28	--	2,100	120	24	40	54	<5.0	--	--	--	
	02/16/01	--	85.54	11.60	--	850	58	9.8	9.4	18	<5.0	--	--	--	
	01/11/02	--	85.42	11.72	<50	920	76	16	16	28	13	--	--	--	
(160.65)	07/01/02	--	147.51	13.14	1,500	4,300	71	14	14	36	<5.0	--	--	--	
	10/04/02	--	146.13	14.52	60	1,400	71	17	26	35	<5.0	--	--	--	
	07/28/06	--	147.30	13.35	370	700	22	4.3	1.2	6.6	<0.5	<0.5	<0.5	0.24	
	10/16/06	--	146.91	13.74	240	590	14	1.6	1.3	3.2	<0.5	<0.5	<0.5	0.21	
	01/09/07	--	148.19	12.46	180	390	30	3.2	1.8	3.2	--	--	--	0.17	
	01/18/07						Well Abandoned								
MW-2C	03/09/07	--	152.24	8.41	140	450	40	9.3	2.9	16	<10	--	--	--	
(160.65)	03/26/07	--	151.93	8.72	--	--	--	--	--	--	--	--	--	--	
	06/24/07	--	151.21	9.44	160	440	30	1.8	5.9	7.4	<5.0	--	--	--	
	09/29/07	--	150.45	10.20	120	200	13	<0.5	<0.5	2.0	<5.0	--	--	--	
	12/27/07	--	151.42	9.23	83	190	13	0.83	<0.5	1.9	<5.0	--	--	--	
	03/15/08	--	151.83	8.82	120	250	24	2.2	5.2	4.5	<5.0	--	--	--	
	09/12/08	--	150.73	9.92	<50	130	7.1	<0.5	1.2	0.83	<5.0	--	--	--	

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Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID	Date	SPH (ft)	Groundwater Elevation (ft)	Depth to Water (ft)	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Dissolved Oxygen mg/L
TOC Elev (ft)	Sampled													
MW-3A	03/09/07	--	152.20	9.35	4,500	39,000	3,800	220	830	2,800	<500	--	--	--
(161.55)	03/26/07	--	152.33	9.22	--	--	--	--	--	--	--	--	--	--
(161.57)	06/24/07	--	151.61	9.94	11,000	34,000	3,200	330	990	3,200	<250	--	--	--
	09/29/07	--	150.21	11.36	11,000	43,000	3,500	150	730	2,200	<1,000	--	--	--
	12/27/07	--	150.20	11.37	8,700	30,000	2,500	24	520	930	<100	--	--	--
	03/15/08	--	152.27	9.30	10,000	26,000	2,400	110	700	1,200	<250	--	--	--
	09/12/08	--	149.57	12.00	9,000	26,000	2,100	29	560	280	<100	--	--	--
MW-3C	03/26/07	--	151.15	10.64	--	--	--	--	--	--	--	--	--	--
(161.79)	04/16/07	--	150.87	10.92	36,000	32,000	1,200	710	600	1,900	<500	--	--	--
	06/24/07	--	149.43	12.36	200,000	50,000	2,200	4,100	860	6,100	<500	--	--	--
	09/29/07	--	148.33	13.46	48,000	37,000	1,700	3,300	830	4,800	<1,000	--	--	--
	12/27/07	--	149.79	12.00	29,000	28,000	590	900	630	2,000	<500	--	--	--
	03/15/08	--	150.70	11.09	21,000	36,000	1,500	2,400	570	3,700	<500	--	--	--
	09/12/08	--	148.37	13.42	11,000	40,000	1,100	1,200	600	3,000	<500	--	--	--
MW-4A	03/09/07	--	152.88	9.56	3,600	16,000	1,600	36	37	150	<250	--	--	--
(162.44)	03/26/07	--	152.56	9.88	--	--	--	--	--	--	--	--	--	--
	06/24/07	--	152.02	10.42	110,000	87,000	1,500	59	290	800	<500	--	--	--
	09/29/07	--	151.33	11.11	170,000	130,000	2,700	69	400	1,400	<240	--	--	--
	12/27/07	--	152.33	10.11	19,000	27,000	1,600	31	100	320	<90	--	--	--
	03/15/08	--	152.51	9.93	38,000	17,000	1,300	<50	120	380	<500	--	--	--
	09/12/08	--	151.72	10.72	120,000	110,000	1,400	<50	210	660	<500	--	--	--
MW-5A	03/09/07	--	150.40	10.42	56	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
(160.82)	03/26/07	--	150.00	10.82	--	--	--	--	--	--	--	--	--	--
	06/24/07	--	148.94	11.88	<50	180	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	09/29/07	--	147.86	12.96	--	--	--	--	--	--	--	--	--	--
	12/27/07	--	148.40	12.42	--	--	--	--	--	--	--	--	--	--
	03/15/08	--	149.96	10.86	<50	180	0.91	<0.5	<0.5	<0.5	<5.0	--	--	--
	09/12/08	--	147.50	13.32					Insufficient water to sample					
MW-5B	03/09/07	--	146.42	15.08	59	140	1.3	0.77	<0.5	1.6	<5.0	--	--	--
(161.50)	03/26/07	--	148.88	12.62	--	--	--	--	--	--	--	--	--	--
	06/24/07	--	147.98	13.52	53	52	1.1	<0.5	<0.5	<0.5	<5.0	--	--	--
	09/29/07	--	146.60	14.90	<50	<50	0.95	<0.5	<0.5	<0.5	<5.0	--	--	--
	12/27/07	--	148.41	13.09	<50	58	1.4	<0.5	0.60	<0.5	<5.0	--	--	--
	03/15/08	--	148.95	12.55	<50	61	2.6	1.1	1.1	3.0	<5.0	--	--	--
	09/12/08	--	146.35	15.15	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--

