



March 11, 2005

Project 4097041918 Task 01

Mr. David Blain
BPS Reprographic Services
945 Bryant Street
San Francisco, California 94103

**Groundwater Remediation and Monitoring Report
Fourth Quarter 2004
BPS Reprographic Services Facility
1700 Jefferson Street
Oakland, California**

Dear Mr. Blain:

MACTEC Engineering and Consulting, Inc., presents this quarterly status letter-report on the groundwater monitoring and remedial activities at the BPS Reprographic Services (BPS) facility located at 1700 Jefferson Street in Oakland, California (Plate 1). Information presented in this letter-report represents groundwater conditions at the subject site during the Fourth Quarter 2004 (July through September), and was prepared to satisfy the quarterly groundwater monitoring requirements of the Alameda County Department of Health Care Services (ACHCS).

BACKGROUND

Three underground gasoline storage tanks were removed from the property in 1987 and a preliminary soil and groundwater investigation indicated that a release of fuel into the subsurface had occurred. Three groundwater-monitoring wells (MW-1, MW-2, and MW-3) were installed on the property to evaluate the distribution of petroleum hydrocarbons in the groundwater and to determine the direction of groundwater flow. Free phase hydrocarbon (FPH) was found in MW-1. Groundwater level measurements at that time indicated that the local groundwater gradient was in a north to northwest direction. Groundwater level measurements would later indicate the direction of the local groundwater gradient changing (to typically east to west or north to northwest).

In November 1987, monitoring well MW-2 was abandoned to facilitate the construction of the present BPS facility and, in January 1988, two additional wells, MW-1A and MW-4, were installed as groundwater extraction wells. MACTEC also installed one offsite monitoring well, MW-5, in August 1988 and a second offsite well, MW-6, in April 1996. The monitoring well locations are shown on Plate 1.

In 1992, a groundwater extraction system was constructed at the site to remove FPH from the groundwater surface. Groundwater was extracted from MW-1A and MW-4 and passed through an oil-water separator that removed the FPH. The water was then drawn into a 3,000-gallon bioreactor tank for treatment by hydrocarbon reducing microbes. Air and nutrients were supplied to the water within the bioreactor to facilitate microbial growth. The treated water from the bioreactor was pumped in batches of approximately 500 gallons through three granular activated carbon vessels before discharge under a wastewater discharge permit from the East Bay Municipal Utility District to the sanitary sewer. The treatment system processed approximately 1,385,490 gallons of groundwater and an estimated 5,062 pounds of FPH were recovered.

By 1999, the oil-water separator was no longer recovering FPH and FPH was no longer present in any of the groundwater monitoring wells. Dissolved hydrocarbon concentrations were decreasing and MACTEC requested approval from the ACHCS to terminate groundwater extraction and to modify the remediation technique to in situ-bioremediation using an oxygen-releasing compound (ORC™). ORC™ is manufactured and distributed by Regenesys, Inc.; its purpose is to increase the concentration of dissolved oxygen (DO) in the groundwater and to augment the ability of naturally occurring microbial organisms in the groundwater to biodegrade the dissolved petroleum hydrocarbons. The ACHCS approved this plan in a letter dated September 28, 1999, following the submittal of an ORC™ calculation sheet and a Groundwater Monitoring Plan, dated September 23, 1999.

MACTEC implemented the in situ bioremediation technique by placing ORC™ in treatment wells: MW-1A, MW-3, MW-4, and MW-5 on September 29, 1999. The ORC™ is contained in fabric "socks" which release oxygen over time until the compound's oxygen releasing potential is depleted. MACTEC installed five socks in each treatment well at the approximate depth of the well's screened interval. As described in the Groundwater Monitoring Plan, the ORC™ socks are removed from the treatment wells two weeks before each quarterly groundwater monitoring event, then replaced after sampling is complete.

The Groundwater Monitoring Plan outlined procedures for groundwater sampling using a non-purge method approved by the Regional Water Quality Control Board in a letter dated January 31, 1997. The first quarter that the new Groundwater Monitoring Plan was implemented, sampling included duplicate sampling using both the purge and non-purge methods (see MACTEC's quarterly report, dated October 25, 1999).

During the Fourth Quarter 2002 groundwater monitoring event MACTEC removed the ORC™ socks from the treatment wells per a request from the ACHCS in a September 27, 2002 letter to BPS. The ACHCS suggested that contaminant concentrations may not be accurate due to the presence of the ORC™ socks and requested the socks be removed and DO allowed to return to back ground levels. Additionally, the ACHCS suggested in the same letter that the ORC™ socks appear to be ineffective as contaminant concentrations continue to be high in MW-1 and MW-5.

During the Fourth Quarter 2002 groundwater monitoring event MACTEC monitored groundwater monitoring MW-1, MW-3, MW-5 and MW-6 for tert Amyl Methyl Ether, Ethyl tert Butyl Ether,

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Diisopropyl Ether, tert Butyl Alcohol, Ethylene Dibromide, and Ethylene Dichloride (EDC) per a request from the ACHCS in the September 27, 2002 letter to BPS. Analytical results indicated none of these analytes were detected in any wells except EDC in MW-1 and MW-5. EDC is monitored in MW-1 and MW-5 quarterly now as required by the ACHCS.

During the ORC™ socks removal effort from MW-5 it was discovered that the socks were stuck. ORC™ socks can become stuck in monitoring wells when the well casing has become disturbed or bent. This can typically be caused by even minor seismic occurrences in the area of the well. The ORC™ socks remained stuck in MW-5 despite three removal attempts including attempts incorporating an industrial winch and tripod. An ORC™ sock removal effort was performed on September 17, 2003 utilizing a drill rig. The socks were successfully removed with no apparent damage to the monitoring well.

FOURTH QUARTER 2004 GROUNDWATER SAMPLING AND ANALYSIS

On December 28, 2004, MACTEC conducted the quarterly groundwater monitoring of MW-1, MW-3, MW-5 and MW-6 (Plate 1) using the non-purge sampling method as described in the Enhanced In-situ Bioremediation and Groundwater Monitoring Procedures letter dated August 17, 1999. The non-purge sampling method was re-evaluated as requested by the ACHCS in a letter dated September 27, 2002. After review of the evaluation data and analysis presented in the Second Quarter 2003 Groundwater Monitoring Report, the ACHCS approved non-purge sampling for use at the site in a letter dated February 13, 2004.

Groundwater parameters collected during sampling are shown on Table 1. Prior to sampling, MACTEC measured the depth to groundwater from the top of casing (TOC) of wells MW-1, MW-3, MW-5 and MW-6 using an electronic water level indicator. These measurements are displayed on Plate 2 and tabulated in Table 2.

Immediately after sample collection, MACTEC labeled and stored the samples in a cooler with ice. The groundwater samples were kept chilled until submitted to Sequoia Analytical Laboratory (Sequoia), a California state-certified laboratory (CA ELAP Certificate #2374), under chain-of-custody protocol for the following analyses:

- Total petroleum hydrocarbons as gasoline (TPHg) in accordance with EPA Method 8015 modified.
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) in accordance with EPA Method 8020.
- Methyl tertiary butyl ether (MTBE) in accordance with EPA Method 8020 with confirmation of detections by EPA Method 8260.
- Ethylene Dichloride (EDC) by EPA Method 8260.

Historical analytical results for TPH-g, BTEX and MTBE collected through September 29, 1999 are shown on Table 3. Fourth Quarter 2004 analytical results for TPH-g, BTEX, MTBE and EDC are

displayed on Plate 3. Analytical results collected since September 29, 1999 are shown on Table 4 and presented graphically on Plate 4. Analytical results for Tert-amyl methyl ether (TAME), Tert-butyl alcohol (TBA), Di-isopropyl ether (DIPE), Ethylene Dibromide (EDB), Ethyl tert Butyl Ether (ETBE) and EDC are displayed on Table 5. Historical groundwater elevations are shown graphically on Plate 5. The certified analytical reports (CARs) are presented in Appendix A.

DISCUSSION

Groundwater Monitoring Data

As shown in Table 2 and on Plate 5, the groundwater surface elevation decreased an average of 1.42 feet across the site as compared to last quarter's measurements. Using the groundwater elevations from MW-1, MW-3, MW-5 and MW-6 as measured on December 28, 2004, groundwater contours were created and are shown on Plate 2. Based on the groundwater elevations, the groundwater gradient is approximately 0.045 ft/ft. The direction of flow appears to be in the Southeasterly direction.

The groundwater elevation in well MW-3 [3.06 feet above mean seal level (MSL)] is significantly lower than ever measured in previous monitoring events. The next highest groundwater elevation monitored in MW-3 was 5.68 feet MSL measured on September 19, 1996. Typically the groundwater elevation in MW-3 is between 8.00 and 8.50 feet MSL with the occasional groundwater elevation slightly above or below this range. Due to the substantially dropped groundwater elevation in this well the groundwater gradient and flow direction are significantly different than during previous monitoring events. Groundwater gradient during year 2004 ranged from 0.002 ft/ft (Second Quarter 2004) to 0.006 ft/ft (First Quarter 2004). Groundwater gradient monitored Fourth Quarter 2003 was 0.005 ft/ft. Typical groundwater gradient direction is West to slightly Southwest.

MACTEC suspects that the groundwater elevation monitored in MW-3 this event was erroneous and due to equipment malfunction or technician error. Its possible that the instrument being used to measure the depth to water may have been activated by moisture on the inside walls of the well casing giving a false reading. MACTEC will pay close attention to the depth to water measurement in this well during the First Quarter 2005 groundwater monitoring event and describe the result in the First Quarter 2005 groundwater monitoring report.

Analytical Results

As shown on Plate 4 and Table 4, Fourth Quarter 2004 monitoring event concentrations of TPH-g and BTEX appear generally the same in all wells compared to Third Quarter 2004 data. However, benzene in MW-3 increased to the highest concentration of benzene measured in this well (340 ug/L) since April 1, 2003 (370 ug/L). TPH-g and Total Xylenes are not typically detected in well MW-6 but were detected this monitoring event. TPH-g was detected in well MW-6 at a concentration of 0.059 mg/L with a detection limit of 0.05 mg/L. Total Xylenes was detected in MW-6 at a concentration of 1.6 ug/L with a

detection limit of 0.5 ug/L. Due to the low concentrations detected, MACTEC suspects the concentrations may be anomalies. These results are discussed further below.

As shown on Plate 4 and Table 4, significant spikes in TPH-g and BTEX concentrations occurred in MW-1 during the Second Quarter 2003 monitoring event. Since that event, concentrations appear to be trending down and significant reductions in these analytes have occurred as demonstrated by the Fourth Quarter 2004 monitoring event. Similarly, significant spikes in TPH-g and TEX concentrations occurred in MW-3 during the Second Quarter 2003 monitoring event and a significant spike in Benzene in MW-3 occurred during the First Quarter 2003 monitoring event. Except for the spike in benzene concentration detected Fourth Quarter 2004 (discussed above) overall concentrations in MW-3 appear to be trending down since the Second Quarter 2003.

