July 16, 2007

VIA ALAMEDA COUNTY FTP SITE

Ms. Donna Drogos
Alameda County Environmental Health
1331 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: **Groundwater Monitoring Report – First Quarter 2007**
Former Exxon Station
5175 Broadway Street
Oakland, California
ACEH Fuel Leak Case No. RO#0000139

Dear Ms. Drogos:

On behalf of Rockridge Heights, LLC, Pangea Environmental Services, Inc., has prepared this *Groundwater Monitoring Report – First Quarter 2007.* 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 the ACEH.

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

Sincerely,
Pangea Environmental Services, Inc.

Bob Clark-Riddell, P.E.
Principal Engineer

Attachment: *Groundwater Monitoring Report – First Quarter 2007*

cc: Rockridge Heights, LLC, C/O Gary Feiner, 34 Schooner Hill, Oakland, California, 94618
RWQCB – SF Bay Region, Cherie McCaulou, 1515 Clay Street, Oakland, California 94612
Vera Stanovich, 1956 Stratton Circle, Walnut Creek, California 94598
SWRCB Geotracker (Electronic copy)

GROUNDWATER MONITORING REPORT – FIRST QUARTER 2007

Former Exxon Station
5175 Broadway
Oakland, California

July 16, 2007

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

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 Figure 2 and 3. Current and historical data are summarized on Table 1.

SITE BACKGROUND

The site is located at 5175 Broadway, at the southwest corner of Broadway and Coronado Avenue in Oakland, California (Figure 1). The site is situated on top of a ridge extending from the base of the East Bay Berkeley Hills into the East Bay Plain. Highway 24 is approximately 0.6 miles to the north-northwest, and San Francisco Bay and Interstate 80 lie approximately 2.3 miles to the west. The site 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. The topography slopes gently away from the site in all directions except northeast. The site has not been operated as a gas station since at least 1979, and is currently vacant and surrounded by a locked fence. The western site boundary is the top of an approximately 10 foot high retaining wall that separates the site from an adjacent apartment complex. Surrounding land use is mixed residential and light commercial.

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. 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.

In January and March 2007, Pangea installed twelve onsite monitoring 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 installed three offsite soil borings to help define the vertical and lateral extent of groundwater contamination. 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 which generally straddle the top of the water table. Intermediate-depth (B-zone) wells are screened at approximately 15 to 20 feet bgs, while deep (C-zone) wells are generally screened at approximately 20 to 25 feet bgs and into fractured bedrock/mudstone. Well MW-1 is screened across both the A-zone and B-zone.

Also, in January and March 2007, Pangea 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. 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

GROUNDWATER MONITORING AND SAMPLING

Groundwater monitoring this quarter involved sampling of all five site wells prior to select well abandonment followed by sampling of the twelve onsite wells installed this quarter. Monitoring and sampling was conducted on several different dates to accommodate the well installation schedule, to locate missing well MW-3, and to re-gauging all wells for more representative water level information.

On January 9, 2007, Pangea conducted initial monitoring of the five groundwater monitoring wells. Groundwater samples were collected from wells MW-1, MW-2 and STMW-5; well STMW-4 was not sampled due to the presence of SPH and well MW-3 could not be located. While the prior consultant (GGTR) could not locate well MW-3, Pangea was able to locate the well which was buried and had not been sampled since 2002. Pangea sampled well MW-3 on January 22, 2007 during well installation activities to control cost.

On March 9, 2007, Pangea conducted monitoring of eleven new monitoring wells (MW-2C, MW-3A, MW-4A, MW-5A, MW-5B, MW-5C, MW-6A, MW-7B, MW-7C, MW-8A and MW-8C). During the March 9 monitoring event Pangea removed well caps prior to measuring water levels, but the depth to water in several wells continued to slowly rise. To obtain water level data more representative of the piezometric surface, Pangea re-gauged the wells on March 26, 2007 after removing all the well caps at least 24 hours prior to gauging to allow water levels to equilibrate (the re-gauging was conducted in conjunction with development

of well MW-3C to control cost). The twelfth and final new onsite monitoring well (MW-3C) was sampled on April 16.

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 most deeper wells (MW-5B, MW-7B, MW-7C and MW-8C) dewatered during purging. During well purging, field technicians measured the pH, temperature and conductivity. 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. Field data sheets are presented as Appendix A.

MONITORING RESULTS

Groundwater elevation and analytical data are described below and summarized on Table 1 and Figure 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, ethylene, xylenes (BTEX) 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

Shallow Groundwater: Based on depth-to-water data collected March 26, 2007, elevation data and the inferred flow directions for shallow A-zone groundwater are shown on Figure 2. As shown on Figure 2, groundwater in A-zone groundwater appears to have mounded in the former UST excavation, and the apparent gradient radiates outwards towards the east, south and west, although regional groundwater flow is generally towards the south and southwest. This observation suggests that the unpaved former UST excavation has acted as a collector for rainwater during the rainy season and that the asphalt pavement covering the remainder of the site serves to reduce infiltration elsewhere and likely directs rainwater to the unpaved UST excavation area. The current inferred flow direction in A-zone groundwater southwest of the former UST excavation area is generally consistent with previous quarterly monitoring events, while the new A-zone wells provide additional data to infer the radial groundwater flow from the former UST area.

Deep Groundwater: Elevation data for both B-zone and C-zone groundwater and the inferred flow direction for C-zone groundwater are shown on Figure 3. The horizontal component of flow for the C-zone groundwater is westwards to southwestwards, as shown on Figure 3. The elevation of the piezometric surface

for deep C-zone wells is lower than elevations for A-zone wells, indicating that a downward gradient is present. No previous data have been collected regarding the direction of flow of C-zone groundwater.

Hydrocarbon and Fuel Oxygenate Distribution in Groundwater

Free Product (SPH): During purging of well STMW-4, SPH were observed on the bailer after removing approximately 5 gallons of groundwater from the well. Purging was stopped and SPH were measured at a thickness of 0.03 ft. A thin layer of SPH has been observed in well STMW-4 during the last three quarters of monitoring. No SPH were detected in any other site wells this quarter, including well MW-4A, which was subsequently installed (though with a shallower screened interval) in the drilled out borehole of STMW-4.