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Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID <i>TOC Elev</i> <i>(ft)</i>	Date Sampled	SPH <i>(ft)</i>	Groundwater Elevation <i>(ft)</i>	Depth to Water <i>(ft)</i>	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Dissolved Oxygen <i>mg/L</i>
$\xleftarrow{\mu\text{g/L}} \hspace{15em} \xrightarrow{\hspace{15em}} \hspace{1em}$														
MW-5C <i>(161.03)</i>	03/09/07	--	148.12	12.91	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	03/26/07	--	148.41	12.62	--	--	--	--	--	--	--	--	--	--
	06/24/07	--	147.58	13.45	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	09/29/07	--	146.41	14.62	66	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	12/27/07	--	148.10	12.93	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	03/15/08	--	148.48	12.55	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	09/12/08	--	146.04	14.99	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
MW-6A <i>(161.58)</i>	03/09/07	--	154.91	6.67	380	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	03/26/07	--	154.41	7.17	--	--	--	--	--	--	--	--	--	--
	06/24/07	--	153.79	7.79	590	140	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	09/29/07	--	152.84	8.74	540	52	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	12/27/07	--	154.27	7.31	170	94	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	03/15/08	--	154.42	7.16	150	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	09/12/08	--	152.92	8.66	510	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
MW-7B <i>(159.15)</i>	03/09/07	--	147.97	11.18	930	18,000	1,500	1,600	140	1,800	<600	--	--	--
	03/26/07	--	148.10	11.05	--	--	--	--	--	--	--	--	--	--
	06/24/07	--	147.54	11.61	40,000	30,000	1,800	2,400	240	2,800	<700	--	--	--
<i>(159.02)</i>	09/29/07	--	146.91	12.11	16,000	37,000	1,300	1,500	180	2,700	<500	--	--	--
	12/27/07	--	147.37	11.65	7,700	18,000	810	880	38	1,600	<50	--	--	--
	03/15/08	--	147.66	11.36	7,900	14,000	730	820	110	1,200	<250	--	--	--
	09/12/08	--	146.87	12.15	27,000	16,000	450	340	19	1,300	<120	--	--	--
MW-7C <i>(158.53)</i>	03/09/07	--	145.44	13.09	190	3,600	970	100	12	90	<120	--	--	--
	03/26/07	--	147.53	11.00	--	--	--	--	--	--	--	--	--	--
	06/24/07	--	146.65	11.88	7,100	16,000	510	520	190	1,300	<100	--	--	--
	09/29/07	--	146.21	12.32	11,000	29,000	580	1,400	600	4,800	<1,000	--	--	--
	12/27/07	--	146.74	11.79	56,000	29,000	250	410	430	3,300	<50	--	--	--
	03/15/08	--	147.45	11.08	7,000	13,000	170	58	170	1,300	<100	--	--	--
	09/12/08	--	146.02	12.51	2,600	7,600	260	38	76	330	<50	--	--	--
MW-8A <i>(161.57)</i>	03/09/07	--	152.05	9.52	4,200	10,000	430	18	<10	88	<100	--	--	--
	03/26/07	--	151.74	9.83	--	--	--	--	--	--	--	--	--	--
	06/24/07	--	151.40	10.17	17,000	12,000	720	500	230	880	<300	--	--	--
	09/29/07	--	150.64	10.95	5,300	7,500	440	67	26	240	<90	--	--	--
<i>(161.59)</i>	12/27/07	--	152.00	9.59	13,000	9,600	290	100	90	360	<100	--	--	--
	03/15/08	--	152.00	9.59	7,500	7,200	170	28	270	110	<100	--	--	--
	09/12/08	--	150.27	11.32	9,900	11,000	220	31	110	180	<50	--	--	--

Pangea

Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID TOC Elev (ft)	Date Sampled	SPH (ft)	Groundwater Elevation (ft)	Depth to Water (ft)	µg/L								Dissolved Oxygen mg/L	
					TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE		1,2-DCA
MW-8C (161.33)	03/09/07	--	149.18	12.15	<50	150	9.8	1.3	2.0	3.9	<5.0	--	--	--
	03/26/07	--	149.56	11.77	--	--	--	--	--	--	--	--	--	--
	06/24/07	--	148.96	12.37	<50	<50	0.57	<0.5	<0.5	<0.5	<5.0	--	--	--
	09/29/07	--	148.35	12.98	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	12/27/07	--	149.84	11.49	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	03/15/08	--	149.94	11.39	<50	110	6.0	1.7	2.4	2.4	<5.0	--	--	--
	09/12/08	--	148.18	13.15	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
MW-9A (155.37)	09/29/07	--	142.76	12.61	86	<50	2.6	<0.5	<0.5	<0.5	<5.0	--	--	--
	12/27/07	--	143.51	11.86	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	03/15/08	--	143.35	12.02	<50	<50	0.85	<0.5	<0.5	<0.5	<5.0	--	--	--
	09/12/08	--	142.60	12.77	<50	<50	1.2	<0.5	<0.5	<0.5	<5.0	--	--	--
MW-9C (154.94)	09/29/07	--	142.67	12.27	390	68	2.2	0.88	<0.5	<0.5	<5.0	--	--	--
	12/27/07	--	143.40	11.54	<50	<50	0.84	<0.5	<0.5	<0.5	<5.0	--	--	--
	03/15/08	--	143.98	10.96	<50	<50	0.55	<0.5	<0.5	<0.5	<5.0	--	--	--
	09/12/08	--	142.53	12.41	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
MW-10A (154.88)	09/29/07	--	144.35	10.53	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	12/27/07	--	145.50	9.38	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	03/15/08	--	145.96	8.92	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--
	09/12/08	--	143.82	11.06	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--

Abbreviations:

µg/L = Micrograms per liter - approximately equal to parts per billion = ppb.

mg/L = Milligrams per liter - approximately equal to parts per million = ppm.

SPH = Separate-phase hydrocarbons encountered in well (value in parentheses is thickness in feet).

Groundwater elevation is calculated according to the relationship: groundwater elevation = TOC (elevation) - (depth to water) + (0.8)(SPH thickness).

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015Cm.

TPHd = Total petroleum hydrocarbons as diesel by EPA Method 8015C.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8021B.

MTBE = Methyl tertiary-butyl ether by EPA Method 8021B. (Concentrations in parentheses are by EPA Method 8260B).

DIPE = Diisopropyl ether by EPA Method 8260B.

1,2-DCA = 1,2-Dichloroethane by EPA Method 8260B.


Table 2 – Well Construction Details –5175 Broadway, Oakland, CA

Well ID	PVC Slot Size	Total Depth of Well (feet bgs)	Screened Interval (ft bgs)	Drill Hole Diameter (inches)	Casing Diameter (inches)	Sand
MW-1	0.02	23	13-23	10	4	8x20
MW-2C	0.01	23	18-23	8	2	#2/12
MW-3A	0.01	14	9-14	8	2	#2/12
MW-3C	0.01	27	22-27	8	2	#2/12
MW-4A	0.01	15	8-15	8	2	#2/12
MW-5A	0.01	14	10-14	8	2	#2/12
MW-5B	0.01	20	17-20	8	2	#2/12
MW-5C	0.01	27	22-27	8	2	#2/12
MW-6A	0.01	17	8-17	8	2	#2/12
MW-7B	0.01	18.5	15.5-18.5	8	2	#2/12
MW-7C	0.01	25	20-25	8	2	#2/12
MW-8A	0.01	15	8-15	8	2	#2/12
MW-8C	0.01	25	20-25	8	2	#2/12
MW-9A	0.01	15.5	7.5-15.5	8	2	#2/12
MW-9C	0.01	21	17-21	8	2	#2/12
MW-10A	0.01	15.5	7.5-15.5	8	2	#2/12