Significant spikes in TPH-g and BTEX concentrations occurred in MW-5 during the Third Quarter 2003 monitoring event. Since that event, TPH-g and BTEX concentrations appeared to be trending down until the Third Quarter 2004. The Third Quarter 2004 monitoring data indicate that TPH-g and BTEX concentrations increased significantly and were approaching high concentration levels monitored in the Third Quarter 2003. However, the Fourth Quarter 2004 TPH-g and BTEX concentrations in MW-5 are slightly less than the TPH-g and BTEX concentrations monitored during the Third Quarter 2004.

As discussed above TPH-g and Total Xylenes were detected in well MW-6 during the Fourth Quarter 2004 monitoring event. All remaining analytes remained non-detectable. Typically TPH-g and Total Xylenes are not detected in well MW-6, however they have been detected in the past at small concentrations. TPH-g has been detected at a concentration of 0.066 mg/L and Total Xylene has been detected at a concentration of 8.7 ug/L monitored during the Fourth Quarter 2001. Typically concentrations of TPH-g and BTEX in MW-6 remain non-detectable. MW-6 will continue to be monitored for these analytes.

As shown on Table 4, MTBE remains non-detectable in all wells.

The following show the range of monitored data for the Fourth Quarter 2004 event as shown on Table 4:

TPH-g ranged from 0.059 mg/L [with a detection limit of 0.05 (MW-6)] to 41 mg/l (MW-5). Benzene ranged from non-detectable with a detection limit of 0.5 ug/L (MW-6) to 10,000 ug/L (MW-5). Toluene ranged from non-detectable with a detection limit of 0.5 ug/L (MW-6) to 3,800 ug/L (MW-5). Ethylbenzene ranged from non-detectable with a detection limit of 0.5 ug/L (MW-6) to 1000 ug/L (MW-5). Total Xylenes ranged from 1.6 ug/L (MW-6) to 2,300 ug/L (MW-5). MTBE was not detected in samples from any of the groundwater monitoring wells this quarter with detection limits ranging from 2.5 ug/L (MW-6) to 250 ug/L (MW-3 and MW-5).

Analytical results for TAME, TBA, DIPE, EDB, ETBE and EDC are displayed on Table 5. As described in the ACHCS September 27, 2002 letter to BPS these analyses were performed per ACHCS request during the Fourth Quarter 2002 monitoring event. None of these analytes were detected in any of the

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groundwater samples collected from MW-1, MW-3, MW-5 and MW-6 except for EDC. EDC was detected in the samples collected from MW-1 at a concentration of 370 ug/L and MW-5 at a concentration of 220 ug/L. Per ACHCS direction, if any of these analytes were not detected during the Fourth Quarter 2002 monitoring event then the analyte does not need subsequent monitoring. Analysis for EDC was performed in groundwater samples from MW-1 and MW-5 during the Fourth Quarter 2004 event. Concentrations of EDC in MW-1 and MW-5 remain within a similar range as previously detected. EDC was detected in the sample from MW-1 at a concentration of 180 ug/L, a slight reduction from last quarter results of 260 ug/L. EDC was detected in the sample from MW-5 at a concentration of 290 ug/L, which is a reduction from last quarter results of 670 ug/L.

As described above, the ORC™ socks were removed from all treatment wells during the Fourth Quarter 2002 monitoring event per ACHCS request (except MW-5, ORC™ socks removed from this well September 17, 2003). The ORC™ socks were removed to allow the DO concentrations in each well to return to background levels. Prior to sampling during the Fourth Quarter 2004 event, DO was monitored in each well. The DO concentrations ranged from 0.2 mg/L in MW-3 to 4.3 mg/L in MW-6. MACTEC will continue to monitor DO in these wells.

RECOMMENDATIONS

MACTEC recommends continued groundwater monitoring at the Site. MACTEC recommends that BPS send a copy of this report to the following address:

Mr. Don Hwang
Alameda County
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California, 94502-6577

While under contract to BPS, MACTEC will continue to provide quarterly groundwater monitoring and reporting as required by The County.

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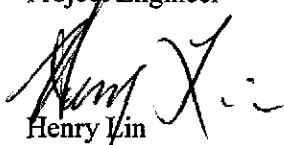
If you have any questions, please contact David S. Nanstad at (415) 278-2118.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.



David S. Nanstad
Project Engineer



Henry Lin
Principal Engineer



Exp. 12/31/2005

4 copies submitted

Attachments: Table 1 – Groundwater Parameters
Table 2 – Groundwater Elevation Data
Table 3 – Historical Groundwater Monitoring Analytical Results - Using Purge Method
Table 4 – Groundwater Monitoring Analytical Results
Table 5 – Groundwater Monitoring Analytical Results – EPA Method 8260

Plate 1 – Site Map
Plate 2 – Groundwater Contours
Plate 3 – TPH-g, BTEX and MTBE Concentrations in Groundwater
Plate 4 – BTEX and DO Results
Plate 5 – Groundwater Elevation Data

Appendix A – Laboratory Reports
Appendix B – Groundwater Sampling Forms
Table B1. Sample Location/Sample Description Cross-Reference

DSN :/Cityblue/4Q04

Table 1.
Groundwater Parameters
BPS Reprographic Services Facility
1700 Jefferson Street
Oakland, California

Dissolved Oxygen (mg/L)	MW-1	MW-3	MW-5	MW-6
9/29/1999	2.9	1.7	0.4	1.8
11/3/1999	4.0	10.3	4.0	2.8
11/22/1999	1.8	2.4	2.0	3.2
1/28/2000	2.9	8.4	3.6	2.2
2/11/2000	2.5	2.3	1.8	3.5
5/12/2000	2.0	7.4	2.4	1.7
5/30/2000	1.9	2.6	1.8	3.2
9/1/2000	2.9	3.4	2.3	2.7
9/15/2000	2.0	1.8	2.2	3.8
11/9/2000	NA	5.0	5.3	NA
11/17/2000	3.1	4.2	3.4	6.0
3/15/2001	2.0	7.0	1.4	2.1
4/2/2001	1.0	0.8	2.0	1.0
6/1/2001	0.2	0.2	6.6	0.3
6/28/2001	0.3	0.6	0.5	0.7
8/16/2001	0.5	6.5	1.6	0.8
8/30/2001	0.3	0.4	0.2	0.5
12/14/2001	0.0	3.8	2.2	0.2
12/26/2001	0.2	0.3	0.2	0.2
4/10/2002	0.6	0.6	0.2	0.4
4/23/2002	0.3	0.4	0.9	0.5
6/3/2002	0.4	5.2	4.3	0.7
6/14/2002	0.3	0.3	0.4	0.3
8/5/2002	0.3	0.3	0.4	0.4
8/14/2002	0.3	0.3	0.4	0.6
12/6/2002	1.0	0.9	NA ²	0.6
12/27/2002	0.9	1.0	NA ²	1.2
4/1/2003 ^b	0.3	1.1	NA ²	NA ¹
7/1/2003 ^{ab}	7.7	7.7	NA ²	7.2
9/24/2003 ^{ab}	6.3	7.2	0.6	0.9
12/29/2003 ^b	0.2	0.3	0.6	0.6
5/18/2004	0.4	0.5	0.4	0.4
6/30/2004	0.4	0.7	0.5	1.1
9/23/2004	4.6	1.0	1.2	1.8
12/28/2004	0.4	0.2	0.3	4.3
REDOX (mvolts)				
5/30/2000	-322	197	-128	203
9/15/2000	-269	3	-89	206
11/17/2000	64	178	296	230
4/2/2001	-194	26	-36	102
6/28/2001	-310	-283	-360	107
8/30/2001	NA ¹	NA ¹	NA ¹	NA ¹
12/26/2001	12	11	11	11
4/23/2002	3	62	-299	158
6/14/2002	0	245	-215	254
8/20/2002	-294	-315	-238	228
12/27/2002	-315	-357	NA ²	-12
4/1/2003 ^b	-82	-75	NA ²	172
7/1/2003 ^b	212	230	NA ²	227
9/24/2003 ^b	-166	-300	-183	50
12/29/2003 ^b	-329	-198	-269	114
5/18/2004	-309	-189	-248	115
6/30/2004	-270	-343	-165	104
9/23/2004	-314	-284	-162	96
12/28/2004	-303	101	-110	127
Temperature (deg F)				
9/29/1999	67.0	72.6	67.7	73.8
11/22/1999	66.4	62.9	65.0	69.8
2/11/2000	61.3	63.2	62.0	68.5
5/30/2000	77.7	74.8	76.3	76.2
9/15/2000	64.4	64.3	64.7	67.0
11/17/2000	54.5	58.1	68.1	65.9
4/2/2001	63.5	64.9	66.2	66.4
6/28/2001	73.0	71.2	74.7	74.3
8/30/2001	74.8	77.6	78.3	78.7
12/26/2001	65.7	65.8	65.8	65.1
4/23/2002	64.4	69.8	37.1	71.6
6/14/2002	66.7	67.5	66.7	68.0
8/20/2002	64.6	67.6	66.2	68.0
12/27/2002	41.7	42.5	NA ²	41.7
4/1/2003 ^b	64.6	67.6	NA ²	68.0
7/1/2003 ^{ab}	79.4	80.3	NA ²	81.9
9/24/2003 ^{ab}	65.1	67.1	65.7	68.5
12/29/2003 ^b	65.0	67.5	67.1	68.0
5/18/2004	69.0	69.0	63.0	68.0
6/30/2004	65.8	68.0	69.1	70.0
9/23/2004	67.6	69.3	68.9	74.5
12/28/2004	60.3	60.4	59.2	62.6

Table 1.
Groundwater Parameters
BPS Reprographic Services Facility
1700 Jefferson Street
Oakland, California

pH	MW-1	MW-3	MW-5	MW-6
9/29/1999	8.4	8.5	8.4	8.4
11/22/1999	6.9	8.4	6.8	6.8
2/11/2000	6.8	6.9	6.8	6.7
5/30/2000	7.0	7.4	7.5	7.6
9/15/2000	7.1	7.5	6.8	6.6
11/17/2000	7.4	7.7	7.1	7.3
4/2/2001	7.0	6.6	7.1	7.0
6/28/2001	6.9	6.7	6.8	6.8
8/30/2001	7.9	7.9	7.9	8.4
12/26/2001	6.2	6.9	7.1	6.7
4/23/2002	6.9	7.0	6.9	6.9
6/14/2002	7.1	7.2	7.1	6.9
8/20/2002	NA ¹	6.9	NA ¹	6.9
12/27/2002	6.3	6.4	NA ²	6.5
4/1/2003 ^b	6.9	7.1	NA ²	6.7
7/1/2003 ^b	7.4	7.6	NA ²	7.7
9/24/2003 ^b	7.1	7.3	7.3	7.2
12/29/2003 ^b	6.7	6.5	6.8	6.7
5/18/2004	6.7	6.5	6.7	6.5
6/30/2004	6.6	6.6	6.3	NA ¹
9/23/2004	6.7	6.6	6.5	6.5
12/28/2004	6.5	5.3	6.6	6.8
Specific Conductance (µS/cm)				
9/29/1999	976	880	1,577	966
11/22/1999	1,004	1,500	1,352	1,038
2/11/2000	992	1,327	1,275	1,149
5/30/2000	845	1,020	758	924
9/15/2000	800	917	989	1,009
11/17/2000	785	970	742	886
4/2/2001	725	365	839	821
6/28/2001	1080	704	876	1021
8/30/2001	924	1015	975	931
12/26/2001	848	496	333	891
4/23/2002	922	601	848	977
6/14/2002	932	767	810	961
8/20/2002	1015	809	891	985
12/27/2002	956	791	NA ²	903
4/1/2003 ^b	1128	800	NA ²	1021
7/1/2003 ^b	1020	690	NA ²	970
9/24/2003 ^b	951	697	987	890
12/29/2003 ^b	1143	396	993	934
5/18/2004	1060	692	922	1037
6/30/2004	1006	725	970	962
9/23/2004	1027	656	966	1007
12/28/2004	875	69	807	873