Maximum Concentrations: The maximum TPHg concentrations this quarter were detected in wells MW-3A and MW-3C, located near the downgradient (southern) edge of the former UST excavation, at concentrations of 39,000 µg/L and 32,000 µg/L respectively. The highest detected benzene concentrations were detected in wells MW-3A (3,800 µg/L) and MW-4A (1,800 µg/L); both of these wells are located near the former UST excavation area, with well MW-3A to the south and MW-4A to the north. The highest TPHd concentration was observed in deep, source area well MW-3C (36,000 µg/L). The laboratory noted in their analytical report that gasoline range compounds were significant, which suggests that this elevated TPHd concentration may be the result of the heavier range of TPHg contamination.

Contaminant Distribution in Shallow Groundwater: As shown on Figure 2, *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, which will be described in Pangea's separate site investigation report. This distribution of hydrocarbons in shallow A-zone groundwater is tentatively interpreted to be due to the mounding of groundwater within the uncapped former UST excavation during the rainy season, likely encouraging plume migration radially away from the excavation area. The lack of elevated hydrocarbon concentrations in well MW-5A (located downgradient from the former UST excavation) may be due to the presence of a thick, relatively impermeable clay section observed in boring logs of shallow soil in that area that impedes migration of contaminated groundwater into that area.

Contaminant Distribution in Deeper Groundwater: As shown on Figure 3, the distribution of *deep* groundwater containing elevated concentrations of petroleum hydrocarbons differs significantly from the distribution of hydrocarbons in shallow groundwater. High levels of contamination within deeper (B- and C-zone) groundwater only appear to be present in the central and southern, downgradient portion of the site,

based on elevated hydrocarbon concentrations detected in wells MW-3C, MW-7B and MW-7C. The hydrocarbon impact in the deeper wells may be explained by the apparent downward vertical gradient indicated by elevation data from the clustered shallow and deep wells.

Vertical Distribution of Contaminants Based on New Well Data: Our evaluation of concentration data from abandoned wells and from the new well clusters suggest that the *shallow groundwater is more impacted than the deeper groundwater*. For example, in the western downgradient area between the source area and the adjacent offsite residence (MW-8A/8B well pair), an elevated impact was detected in shallow well MW-8A (10,000 µg/L TPHg and 430 µg/L benzene), while an insignificant impact was detected in deeper well MW-8C (150 µg/L TPHg and 9.8 µg/L benzene) which is screened in bedrock. Also, within the impacted area *north* of the UST source area, benzene concentrations are higher in shallow A-zone well MW-4A (1,600 µg/L) than in well MW-1 (maximum of 160 µg/L benzene within past 15 years) which is screened in the deeper B- and C-zones.

The deeper groundwater zone within the fractured bedrock apparently has limited contaminant mass due to limited permeability and low water yield during well purging (wells MW-5B, MW-7B, MW-7C, and MW-8C all dewatered after purging 1 or 2 well volumes). These wells also produced little water during well development and DPE testing (reported separately).

OTHER SITE ACTIVITIES

Groundwater Monitoring

Groundwater monitoring and sampling will be conducted at the subject site on a quarterly basis. During the next quarter, Pangea will conduct gauging and sampling of all site groundwater monitoring wells. Groundwater samples will be analyzed for TPHg/BTEX/MTBE by EPA Method 8015Cm/8021B, and TPHd by EPA Method 8015C with silica gel cleanup. Pangea will summarize groundwater monitoring activities and results in a groundwater monitoring report.

Site Investigation

In January and March 2007, Pangea installed twelve onsite wells and completed offsite soil borings to help define the vertical and lateral extent of groundwater contamination. Pangea also abandoned four monitoring wells to reduce the risk of vertical contaminant migration and improve the quality of monitoring data. While select results are described in this report, Pangea will provide a separate technical report documenting the site investigation activities and results.

The installation of offsite groundwater monitoring wells and temporary soil gas probes proposed in the

workplan was not conducted due to delayed site access. Pangea hopes to conduct this additional sampling in the near future, upon obtaining access south of the site. The offsite well installation will help delineate the downgradient extent of contamination in shallow and deeper groundwater. The soil gas sampling will help evaluate the potential risk to human health due to potential vapor intrusion into indoor air.

Interim Remedial Action

In April 2007, Pangea performed feasibility testing of dual-phase extraction (DPE) and air sparging (AS) to evaluate the effectiveness of DPE, AS, and associated techniques for remediating residual hydrocarbons beneath the site. Pangea will prepare a technical report documenting feasiblity test results, evaluating remediation alternatives, and proposing interim remedial action.

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 ACEH.

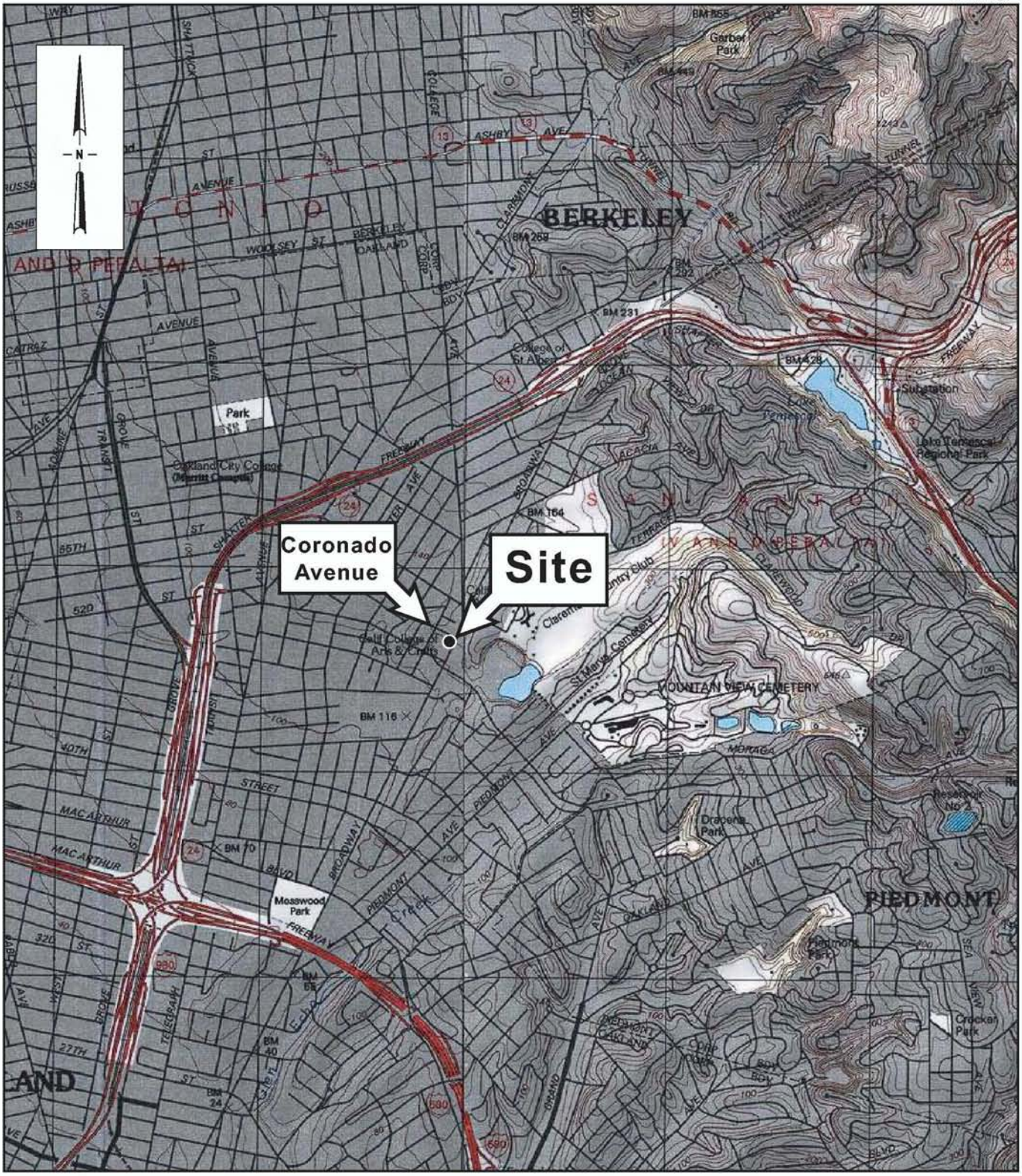
ATTACHMENTS

Figure 1 – Site Vicinity Map
Figure 2 – Groundwater Elevation Contour and Hydrocarbon Concentration Map (Shallow)
Figure 3 – Groundwater Elevation Contour and Hydrocarbon Concentration Map (Deep)

Table 1 – Groundwater Elevation and Analytical Data

Appendix A – Groundwater Monitoring Field Data Sheets
Appendix B – Laboratory Analytical Report

7/16/2007



SOURCE: TOPO! MAPS

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Figure 1

Former Exxon Station
5175 Broadway
Oakland, California

PANGEA

Site Location Map

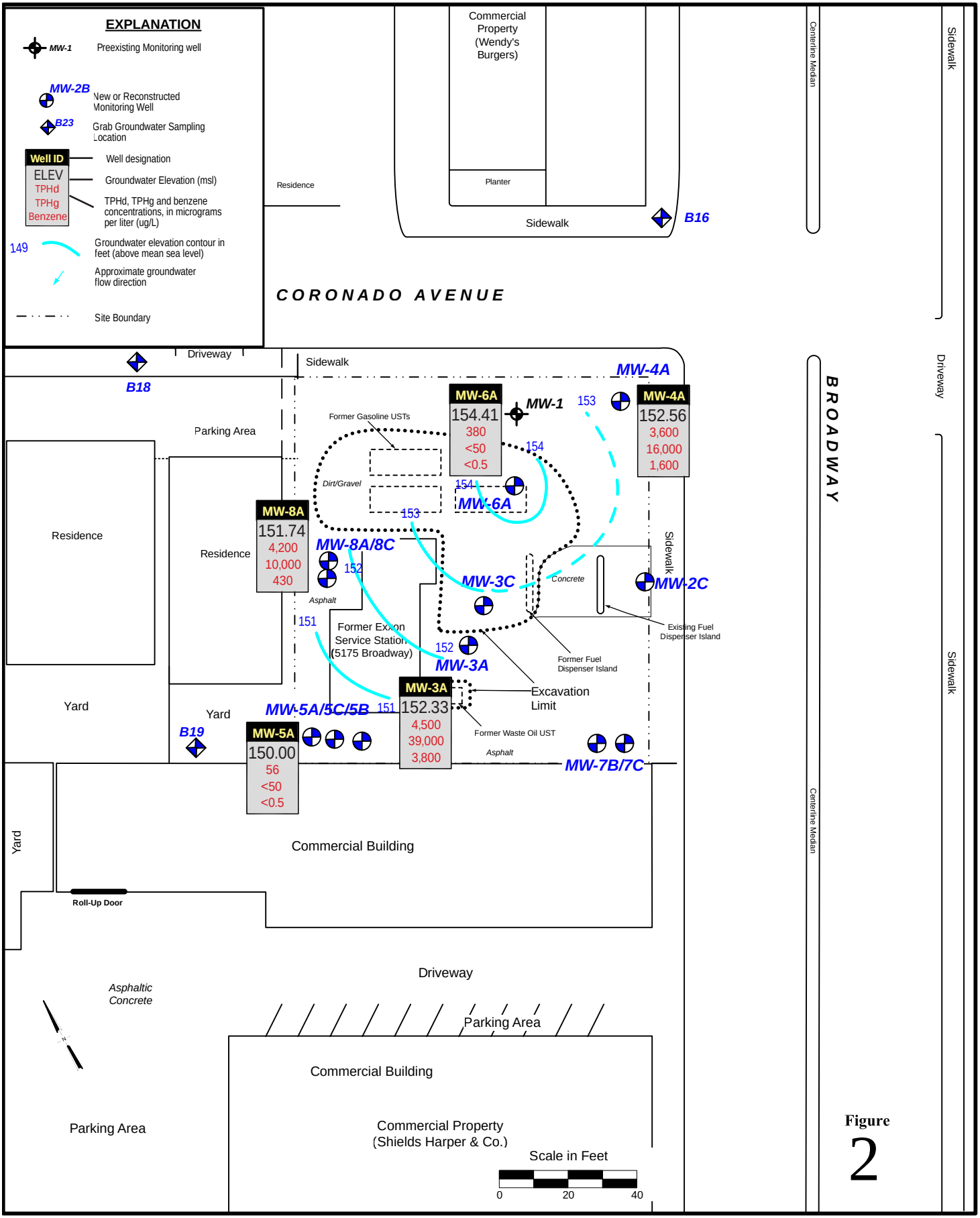


Figure 2

Former Exxon Station
5175 Broadway
Oakland, California

Groundwater Elevation and Hydrocarbon Concentration Map (Shallow)

PANGEA

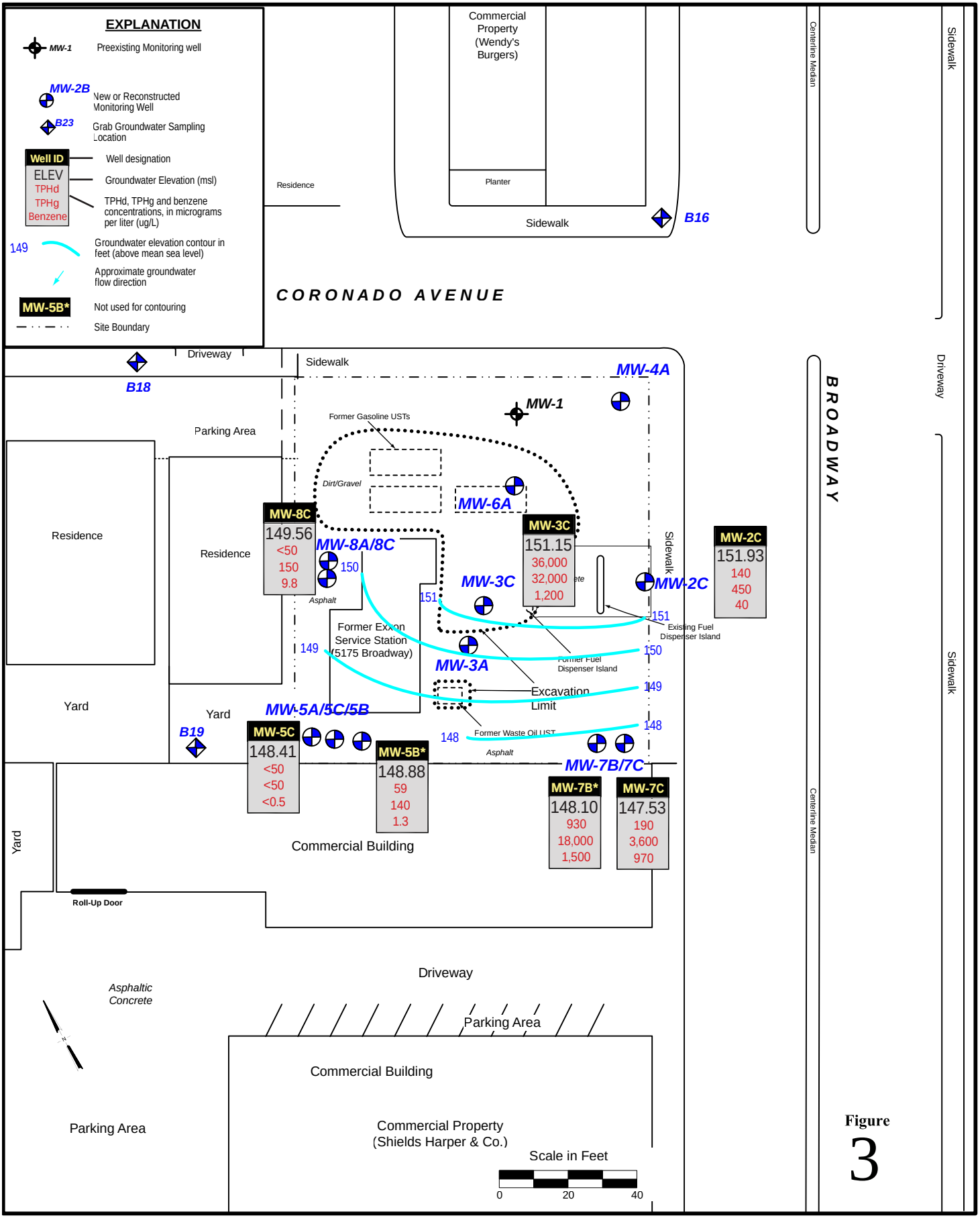


Figure
3

Well location base map.pdf 3/20/2006

Former Exxon Station
5175 Broadway
Oakland, California

Groundwater Elevation and Hydrocarbon Concentration Map (Deep)

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)	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Dissolved Oxygen mg/L
					←				µg/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	0.21
	10/16/06	--	151.98	9.05	110	390	16	<0.5	1.5	2.2	<0.5	41	1.6	0.17
(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**	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--

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)	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Dissolved Oxygen mg/L
					←			µg/L					→	
MW-2	09/28/92	--	91.93	10.09	--	1,600	47	20	47	97	--	--	--	--
(continued)	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	<0.5	0.17
	10/16/06	--	150.45	10.53	76	150	16	1.0	3.5	2.2	<0.5	1.2	<0.5	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**								
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	--	--	--

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)	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Dissolved Oxygen mg/L
					←				µg/L				→	
MW-3	04/24/98	--	88.04	9.90	680	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--
(continued)	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**							
STMW-4	07/03/91	--	92.58	11.00	--	3,100	610	62	39	150	--	--	--	--
(103.58)	11/11/91	--	92.50	11.08	--	3,600	990	15	2.6	180	--	--	--	--
(101.08)	03/04/92	--	91.64	9.44	--	5,000	35	20	22	71	--	--	--	--
(98.80)	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	--	--	--

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)	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Dissolved Oxygen mg/L
					←			µg/L					→	
STMW-4	02/16/01	--	89.60	9.20	--	5,700	560	<25	<25	<25	<25	--	--	--
(continued)	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**							**0.24**
	01/26/07						**Well Abandoned**							**0.24**
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**	--	--	--	--	--	--	--	--	--	--
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**	--	--	--	--	--	--	--	--	--	--

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)	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Dissolved Oxygen mg/L
					← µg/L →									
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**	--	--	--
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**	--	--	--	--	--	--	--	--	--	--
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**	--	--	--	--	--	--	--	--	--	--
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**	--	--	--	--	--	--	--	--	--	--
MW-5C	**03/09/07**	--	**148.12**	**12.91**	**<50**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	--	--	--
(161.03)	**03/26/07**	--	**148.41**	**12.62**	--	--	--	--	--	--	--	--	--	--
MW-6A	**03/09/07**	--	**154.91**	**6.67**	**380**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	--	--	--
(161.58)	**03/26/07**	--	**154.41**	**7.17**	--	--	--	--	--	--	--	--	--	--
MW-7B	**03/09/07**	--	**147.97**	**11.18**	**930**	**18,000**	**1,500**	**1,600**	**140**	**1,800**	**<600**	--	--	--
(159.15)	**03/26/07**	--	**148.10**	**11.05**	--	--	--	--	--	--	--	--	--	--
MW-7C	**03/09/07**	--	**145.44**	**13.09**	**190**	**3,600**	**970**	**100**	**12**	**90**	**<120**	--	--	--
(158.53)	**03/26/07**	--	**147.53**	**11.00**	--	--	--	--	--	--	--	--	--	--
MW-8A	**03/09/07**	--	**152.05**	**9.52**	**4,200**	**10,000**	**430**	**18**	**<10**	**88**	**<100**	--	--	--
(161.57)	**03/26/07**	--	**151.74**	**9.83**	--	--	--	--	--	--	--	--	--	--
MW-8C	**03/09/07**	--	**149.18**	**12.15**	**<50**	**150**	**9.8**	**1.3**	**2.0**	**3.9**	**<5.0**	--	--	--
(161.33)	**03/26/07**	--	**149.56**	**11.77**	--	--	--	--	--	--	--	--	--	--

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 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.

APPENDIX A

Groundwater Monitoring Field Data Sheets

Pangea
ENVIRONMENTAL SERVICES, INC.

Well Gauging Data Sheet

Project.Task #: 1145.001 210				Project Name: Feiner			
Address: 5171 Broadway, Oakland CA						Date: 1/9/07	
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	9:50			8.20	23.00	TOC
MW-2	4	9:45			9.33	22.91	"
MW-3	—	unable to locate			—	—	—
STMW-4	4	10:00			9.93	19.09	TOC
STMW-5	2	9:55			12.46	23.96	"

Comments:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-1

Project.Task #: 1145.001 210	Project Name: Feiner
Address: 5171 Broadway, Oakland CA	
Date: 1/9/07	Weather: Sunny
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius² * 0.163
Total Depth (TD): 23.00	Depth to Product:
Depth to Water (DTW): 8.70	Product Thickness:
Water Column Height: 14.80	1 Casing Volume: 9.62 gallons
Reference Point: TOC	3 Casing Volumes: 28.86 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:11	20.8	7.21	780				9.5	
11:16	19.9	7.26	759				19	
11:43	19.9	7.30	771				29	

Comments: Oakton DO meter
very turbid, silty
slow recharge after 24 gallons

pre purge DO = 0.22 mg/l
post purge DO = mg/l

Sample ID: MW-1	Sample Time: 11:47
Laboratory: McCampbell Analytical, INC.	Sample Date: 1/9/07
Containers/Preservative: Voa/HCL, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-2

Project.Task #: 1145.001 210	Project Name: Feiner
Address: 5171 Broadway, Oakland CA	
Date: 1/9/07	Weather: Sunny
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius² * 0.163
Total Depth (TD): 22.91	Depth to Product:
Depth to Water (DTW): 9.33	Product Thickness:
Water Column Height: 13.58	1 Casing Volume: 8.82 gallons
Reference Point: TOC	3 Casing Volumes: 26.48 gallons

Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump

Sampling Device: Disposable Bailer

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
10:45	19.4	6.63	975				9	
10:49	20.2	6.66	909				18	
11:21	19.5	6.72	955				26.5	

Comments: Oakton DO meter — pre purge DO = 0.14 mg/l

very turbid, silty — post purge DO = mg/l

slow recharge after 2nd casing volume completed

Sample ID: MW-2	Sample Time: 11:24
Laboratory: McCampbell Analytical, INC.	Sample Date: 1/9/07
Containers/Preservative: Voa/HCL, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-3

Project.Task #: 1145.001 210	Project Name: Feiner
Address: 5171 Broadway, Oakland CA	
Date: 1/9/07	Weather:
Well Diameter:	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD):	Depth to Product:
Depth to Water (DTW):	Product Thickness:
Water Column Height:	1 Casing Volume: gallons
Reference Point: TOC	___ Casing Volumes: gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
	unable to locate							

Comments: Oakton DO meter

pre purge DO = mg/l

post purge DO = mg/l

Sample ID:	Sample Time:
Laboratory: McCampbell Analytical, INC.	Sample Date: 1/9/07
Containers/Preservative: Voa/HCL, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: STMW-4

Project.Task #: 1145.001 210	Project Name: Feiner
Address: 5171 Broadway, Oakland CA	
Date: 1/9/07	Weather:
Well Diameter: 4''	Volume/ft. 1" = 0.04, 2" = 0.16, 3" = 0.37, 4" = 0.65, 6" = 1.47, radius^2 * 0.163
Total Depth (TD): 19.09	Depth to Product:
Depth to Water (DTW): 9.93	Product Thickness:
Water Column Height: 9.16	1 Casing Volume: 5.95 gallons
Reference Point: TOC	3 Casing Volumes: 17.86 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
		SPH no sample taken						
		purged 5gallons						

Comments: Oakton DO meter — pre purge DO = 0.24 mg/l

very turbid, silty — post purge DO = mg/l

sheen, SPH appeared after purging 5gallons, ~~SPH~~ SPH at 12.70
DTW at 12.73

Sample ID: ~~STMW-4~~	Sample Time:
Laboratory: McCampbell Analytical, INC.	Sample Date: 1/9/07
Containers/Preservative: Voa/HCL, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: STMW-5

Project Task #: 1145.001 210	Project Name: Feiner
Address: 5171 Broadway, Oakland CA	
Date: 1/9/07	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): 23.96	Depth to Product:
Depth to Water (DTW): 12.46	Product Thickness:
Water Column Height: 11.50	1 Casing Volume: 1.84 gallons
Reference Point: TOC	3 Casing Volumes: 5.52 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp C	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
10:20	17.8	6.38	1796				2	
10:25	17.9	6.38	1803				4	
10:30	17.8	6.47	1794				5.5	

Comments: Oakton DO meter — pre purge DO = 0.17 mg/l

post purge DO = mg/l

very turbid, silty

Sample ID: STMW-5	Sample Time: 10:35
Laboratory: McCampbell Analytical, INC.	Sample Date: 1/9/07
Containers/Preservative: Voa/HCL, Amber Liter/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-3

Project.Task #:	Project Name: Rockridge Heights
Address: 5175 Broadway Oakland, CA	
Date: 1/22/2007	Weather: Sunny, Cool
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 3" = 0.37 | 6" = 1.47 | 2" = 0.16 | 4" = 0.65 | radius^2 * 0.163
Total Depth (TD): 27 ft	Depth to Product: NA
Depth to Water (DTW): 11.62 ft	Product Thickness: NA
Water Column Height: 15.38 ft	1 Casing Volume: 10 gallons
Reference Point: N TOC	2 Casing Volumes: 20 gallons
Purging Device: Disposable Bailer	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
1250	Purged ~20 gallons							
1300	Took Sample							

Comments: Turbid, Strong hydrocarbon odor

Sample ID: MW-3	Sample Time: 1300
Laboratory: McCampbell Analytical	Sample Date: 1/22/2007
Containers/Preservative: 3 HCL Voas, 1 Amber Liter	
Analyzed for: TPHd, TPHg, BTEX, 5 Oxy by EPA Method 8260B	
Sampler Name: Bryce Taylor	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

Well Gauging Data Sheet

Project.Task #: 1145.001.320 Project Name: Feiner

Address: 5175 Broadway, Oakland, CA Date: 3-9-07

Name: Sanjiv Gill Signature:

Well ID	Well Size (in.)	Time	Depth to Water (ft)	Time	Depth to Water (ft)	Time	Depth to Water (ft)	Total Depth (ft)	Measuring Point
MW-2C	2"	10:12	8.41	10:37	8.41	—	—	23.03	TOC
MW-3A		10:21	9.37	10:47	9.35	—	—	13.83	
MW-4A		10:22	9.54	10:45	9.56	—	—	14.73	
MW-5A		10:18	10.41	10:41	10.42	—	—	13.52	
MW-5B		10:16	15.49	10:40	15.26	10:57	1508	19.23	
MW-5C		10:14	14.02	10:39	13.21	10:51	12.91	26.70	
MW-6A		10:20	6.66	10:43	6.67	—	—	14.92	
MW-7B		10:05	11.20	10:31	11.18	—	—	18.55	
MW-7C		10:01	14.88	10:29	13.93	10:48	13.09	24.56	
MW-8A		10:10	9.50	10:35	9.52	—	—	14.89	
MW-8C	↑	10:08	14.16	10:33	12.85	10:49	12.95	25.04	

Comments: All B & C wells under pressure

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ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-2C

Project.Task #: 1145.001 320	Project Name: Feiner
Address: 5175 Broadway, Oakland, CA	
Date: 3/9/07	Weather: Cloudy
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius² * 0.163
Total Depth (TD): 23.03	Depth to Product:
Depth to Water (DTW): 8.41	Product Thickness:
Water Column Height: 14.62	1 Casing Volume: 2.33 gallons
Reference Point: TOC	3 Casing Volumes: 6.99 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:19	20.2	9.04	517				2.5	
12.23	19.8	8.97	479				5	
12.25	19.8	8.90	516				7	

Comments: Oakton DO meter — pre purge DO = mg/l

post purge DO = mg/l

very turbid, heavy silt

Sample ID: MW-2C	Sample Time: 12:29
Laboratory: McCampbell Analytical, INC.	Sample Date: 3/9/07
Containers/Preservative: Voa/HCL, Amber 1L/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-3A

Project.Task #: 1145.001 320	Project Name: Feiner
Address: 5175 Broadway, Oakland, CA	
Date: 3/9/07	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): 9.35	Product Thickness:
Water Column Height: 4.48	1 Casing Volume: 0.71 gallons
Reference Point: TOC	3 Casing Volumes: 2.13 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
2:09	19.7	9.56	754				1	
2:10	19.9	9.71	758				1.5	
2:11	19.9	9.71	765				2.0	

Comments: Oakton DO meter

pre purge DO = mg/l

post purge DO = mg/l

very turbid

Sample ID: MW-3A	Sample Time: 2:13
Laboratory: McCampbell Analytical, INC.	Sample Date: 3/9/07
Containers/Preservative: Voa/HCL, Amber 1L/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-4A

Project.Task #: 1145.001 320	Project Name: Feiner
Address: 5175 Broadway, Oakland, CA	
Date: 3/9/07	Weather: Sunny
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius² * 0.163
Total Depth (TD): 14.73	Depth to Product:
Depth to Water (DTW): 9.56	Product Thickness:
Water Column Height: 5.17	1 Casing Volume: 0.82 gallons
Reference Point: TOC	3 Casing Volumes: 2.46 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
1:49	19.9	8.81	958				1	
1:51	18.6	8.87	968				2.0	
1:53	18.9	8.87	961				2.5	

Comments: Oakton DO meter

pre purge DO = mg/l

post purge DO = mg/l

very turbid, silty

Sample ID: MW-4A	Sample Time: 1:55
Laboratory: McCampbell Analytical, INC.	Sample Date: 3/9/07
Containers/Preservative: Voa/HCL, Amber 1L/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-5A

Project.Task #: 1145.001 320	Project Name: Feiner
Address: 5175 Broadway, Oakland, CA	
Date: 3/9/07	Weather: Cloudy
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): 13.52	Depth to Product:
Depth to Water (DTW): 10.42	Product Thickness:
Water Column Height: 3.10	1 Casing Volume: 0.49 gallons
Reference Point: TOC	3 Casing Volumes: 1.48 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
1:15	15.1	7.50	1231				.5	
1:16	14.8	7.69	1218				1.0	
1.18	14.5	753	1223				1.5	

Comments: Oakton DO meter

pre purge DO = mg/l

post purge DO = mg/l

very turbid, silty

Sample ID: MW-5A	Sample Time: 1 20
Laboratory: McCampbell Analytical, INC.	Sample Date: 3/9/07
Containers/Preservative: Voa/HCL, Amber 1L/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

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ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-5B

Project.Task #: 1145.001 320	Project Name: Feiner
Address: 5175 Broadway, Oakland, CA	
Date: 3/9/07	Weather: Cloudy
Well Diameter: 2"	Volume/ft. 1" = 0.04, 2" = 0.16, 3" = 0.37, 4" = 0.65, 6" = 1.47, radius² * 0.163
Total Depth (TD): 19.23	Depth to Product:
Depth to Water (DTW): 15.08	Product Thickness:
Water Column Height: 4.15	1 Casing Volume: 0.66 gallons
Reference Point: TOC	3 Casing Volumes: 1.99 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp C°	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
1:06	16.9	7.06	1241				.5	
1:08	17.2	6.89	1205				1.0	
1:11	Dewatered after 1 gallon							

Comments: Oakton DO meter

pre purge DO = mg/l

post purge DO = mg/l

very turbid, silty

Sample ID: MW-5B	Sample Time: 2:46
Laboratory: McCampbell Analytical, INC.	Sample Date: 3/9/07
Containers/Preservative: Voa/HCL, Amber 1L/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

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ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-5C

Project Task #: 1145.001 320	Project Name: Feiner
Address: 5175 Broadway, Oakland, CA	
Date: 3/9/07	Weather: Sunny
Well Diameter:	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 26.70	Depth to Product:
Depth to Water (DTW): 12.91	Product Thickness:
Water Column Height: 13.79	1 Casing Volume: 2.20 gallons
Reference Point: TOC	3 Casing Volumes: 660 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp C	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:46	17.5	6.98	1340				2	
17:51	16.8	7.00	1375				4	
17:54	16.3	6.97	1369				6.5	

Comments: Oakton DO meter

pre purge DO = mg/l

post purge DO = mg/l

very turbid, silty

Sample ID: MW-5C	Sample Time: 12:57
Laboratory: McCampbell Analytical, INC.	Sample Date: 3/9/07
Containers/Preservative: Voa/HCL, Amber 1L/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-6A

Project.Task #: 1145.001 320	Project Name: Feiner
Address: 5175 Broadway, Oakland, CA	
Date: 3/9/07	Weather: Cloudy
Well Diameter: 2"	Volume/ft. 1" = 0.04, 2" = 0.16, 3" = 0.37, 4" = 0.65, 6" = 1.47, radius² * 0.163
Total Depth (TD): 14.92	Depth to Product:
Depth to Water (DTW): 6.67	Product Thickness:
Water Column Height: 8.25	1 Casing Volume: 1.32 gallons
Reference Point: TOC	3 Casing Volumes: 3.96 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
1:35	16.6	7.38	878				1.5	
1:39	17.1	7.45	870				3	
1:41	16.5	7.45	873				4	

Comments: Oakton DO meter

pre purge DO = mg/l

post purge DO = mg/l

very turbid, heavy silt

Sample ID: MW-6A	Sample Time: 1:43
Laboratory: McCampbell Analytical, INC.	Sample Date: 3/9/07
Containers/Preservative: Voa/HCL, Amber 1L/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-7B

Project Task #: 1145.001 320	Project Name: Feiner
Address: 5175 Broadway, Oakland, CA	
Date: 3/9/07	Weather: Cloudy
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius² * 0.163
Total Depth (TD): 18.55	Depth to Product:
Depth to Water (DTW): 11.18	Product Thickness:
Water Column Height: 7.37	1 Casing Volume: 1.17 gallons
Reference Point: TOC	3 Casing Volumes: 3.53 gallons
Purging Device: (Disposable Bailer) 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp (C)	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
~~11:27~~	~~20.9~~	6.91	1209				1.5	
11:31	20.9	6.95	1175				2.5	
11:35	Dewatered after 3 gallons						~~3.5~~	

Comments: Oakton DO meter

pre purge DO = mg/l

post purge DO = mg/l

very turbid, thick silt

Sample ID: MW-7B	Sample Time: 2:29
Laboratory: McCampbell Analytical, INC.	Sample Date: 3/9/07
Containers/Preservative: Voa/HCL, Amber 1L/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-7C

Project.Task #: 1145.001 320	Project Name: Feiner
Address: 5175 Broadway, Oakland, CA	
Date: 3/9/07	Weather: Cloudy
Well Diameter: 2"	Volume/ft. 1" = 0.04, 2" = 0.16, 3" = 0.37, 4" = 0.65, 6" = 1.47, radius² * 0.163
Total Depth (TD): 24.56	Depth to Product:
Depth to Water (DTW): 13.09	Product Thickness:
Water Column Height: 11.47	1 Casing Volume: 1.83 gallons
Reference Point: TOC	3 Casing Volumes: 5.50 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:15	20.3	6.88	1129				1.5	
11:17	19.8	7.01	1122				3	
11:21	Dewatered after 4.5 gallons						4.5	

Comments: Oakton DO meter

pre purge DO = mg/l

post purge DO = mg/l

very turbid, silty

Sample ID: MW-7C	Sample Time: 2:22
Laboratory: McCampbell Analytical, INC.	Sample Date: 3/9/07
Containers/Preservative: Voa/HCL, Amber 1L/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-8A

Project.Task #: 1145.001 320	Project Name: Feiner
Address: 5175 Broadway, Oakland, CA	
Date: 3/9/07	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): 14.89	Depth to Product:
Depth to Water (DTW): 9.52	Product Thickness:
Water Column Height: 5.37	1 Casing Volume: 0.85 gallons
Reference Point: TOC	3 Casing Volumes: 2.57 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11.56	19.6	7.03	1012				1	
11.58	19.3	6.96	1017				1.5	
12:00	19.7	6.95	1032				2.5	

Comments: Oakton DO meter

pre purge DO = mg/l

post purge DO = mg/l

very turbid, silty, odor

Sample ID: MW-8A	Sample Time: 12:03
Laboratory: McCampbell Analytical, INC.	Sample Date: 3/9/07
Containers/Preservative: Voa/HCL, Amber 1L/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-8C

Project.Task #: 1145.001 320	Project Name: Feiner			
Address: 5175 Broadway, Oakland, CA				
Date: 3/9/07	Weather: Sunny			
Well Diameter: 2"	Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47
		2" = 0.16	4" = 0.65	radius² * 0.163
Total Depth (TD): 25.04	Depth to Product:			
Depth to Water (DTW): 12.15	Product Thickness:			
Water Column Height: 12.89	1 Casing Volume: 2.06 gallons			
Reference Point: TOC	3 Casing Volumes: 6.18 gallons			
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump				
Sampling Device: Disposable Bailer				

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:42	19.8	7.02	1418				2	
11:46	Dewatered before 4 gallons							

Comments: Oakton DO meter

pre purge DO = mg/l

post purge DO = mg/l

very turbid, heavy silt

Sample ID: MW-8C	Sample Time: 2:37
Laboratory: McCampbell Analytical, INC.	Sample Date: 3/9/07
Containers/Preservative: Voa/HCL, Amber 1L/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

WELL GAUGING DATA

Project # 070326-WC-2 Date 3/26/07 Client Forgea

Site Former Exxon @ 5175 Broadway, Oakland

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Final DTB
MW-1	4					8.26			
MW-2C	2					8.72			
MW-3A	2					9.22			
MW-3C	2					10.64	25.35		26.59
MW-4A	2					9.88			
MW-5A	2					10.82			
MW-5B	2					12.62			
MW-5C	2					12.62			
MW-6A	2					7.17			
MW-7B	2					11.05			
MW-7C	2					11.00			
MW-8A	2					9.83			
MW-8C	2					11.77			

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-3C

Project.Task #:	Project Name: Rockridge Heights
Address: 5175 BROADWAY, OAKLAND	
Date: 4-16-07	Weather:
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): 26.42"	Depth to Product: —
Depth to Water (DTW): 10.92	Product Thickness: —
Water Column Height: 15.50	1 Casing Volume: 1.00 gallons
Reference Point: MW-3C	3 Casing Volumes: 3.3 gallons
Purging Device: Bailer	
Sampling Device: Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
1300	18.2	7.07	1107	—	—	252	3.5	

Comments:

Sample ID: MW-3C	Sample Time: 1300
Laboratory: McCampell	Sample Date: 4-16-07
Containers/Preservative: 4 VOAs + 2 AMBERS w/ HCl preservative	
Analyzed for: TPHg/BTEX/MTBE (4 VOAs) & TPHd (2 ambers) w/ SILICA GEL	
Sampler Name: LB	Signature:

APPENDIX B

Laboratory Analytical Report

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.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	Date Sampled: 01/09/07
		Date Received: 01/09/07
	Client Contact: Bob Clark-Riddell	Date Reported: 01/12/07
	Client P.O.:	Date Completed: 01/12/07

WorkOrder: 0701160

January 12, 2007

Dear Bob:

Enclosed are:

1). the results of **3** analyzed samples from your **#1145.001; Feiner project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill 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 please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Website: Email: main@mccampbell.com
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ■ 5 DAY

EDF Required? (Yes) No

Report To: Bob Clark-Riddel Bill To: Pangea Environmental
Company: Pangea Environmental Services Inc.
1710 Franklin Street Sutie 200
Oakland, CA 94612 E-Mail: bcr@pangeaenv.com
Tele: 510-836-3702 Fax: 510-836-3709
Project #: 1145.001 Project Name: Feiner
Project Location: 5175 Broadway, Oakland, CA
Sampler Signature: Muskan Environmental Sampling

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED ICE	HCL	HNO_3	Other	Analysis Request: BTEX & TPH as Gas (602 / 8021 + 8015)	MTBE / BTEX ONLY (EPA 602 / 8021)	TPH as Diesel (8015) with silica gel clean up	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	Fuel Additives (MTBE, ETBE, TAME, DIPE, TBA, 1,2 – DCA, 1,2 – EDB, ethanol) by 8260B	If Mtbe is detected by 8021 confirm by 8260B	Other	Comments
+1 MW-1		1-9-07	11:47	3	voa amb	X					X	X			X		X												
+1 MW-2		1-9-07	11:24	1	1	X					X	X			X		X												
+1 STMW-5		1-9-07	10:35	X	X	X					X	X			X		X												

Relinquished By:	Date:	Time:	Received By:
	1/9/07	1:10pm	
Relinquished By:	Date:	Time:	Received By:

ICE/t° 9.8°C
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB
PRESERVATION VOAS ✓ O&G METALS OTHER

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0701160 **ClientID: PEO**

☑ EDF ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Bob Clark-Riddell; Feiner
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
Email:
TEL: (510) 836-3700 FAX: (510) 836-3709
ProjectNo: #1145.001
PO:

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: **5 days**

Date Received: **01/09/2007**
Date Printed: **01/09/2007**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0701160-001	MW-1	Water	1/9/07 11:47:00 AM	☐	A	A	B									
0701160-002	MW-2	Water	1/9/07 11:24:00 AM	☐	A		B									
0701160-003	STMW-5	Water	1/9/07 10:35:00 AM	☐	A		B									

Test Legend:

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

Prepared by: Lisa Cavalier

Comments:

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

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: #1145.001; Feiner	Date Sampled: 01/09/07
1710 Franklin Street, Ste. 200		Date Received: 01/09/07
Oakland, CA 94612	Client Contact: Bob Clark-Riddell	Date Extracted: 01/10/07-01/11/07
	Client P.O.:	Date Analyzed: 01/10/07-01/11/07

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0701160

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	530,a,i	---	21	1.7	2.8	5.1	1	101
002A	MW-2	W	210,a,i	---	27	2.6	8.1	6.8	1	93
003A	STMW-5	W	390,a,i	---	30	3.2	1.8	3.2	1	110

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	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	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 McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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

Pangea Environmental Svcs., Inc.	Client Project ID: #1145.001; Feiner	Date Sampled: 01/09/07
1710 Franklin Street, Ste. 200		Date Received: 01/09/07
Oakland, CA 94612	Client Contact: Bob Clark-Riddell	Date Extracted: 01/09/07
	Client P.O.:	Date Analyzed 01/11/07

Diesel Range (C10-C23) Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C/3630C Analytical methods: SW8015C Work Order: 0701160

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0701160-001B	MW-1	W	160,d,i	1	99
0701160-002B	MW-2	W	84,d,i	1	101
0701160-003B	STMW-5	W	180,d,i	1	105

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 McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0701160

EPA Method SW8021B/8015Cm Extraction SW5030B BatchID: 25612 Spiked Sample ID: 0701151-002A

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	103	106	3.51	114	105	7.56	70 - 130	30	70 - 130	30
MTBE	ND	10	94.5	93.5	1.03	96.7	97.7	1.08	70 - 130	30	70 - 130	30
Benzene	ND	10	101	103	2.34	104	97.1	6.54	70 - 130	30	70 - 130	30
Toluene	ND	10	94.1	96.5	2.47	97	84.3	14.0	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	99.2	101	1.41	103	96	7.06	70 - 130	30	70 - 130	30
Xylenes	ND	30	91	91.3	0.366	89	90.7	1.86	70 - 130	30	70 - 130	30
%SS:	92	10	102	103	0.937	104	101	3.02	70 - 130	30	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 25612 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0701160-001	1/09/07 11:47 AM	1/10/07	1/10/07 11:47 PM	0701160-002	1/09/07 11:24 AM	1/11/07	1/11/07 12:19 AM
0701160-003	1/09/07 10:35 AM	1/11/07	1/11/07 12:51 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.

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0701160

EPA Method SW8015C **Extraction SW3510C/3630C** **BatchID: 25625** **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(d)	N/A	1000	N/A	N/A	N/A	113	109	3.90	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	94	100	6.52	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 25625 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0701160-001	1/09/07 11:47 AM	1/09/07	1/11/07 7:30 AM	0701160-002	1/09/07 11:24 AM	1/09/07	1/11/07 8:36 AM
0701160-003	1/09/07 10:35 AM	1/09/07	1/11/07 9:43 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.