APPENDIX A


Groundwater Monitoring Field Data Sheets

Well Gauging Data Sheet

Project.Task #:1145.001 216				Project Name: Feiner - 5175 Broadway			
Address: 5175 Broadway, Oakland, CA						Date:9/12/08	
Name: Sanjiv Gill				Signature: 			
Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point
MW-1	4"	11:09			9.24	22.97	TOC
MW-2C	2"	10:59			9.92	23.03	
MW-3A	2"	11:15			12.00	13.83	
MW-3C	2"	11:13			13.42	26.75	
MW-4A	2"	11:11			10.72	14.73	
MW-5A	2"	10:55			13.32	13.52	
MW-5B	2"	10:53			15.15	19.23	
MW-5C	2"	10:51			14.99	26.70	
MW-6A	2"	10:57			8.66	14.92	
MW-7B	2"	11:03			12.15	18.55	
MW-7C	2"	11:01			12.51	24.42	

Comments:

Well Gauging Data Sheet

Project.Task #: 1145.001 216				Project Name: Feiner - 5175 Broadway			
Address: 5175 Broadway, Oakland, CA						Date: 9/12/08	
Name: Sanjiv Gill				Signature: 			
Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point
MW-8A	2"	11:07			11.32	14.90	TDC
MW-8C	2"	11:05			13.15	24.89	
MW-9A	2"	10:47			12.77	15.19	
MW-9C	2"	10:45			12.41	20.45	
MW-10A	2"	10:49			11.06	17.96	

Comments:


MONITORING FIELD DATA SHEET

Well ID: MW-2C

Project.Task #: 1145.001 216				Project Name: Feiner - 5175 Broadway				
Address: 5175 Broadway, Oakland, CA								
Date: 9/12/08				Weather: <i>Cloudy</i>				
Well Diameter: <i>2''</i>		Volume/ft.		1" = 0.04	3" = 0.37	6" = 1.47		
				2" = 0.16	4" = 0.65	radius ² * 0.163		
Total Depth (TD): <i>23.03</i>				Depth to Product:				
Depth to Water (DTW): <i>9.92</i>				Product Thickness:				
Water Column Height: <i>13.11</i>				1 Casing Volume: <i>2.09</i>		gallons		
Reference Point: TOC				<u>3</u> Casing Volumes: <i>6.27</i>		gallons		
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Check Valve Tubing, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<i>9:35</i>	<i>20.2</i>	<i>7.56</i>	<i>926</i>				<i>2</i>	
<i>9:37</i>	<i>20.5</i>	<i>7.49</i>	<i>931</i>				<i>4</i>	
<i>9:40</i>	<i>20.2</i>	<i>7.49</i>	<i>930</i>				<i>6</i>	

Comments: YSI 550A DO meter pre purge DO = mg/l
 post purge DO = mg/l

very turbid, very silty


Sample ID: <i>MW-2C</i>	Sample Time: <i>9:45</i>
Laboratory: McCampbell Analytical, INC.	Sample Date: <i>9/13/08</i>
Containers/Preservative: <i>Voa/HCl</i> , Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET

Well ID: MW-3A

Project.Task #: 1145.001 216		Project Name: Feiner - 5175 Broadway						
Address: 5175 Broadway, Oakland, CA								
Date: 9/12/08		Weather: Sunny						
Well Diameter: 2"		Volume/ft. 1" = 0.04 3" = 0.37 6" = 1.47 2" = 0.16 4" = 0.65 radius ² * 0.163						
Total Depth (TD): 13.83		Depth to Product:						
Depth to Water (DTW): 12.00		Product Thickness:						
Water Column Height: 1.83		1 Casing Volume: 0.29 gallons						
Reference Point: TOC		3 Casing Volumes: 0.87 gallons						
Purging Device: Disposable Bailer, 3" PVC Bailer, Check Valve Tubing, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
3:55	21.7	7.93	847				0.3	
4:00	Dewatered						0.5	

Comments: YSI 550A DO meter pre purge DO = mg/l
post purge DO = mg/l

Sample ID: MW-3A	Sample Time: 11:45
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/13/08
Containers/Preservative: Voa/HCl, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET

Well ID: MW-3C

Project.Task #: 1145.001 216		Project Name: Feiner - 5175 Broadway							
Address: 5175 Broadway, Oakland, CA									
Date: 9/12/08		Weather: <i>Sunny</i>							
Well Diameter: <i>2"</i>		Volume/ft. <table border="1"> <tr> <td>1" = 0.04</td> <td>3" = 0.37</td> <td>6" = 1.47</td> </tr> <tr> <td>2" = 0.16</td> <td>4" = 0.65</td> <td>radius** 0.163</td> </tr> </table>		1" = 0.04	3" = 0.37	6" = 1.47	2" = 0.16	4" = 0.65	radius** 0.163
1" = 0.04	3" = 0.37	6" = 1.47							
2" = 0.16	4" = 0.65	radius** 0.163							
Total Depth (TD): <i>26.75</i>		Depth to Product:							
Depth to Water (DTW): <i>13.42</i>		Product Thickness:							
Water Column Height: <i>13.33</i>		1 Casing Volume: <i>2.13</i> gallons							
Reference Point: TOC		<i>3</i> Casing Volumes: <i>6.39</i> gallons							
Purging Device: Disposable Bailer, 3" PVC Bailer, Check Valve Tubing, Whal Pump									
Sampling Device: Disposable Bailer									
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW	
<i>3:40</i>	<i>19.8</i>	<i>7.12</i>	<i>1740</i>				<i>2</i>		
<i>3:45</i>	<i>Dewatered</i>						<i>*35</i>		
							<i>5</i>		

Comments: YSI 550A DO meter pre purge DO = mg/l
 post purge DO = mg/l
very turbid, very silty, odor

Sample ID: <i>MW-3C</i>	Sample Time: <i>11:35</i>
Laboratory: McCampbell Analytical, INC.	Sample Date: <i>9/13/08</i>
Containers/Preservative: Voa/HCl, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: <i>lg</i>


MONITORING FIELD DATA SHEET

Well ID: **MW-4A**

Project Task #: 1145.001 216			Project Name: Feiner - 5175 Broadway					
Address: 5175 Broadway, Oakland, CA								
Date: 9/12/08			Weather: Cloudy					
Well Diameter: 2"			Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47		
			2" = 0.16	4" = 0.65	radius ² * 0.163			
Total Depth (TD): 14.73			Depth to Product:					
Depth to Water (DTW): 10.72			Product Thickness:					
Water Column Height: 4.01			1 Casing Volume: 0.64			gallons		
Reference Point: TOC			<u>3</u> Casing Volumes: 1.92			gallons		
Purging Device: Disposable Bailer 3" PVC Bailer, Check Valve Tubing, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
10:45	22.0	7.37	1092				0.910	
10:47	22.3	7.30	1105				1.015	
10:50	22.2	7.35	1165				2.020	