Note:

Baseline dissolved oxygen measurement taken on 09/29/99, prior to initial installation of oxygen releasing compound

mg/l = milligrams per liter

mvolts = millivolts

deg. F = degrees Fahrenheit

µS/cm = micro-ohms per centimeter

NA = Not Available

1 = indicates data not available due to equipment malfunction

2 = not available due to ORC socks stuck in well on these dates

a = indicates dissolved oxygen and temperature readings collected on this date above typical range and should be considered suspect

b = indicates this data collected post purge

**Table 2. Groundwater Elevation Data
BPS Reprographic Services Facility
1700 Jefferson Street
Oakland, California**

Date Sampled	MW-1		MW-3		MW-5		MW-6		Average Change Since Preceding Quarter
	TOC Elev.	32.36	TOC Elev.	31.77	TOC Elev.	30.56	TOC Elev.	31.26	
	Water Level	Water Elevation	Water Level	Water Elevation	Water Level	Water Elevation	Water Level	Water Elevation	
3/6/1996	NM	--	24.79	6.98	23.53	7.03	NA	--	
6/11/1996	FP	--	25.60	6.17	23.78	6.78	25.16	6.10	-0.53
9/19/1996	FP	--	26.09	5.68	24.48	6.08	25.76	5.50	-0.60
12/23/1996	FP	--	FP	--	24.83	5.73	25.88	5.38	-0.23
3/27/1997	FP	--	FP	--	23.82	6.74	24.78	6.48	1.06
6/4/1997	26.41	5.95	25.11	6.66	23.92	6.64	24.60	6.66	0.04
9/26/1997	26.80	5.56	25.41	6.36	24.29	6.27	24.80	6.46	-0.32
12/22/1997	26.00	6.36	24.91	6.86	24.02	6.54	24.71	6.55	0.42
3/31/1998	26.06	6.30	24.05	7.72	22.78	7.78	23.75	7.51	0.75
6/18/1998	25.60	6.76	23.71	8.06	22.51	8.05	23.22	8.04	0.40
8/28/1998	25.45	6.91	23.70	8.07	22.74	7.82	22.23	9.03	0.23
12/2/1998	24.92	7.44	23.60	8.17	23.16	7.40	23.72	7.54	-0.32
3/10/1999	24.90	7.46	22.65	9.12	22.82	7.74	23.54	7.72	0.37
6/30/1999	25.53	6.83	23.07	8.70	22.41	8.15	23.04	8.22	-0.04
9/29/1999	24.23	8.13	23.03	8.74	22.81	7.75	23.42	7.84	0.14
11/22/1999	24.33	8.03	23.68	8.09	22.88	7.68	23.64	7.62	-0.26
2/11/2000	24.38	7.98	23.74	8.03	22.74	7.82	23.67	7.59	0.00
5/30/2000	23.57	8.79	22.97	8.80	21.73	8.83	22.82	8.44	0.86
9/15/2000	23.85	8.51	23.12	8.65	22.14	8.42	23.10	8.16	-0.28
11/16/2000	24.14	8.22	23.40	8.37	22.39	8.17	23.41	7.85	-0.28
4/2/2001	23.40	8.96	23.40	8.37	22.07	8.49	23.33	7.93	0.29
6/28/2001	23.58	8.78	23.17	8.60	22.15	8.41	23.15	8.11	0.04
8/30/2001	24.00	8.36	23.35	8.42	22.35	8.21	23.35	7.91	-0.25
12/26/2001	24.18	8.18	23.54	8.23	22.49	8.07	23.27	7.99	-0.11
4/23/2002	NA	NA	22.89	8.88	21.07	9.49	22.89	8.37	0.82
6/14/2002	23.41	8.95	22.85	8.92	21.80	8.76	22.81	8.45	-0.20
8/20/2002	23.85	8.51	23.11	8.66	22.14	8.42	23.15	8.11	-0.31
12/27/2002	24.10	8.26	23.34	8.43	*NA	*NA	23.41	7.85	-0.24
4/1/2003	23.75	8.61	22.90	8.87	*NA	*NA	23.16	8.10	0.35
7/1/2003	23.50	8.86	22.80	8.97	*NA	*NA	22.75	8.51	0.25
9/24/2003	23.82	8.54	23.15	8.62	22.21	8.35	23.16	8.10	-0.27
12/29/2003	24.07	8.29	23.45	8.32	22.56	8.00	23.47	7.79	-0.30
5/18/2004	23.64	8.72	22.98	8.79	21.85	8.71	22.87	8.39	0.55
6/30/2004	23.64	8.72	23.04	8.73	22.00	8.56	22.43	8.83	0.06
9/23/2004	23.98	8.38	23.32	8.45	22.36	8.20	23.30	7.96	-0.46
12/28/2004	24.07	8.29	28.71	3.06	22.42	8.14	23.42	7.84	-1.42

Note: All measurements shown in feet.
 TOC Elev. = top of casing elevation
 NM = not monitored
 FP = free product
 -- = no data collected
 NA = not available
 * This data not available due to ORC socks stuck in well

**Table 4. Groundwater Monitoring Analytical Results
BPS Reprographic Services Facility
1700 Jefferson Street
Oakland, California**

	9/29/1999 ⁶	11/22/1999	2/11/2000	5/30/2000	9/15/2000	11/16/2000	4/2/2001	6/28/2001	8/30/2001	12/26/2001	4/24/2002	6/14/2002	8/20/2002	12/27/2002	4/1/2003	7/1/2003 ⁵	9/25/2003 ⁵	12/29/2003 ⁵	5/18/2004	6/30/2004	9/23/2004	12/28/2004
TPHg (mg/L)																						
MW-1	14	24	19	19	20	18	19	39	31	34	35	35	26	28	16	61	59	46	23	24	24	22
MW-3	4.1	3.1	0.54	0.49	1.5	1.3	0.17	4.9	3.1	0.95	300	4.6	4.9	4	5.9	12	10	7.3	1.5	2.0	3.4	3.9
MW-5	10	30	23	19	24	1.8	15	3.6	34	1.9	9.4	1.7	3.2	*6.2	NA ⁴	NA ⁴	43	26	15	18	42	41
MW-6	ND<0.5	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	0.066	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	0.059
Benzene (µg/L)																						
MW-1	6,200	4,900	4,100	5,700	4,100	3,500	4,700	5,200	5,600	5,300	4,900	5,400	4,100	4,500	4,500	7,700	7,600	6,600	4,100	3,500	3,800	3,400
MW-3	180	6.5	8.3	11	28	20	9	150	42	8	11	130	330	110	370	200	150	160	77	81	140	340
MW-5	14,000	11,000	12,000	9,900	3,800	470	7,400	300	8,300	300	2,300	110	320	*2200	NA ⁴	NA ⁴	12,000	7,700	5,000	5,700	12,000	10,000
MW-6	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.30	ND<0.30	ND<0.50	ND<0.50	3.6	ND<0.50	ND<0.50	ND<0.50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Toluene (µg/L)																						
MW-1	5,900	5,000	4,800	8,400	5,700	4,300	5,200	4,200	5,100	5,200	6,000	6,800	4,700	5,000	6,000	11,000	9,400	7,900	4,700	3,600	3,900	3,400
MW-3	340	33	20	5.6	14	34	6.2	240	48	5.2	4.8	470	170	280	150	460	300	250	72	37	95	37
MW-5	470	3,400	4,500	6,900	3,000	220	3,000	11	3,000	110	130	ND<2.5	8.6	*140	NA ⁴	NA ⁴	2800	1900	1,300	1,600	3,900	3,800
MW-6	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.30	ND<0.30	2.9	ND<0.50	3.6	ND<0.50	ND<0.50	ND<0.50	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05
Ethylbenzene (µg/L)																						
MW-1	620	730	530	730	540	640	570	660	560	630	740	870	620	660	680	1200	1000	960	450	390	470	380
MW-3	130	27	2.4	0.45	2.6	25	1.4	38	26	1.1	0.72	91	40	57	44	130	120	79	19.00	34.0	36	11
MW-5	1,100	1,500	1,200	1,200	460	39	1000	16	1,400	55	300	7.2	22	*160	NA ⁴	NA ⁴	1500	910	380	540	1200	1000
MW-6	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.30	ND<0.30	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Total Xylenes (µg/L)																						
MW-1	3,500	3,500	2,800	3,500	2,700	3,200	2,600	3,900	2,500	2,400	3,100	3,500	2,700	3,000	3,100	6,700	4,800	4,000	1,500	1,300	1,400	1,400
MW-3	580	260	28	17	160	28	8.1	160	210	7	1.4	390	150	260	230	390	280	210	59	40	40	60
MW-5	600	2,500	1,300	2,600	1,200	100	2,200	15	2,600	120	270	ND<2.5	19	*250	NA ⁴	NA ⁴	3000	210	770	1,200	2,400	2,300
MW-6	ND<0.6	ND<0.6	ND<0.6	ND<0.6	ND<0.6	ND<0.60	ND<0.30	2.7	ND<0.50	8.7	ND<0.50	ND<0.50	ND<0.50	ND<0.5	ND<0.5	ND<2.5	ND<2.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.6
MTBE (µg/L) (EPA Method 8020)																						
MW-1	ND<250	ND<100	6.6	ND<5.0 ¹	ND<12 ^{1,2}	ND<40 ^{1,2}	50 ¹	8.5 ¹	ND<100 ^{1,2}	ND<120	ND<120	ND<250	ND<120	ND<120	ND<120	ND<250	ND<1200	ND<250	ND<50	ND<50	¹ ND<25	ND<250
MW-3	14	ND<1.0	31	ND<5.0 ¹	ND<5 ¹	ND<5 ¹	77 ¹	ND<2 ¹	ND<1.2 ¹	ND<0.50 ¹	ND<0.50 ¹	ND<0.50 ¹	ND<5 ¹	19	ND<1.0 ¹	ND<5 ¹	ND<2.5 ¹	ND<2.5 ¹	ND<12	ND<1.0	¹ ND<10	ND<5 ¹
MW-5	ND<100	ND<100	6.6	ND<200	ND<10 ^{1,2}	ND<5 ¹	ND<50 ¹	4.4 ¹	ND<50 ¹	ND<10 ¹	ND<50	ND<0.50 ¹	ND<0.50 ¹	*ND(25)	NA ⁴	NA ⁴	ND<1200	ND<2.5 ¹	ND<50	ND<50	ND<120	ND<250
MW-6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	5 ^{1,3}	17 ¹	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5

mg/L = milligrams per liter
µg/L = micrograms per liter
ND = Not detected above the reporting limit following the less than sign
NA = Not Available
MTBE = methyl t-butyl ether
1 Result of MTBE confirmation by EPA Method 8260.
2 Reporting limits elevated due to matrix interference.
3 Detection limit = 5 µg/L, backup sample analyzed after hold time had a result of ND<5 µg/L
4 Data from April 1 and July 1, 2003 sampling event not available due to ORC sock obstruction in well (see report for details)
5 Samples collected post purge on this date, all other samples collected without purging (see report for details)
6 A sample was collected on this date both post and pre purge. The sample results collected post purge are shown on Table 3.