Comments: YSI 550A DO meter pre purge DO = mg/l
post purge DO = mg/l

very turbid, very silty, odor, sheen

Sample ID: MW-4A		Sample Time: 10:55	
Laboratory: McCampbell Analytical, INC.		Sample Date: 9/13/08	
Containers/Preservative: Voa/HCl, Amber Liter/HCl			
Analyzed for: 8015, 8021			
Sampler Name: Sanjiv Gill		Signature: 	

MONITORING FIELD DATA SHEET

Well ID: MW-5A

Project.Task #: 1145.001 216		Project Name: Feiner - 5175 Broadway							
Address: 5175 Broadway, Oakland, CA									
Date: 9/12/08		Weather: <u>Cloudy</u>							
Well Diameter: <u>2"</u>		Volume/ft. <table border="1" style="font-size: small;"> <tr> <td>1" = 0.04</td> <td>3" = 0.37</td> <td>6" = 1.47</td> </tr> <tr> <td>2" = 0.16</td> <td>4" = 0.65</td> <td>radius² * 0.163</td> </tr> </table>		1" = 0.04	3" = 0.37	6" = 1.47	2" = 0.16	4" = 0.65	radius ² * 0.163
1" = 0.04	3" = 0.37	6" = 1.47							
2" = 0.16	4" = 0.65	radius ² * 0.163							
Total Depth (TD): <u>13.52</u>		Depth to Product:							
Depth to Water (DTW): <u>13.32</u>		Product Thickness:							
Water Column Height: <u>0.20</u>		1 Casing Volume: <u>0.03</u> gallons							
Reference Point: TOC		<u>3</u> Casing Volumes: <u>0.09</u> gallons							
Purging Device: Disposable Bailer, 3" PVC Bailer, Check Valve Tubing, Whal Pump									
Sampling Device: Disposable Bailer									
Time	Temp @	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW	
<u>Insufficient water</u>									

Comments: YSI 550A DO meter pre purge DO = mg/l
post purge DO = mg/l

Sample ID:	Sample Time:
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/ /08
Containers/Preservative: Voa/HCl, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:


MONITORING FIELD DATA SHEET

Well ID: MW-5B

Project.Task #: 1145.001 216				Project Name: Feiner - 5175 Broadway					
Address: 5175 Broadway, Oakland, CA									
Date: 9/12/08				Weather: <u>Sunny</u>					
Well Diameter: <u>2"</u>				Volume/ft.		1" = 0.04		3" = 0.37	6" = 1.47
						2" = 0.16		4" = 0.65	radius ² * 0.163
Total Depth (TD): <u>19.23</u>				Depth to Product:					
Depth to Water (DTW): <u>15.15</u>				Product Thickness:					
Water Column Height: <u>4.08</u>				1 Casing Volume: <u>0.65</u>		gallons			
Reference Point: TOC				3 Casing Volumes: <u>1.95</u>		gallons			
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Check Valve Tubing, Whal Pump									
Sampling Device: Disposable Bailer									
Time	Temp @	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW	
<u>2:10</u>	<u>19.8</u>	<u>6.79</u>	<u>1393</u>				<u>1.0</u>		
<u>2:20</u>	<u>Dewatered</u>						<u>1.5</u>		
							2.0		

9-12-08

Comments: YSI 550A DO meter pre purge DO = _____ mg/l
 post purge DO = _____ mg/l


Sample ID: <u>MW-5B</u>	Sample Time: <u>11:10</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: <u>9/13/08</u>
Containers/Preservative: <u>Voa/HCl, Amber Liter/HCl</u>	
Analyzed for: <u>8015, 8021</u>	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET

Well ID: MW-5C

Project Task #: 1145.001 216		Project Name: Feiner - 5175 Broadway						
Address: 5175 Broadway, Oakland, CA								
Date: 9/12/08		Weather: <u>Sunny</u>						
Well Diameter: <u>2''</u>	Volume/ft.	1" = 0.04	3" = 0.37					
		2" = 0.16	4" = 0.65					
6" = 1.47		radius ² * 0.163						
Total Depth (TD): <u>26.70</u>	Depth to Product:							
Depth to Water (DTW): <u>14.99</u>	Product Thickness:							
Water Column Height: <u>11.71</u>	1 Casing Volume: <u>1.87</u>		gallons					
Reference Point: TOC	3 Casing Volumes: <u>5.61</u>		gallons					
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Check Valve Tubing, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>1:45</u>	<u>19.7</u>	<u>6.71</u>	<u>1746</u>				<u>2</u>	
<u>1:50</u>	<u>18.9</u>	<u>6.78</u>	<u>1790</u>				<u>4</u>	
<u>1:55</u>	<u>18.9</u>	<u>6.79</u>	<u>1765</u>				<u>5.5</u>	

Comments: YSI 550A DO meter pre purge DO = mg/l
 post purge DO = mg/l
Very turbid, very silty

Sample ID: <u>MW-5C</u>	Sample Time: <u>2:00</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: <u>9/12/08</u>
Containers/Preservative: Voa/HCl, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 


MONITORING FIELD DATA SHEET

Well ID: MW-6A

Project.Task #: 1145.001 216		Project Name: Feiner - 5175 Broadway							
Address: 5175 Broadway, Oakland, CA									
Date: 9/12/08		Weather: <i>Cloudy</i>							
Well Diameter: <i>2"</i>		Volume/ft. <table border="1"> <tr> <td>1" = 0.04</td> <td>3" = 0.37</td> <td>6" = 1.47</td> </tr> <tr> <td>2" = 0.16</td> <td>4" = 0.65</td> <td>radius² * 0.163</td> </tr> </table>		1" = 0.04	3" = 0.37	6" = 1.47	2" = 0.16	4" = 0.65	radius ² * 0.163
1" = 0.04	3" = 0.37	6" = 1.47							
2" = 0.16	4" = 0.65	radius ² * 0.163							
Total Depth (TD): <i>14.92</i>		Depth to Product:							
Depth to Water (DTW): <i>8.66</i>		Product Thickness:							
Water Column Height: <i>6.26</i>		1 Casing Volume: 1.00 <i>1.00</i> gallons							
Reference Point: TOC		<i>3</i> Casing Volumes: <i>3.00</i> gallons							
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Check Valve Tubing, Whal Pump									
Sampling Device: Disposable Bailer									
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW	
<i>9:15</i>	<i>20.3</i>	<i>7.31</i>	<i>1134</i>				<i>1</i>		
<i>9:17</i>	<i>20.5</i>	<i>7.29</i>	<i>1163</i>				<i>2</i>		
<i>9:20</i>	<i>20.2</i>	<i>7.27</i>	<i>1165</i>				<i>3</i>		

Comments: YSI 550A DO meter pre purge DO = mg/l
 post purge DO = mg/l

very turbid, very silty

Sample ID: <i>MW-6A</i>	Sample Time: <i>9:25</i>
Laboratory: McCampbell Analytical, INC.	Sample Date: <i>9/13/08</i>
Containers/Preservative: Voa/HCl, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET


Well ID: MW-7B

Project.Task #: 1145.001 216				Project Name: Feiner - 5175 Broadway				
Address: 5175 Broadway, Oakland, CA								
Date: 9/12/08				Weather: <u>Sunny</u>				
Well Diameter: <u>2"</u>				Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47	
				2" = 0.16	4" = 0.65	radius = 0.163		
Total Depth (TD): <u>18.55</u>				Depth to Product:				
Depth to Water (DTW): <u>12.15</u>				Product Thickness:				
Water Column Height: <u>6.40</u>				1 Casing Volume:	<u>1.02</u>	gallons		
Reference Point: TOC				3 Casing Volumes:	<u>3.06</u>	gallons		
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Check Valve Tubing, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp @	pH	Cond (μ s)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>3:25</u>	<u>20.1</u>	<u>7.31</u>	<u>1389</u>				<u>1</u>	
<u>3:30</u>	<u>Dewatered</u>						<u>1.5</u>	
							<u>5</u>	

Comments: YSI 550A DO meter pre purge DO = mg/l

post purge DO = mg/l

very turbid, very silty, light sheen

Sample ID: <u>MW-7B</u>	Sample Time: <u>11:30</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: <u>9/13/08</u>
Containers/Preservative: <u>Voal/HCl, Amber Liter/HCl</u>	
Analyzed for: <u>8015, 8021</u>	
Sampler Name: <u>Sanjiv Gill</u>	Signature: 


MONITORING FIELD DATA SHEET

Well ID: **MW-7C**

Project.Task #: 1145.001 216		Project Name: Feiner - 5175 Broadway						
Address: 5175 Broadway, Oakland, CA								
Date: 9/12/08		Weather: Sunny						
Well Diameter: 2"	Volume/ft.	1" = 0.04 2" = 0.16	3" = 0.37 4" = 0.65 6" = 1.47 radius ² * 0.163					
Total Depth (TD): 24.42	Depth to Product:							
Depth to Water (DTW): 12.51	Product Thickness:							
Water Column Height: 11.91	1 Casing Volume: 1.90	gallons						
Reference Point: TOC	3 Casing Volumes: 5.70	gallons						
Purging Device: <u>Disposable Bailer</u> 3" PVC Bailer, Check Valve Tubing, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
3:10	20.5	7.35	1496				2	
3:15	Deaerated						3.5 6	

Comments: YSI 550A DO meter pre purge DO = mg/l
 post purge DO = mg/l

very turbid, very silty, light sheen


Sample ID: MW-7C	Sample Time: 11:20
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/13/08
Containers/Preservative: Voa/HCl, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET

Well ID: MW-8A

Project.Task #: 1145.001 216		Project Name: Feiner - 5175 Broadway	
Address: 5175 Broadway, Oakland, CA			
Date: 9/12/08		Weather: Sunny	
Well Diameter: 2"	Volume/ft.	1" = 0.04	3" = 0.37
		2" = 0.16	4" = 0.65
Total Depth (TD): 14.90		Depth to Product:	
Depth to Water (DTW): 11.32		Product Thickness:	
Water Column Height: 3.58		1 Casing Volume: 0.57 gallons	
Reference Point: TOC		3 Casing Volumes: 1.71 gallons	
Purging Device: Disposable Bailer, 3" PVC Bailer, Check Valve Tubing, Whal Pump			
Sampling Device: Disposable Bailer			
Time	Temp @	pH	Cond (µs)
2:55	20.1	7.04	1532
2:57	19.7	6.95	1520
3:00	19.6	6.95	1514

Comments: YSI 550A DO meter pre purge DO = mg/l
 post purge DO = mg/l
 very turbid, very silty, odor

Sample ID: MW-8A	Sample Time: 3:05
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/12/08
Containers/Preservative: Voa/HCl, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET


Well ID: **MW-8C**

Project Task #: 1145.001 216		Project Name: Feiner - 5175 Broadway							
Address: 5175 Broadway, Oakland, CA									
Date: 9/12/08		Weather: Sunny							
Well Diameter: 2"		Volume/ft. <table border="1"> <tr> <td>1" = 0.04</td> <td>3" = 0.37</td> <td>6" = 1.47</td> </tr> <tr> <td>2" = 0.16</td> <td>4" = 0.65</td> <td>radius² * 0.163</td> </tr> </table>		1" = 0.04	3" = 0.37	6" = 1.47	2" = 0.16	4" = 0.65	radius ² * 0.163
1" = 0.04	3" = 0.37	6" = 1.47							
2" = 0.16	4" = 0.65	radius ² * 0.163							
Total Depth (TD): 24.89		Depth to Product:							
Depth to Water (DTW): 13.15		Product Thickness:							
Water Column Height: 11.74		1 Casing Volume: 1.87 gallons							
Reference Point: TOC		3 Casing Volumes: 5.61 gallons							
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Check Valve Tubing, Whal Pump									
Sampling Device: Disposable Bailer									
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW	
2:30	19.7	7.21	1558				2		
2:40	18.9	7.19	1543				4		
2:45	De-watered						4.5		

9-12-08

Comments: YSI 550A DO meter pre purge DO = mg/l
 post purge DO = mg/l

very turbid, very silty


Sample ID: MW-8C	Sample Time: 11:15
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/13/08
Containers/Preservative: Voa/HCl, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET

Well ID: MW-9A

Project.Task #: 1145.001 216				Project Name: Feiner - 5175 Broadway										
Address: 5175 Broadway, Oakland, CA														
Date: 9/12/08				Weather: <u>Cloudy</u>										
Well Diameter: <u>2"</u>				Volume/ft. <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1" = 0.04</td><td>3" = 0.37</td><td>6" = 1.47</td></tr><tr><td>2" = 0.16</td><td>4" = 0.65</td><td>radius² * 0.163</td></tr></table>					1" = 0.04	3" = 0.37	6" = 1.47	2" = 0.16	4" = 0.65	radius ² * 0.163
1" = 0.04	3" = 0.37	6" = 1.47												
2" = 0.16	4" = 0.65	radius ² * 0.163												
Total Depth (TD): <u>15.19</u>				Depth to Product:										
Depth to Water (DTW): <u>12.77</u>				Product Thickness:										
Water Column Height: <u>2.42</u>				1 Casing Volume: <u>0.38</u> gallons										
Reference Point: TOC				3 Casing Volumes: <u>1.14</u> gallons										
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Check Valve Tubing, What Pump														
Sampling Device: Disposable Bailer														
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW						
<u>12:40</u>	<u>21.5</u>	<u>7.63</u>	<u>987</u>				<u>.3</u>							
<u>12:45</u>	<u>21.4</u>	<u>7.70</u>	<u>995</u>				<u>.6</u>							
<u>12:50</u>	<u>21.3</u>	<u>7.70</u>	<u>1010</u>				<u>1.0</u>							

Comments: YSI 550A DO meter pre purge DO = mg/l
 post purge DO = mg/l
very turbid, very silty