* = Fourth Quarter 2002 analytical data for MW-5 collected on January 3, 2003

Table 5. Groundwater Monitoring Analytical Results
EPA Method 8260
BPS Reprographic Services Facility
1700 Jefferson Street
Oakland, California

	¹ 12/27/2002	² 4/1/2003	² 7/1/2003	² 9/25/2003	² 12/29/2003	¹ 5/18/2004	¹ 6/30/2004	¹ 9/23/2004	¹ 12/28/2004	
tert Amyl Methyl Ether (µg/L)										
MW-1	ND<250	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-3	ND<25	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-5	*ND<100	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-6	ND<1	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethyl tert Butyl Ether (µg/L)										
MW-1	ND<250	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-3	ND<25	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-5	*ND<100	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-6	ND<1	NR	NR	NR	NR	NR	NR	NR	NR	NR
Di-isopropyl Ether (µg/L)										
MW-1	ND<250	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-3	ND<25	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-5	*ND<100	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-6	ND<1	NR	NR	NR	NR	NR	NR	NR	NR	NR
tert Butyl Alcohol (µg/L)										
MW-1	ND<5000	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-3	ND<500	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-5	*ND<2000	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-6	ND<20	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylene Dibromide (µg/L)										
MW-1	ND<120	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-3	ND<12	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-5	*ND<50	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-6	ND<0.5	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylene Dichloride (µg/L)										
MW-1	370	ND<120	400	^a 500	360	320	320	260	180	
MW-3	ND<12	NR	NR	NR	NR	NR	NR	NR	NR	
MW-5	*220	³ NA	³ NA	610	410	290	610	670	290	
MW-6	ND<0.5	NR	NR	NR	NR	NR	NR	NR	NR	

Notes:

Analytes shown on this table monitored per ACHCS requirement described in the September 27, 2002 letter to BPS from the ACHCS (see report text for details).

µg/l = micrograms per liter

NA = Not Applicable

ND = Not detected above the reporting limit

NR = Not Required per ACHCS direction indicating if analyte not detected during 12/27/02 sampling event then the analyte does not need continued monitoring/MW-1 and MW-5 are the only wells currently sampled for Ethylene Dichloride (see report text for details)

* = Analytical data collected for MW-5 on January 3, 2003



a = EDC detected at same concentration as detection limit

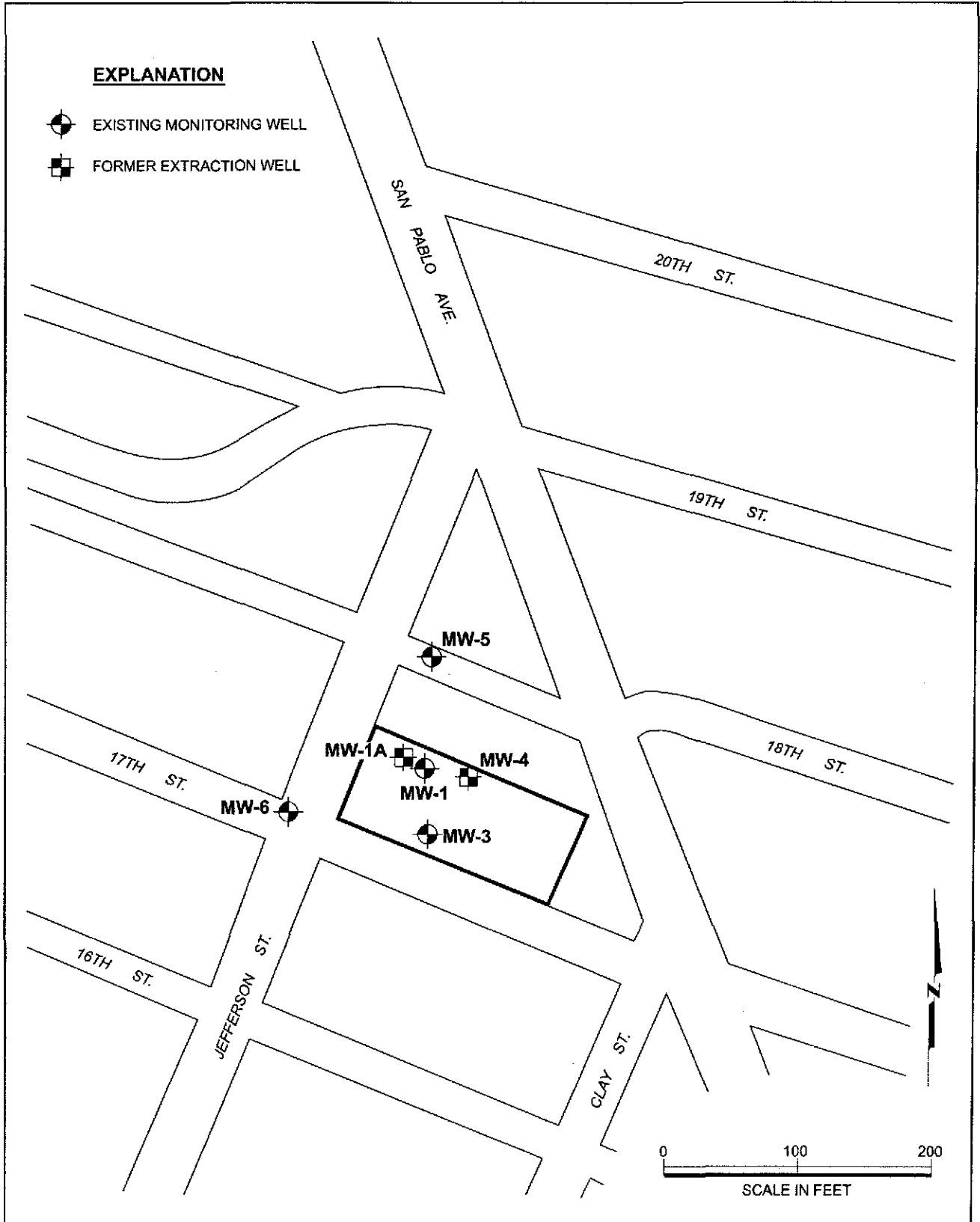
1 = Samples on this date collected without purging

2 = Samples on this date collected post purge

3 = Data from April 1 and July 1, 2003 sampling event not available due to stuck ORC socks obstructing well (see Report for details).

EXPLANATION

-  EXISTING MONITORING WELL
-  FORMER EXTRACTION WELL



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Site Map
Fourth Quarter 2004
1700 Jefferson Street
BPS Reprographic Services Facility
Oakland, California

PLATE

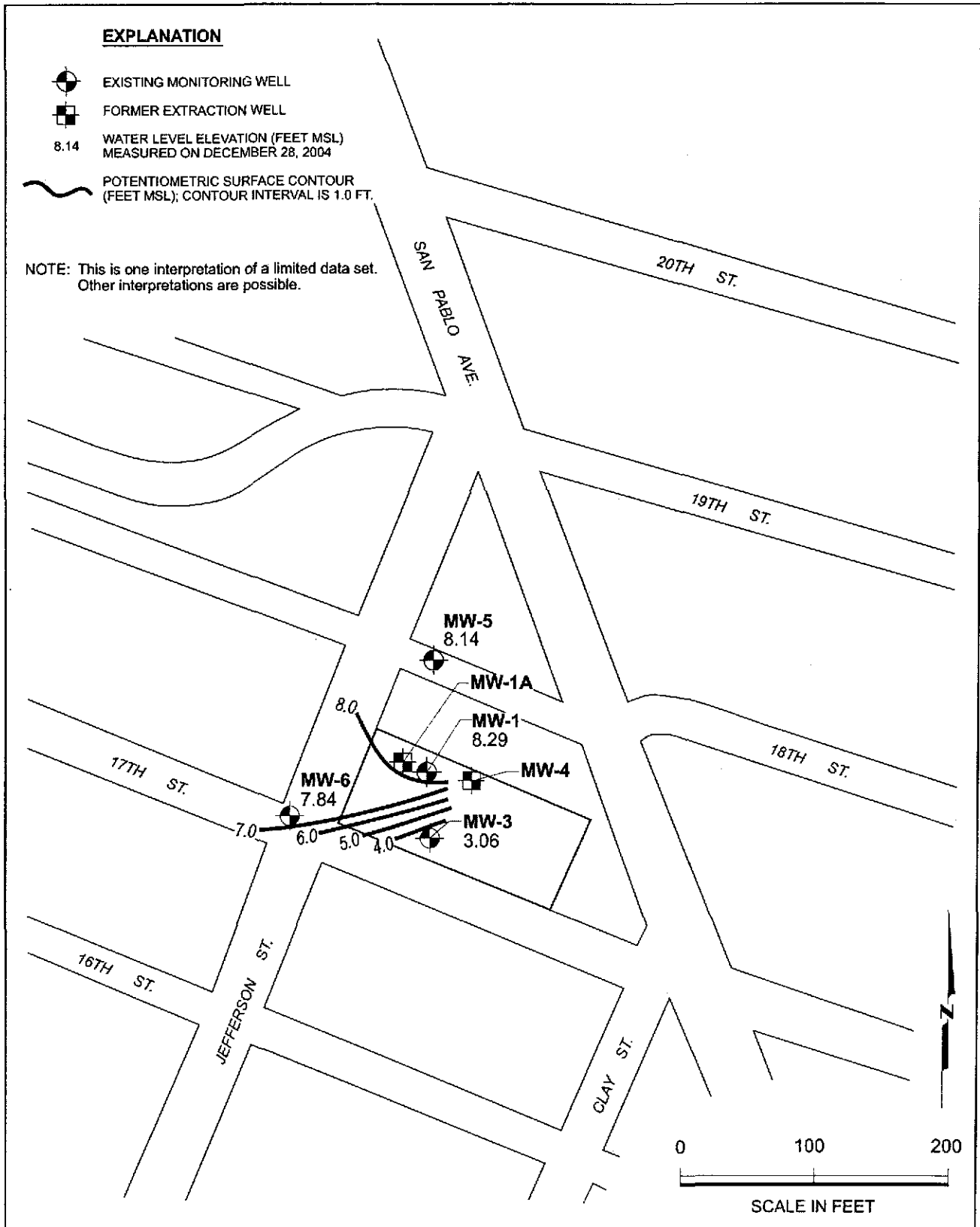
1

DRAWN	PROJECT NUMBER	CHECKED	DATE	APPROVED	DATE
CN	4097041918 01		2/21/05		

EXPLANATION

-  EXISTING MONITORING WELL
-  FORMER EXTRACTION WELL
- 8.14 WATER LEVEL ELEVATION (FEET MSL)
MEASURED ON DECEMBER 28, 2004
-  POTENTIOMETRIC SURFACE CONTOUR
(FEET MSL); CONTOUR INTERVAL IS 1.0 FT.