Sample ID: <u>MW-9A</u>		Sample Time: <u>1:00</u>	
Laboratory: McCampbell Analytical, INC.		Sample Date: <u>9/12/08</u>	
Containers/Preservative: <u>Voa/HCl, Amber Liter/HCl</u>			
Analyzed for: <u>8015, 8021</u>			
Sampler Name: Sanjiv Gill		Signature: 	

MONITORING FIELD DATA SHEET

Well ID: **MW-9C**

Project.Task #: 1145.001 216		Project Name: Feiner - 5175 Broadway						
Address: 5175 Broadway, Oakland, CA								
Date: 9/12/08			Weather: Cloudy					
Well Diameter: 2"		Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47			
		2" = 0.16	4" = 0.65	radius* 0.163				
Total Depth (TD): 20.45		Depth to Product:						
Depth to Water (DTW): 12.41		Product Thickness:						
Water Column Height: 8.04		1 Casing Volume: 1.28		gallons				
Reference Point: TOC		3 Casing Volumes: 3.84		gallons				
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Check Valve Tubing, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:00	21.3	7.71	563				1.5	
12:05	20.7	7.80	541				3	
12:15	20.5	7.80	567				4	

Comments: YSI 550A DO meter pre purge DO = mg/l
 post purge DO = mg/l
very turbid, very silty

Sample ID: MW-9C	Sample Time: 12:25
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/12/08
Containers/Preservative: Voa/HCl, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 


MONITORING FIELD DATA SHEET

Well ID: MW-10A

Project.Task #: 1145.001 216		Project Name: Feiner - 5175 Broadway							
Address: 5175 Broadway, Oakland, CA									
Date: 9/12/08		Weather: <u>Cloudy</u>							
Well Diameter: <u>2''</u>		Volume/ft. <table border="1"> <tr> <td>1" = 0.04</td> <td>3" = 0.37</td> <td>6" = 1.47</td> </tr> <tr> <td>2" = 0.16</td> <td>4" = 0.65</td> <td>radius = 0.163</td> </tr> </table>		1" = 0.04	3" = 0.37	6" = 1.47	2" = 0.16	4" = 0.65	radius = 0.163
1" = 0.04	3" = 0.37	6" = 1.47							
2" = 0.16	4" = 0.65	radius = 0.163							
Total Depth (TD): <u>17.96</u>		Depth to Product:							
Depth to Water (DTW): <u>11.06</u>		Product Thickness:							
Water Column Height: <u>6.90</u>		1 Casing Volume: <u>1.10</u> gallons							
Reference Point: TOC		<u>3</u> Casing Volumes: <u>3.30</u> gallons							
Purging Device: <u>Disposable Bailer</u> 3" PVC Bailer, Check Valve Tubing, Whal Pump									
Sampling Device: Disposable Bailer									
Time	Temp @	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW	
<u>1:20</u>	<u>22.7</u>	<u>7.20</u>	<u>933</u>				<u>1</u>		
<u>1:22</u>	<u>21.8</u>	<u>7.25</u>	<u>935</u>				<u>2</u>		
<u>1:25</u>	<u>21.9</u>	<u>7.28</u>	<u>887</u>				<u>3</u>		

Comments: YSI 550A DO meter pre purge DO = mg/l
 post purge DO = mg/l

very turbid, very silty

Sample ID: <u>MW-10A</u>	Sample Time: <u>1:30</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: <u>9/12/08</u>
Containers/Preservative: <u>Voa/HCl, Amber Liter/HCl</u>	
Analyzed for: <u>8015, 8021</u>	
Sampler Name: Sanjiv Gill	Signature: 

APPENDIX B

Laboratory Analytical Report



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mcccampbell.com E-mail: main@mcccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1145.001; Feiner-5175 Broadway	Date Sampled: 09/12/08-09/13/08
	Client Contact: Celia Costarella	Date Received: 09/15/08
	Client P.O.:	Date Reported: 09/22/08
		Date Completed: 09/22/08

WorkOrder: 0809413

September 22, 2008

Dear Celia:

Enclosed within are:

- 1) The results of the **15** analyzed samples from your project: **#1145.001; Feiner-5175 Broadway,**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McC Campbell Analytical, Inc.



McC Campbell Analytical, Inc.

"When Quality Counts"

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Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1145.001; Feiner-5175 Broadway	Date Sampled: 09/12/08-09/13/08
	Client Contact: Celia Costarella	Date Received: 09/15/08
	Client P.O.:	Date Extracted: 09/17/08-09/19/08
		Date Analyzed 09/17/08-09/19/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0809413

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	1000,d1	ND	13	ND	0.61	1.4	1	115
002A	MW-2C	W	130,d1,b1	ND	7.1	ND	1.2	0.83	1	108
003A	MW-3A	W	26,000,d1	ND<100	2100	29	560	280	20	110
004A	MW-3C	W	40,000,d1	ND<500	1100	1200	600	3000	100	100
005A	MW-4A	W	110,000,d1,d7	ND<500	1400	ND<50	210	660	100	106
006A	MW-5B	W	ND,b1	ND	ND	ND	ND	ND	1	99
007A	MW-5C	W	ND,b1	ND	ND	ND	ND	ND	1	97
008A	MW-6A	W	ND,b1	ND	ND	ND	ND	ND	1	95
009A	MW-7B	W	16,000,d1,b6	ND<120	450	340	19	1300	10	98
010A	MW-7C	W	7600,d1	ND<50	260	38	76	330	10	108
011A	MW-8A	W	11,000,d1	ND<50	220	31	110	180	10	119
012A	MW-8C	W	ND	ND	ND	ND	ND	ND	1	96
013A	MW-9A	W	ND	ND	1.2	ND	ND	ND	1	103
014A	MW-9C	W	ND,b1	ND	ND	ND	ND	ND	1	95
015A	MW-10A	W	ND,b1	ND	ND	ND	ND	ND	1	98

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

- b1) aqueous sample that contains greater than ~1 vol. % sediment
- b6) lighter than water immiscible sheen/product is present
- d1) weakly modified or unmodified gasoline is significant
- d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram



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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1145.001; Feiner-5175 Broadway	Date Sampled: 09/12/08-09/13/08
	Client Contact: Celia Costarella	Date Received: 09/15/08
	Client P.O.:	Date Analyzed 09/17/08-09/18/08
		Date Extracted: 09/15/08

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up*

Extraction method SW3510C/3630C

Analytical methods: SW8015C

Work Order: 0809413

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS
0809413-001B	MW-1	W	320,e11	1	118
0809413-002B	MW-2C	W	ND,b1	1	119
0809413-003B	MW-3A	W	9000,e4	1	123
0809413-004B	MW-3C	W	11,000,e4	10	128
0809413-005B	MW-4A	W	120,000,e11,b6	10	128
0809413-006B	MW-5B	W	ND,b1	1	119
0809413-007B	MW-5C	W	ND,b1	1	119
0809413-008B	MW-6A	W	510,e7,e11,b1	1	119
0809413-009B	MW-7B	W	27,000,e11,b6	10	127
0809413-010B	MW-7C	W	2600,e4	1	120
0809413-011B	MW-8A	W	9900,e11	1	118
0809413-012B	MW-8C	W	ND	1	117
0809413-013B	MW-9A	W	ND	1	119
0809413-014B	MW-9C	W	ND,b1	1	118
0809413-015B	MW-10A	W	ND,b1	1	118

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract/matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

- b1) aqueous sample that contains greater than ~1 vol. % sediment
- b6) lighter than water immiscible sheen/product is present
- e4) gasoline range compounds are significant.
- e7) oil range compounds are significant
- e11) stoddard solvent/mineral spirit



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 38218

WorkOrder 0809413

EPA Method SW8021B/8015Cm		Extraction SW5030B							Spiked Sample ID: 0809406-001B			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) [£]	ND	60	109	111	2.00	78.3	80.5	2.69	70 - 130	20	70 - 130	20
MTBE	ND	10	81.1	81.3	0.273	92.6	95.9	3.43	70 - 130	20	70 - 130	20
Benzene	ND	10	84.4	86.3	2.13	89.9	96.6	7.13	70 - 130	20	70 - 130	20
Toluene	ND	10	84	84.9	1.04	80.3	85.7	6.52	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	85.8	87.7	2.16	89.2	94.9	6.14	70 - 130	20	70 - 130	20
Xylenes	ND	30	85.8	87.4	1.87	88.6	93.1	4.99	70 - 130	20	70 - 130	20
%SS:	115	10	98	96	1.65	99	102	3.59	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 38218 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809413-001A	09/13/08 10:20 AM	09/17/08	09/17/08 6:55 PM	0809413-002A	09/13/08 9:45 AM	09/17/08	09/17/08 7:25 PM
0809413-003A	09/13/08 11:45 AM	09/17/08	09/17/08 11:57 PM	0809413-004A	09/13/08 11:35 AM	09/17/08	09/17/08 6:42 AM
0809413-005A	09/13/08 10:55 AM	09/17/08	09/17/08 7:12 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 38229

WorkOrder 0809413

EPA Method SW8021B/8015Cm		Extraction SW5030B							Spiked Sample ID: 0809428-001			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) ^f	ND	60	97.2	97	0.242	97	102	4.93	70 - 130	20	70 - 130	20
MTBE	ND	10	101	97.5	3.27	116	114	1.55	70 - 130	20	70 - 130	20
Benzene	ND	10	90.3	87.7	2.80	95.7	94	1.80	70 - 130	20	70 - 130	20
Toluene	0.99	10	80.6	78.1	2.79	106	104	1.91	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	98.4	96.2	2.28	105	104	1.14	70 - 130	20	70 - 130	20
Xylenes	ND	30	109	107	1.98	116	115	0.728	70 - 130	20	70 - 130	20
%SS:	92	10	93	94	1.67	98	93	4.26	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 38229 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809413-006A	09/13/08 11:10 AM	09/17/08	09/17/08 8:25 PM	0809413-007A	09/12/08 2:00 PM	09/17/08	09/17/08 8:24 AM
0809413-008A	09/13/08 9:25 AM	09/18/08	09/18/08 8:03 AM	0809413-009A	09/13/08 11:30 AM	09/18/08	09/18/08 9:09 AM
0809413-010A	09/13/08 11:20 AM	09/17/08	09/17/08 5:47 PM	0809413-011A	09/12/08 3:05 PM	09/19/08	09/19/08 1:24 AM
0809413-012A	09/13/08 11:15 AM	09/18/08	09/18/08 12:57 AM	0809413-013A	09/12/08 1:00 PM	09/19/08	09/19/08 3:20 PM
0809413-014A	09/12/08 12:25 PM	09/18/08	09/18/08 10:23 PM	0809413-015A	09/12/08 1:30 PM	09/17/08	09/17/08 4:40 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 38228

WorkOrder 0809413

EPA Method SW8015C		Extraction SW3510C/3630C							Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	99.7	95.9	3.83	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	118	116	1.16	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 38228 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809413-001B	09/13/08 10:20 AM	09/15/08	09/17/08 6:02 AM	0809413-002B	09/13/08 9:45 AM	09/15/08	09/17/08 7:10 AM
0809413-003B	09/13/08 11:45 AM	09/15/08	09/18/08 2:37 AM	0809413-004B	09/13/08 11:35 AM	09/15/08	09/18/08 4:53 AM
0809413-005B	09/13/08 10:55 AM	09/15/08	09/17/08 11:12 PM	0809413-006B	09/13/08 11:10 AM	09/15/08	09/17/08 11:46 AM
0809413-007B	09/12/08 2:00 PM	09/15/08	09/17/08 9:29 AM	0809413-008B	09/13/08 9:25 AM	09/15/08	09/17/08 12:54 PM
0809413-009B	09/13/08 11:30 AM	09/15/08	09/17/08 8:55 PM	0809413-010B	09/13/08 11:20 AM	09/15/08	09/17/08 2:03 PM
0809413-011B	09/12/08 3:05 PM	09/15/08	09/17/08 3:13 PM	0809413-012B	09/13/08 11:15 AM	09/15/08	09/17/08 5:30 PM
0809413-013B	09/12/08 1:00 PM	09/15/08	09/17/08 6:38 PM	0809413-014B	09/12/08 12:25 PM	09/15/08	09/17/08 7:46 PM
0809413-015B	09/12/08 1:30 PM	09/15/08	09/18/08 3:45 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**

Date and Time Received: **09/15/08 10:16:01 AM**

Project Name: **#1145.001; Feiner-5175 Broadway**

Checklist completed and reviewed by: **Maria Venegas**

WorkOrder N°: **0809413** Matrix Water

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Sample IDs noted by Client on COC? Yes No
- Date and Time of collection noted by Client on COC? Yes No
- Sampler's name noted on COC? Yes No

Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes No NA
- Shipping container/cooler in good condition? Yes No
- Samples in proper containers/bottles? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes No
- Container/Temp Blank temperature Cooler Temp: 2.6°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
- Sample labels checked for correct preservation? Yes No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes No NA
- Samples Received on Ice? Yes No

(Ice Type: WET ICE)

* NOTE: If the "No" box is checked, see comments below.