NOTE: This is one interpretation of a limited data set.
Other interpretations are possible.



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Groundwater Contours
Fourth Quarter 2004
1700 Jefferson Street
BPS Reprographic Services Facility
Oakland, California

PLATE

2

DRAWN
CN

PROJECT NUMBER
4097041918 01

CHECKED

DATE
2/21/05

APPROVED

DATE

19TH ST.

SAN PABLO AVE.

18TH ST.

17TH ST.

JEFFERSON ST.

CLAY ST.

TPHg Total Petroleum Hydrocarbons as gasoline
 B Benzene
 T Toluene
 E Ethylbenzene
 X Xylene
 MTBE Methyl tert-butyl ether
 EDC Ethylene Dichloride
 ND Not detected above reporting limits in parentheses

NOTE: TPHg concentrations presented in mg/L
 BTEX, MTBE and EDC concentrations presented in µg/L.

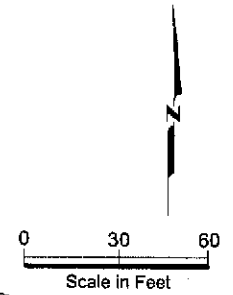
TPHg 41
 B 10,000
 T 3,800
 E 1,000
 X 2,300
 MTBE ND(<250)
 EDC 290

TPHg 22
 B 3,400
 T 3,400
 E 380
 X 1,400
 MTBE ND(<280)
 EDC 180

TPHg 0.59
 B ND(<0.5)
 T ND(<0.5)
 E ND(<0.5)
 X 1.6
 MTBE ND(<2.5)
 EDC NR

TPHg 3.9
 B 340
 T 37
 E 11
 X 60
 MTBE ND (<5)
 EDC NR

MW-1A
 MW-1
 MW-4
 BPS Reprographic Services Facility
 MW-3



EXPLANATION

- SITE BOUNDARY
- ⊕ MONITORING WELL
- ⊞ FORMER EXTRACTION WELL
- mg/L MILIGRAMS PER LITER
- µg/LT MICROGRAMS PER LITER
- NR NOT REQUIRED (ONLY WELLS MW-1 AND MW-5 REQUIRE EDC MONITORING - SEE REPORT)



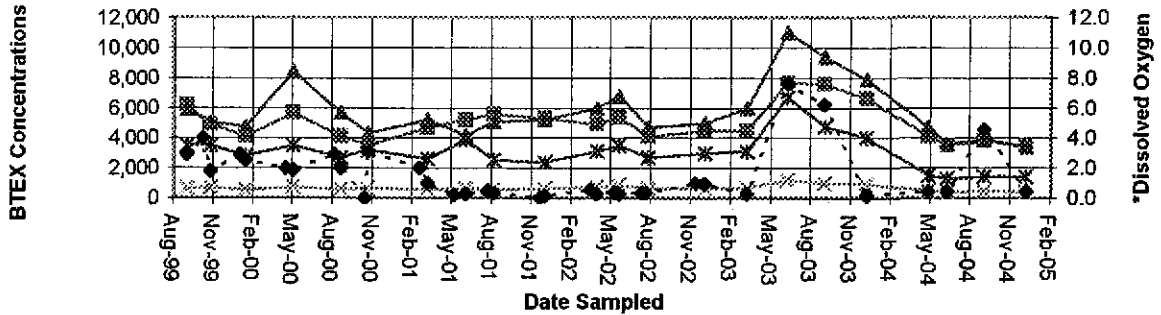
MACTEC

TPHg, BTEX, MTBE and EDC Concentrations in Groundwater PLATE
 Fourth Quarter 2004
 1700 Jefferson Street
 BPS Reprographic Services Facility
 Oakland, California

3

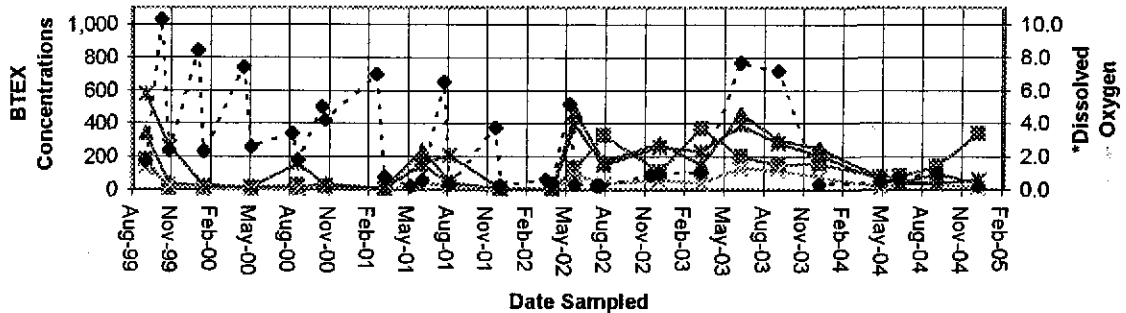
DRAWN CN	PROJECT NUMBER 4097041918 01	CHECKED	DATE 2/21//05	APPROVED	DATE
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MW-1



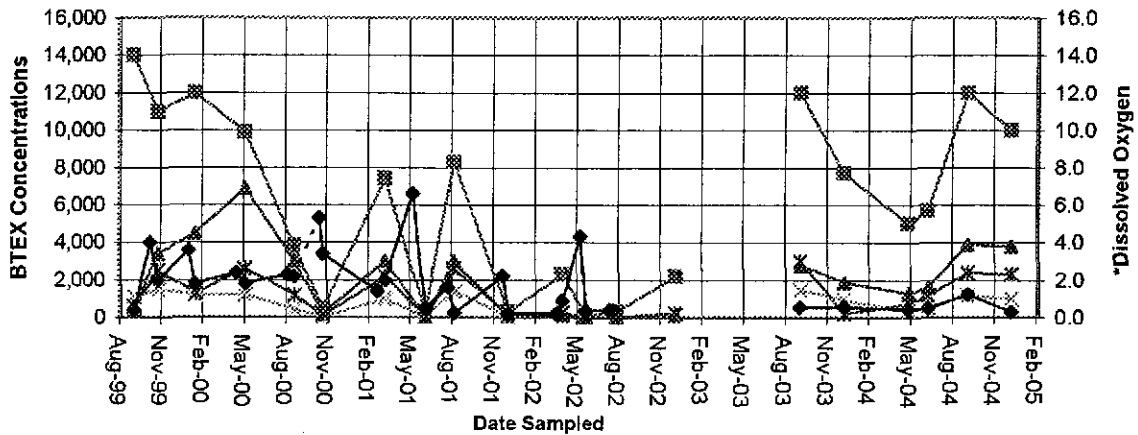
(Samples collected post purge between July 2003 and December 2003, all other samples collected pre-purge. ORC removed after Sept. 2002.)

MW-3



(Samples collected post purge between July 2003 and December 2003, all other samples collected pre-purge. ORC removed after Sept. 2002.)

MW-5



(Samples collected post purge between July 2003 and December 2003, all other samples collected pre-purge. ORC sock stuck in MW-5 for April 2003 and July 2003 sampling events.)

Benzene (µg/L)
 Toluene (µg/L)
 Ethylbenzene (µg/L)

 Total Xylenes (µg/L)

 Dissolved Oxygen (mg/L)

* DO values collected after ORC removal and prior to sampling between Sept. 99 and Sept. 2002.



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BTEX and DO Results
 Fourth Quarter 2004
 BPS Reprographic Services Facility
 1700 Jefferson Steet
 Oakland, California

Plate

4

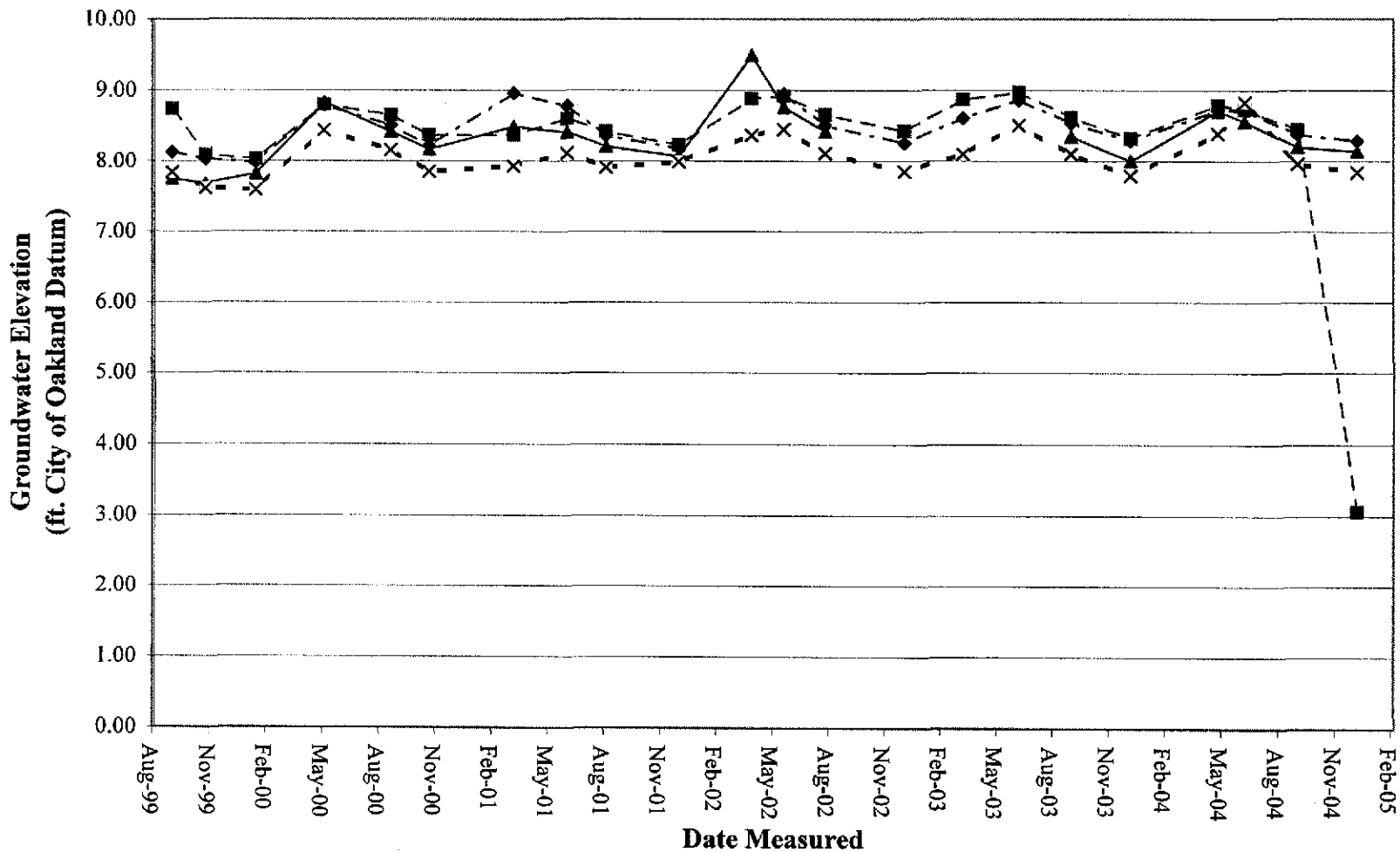
Drawn by
DSN

JOB NUMBER
4097041918

APPROVED

DATE
Jan-05

REVISION DATE



(ORC sock stuck in MW-5 from Dec. 2002 until Sep. 2003 - No groundwater elevations monitored in MW-5 during that time)



Groundwater Elevation Data
 Fourth Quarter 2004
 BPS Reprographic Services Facility
 1700 Jefferson Steet
 Oakland, California

Plate

5

DRAWN
DSN

JOB NUMBER
4097041918

APPROVED

DATE
February-05

REVISION DATE

APPENDIX A
LABORATORY REPORTS



**Sequoia
Analytical**

1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

14 January, 2005

David Nanstad
MACTEC E&C - Petaluma
5341 Old Redwood Highway, Suite 300
Petaluma, CA 94954

RE: General Commercial
Work Order: P412446

Enclosed are the results of analyses for samples received by the laboratory on 12/28/04 13:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stacy P. Hoch
Dept Manager - Client Services

CA ELAP Certificate #2374

MACTEC E&C - Petaluma 5341 Old Redwood Highway, Suite 300 Petaluma CA, 94954	Project: General Commercial Project Number: BPS Services-City Blue/4097041918.01 Project Manager: David Nanstad	P412446 Reported: 01/14/05 11:16
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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
045302	P412446-01	Water	12/28/04 08:45	12/28/04 13:50
045301	P412446-02	Water	12/28/04 09:15	12/28/04 13:50
045306	P412446-03	Water	12/28/04 10:10	12/28/04 13:50
045303	P412446-04	Water	12/28/04 11:00	12/28/04 13:50

MACTEC E&C - Petaluma 5341 Old Redwood Highway, Suite 300 Petaluma CA, 94954	Project: General Commercial Project Number: BPS Services-City Blue/4097041918.01 Project Manager: David Nanstad	P412446 Reported: 01/14/05 11:16
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Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
045302 (P412446-01) Water Sampled: 12/28/04 08:45 Received: 12/28/04 13:50									
Gasoline Range Organics (C6-C10)	3900	250	ug/l	5	5010123	01/10/05	01/10/05	EPA 8015B/8021 B	
Benzene	340	2.5	"	"	"	"	"	"	
Toluene	37	2.5	"	"	"	"	"	"	
Ethylbenzene	11	2.5	"	"	"	"	"	"	
Xylenes (total)	60	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	69	12	"	"	"	"	"	"	CFI
Surrogate: <i>a,a,a</i> -Trifluorotoluene		94 %	89-131	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99 %	65-135	"	"	"	"	"	
045301 (P412446-02) Water Sampled: 12/28/04 09:15 Received: 12/28/04 13:50									
Gasoline Range Organics (C6-C10)	22000	5000	ug/l	100	5010123	01/10/05	01/10/05	EPA 8015B/8021 B	
Benzene	3400	50	"	"	"	"	"	"	
Toluene	3400	50	"	"	"	"	"	"	
Ethylbenzene	380	50	"	"	"	"	"	"	
Xylenes (total)	1400	50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	250	"	"	"	"	"	"	CFI
Surrogate: <i>a,a,a</i> -Trifluorotoluene		93 %	89-131	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99 %	65-135	"	"	"	"	"	
045306 (P412446-03) Water Sampled: 12/28/04 10:10 Received: 12/28/04 13:50									
Gasoline Range Organics (C6-C10)	59	50	ug/l	1	5010139	01/11/05	01/11/05	EPA 8015B/8021 B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	1.6	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		99 %	89-131	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94 %	65-135	"	"	"	"	"	

MACTEC E&C - Petaluma
5341 Old Redwood Highway, Suite 300
Petaluma CA, 94954

Project: General Commercial
Project Number: BPS Services-City Blue/4097041918.01
Project Manager: David Nanstad

P412446
Reported:
01/14/05 11:16

**Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
045303 (P412446-04) Water Sampled: 12/28/04 11:00 Received: 12/28/04 13:50									
Gasoline Range Organics (C6-C10)	41000	5000	ug/l	100	5010123	01/10/05	01/10/05	EPA 8015B/8021	
								B	
Benzene	10000	50	"	"	"	"	"	"	
Toluene	3800	50	"	"	"	"	"	"	
Ethylbenzene	1000	50	"	"	"	"	"	"	
Xylenes (total)	2300	50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		94 %		89-131	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		100 %		65-135	"	"	"	"	

MACTEC E&C - Petaluma
 5341 Old Redwood Highway, Suite 300
 Petaluma CA, 94954

 Project: General Commercial
 Project Number: BPS Services-City Blue/4097041918.01
 Project Manager: David Nanstad

 P412446
 Reported:
 01/14/05 11:16

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
045302 (P412446-01) Water Sampled: 12/28/04 08:45 Received: 12/28/04 13:50 R-05									
Methyl tert-butyl ether	ND	5.0	ug/l	10	5010138	01/11/05	01/11/05	EPA 8260B	
Surrogate: Dibromofluoromethane		99 %	84-122		"	"	"	"	
045301 (P412446-02) Water Sampled: 12/28/04 09:15 Received: 12/28/04 13:50									
1,2-Dichloroethane	180	100	ug/l	100	5010121	01/10/05	01/10/05	EPA 8260B	
Surrogate: Dibromofluoromethane		115 %	84-122		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		110 %	74-135		"	"	"	"	
Surrogate: Toluene-d8		103 %	84-119		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	86-119		"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	10	5010138	01/11/05	01/11/05	"	
Surrogate: Dibromofluoromethane		97 %	84-122		"	"	"	"	
045306 (P412446-03) Water Sampled: 12/28/04 10:10 Received: 12/28/04 13:50									
Methyl tert-butyl ether	ND	0.50	ug/l	1	5010138	01/11/05	01/11/05	EPA 8260B	
Surrogate: Dibromofluoromethane		99 %	84-122		"	"	"	"	
045303 (P412446-04) Water Sampled: 12/28/04 11:00 Received: 12/28/04 13:50									
1,2-Dichloroethane	290	100	ug/l	100	5010121	01/10/05	01/10/05	EPA 8260B	
Surrogate: Dibromofluoromethane		115 %	84-122		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		114 %	74-135		"	"	"	"	
Surrogate: Toluene-d8		102 %	84-119		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	86-119		"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	10	5010138	01/11/05	01/11/05	"	
Surrogate: Dibromofluoromethane		98 %	84-122		"	"	"	"	

MACTEC E&C - Petaluma
5341 Old Redwood Highway, Suite 300
Petaluma CA, 94954

Project: General Commercial
Project Number: BPS Services-City Blue/4097041918.01
Project Manager: David Nanstad

P412446
Reported:
01/14/05 11:16

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5010123 - EPA 5030B, waters / EPA 8015B/8021B
Blank (5010123-BLK1)

Prepared & Analyzed: 01/10/05

Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: <i>a,a,a</i> -Trifluorotoluene	288		"	300		96	89-131			
Surrogate: 4-Bromofluorobenzene	273		"	300		91	65-135			

Laboratory Control Sample (5010123-BS1)

Prepared & Analyzed: 01/10/05

Gasoline Range Organics (C6-C10)	2420	50	ug/l	2750		88	65-135			
Benzene	37.9	0.50	"	40.0		95	82-139			
Toluene	182	0.50	"	200		91	75-123			
Ethylbenzene	43.7	0.50	"	47.0		93	75-114			
Xylenes (total)	224	0.50	"	228		98	78-116			
Methyl tert-butyl ether	66.4	2.5	"	62.0		107	64-168			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	289		"	300		96	89-131			
Surrogate: 4-Bromofluorobenzene	312		"	300		104	65-135			

Matrix Spike (5010123-MS1)

Source: P412479-04

Prepared & Analyzed: 01/10/05

Gasoline Range Organics (C6-C10)	2240	50	ug/l	2750	ND	81	65-135			
Benzene	33.2	0.50	"	40.0	ND	83	82-139			
Toluene	166	0.50	"	200	0.10	83	75-123			
Ethylbenzene	38.9	0.50	"	47.0	ND	83	75-114			
Xylenes (total)	201	0.50	"	228	0.27	88	78-116			
Methyl tert-butyl ether	62.2	2.5	"	62.0	0.83	99	64-168			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	281		"	300		94	89-131			
Surrogate: 4-Bromofluorobenzene	308		"	300		103	65-135			

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 Reported:
 01/14/05 11:16

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5010123 - EPA 5030B, waters / EPA 8015B/8021B

Matrix Spike Dup (5010123-MSD1)	Source: P412479-04			Prepared & Analyzed: 01/10/05						
Gasoline Range Organics (C6-C10)	2330	50	ug/l	2750	ND	85	65-135	4	20	
Benzene	34.4	0.50	"	40.0	ND	86	82-139	4	20	
Toluene	170	0.50	"	200	0.10	85	75-123	2	20	
Ethylbenzene	40.8	0.50	"	47.0	ND	87	75-114	5	20	
Xylenes (total)	208	0.50	"	228	0.27	91	78-116	3	20	
Methyl tert-butyl ether	64.6	2.5	"	62.0	0.83	103	64-168	4	20	
Surrogate: a,a,a-Trifluorotoluene	282		"	300		94	89-131			
Surrogate: 4-Bromofluorobenzene	308		"	300		103	65-135			

Batch 5010139 - EPA 5030B, waters / EPA 8015B/8021B

Blank (5010139-BLK1)	Prepared & Analyzed: 01/11/05									
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	298		"	300		99	89-131			
Surrogate: 4-Bromofluorobenzene	263		"	300		88	65-135			
Laboratory Control Sample (5010139-BS1)	Prepared & Analyzed: 01/11/05									
Gasoline Range Organics (C6-C10)	2540	50	ug/l	2750		92	65-135			
Benzene	39.2	0.50	"	40.0		98	82-139			
Toluene	192	0.50	"	200		96	75-123			
Ethylbenzene	45.5	0.50	"	47.0		97	75-114			
Xylenes (total)	234	0.50	"	228		103	78-116			
Methyl tert-butyl ether	68.5	2.5	"	62.0		110	64-168			
Surrogate: a,a,a-Trifluorotoluene	302		"	300		101	89-131			
Surrogate: 4-Bromofluorobenzene	302		"	300		101	65-135			

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 Reported:
 01/14/05 11:16

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5010139 - EPA 5030B, waters / EPA 8015B/8021B

Matrix Spike (5010139-MS1)	Source: P501018-12			Prepared & Analyzed: 01/11/05						
Gasoline Range Organics (C6-C10)	40600	500	ug/l	27500	16000	89	65-135			
Benzene	386	5.0	"	400	6.1	95	82-139			
Toluene	2230	5.0	"	2000	450	89	75-123			
Ethylbenzene	938	5.0	"	470	510	91	75-114			
Xylenes (total)	5040	5.0	"	2280	3100	85	78-116			
Methyl tert-butyl ether	480	25	"	620	37	71	64-168			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	282		"	300		94	89-131			
<i>Surrogate: 4-Bromofluorobenzene</i>	317		"	300		106	65-135			
Matrix Spike Dup (5010139-MSD1)	Source: P501018-12			Prepared & Analyzed: 01/11/05						
Gasoline Range Organics (C6-C10)	39300	500	ug/l	27500	16000	85	65-135	3	20	
Benzene	374	5.0	"	400	6.1	92	82-139	3	20	
Toluene	2150	5.0	"	2000	450	85	75-123	4	20	
Ethylbenzene	912	5.0	"	470	510	86	75-114	3	20	
Xylenes (total)	4850	5.0	"	2280	3100	77	78-116	4	20	QM02
Methyl tert-butyl ether	461	25	"	620	37	68	64-168	4	20	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	280		"	300		93	89-131			
<i>Surrogate: 4-Bromofluorobenzene</i>	317		"	300		106	65-135			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5010121 - EPA 5030B waters / EPA 8260B
Blank (5010121-BLK1)

Prepared & Analyzed: 01/10/05

Acetone	ND	10	ug/l							
Benzene	ND	1.0	"							
Bromobenzene	ND	1.0	"							
Bromochloromethane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
2-Butanone	ND	10	"							
n-Butylbenzene	ND	1.0	"							
sec-Butylbenzene	ND	1.0	"							
tert-Butylbenzene	ND	1.0	"							
Carbon disulfide	ND	10	"							
Carbon tetrachloride	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	1.0	"							
Chloromethane	ND	1.0	"							
2-Chlorotoluene	ND	1.0	"							
4-Chlorotoluene	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
1,2-Dibromo-3-chloropropane	ND	1.0	"							
1,2-Dibromoethane (EDB)	ND	1.0	"							
Dibromomethane	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
Dichlorodifluoromethane	ND	1.0	"							
1,1-Dichloroethane	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
1,1-Dichloroethene	ND	1.0	"							
cis-1,2-Dichloroethene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
1,3-Dichloropropane	ND	1.0	"							
2,2-Dichloropropane	ND	1.0	"							
1,1-Dichloropropene	ND	1.0	"							

Sequoia Analytical - Petaluma

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5010121 - EPA 5030B waters / EPA 8260B
Blank (5010121-BLK1)

Prepared & Analyzed: 01/10/05

cis-1,3-Dichloropropene	ND	1.0	ug/l							
trans-1,3-Dichloropropene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Freon 113	ND	1.0	"							
Hexachlorobutadiene	ND	1.0	"							
2-Hexanone	ND	10	"							
Isopropylbenzene	ND	1.0	"							
p-Isopropyltoluene	ND	1.0	"							
Methylene chloride	ND	1.0	"							
4-Methyl-2-pentanone	ND	10	"							
Methyl tert-butyl ether	ND	1.0	"							
Naphthalene	ND	1.0	"							
n-Propylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,1,2-Tetrachloroethane	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
Toluene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	1.0	"							
1,2,4-Trichlorobenzene	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
1,2,3-Trichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
Vinyl acetate	ND	20	"							
Vinyl chloride	ND	1.0	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	1.0	"							
Surrogate: Dibromofluoromethane	5.22		"	5.00		104	84-122			
Surrogate: 1,2-Dichloroethane-d4	5.27		"	5.00		105	74-135			
Surrogate: Toluene-d8	5.27		"	5.00		105	84-119			
Surrogate: 4-Bromofluorobenzene	5.27		"	5.00		105	86-119			

Sequoia Analytical - Petaluma

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 Petaluma CA, 94954

 Project: General Commercial
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 Project Manager: David Nanstad

 P412446
 Reported:
 01/14/05 11:16

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5010121 - EPA 5030B waters / EPA 8260B
Laboratory Control Sample (5010121-BS1)

Prepared & Analyzed: 01/10/05

Benzene	4.88	1.0	ug/l	5.00		98	81-118			
Chlorobenzene	5.23	1.0	"	5.00		105	88-119			
1,1-Dichloroethene	5.29	1.0	"	5.00		106	77-121			
Toluene	5.03	1.0	"	5.00		101	84-119			
Trichloroethene	5.00	1.0	"	5.00		100	83-126			
Surrogate: Dibromofluoromethane	5.22		"	5.00		104	84-122			
Surrogate: 1,2-Dichloroethane-d4	5.08		"	5.00		102	74-135			
Surrogate: Toluene-d8	5.28		"	5.00		106	84-119			
Surrogate: 4-Bromofluorobenzene	5.48		"	5.00		110	86-119			

Laboratory Control Sample Dup (5010121-BSD1)

Prepared & Analyzed: 01/10/05

Benzene	4.89	1.0	ug/l	5.00		98	81-118	0.2	20	
Chlorobenzene	5.00	1.0	"	5.00		100	88-119	4	20	
1,1-Dichloroethene	5.35	1.0	"	5.00		107	77-121	1	20	
Toluene	4.96	1.0	"	5.00		99	84-119	1	20	
Trichloroethene	5.12	1.0	"	5.00		102	83-126	2	20	
Surrogate: Dibromofluoromethane	5.28		"	5.00		106	84-122			
Surrogate: 1,2-Dichloroethane-d4	5.35		"	5.00		107	74-135			
Surrogate: Toluene-d8	5.34		"	5.00		107	84-119			
Surrogate: 4-Bromofluorobenzene	5.25		"	5.00		105	86-119			

Batch 5010138 - EPA 5030B waters / EPA 8260B
Blank (5010138-BLK1)

Prepared & Analyzed: 01/11/05

Methyl tert-butyl ether	ND	0.50	ug/l							
Surrogate: Dibromofluoromethane	4.89		"	5.00		98	84-122			

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 Reported:
 01/14/05 11:16

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5010138 - EPA 5030B waters / EPA 8260B										
Laboratory Control Sample (5010138-BS1)				Prepared & Analyzed: 01/11/05						
Methyl tert-butyl ether	4.57	0.50	ug/l	5.00		91	77-123			
Surrogate: Dibromofluoromethane	4.96		"	5.00		99	84-122			
Matrix Spike (5010138-MS1)				Source: P501061-09 Prepared & Analyzed: 01/11/05						
Methyl tert-butyl ether	7.52	0.50	ug/l	5.00	2.5	100	77-123			
Surrogate: Dibromofluoromethane	5.00		"	5.00		100	84-122			
Matrix Spike Dup (5010138-MSD1)				Source: P501061-09 Prepared & Analyzed: 01/11/05						
Methyl tert-butyl ether	7.67	0.50	ug/l	5.00	2.5	103	77-123	2	20	
Surrogate: Dibromofluoromethane	5.06		"	5.00		101	84-122			



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Notes and Definitions

- R-05 The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
- QM02 The spike recovery was below control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- CF1 Primary and confirmation results varied by greater than 40% RPD.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Samplers: David Browne

Lab: Sequoia

Job Number: 4097041918.01

Name/Location: BPS / City Blue, San Oakland

Project Manager: David Nausbaul Recorder: David Browne
(Signature Required)

MATRIX	# CONTAINERS & PRESERV.				SAMPLE NUMBER				DATE				
	Water	Soil	Air	Unpres.	H2SO4	HNO3	HCL	YR	SEQ	YR	MO	DAY	TIME
X						2	04	5302	04	12	28	08	45
X						6	04	5301	09	12	28	09	15
X						3	04	5303	04	12	28	10	10
X						6	04	5303	04	12	28	11	00

STATION DESCRIPTION	DEPTH
<u>P412446-01</u>	
	<u>2</u>
	<u>3</u>
	<u>4</u>

ANALYSIS REQUESTED			
TPH	gga	BTX	EDC
X	X	X	X
X	X	X	X
X	X	X	X
X	X	X	X

ADDITIONAL INFORMATION		
SAMPLE NUMBER		TURNAROUND TIME/ REMARKS
YR	SEQ	
		<u>Standard TAT</u>
		COOLER CUSTODY SEALS INTACT <input type="checkbox"/>
		NOT INTACT <input type="checkbox"/>
		COOLER TEMPERATURE <u>3.3</u> °C
		* Confirmed using <u>Method 8260</u>

CHAIN OF CUSTODY RECORD			
<u>David Browne</u> (Signature)	<u>David Browne</u> (Print Name)	<u>MACTEC</u> (Company)	<u>12/28/04 1350</u> Date/Time
<u>Gail Herrmann</u> (Signature)	<u>GAIL HERRMANN</u> (Print Name)	<u>Sequoia</u> (Company)	<u>12/28/04 1352</u> Date/Time
Method of Shipment:			

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Mactec
 REC. BY (PRINT) GH IACI
 WORKORDER: P412446

DATE Received at Lab: 12-28-04
 TIME Received at Lab: 1350
 LOG IN DATE: 12-28-04

(Drinking water) for regulatory purposes: YES NO
 (Wastewater) for regulatory purposes: YES NO

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	Dash #	CLIENT ID	CONTAINER DESCRIPTION	pH	SAMPLE MATRIX	DATE SAMPLED	CONDITION (ETC.)
1. Custody Seal(s) Present / <input checked="" type="radio"/> Absent Intact / Broken*			045362	2xpv		W	12-28	
			045301	6xpv				
2. Chain-of-Custody Present / Absent*			045306	3xpv				
3. Airbill: Airbill / Sticker Present / Absent			045303	6xpv				
4. Airbill #:								
5. Sample Labels: Present / Absent								
6. Sample IDs: Listed / Not Listed on Chain-of-Custody								
7. Sample Condition: <input checked="" type="radio"/> Intact / Broken* / Leaking*								
8. Does information on custody reports, traffic reports, and sample labels agree? <input checked="" type="radio"/> Yes / No*								
9. Sample received within hold time: <input checked="" type="radio"/> Yes / No*								
10. Proper Preservatives used: <input checked="" type="radio"/> Yes / No*								
11. Temperature Blank Received? <input checked="" type="radio"/> Yes / No*								
12. Temp Rec. at Lab: <u>3.3</u> degrees C (Acceptance range for samples requiring thermal pres.: 4 +/- 2°C) <input checked="" type="radio"/> Yes / No*								
13. Samples collected more than 4 days ago? <input checked="" type="radio"/> Yes * / No								

***If Circled, contact Project Manager and attach record of resolution.**

APPENDIX B

GROUNDWATER SAMPLING FORM

**Table B1. Sample Location/Sample Description Cross-Reference
BPS Reprographic Services Facility
1700 Jefferson Street
Oakland, California**

Well/Sample Number	Client Sample ID
MW-1	43923001
MW-3	43923002
MW-5	43923003
MW-6	43923004

Project: BPS - City Blue Job No. 409704 1910.1
 Subject: FIELD INVESTIGATION DAILY REPORT Date: 12/28/07
 Equipment Rental: _____ Company: _____ To: David Harwood
 Equipment Hours: _____ F.E. Time from: _____ to: _____ By: D. Brown

(Outside service and expense record must be attached for any outside costs)

0600 - Depart for BPS
 0645 C.S.T. - IT's too dark out

0700 @ BPS - Calibrate equipment
 YSE Serial # 1384 to 1,000 cm/ps
 T = 21.2 Cond = 936
 Hanna pH meter Serial # DB03 to 4 d.f.
 Hach Turbidity Serial # 9090
 0-10 = 4.60 10-100 = 48.0 100-1000 = 514
 D.O. meter YSE 55 to 0' elevation
 Redox same as Hanna

0715	@ MW-6	WL = 23.42	Redox = 126.6	D.O. = 4.28
0730	@ MW-3	WL = 28.71	Redox = 101.3	D.O. = 0.23
0745	@ MW-5	WL = 22.42	Redox = 109.9	D.O. = 0.32
0805	@ MW-1	WL = 29.07	Redox = 302.6	D.O. = 0.41
0820	@ MW-1A	WL = 22.62		
0825	@ MW-3	Run dedicated tubing down the well		
0845	Sample MW3			

Sample # 045302

See Ground Water Sample Forms.

1130 Depart site

1300 @ MACTEC Rebuilding

ASB
 12/28/07

Attachments:

Initial

Yes

Groundwater Monitoring Data Sheet

City Blue
 1700 Jefferson Street
 Oakland, CA

Well Number	Date	Time	Water Depth First Reading (TOC)	Water Depth Second Reading (TOC)	Cap	Lock	Casing	Box/Lid	Well Diameter	Comments
MW-1	12/28	0505	29.07	29.07	Y	No	Good	Good	4	
MW-3	12/28	0730	28.71	28.71	Y	No	Good	Good	4	
MW-5	12/28	0745	22.42	22.42	Y	No	Good	Good	2	
MW-6	12/28	0715	23.42	23.42	Y	No	Good	Good	2"	
MW-1A	12/28	0820	22.62	22.62	Y	No	Good	Good	4	
MW-4										

Please record all monitoring equipment model numbers, serial numbers and calibration dates here. Also record expiration dates of calibration fluids if applicable:

pH: _____

Temperature: _____

Specific Conductance: _____

Dissolved Oxygen: _____

Turbidity: _____



GROUNDWATER SAMPLING FORM

Job Name: City Blue
 Job Number: 4097041918, 01
 Recorded By: David Bunker
(Signature)

Well Number: MW-6
 Well Type: Monitor Extraction Other
 PVC St. Steel Other
 Date: 12/28/04 12/28/04
 Sampled By: D.S.B.
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches): 2
 Total Depth of Casing (TD in ft BTOC): 32.5
 Water Level Depth (WL in ft BTOC): 23.42
 No. of Well Volumes to be purged (#V): 3

PURGE METHOD

Bailor - Type: R.V.C.
 Submersible - Type: _____
 Other - Type: Micro Purge

PURGE VOLUME CALCULATION

$\frac{WL}{D} \times \frac{\pi}{4} \times D^2 \times 2.31 \times \frac{1}{2.31} \times 2.31 \times 3 \times 0.0408 = \text{gals}$

TD (feet) WL (feet) D (inches) #V Calculated Purge Volume

PUMP INTAKE SETTING

Near Bottom Near Top
 Other: Middle of Screen
 Depth in feet (BTOC): _____
 Screen Interval in feet (BTOC): from _____ to _____

Field Parameter Measurement

Minutes	pH	Conductivity (µS)	Temp.		Turbidity (NTU)
			<input checked="" type="checkbox"/> °C	<input type="checkbox"/> °F	
Initial	<u>6.89</u>	<u>873</u>	<u>17.0</u>		<u>123</u>

Meter S/N _____

PURGE TIME

Purge Start: _____ GPM: _____
 Purge Stop: _____ GPM: _____
 Elapsed:

PURGE VOLUME

Volume: _____ gallons
 D.O. 4.28 Redox: 126.6

Observations During Purging (Well Condition, Color, Odor):
cloudy Browns, odorless, no-screens

Discharge Water Disposal: Sanitary Sewer
 Storm Sewer Other 55 Gal. drum on site

WELL SAMPLING

Bailor - Type: _____ Sample Time: 1010

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
<u>Q463 -06</u>	<u>3 VOA's</u>	T.P.H gas (8015 Modified)	HCL	Soquois	
<u>↓</u>	<u>↓</u>	BTEX (8020)	<u>↓</u>	<u>↓</u>	
		MTBE (8020)			

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Dupl. Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.



GROUNDWATER SAMPLING FORM

Job Name: City Blue
Job Number: 4097041918, 01
Recorded By: David Boone (Signature)

Well Number: MW-1
Well Type: Monitor, PVC
Date: 12/28/04
Sampled By: D.S.B. (Initials)

Reviewed by

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches): 2
Total Depth of Casing (TD in ft BTOC): 33.5
Water Level Depth (WL in ft BTOC): 24.07
No. of Well Volumes to be purged (# V): 3

PURGE METHOD

BAJLER - Type: PVC DCA
Submersible - Type:
Other - Type: Micro purge

PURGE VOLUME CALCULATION

TD (feet) x WL (Feet) x D (inches) x 8 V = Calculated Purge Volume gals

PUMP INTAKE SETTING

Near Bottom, Near Top, Other: Middle of screen
Depth in feet (BTOC):
Screen Interval in feet (BTOC): from to

Field Parameter Measurement

Table with columns: Minutes, pH, Conductivity (uS), Temp. (C/F), Turbidity (NTU). Initial row: 6.51, 875, 15.7, 7.91

PURGE TIME and PURGE RATE

Purge Start: GPM:
Purge Stop: GPM:
Elapsed:

PURGE VOLUME

Volume: gallons
D.O. 0.91 Redox: -32.6
Observations During Purging (Well Condition, Color, Odor): Clear, slight hydrocarbon odor - No sheen
Discharge Water Disposal: Sanitary Sewer, Storm Sewer, Other 55 Gal. drum on site

WELL SAMPLING

Bajler - Type: Sample Time: 0915

Table with columns: Sample No., Volume/Cont., Analysis Requested, Preservatives, Lab, Comments. Row 1: Q453 01, 6 VOA's, T.P.H gas (8015 Modified), HCL, Sequoia

QUALITY CONTROL SAMPLES

Duplicate Samples table with columns: Original Sample No., Dupl. Sample No.

Blank Samples table with columns: Type, Sample No.

Other Samples table with columns: Type, Sample No.



GROUNDWATER SAMPLING FORM

Job Name: City Blue
 Job Number: 4097041918.01
 Recorded By: David Browne
(Signature)

Well Number: MW-3
 Well Type: Monitor Extraction Other
 PVC St. Steel Other
 Date: 12/28/04
 Sampled By: D.S.B
(Initials)

WELL PURGING

PURGE VOLUME
 Casing Diameter (D in inches): 4
 Total Depth of Casing (TD in ft BTOC): 31
 Water Level Depth (WL in ft BTOC): 28.71
 No. of Well Volumes to be purged (#V): 3

PURGE METHOD
 Bailor - Type: P.V.C.
 Submersible - Type: _____
 Other - Type: Micro Pump

PURGE VOLUME CALCULATION
~~_____ X _____ X 3 X 0.0408 = _____ gals~~
TD (feet) WL (feet) D (inches) #V Calculated Purge Volume

PUMP INTAKE SETTING
 Near Bottom Near Top
 Other: Mid-depth Screen
 Depth in feet (BTOC): _____
 Screen Interval in feet (BTOC): from _____ to _____

Field Parameter Measurement

Minutes	pH	Conductivity (µS)	Temp.	Turbidity (NTU)
			<input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	
Initial	5.30	68.8 µs	15.8	11.3

Meter S/N: _____

PURGE TIME
 Purge Start: _____
 Purge Stop: _____
 Elapsed: _____

PURGE RATE
 GPM: _____

PURGE VOLUME
 Volume: _____ gallons
 D.O. 0.23 Redox 101.3

Observations During Purging (Well Condition, Color, Odor):
clear, odorless, etc shown

Discharge Water Disposal:
 Storm Sewer Sanitary Sewer
 Other 55 Gal. drum on site

WELL SAMPLING

Bailor - Type: _____ Sample Time: 0845

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
O453 -02	3 VOA's	T.P.H gas (8015 Modified)	HCL	Sequoia	
↓	↓	BTEX (8020)	↓	↓	
↓	↓	MTBE (8020)	↓	↓	

QUALITY CONTROL SAMPLES

Duplicate Samples		Blank Samples		Other Samples	
Original Sample No.	Dupl. Sample No.	Type	Sample No.	Type	Sample No.

CHAIN OF CUSTODY FORM

Seq. No.: 1101

Job Number: 4097041918.01

Samplers: David Browne

Lab: Seymour

Name/Location: BOS City Blue ~~San~~ Oakland

Project Manager: David Neustadt Recorder: David Browne
(Signature Required)

MATRIX			# CONTAINERS & PRESERV.				SAMPLE NUMBER				DATE				
Water	Soil	Air	Unpres.	H2SO4	HNO3	HCL	YR	SEQ	YR	MO	DAY	TIME	STATION DESCRIPTION		DEPTH
X						2	04	5302	04	12	28	0845	MW-3		
						6	04	5301	09	12	28	0915	MW-1		
X						3	04	5303 ⁶	04	12	28	1010	MW-6		
X						6	04	5303	04	12	28	1100	MW-5		

ANALYSIS REQUESTED			
TPH (B15)			
BTEX (B20)	X		
NITRE (B20)	X		
ENC			

ADDITIONAL INFORMATION		
SAMPLE NUMBER		TURNAROUND TIME/REMARKS
YR	SEQ	
		Standard TAT
		* Confirmed using ^{not used} 8260

CHAIN OF CUSTODY RECORD			
<u>David Browne</u> Relinquished By (Signature)	<u>David Browne</u> (Print Name)	<u>MACTEC</u> (Company)	<u>12/28/04 BSO</u> Date/Time
<u>Gail Herrmann</u> Received By (Signature)	<u>GAIL HERRMANN</u> (Print Name)	<u>SEYDIA</u> (Company)	<u>12/28/04 BSO</u> Date/Time
Method of Shipment:			