Client contacted:

Date contacted:

Contacted by:

Comments:

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
 Pittsburg, CA 94565-1701
 (925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0809413

ClientCode: PEO

WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:		Bill to:	Requested TAT: 5 days
Celia Costarella	Email: ccostarella@pangeaenv.com	Bob Clark-Riddell	
Pangea Environmental Svcs., Inc.	cc:	Pangea Environmental Svcs., Inc.	Date Received: 09/15/2008
1710 Franklin Street, Ste. 200	PO:	1710 Franklin Street, Ste. 200	Date Printed: 09/15/2008
Oakland, CA 94612	ProjectNo: #1145.001; Feiner-5175 Broadway	Oakland, CA 94612	
(510) 836-3700 FAX (510) 836-3709			

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0809413-015	MW-10A	Water	9/12/2008 13:30	<input type="checkbox"/>	A		B										

Test Legend:

1	G-MBTX_W	2	PREDF REPORT	3	TPH(D)WSG_W	4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
 Hazardous samples will be returned to client or disposed of at client expense.

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0809413

ClientCode: PEO

WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:	Celia Costarella	Email: ccostarella@pangeaenv.com	Bill to:	Bob Clark-Riddell	Requested TAT: 5 days
	Pangea Environmental Svcs., Inc.	cc:		Pangea Environmental Svcs., Inc.	Date Received: 09/15/2008
	1710 Franklin Street, Ste. 200	PO:		1710 Franklin Street, Ste. 200	Date Printed: 09/15/2008
	Oakland, CA 94612	ProjectNo: #1145.001; Feiner-5175 Broadway		Oakland, CA 94612	
	(510) 836-3700 FAX (510) 836-3709				

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0809413-001	MW-1	Water	9/13/2008 10:20	<input type="checkbox"/>	A	A	B									
0809413-002	MW-2C	Water	9/13/2008 9:45	<input type="checkbox"/>	A		B									
0809413-003	MW-3A	Water	9/13/2008 11:45	<input type="checkbox"/>	A		B									
0809413-004	MW-3C	Water	9/13/2008 11:35	<input type="checkbox"/>	A		B									
0809413-005	MW-4A	Water	9/13/2008 10:55	<input type="checkbox"/>	A		B									
0809413-006	MW-5B	Water	9/13/2008 11:10	<input type="checkbox"/>	A		B									
0809413-007	MW-5C	Water	9/12/2008 14:00	<input type="checkbox"/>	A		B									
0809413-008	MW-6A	Water	9/13/2008 9:25	<input type="checkbox"/>	A		B									
0809413-009	MW-7B	Water	9/13/2008 11:30	<input type="checkbox"/>	A		B									
0809413-010	MW-7C	Water	9/13/2008 11:20	<input type="checkbox"/>	A		B									
0809413-011	MW-8A	Water	9/12/2008 15:05	<input type="checkbox"/>	A		B									
0809413-012	MW-8C	Water	9/13/2008 11:15	<input type="checkbox"/>	A		B									
0809413-013	MW-9A	Water	9/12/2008 13:00	<input type="checkbox"/>	A		B									
0809413-014	MW-9C	Water	9/12/2008 12:25	<input type="checkbox"/>	A		B									

Test Legend:

1	G-MBTX_W	2	PREF REPORT	3	TPH(D)WSG_W	4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

0809413

<p align="center">Pangea Environmental Services, Inc. 1710 Franklin Street Oakland, CA 94612 Website: www.pangeaenv.com Telephone: (510) 836-3700 Fax: (510) 836-3709</p>	<p align="center">CHAIN OF CUSTODY RECORD</p> <p>TURN AROUND TIME <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/></p> <p align="right">RUSH 24 HR 48 HR 72 HR 5 DAY</p> <p>EDF Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Normal) No Write On (DW) No</p>
---	---

Report To: Celia Costarella	Bill To: Pangea
Company: Pangea Environmental Technology, Inc. 1710 Franklin Street, Suite 200, Oakland, CA 94612	
E-Mail: ccostarella@pangeaenv.com	
Tele: (510) 735-1751	Fax: (510) 836-3709
Project #: 1145.001	Project Name: Feiner-5175 Broadway
Project Location: 5175 Broadway, Oakland, CA	
Sampler Signature: <i>Muska Environmental Sampling</i>	

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other			
+ MW-1		9-13-08	10:20	3	Vol. Amb	X					X	X					Filter Samples for Metals analysis: Yes / No
+ MW-2C		9-13-08	9:45														
+ MW-3A		9-13-08	11:45														
+ MW-3C		9-13-08	11:35														
+ MW-4A		9-13-08	10:55														
+ MW-5B		9-13-08	11:10														
+ MW-5C		9-12-08	2:00														
+ MW-6A		9-13-08	9:25														
+ MW-7B		9-13-08	11:30														
+ MW-7C		9-13-08	11:20														
+ MW-8A		9-12-08	3:05														
+ MW-8C		9-13-08	11:15														
+ MW-9A		9-12-08	1:00														
+ MW-9C		9-12-08	12:25														

Relinquished By: <i>[Signature]</i>	Date: 9-15-08	Time: 9:05	Received By: <i>[Signature]</i>	COMMENTS: ICE/° 2.6 GOOD CONDITION ✓ HEAD SPACE ABSENT ✓ DECHLORINATED IN LAB ✓ APPROPRIATE CONTAINERS ✓ PRESERVED IN LAB ✓ VOAS ✓ O&G METALS OTHER PRESERVATION ✓ pH<2
Relinquished By: <i>[Signature]</i>	Date: 9/15/08	Time: 9:30	Received By: <i>[Signature]</i>	
Relinquished By:	Date:	Time:	Received By:	

Pangea Environmental Services, Inc.

1710 Franklin Street
Oakland, CA 94612

Website: www.pangeaenv.com

Telephone: (510) 836-3700

Fax: (510) 836-3709

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? Yes No (Normal) No Write On (DW) No

Report To: Celia Costarella Bill To: Pangea
 Company: Pangea Environmental Technology, Inc.
 1710 Franklin Street, Suite 200, Oakland, CA 94612
 E-Mail: ccostarella@pangeaenv.com
 Tele: (510) 735-1751 Fax: (510) 836-3709
 Project #: 1145.001 Project Name: Feine-5175 Broadway
 Project Location: 5175 Broadway, Oakland, CA
 Sampler Signature: *Muskan Environmental Sampling*

Analysis Request

Other

Comments

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		CONTAINERS		MATRIX					METHOD PRESERVED				Analysis Request	Other	Comments	
		Date	Time	#	Type	Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other				
MJ-10A		9-12-08	1:30	3 2	VOR A/B	X	X				X	X						Filter Samples for Metals analysis: Yes / No

Relinquished By: <i>[Signature]</i>	Date: 9-15-08	Time: 9:05	Received By: <i>[Signature]</i>
Relinquished By: <i>[Signature]</i>	Date: 9/15/08	Time: 9:50	Received By: <i>[Signature]</i>
Relinquished By:	Date:	Time:	Received By:

ICE/r _____
 GOOD CONDITION _____
 HEAD SPACE ABSENT _____
 DECHLORINATED IN LAB _____
 APPROPRIATE CONTAINERS _____
 PRESERVED IN LAB _____

VOAS O&G METALS OTHER
 PRESERVATION pH<2

COMMENTS: