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*4:19 pm, Jun 18, 2012*

Alameda County  
Environmental Health

Barbara Jakub  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577


Re: BPS Reprographics (Formerly City Blue Print)  
RWQCB Case #01-0210  
1700 Jefferson St  
Oakland CA, 94612

Dear Barbara Jakub,

BPS had directed MACTEC to provide, on our behalf, professional environmental consulting services to the best of their ability. To the best of my knowledge the information in this report is accurate and all local Agency and/or Regional Water Quality Control Board regulations and guidelines have been followed.

This report was prepared by MACTEC and BPS has relied on their advice and assistance. I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,



---

Authorized Representative

Attachment: Report



engineering and constructing a better tomorrow

February 13, 2009

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

Subject: **Groundwater Remediation and Monitoring Report  
Fourth Quarter 2008  
BPS Reprographic Services Facility  
1700 Jefferson Street  
Oakland, California  
MACTEC Project No. 4088087514 01**

Dear Mr. Blain:

MACTEC Engineering and Consulting, Inc. (MACTEC) 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). The First Quarter 2008 groundwater monitoring event was performed on March 26, 2008, and results were presented in a letter-report dated May 5, 2008. The Second Quarter 2008 groundwater monitoring event was performed on June 2, 2008 and results were presented in a letter-report dated July 22, 2008. The Third Quarter 2008 groundwater monitoring event was performed on September 10, 2008 and results were presented in a letter-report dated October 13, 2008. Information presented in this letter-report represents the Fourth Quarter 2008 (October 1, 2008 through December 31, 2008) groundwater conditions at the subject site, 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 and all associated product lines and dispensers were removed from the property on June 15, 1987. The storage tank excavation dimensions were approximately 21 feet by 25 feet by 5 feet below ground surface (bgs). The bottom of the tank pit was over excavated to the extent of the excavation equipment on site (approximately 9.5 feet bgs) due to suspected contamination. A preliminary soil and groundwater investigation indicated that a release of fuel into the subsurface had occurred. Subsequent investigation indicated the presence of free phase hydrocarbons (FPH) in groundwater beneath the site and a local groundwater gradient direction that ranges from north-northwest to west.

The existing groundwater monitoring wells (MW-1, MW-3, MW-5, and MW-6) and extraction wells (MW-1A and MW-4) are shown on Plate 1. Groundwater extraction and treatment began in 1992. The treatment system consisted of an oil-water separator that removed the FPH, a 3,000-gallon bioreactor tank for treatment by hydrocarbon reducing microbes, and three granular activated carbon vessels. The treated water was discharged under a wastewater discharge permit from the East Bay Municipal Utility District to

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the sanitary sewer. During its operation, 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. In June 1999, as approved by the ACHCS, groundwater extraction and treatment ceased. In September 1999, MACTEC implemented *in-situ* bioremediation using ORC™ in groundwater extraction wells MW-1A and MW-4 and groundwater monitoring wells MW-3, and MW-5. The ORC™ was contained in fabric “socks” and releases oxygen over time to encourage aerobic microbes to metabolize the hydrocarbons. As described in the Harding Lawson Associates September 23, 1999 Groundwater Monitoring Plan, the ORC™ socks were removed from the treatment wells two weeks before each quarterly groundwater monitoring event, and then replaced after sampling was complete. *In-situ* bioremediation continued until the Fourth Quarter 2002. In late 2002 and early 2003, MACTEC removed the ORC™ socks from the monitoring wells, as requested by the ACHCS in their letter dated September 27, 2002. Since then, no further groundwater treatment has been implemented; however, quarterly monitoring has continued.

#### **FOURTH QUARTER 2008 GROUNDWATER SAMPLING AND ANALYSIS**

On November 19, 2008, MACTEC conducted quarterly groundwater monitoring of MW-1, MW-3, MW-5, and MW-6 (Plate 1) using a non-purge method, in accordance with the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) January 31, 1997 letter *Utilization of Non-Purge Approach for Sampling of Monitoring Wells Impacted by Petroleum Hydrocarbons, BTEX and MTBE*, file No. 1123.64.

Prior to sampling, MACTEC measured the depth to groundwater within each well casing from the top of casing (TOC) of wells MW-1, MW-3, MW-5, and MW-6 using an electronic water level indicator. The groundwater elevation at each well is calculated by subtracting the measured depth to water from the surveyed top of well casing elevation. Current and historical groundwater measurements and groundwater elevations are tabulated in Table 2 and a time history plot of groundwater elevations are displayed on Plate 2. As presented in Table 2, the elevation of the groundwater surface decreased an average of 0.16 feet across the site, as compared to last quarter’s measurements.

The groundwater elevation contours shown on Plate 3 were drawn using the November 19, 2008 depth to groundwater measurements from wells MW-1, MW-3, MW-5, and MW-6. Based on the calculated groundwater elevations, the groundwater gradient is approximately 0.0045 feet per foot (ft/ft). The direction of flow is towards the west.

Groundwater samples were collected from each monitoring well through Teflon tubing using a peristaltic pump. Dedicated tubing was inserted in the well being sampled with the tubing open end suspended 2 to 4 feet below the groundwater surface. After removal of an approximate volume of groundwater equal to the length of the Teflon tubing, a groundwater sample was collected and analyzed for field parameters including conductivity, pH, dissolved oxygen (DO), and temperature. A groundwater sample was then collected for laboratory chemical analysis.

Immediately after sample collection, MACTEC labeled and stored the samples in a cooler with ice. The groundwater samples were kept chilled to a temperature less than 6 degrees centigrade until submitted to Test America Analytical Testing Corporation (Test America), a California state-certified laboratory (CA ELAP Certificate #1214), under chain-of-custody protocol for the following analyses:

- Total petroleum hydrocarbons as gasoline (TPHg) by Environmental Protection Agency (EPA) Method 8015 modified.
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8021B.
- Methyl tertiary butyl ether (MTBE) by EPA Method 8021B, with confirmation of detections by EPA Method 8260B.
- 1,2-Dichloroethane [(1,2-DCA) also known as Ethylene Dichloride] by EPA Method 8260B.

The Fourth Quarter 2008 analytical results for TPHg, BTEX, MTBE, and 1,2-DCA are displayed on Plate 4. Historical analytical results for TPHg, BTEX, MTBE and 1,2-DCA collected from August 1, 1991 to September 29, 1999, are shown in Table 3. Analytical results collected since September 29, 1999, are shown in Table 4 and presented graphically on Plates 5a, 5b, and 5c. The certified analytical reports (CARs) for this quarter's monitoring event are presented in Appendix A.

## DISCUSSION

As shown in Table 4 and Plates 5a, 5b, and 5c, the Fourth Quarter 2008 monitoring event concentrations of TPHg and BTEX are within the range of historical concentrations of these compounds with the exception of benzene in well MW-5 which was detected at its highest concentration since Third Quarter 1999. The range of chemical concentrations detected in samples collected during the Fourth Quarter 2008 event are as follows:

- TPHg ranged from non-detect with a detection limit of 0.05 milligrams per liter (mg/L; MW-6) to 46 mg/L (MW-5).
- Benzene ranged from non-detect with a detection limit of 0.5 micrograms per liter ( $\mu\text{g/L}$ ; MW-6) to 14,000  $\mu\text{g/L}$  (MW-5).
- Toluene ranged from non-detect with a detection limit of 0.5  $\mu\text{g/L}$ ; (MW-6) to 4,500  $\mu\text{g/L}$  (MW-5).
- Ethylbenzene ranged from non-detect with a detection limit of 0.5  $\mu\text{g/L}$  (MW-6) to 3,900  $\mu\text{g/L}$  (MW-5).
- Total Xylenes ranged from non-detect with a detection limit of 0.5  $\mu\text{g/L}$ ; (MW-6) to 2,700  $\mu\text{g/L}$  (MW-5).
- MTBE was not detected in samples from any of the groundwater monitoring wells this quarter, with detection limits ranging from 2.5  $\mu\text{g/L}$  (MW-6) to 1,200  $\mu\text{g/L}$  (MW-5).

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- 1,2-DCA was detected in MW-1 at a concentration of 180 µg/L and in MW-5 at a concentration of 340 µg/L.

An overview of recent concentration trends observed in each monitoring well is presented below.

In MW-1, chemical concentrations peaked during the Second Quarter 2003 monitoring event, decreased to unusually low levels during the Third Quarter 2005, and increased again through the First Quarter 2006 (Plate 5a). Since then concentrations have remained relatively stable with seasonal fluctuations. The Fourth Quarter 2008 concentrations of TPHg and BTEX in MW-1 have increased since the Third Quarter 2008 concentrations, and remain within their respective recent historical ranges.

In MW-3, chemical concentrations peaked in 2003; decreased significantly in mid-2005, and subsequently increased (Plate 5b). Since then, concentrations have remained relatively stable. The Fourth Quarter 2008 concentrations of TPHg and BTEX in MW-3 have decreased since the Third Quarter 2008. Chemical concentrations remain within their respective recent historical ranges.

Chemical concentrations in MW-5 decreased to historical lows during the First and Second Quarter 2006 (Plate 5c). Subsequently, TPHg and BTEX concentrations have increased, but remain within their respective recent historical ranges with the exception of benzene. The Fourth Quarter 2008 concentrations of TPHg and TEX in MW-5 have increased since the Third Quarter 2008 concentrations, and remain within their respective recent historical ranges. Benzene, however, has increased to the highest measured concentration since Third Quarter 1999.

Typically, groundwater collected from MW-6 contains no detectable concentrations of TPHg or BTEX compounds. However, First Quarter 2008 monitoring data from MW-6 indicated Toluene and Xylenes were detected at 0.68 and 0.88 µg/L, respectively. For the Second, Third and Fourth Quarter 2008 monitoring events no detectable concentrations of TPHg or BTEX compounds were present. MW-6 will continue to be monitored for these analytes.

Beginning with the Fourth Quarter 2002 event, 1,2-DCA (also known as EDC) was added to the list of analytes at the direction of the ACHCS monitored at MW-1 and MW-5. The current concentrations of 1,2-DCA detected in MW-1 and MW-5 (180 µg/L and 340 µg/L, respectively) are similar to concentrations detected during previous quarters. 1,2-DCA concentrations in both wells remain within their respective historical concentration ranges.

## **RECOMMENDATIONS**

MACTEC recommends continued groundwater monitoring at the Site to satisfy the ACHCS quarterly groundwater monitoring requirement which includes providing the ACHCS with a copy of this letter-report. MACTEC also recommends evaluating the site for application of remedial methods that may potentially advance site closure. Please provide the ACHCS with a copy of this letter-report at the address listed below;

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Ms. Barbara Jakub  
Alameda County  
Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California, 94502-6577


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

Yours very truly,

MACTEC ENGINEERING AND CONSULTING, INC.



David S. Nanstad, REA  
Senior Engineer



for Debra Leibensberger, REA *w/permission*  
Project Manager



Warren Chamberlain, PG, CHG, PE  
Senior Principal Engineer



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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

Plate 1 – Site Map  
Plate 2 – Groundwater Elevation Data  
Plate 3 – Groundwater Contours  
Plate 4 – TPHg, BTEX, MTBE and EDC Concentrations in Groundwater  
Plate 5a – MW-1 BTEX and DO Results  
Plate 5b – MW-3 BTEX and DO Results  
Plate 5c – MW-5 BTEX and DO Results

Appendix A – Laboratory Reports  
Appendix B – Groundwater Sampling Forms

## **TABLES**

**Table 1. GW Parameters**  
**BPS Reprographic Services Facility**  
**1700 Jefferson St.**  
**Oakland CA**

Dissolved Oxygen (mg/L)	MW-1	MW-3	MW-5	MW-6
9/29/1999	2.9	1.7	0.4	1.8
11/5/1999	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 <sup>1</sup>	0.6
12/27/2002	0.9	1.0	NA <sup>2</sup>	1.2
4/1/2003	0.3	1.1	NA <sup>2</sup>	NA <sup>1</sup>
7/1/2003	7.7	7.7	NA <sup>2</sup>	7.2
9/24/2003	6.3	7.2	0.6	0.9
12/29/2003	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
3/16/2005	0.4	0.1	0.5	0.5
6/23/2005	0.6	0.6	0.8	0.6
9/9/2005	0.6	0.6	0.7	1.1
12/2/2005	1.5	2.0	1.1	0.9
3/24/2006	0.8	0.7	0.9	0.9
6/29/2006	1.1	1.1	0.7	1.2
9/13/2006	0.6	1.0	1.5	1.1
12/27/2006	7.9	7.0	0.4	0.6
3/30/2007	1.3	1.3	1.9	1.9
7/2/2007	2.0	1.5	1.6	1.7
10/2/2007	6.3	7.8	5.7	0.2
12/13/2007	0.6	0.3	0.7	0.7
3/26/2008	0.5	0.5	0.6	1.3
6/2/2008	0.6	0.4	0.2	0.4
9/10/2008	0.5	0.3	0.5	0.6
11/19/2008	0.4	0.4	0.2	0.2



**Table 1. GW Parameters**  
**BPS Reprographic Services Facility**  
**1700 Jefferson St.**  
**Oakland CA**

<b>REDOX (mvolts)</b>	<b>MW-1</b>	<b>MW-3</b>	<b>MW-5</b>	<b>MW-6</b>
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 <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>
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 <sup>2</sup>	-12
4/1/2003 <sup>b</sup>	-82	-75	NA <sup>2</sup>	172
7/1/2003 <sup>b</sup>	212	230	NA <sup>2</sup>	227
9/24/2003 <sup>b</sup>	-166	-300	-183	50
12/29/2003 <sup>b</sup>	-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
3/16/2005	-36	-50	-162	177
6/23/2005	-225	-42	-117	109
9/9/2005	-30	-52	-152	98
12/2/2005	-26	-141	-108	20
3/24/2006	-179	-118	-112	87
6/29/2006	-202	-182	-151	6
9/13/2006	-270	-257	-222	36
12/27/2006	-329	-265	-305	36
3/30/2007	-324	-340	243	-61
7/2/2007	-317	-292	169	-93
10/2/2007	13	-305	-217	16
12/13/2007	-283	-322	-240	106
3/26/2008	-172	-34	-91	229
6/2/2008	-119	-56	-74	203
9/10/2008	-176	-136	-151	180
11/19/2008	58	25	-50	236
<b>Temperature (deg F)</b>	<b>MW-1</b>	<b>MW-3</b>	<b>MW-5</b>	<b>MW-6</b>
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 <sup>2</sup>	41.7
4/1/2003 <sup>b</sup>	64.6	67.6	NA <sup>2</sup>	68.0
7/1/2003 <sup>ab</sup>	79.4	80.3	NA <sup>2</sup>	81.9
9/24/2003 <sup>b</sup>	65.1	67.1	65.7	68.5

**Table 1. GW Parameters**  
**BPS Reprographic Services Facility**  
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**Oakland CA**

Temperature (deg F)	MW-1	MW-3	MW-5	MW-6
12/29/2003 <sup>b</sup>	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
3/16/2005	63.3	66.0	64.4	66.0
6/23/2005	64.4	66.7	65.8	66.9
9/9/2005	69.0	70.3	69.8	71.0
12/2/2005	61.5	63.7	62.2	62.1
3/24/2006	63.7	66.4	65.3	62.6
6/29/2006	69.3	68.2	71.2	72.1
9/13/2006	64.8	66.6	65.7	68.5
12/26/2006	59.7	60.4	61.2	57.9
3/30/2007	64.0	65.8	66.0	64.4
7/2/2007	65.1	66.6	66.6	66.0
10/2/2007	68.0	67.3	66.0	71.6
12/13/2007	60.1	62.4	61.5	61.3
3/26/2008	66.6	64.9	64.1	66.6
6/2/2008	65.5	66.4	69.1	70.9
9/10/2008	69.0	68.9	69.0	70.6
11/19/2008	64.7	67.1	62.7	68.1
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 <sup>1</sup>	6.9	NA <sup>1</sup>	6.9
12/27/2002	6.3	6.4	NA <sup>2</sup>	6.5
4/1/2003 <sup>b</sup>	6.9	7.1	NA <sup>2</sup>	6.7
7/1/2003 <sup>b</sup>	7.4	7.6	NA <sup>2</sup>	7.7
9/24/2003 <sup>b</sup>	7.1	7.3	7.3	7.2
12/29/2003 <sup>b</sup>	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 <sup>1</sup>
9/23/2004	6.7	6.6	6.5	6.5
12/28/2004	6.5	5.3	6.6	6.8
3/16/2005	6.3	5.7	5.8	6.2
6/23/2005	6.4	6.1	6.5	6.6
9/9/2005	6.5	6.1	6.1	7.0
12/2/2005	6.5	5.9	7.6	7.1
3/24/2006	7.1	7.6	6.8	7.4
6/29/2006	6.5	6.1	7.3	7.0
9/13/2006	6.9	7.4	6.6	8.3
12/27/2006	6.3	5.2	6.0	6.0
3/30/2007	6.5	5.5	6.4	6.3
7/2/2007	6.3	6.1	6.7	6.5
10/2/2007	6.1	5.9	6.4	6.7
12/13/2007	6.9	6.8	7.1	6.8
3/26/2008	6.9	6.0	6.8	6.9
6/2/2008	6.9	6.5	7.0	6.9
9/10/2008	6.6	6.3	6.7	6.6
11/19/2008	6.5	5.0	6.4	5.7

**Table 1. GW Parameters**  
**BPS Reprographic Services Facility**  
**1700 Jefferson St.**  
**Oakland CA**

Specific Conductance (µS/cm)	MW-1	MW-3	MW-5	MW-6
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 <sup>2</sup>	903
4/1/2003 <sup>b</sup>	1128	800	NA <sup>2</sup>	1021
7/1/2003 <sup>b</sup>	1020	690	NA <sup>2</sup>	970
9/24/2003 <sup>b</sup>	951	697	987	890
12/29/2003 <sup>b</sup>	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
3/16/2005	899	69	831	872
6/23/2005	799	102	718	814
9/9/2005	852	103	817	881
12/2/2005	891	39	750	811
3/24/2006	1156	208	996	1042
6/29/2006	1113	658	795	932
9/13/2006	1088	591	873	650
12/27/2006	996	145	775	847
3/30/2007	1063	303	919	918
7/2/2007	887	337.8	949	776
10/2/2007	1133	364.4	930	1033
12/13/2007	1033	490	839	394.3
3/26/2008	1208	242	670	1080
6/2/2008	1415	490	1096	1150
9/10/2008	1376	585	1068	1121
11/19/2008	1200	124	960	995

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

Checked 

Accepted 

**Table 2. GW Elevation Data**  
**BPS Reprographic Services Facility**  
**1700 Jefferson St**  
**Oakland CA**

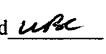
Date Sampled	MW-1 TOC Elev.   32.36		MW-3 TOC Elev.   31.77		MW-5 TOC Elev.   30.56		MW-6 TOC Elev.   31.26		Average Change Since Preceding Quarter
	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	Depth to Water	Water Elevation	
3/6/1996	NM	--	24.79	6.98	23.53	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
3/16/2005	23.80	8.56	23.70	8.07	22.11	8.45	23.60	7.66	1.35
6/23/2005	22.90	9.46	22.40	9.37	21.20	9.36	22.27	8.99	1.11
9/9/2005	23.27	9.09	22.63	9.14	21.68	8.88	22.55	8.71	-0.34
12/2/2005	23.75	8.61	23.03	8.74	22.19	8.37	23.05	8.21	-0.47
3/24/2006	23.05	9.31	22.57	9.20	21.01	9.55	22.50	8.76	0.72
6/29/2006	22.56	9.80	21.93	9.84	20.78	9.78	21.85	9.41	0.50
9/13/2006	23.00	9.36	22.35	9.42	21.35	9.21	22.31	8.95	-0.47
12/27/2006	23.47	8.89	22.82	8.95	21.82	8.74	22.85	8.41	-0.49
3/30/2007	23.51	8.85	22.91	8.86	21.70	8.86	22.88	8.38	-0.01
7/2/2007	23.39	8.97	22.88	8.89	21.81	8.75	22.75	8.51	0.04
10/2/2007	23.87	8.49	23.20	8.57	22.22	8.34	23.17	8.09	-0.41
12/13/2007	24.05	8.31	23.40	8.37	22.31	8.25	23.37	7.89	-0.17
3/26/2008	23.56	8.80	23.00	8.77	21.77	8.79	22.97	8.29	0.46
6/2/2008	23.70	8.66	23.08	8.69	22.04	8.52	23.07	8.19	-0.15
9/10/2008	24.07	8.29	23.55	8.22	22.52	8.04	23.49	7.77	-0.44
11/19/2008	24.33	8.03	23.68	8.09	22.63	7.93	23.64	7.62	-0.16

**Table 2. GW Elevation Data**  
**BPS Reprographic Services Facility**  
**1700 Jefferson St**  
**Oakland CA**

Notes: 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
**	This data is suspect due to probable equipment malfunction or operator error.

Checked 

Approved 

**Table 3. GW Monitoring Analytical Data - Purge Method**  
**BPS Reprographic Services**  
**1700 Jefferson Street**  
**Oakland CA**  
**8/1/1991 to 9/29/1999**

	Date Sampled														Date Sampled												
	8/1/1991	9/30/1992	3/30/1993	1/13/1994	4/13/1994	6/29/1994	12/8/1994	4/3/1995	6/27/1995	9/19/1995	12/13/1995	3/6/1996	6/11/1996	9/19/1996	12/23/1996	3/27/1997	6/4/1997	9/26/1997	12/23/1997	3/31/1998	6/18/1998	8/28/1998	12/2/1998	3/10/1999	6/30/1999	9/29/1999 <sup>1</sup>	
<b>TPHg (mg/L)</b>	FP	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	FP	FP	FP	FP	68	59	41	44	32	26	26	26	18	21	
MW-1A	350	FP	FP	FP	170	95	190	67	53	52	62	200	140	100	FP	66	54	73	66	51	50	15	41	10	18	NA	
MW-3	74	FP	FP	FP	FP	39	4,600	51	20	6.2	19	7	16	6	FP	FP	85	47	32	32	16	17	3.2	9.6	7.9	5.0	
MW-4	86	FP	FP	FP	58	16	92	35	13	14	11	110	260	95	FP	37	24	41	48	NA	25	48	10	11	8.8	NA	
MW-5	120	51	74	80	63	64	59	51	41	50	45	51	48	48	45	44	35	36	39	48	17	16	15	23	7.7	11	
MW-6	--	--	--	--	--	--	--	--	--	--	--	--	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)	ND(0.05)	ND(0.05)	ND(0.05)	
<b>Benzene (µg/L)</b>	FP	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	FP	FP	FP	FP	2,200	6,000	6,800	8,300	1,100	8,600	9,200	8,200	7,000	9,200	
MW-1A	17,000	FP	FP	FP	17,000	16,000	13,000	11,000	11,000	8,900	9,900	14,000	18,000	16,000	FP	12,000	11,000	10,000	10,000	9,100	11,000	1,100	8,500	2,300	6,400	NA	
MW-3	1,600	FP	FP	FP	FP	3,200	1,500	1,100	270	70	220	120	170	45	FP	FP	8,500	610	640	690	180	84	39	86	31	120	
MW-4	1,500	FP	FP	FP	1,500	1,300	1,700	1,200	1,300	2,200	630	2,600	6,600	9,900	FP	2,600	2,900	2,900	6,000	NA	2,000	9,700	1,700	2,300	1,800	NA	
MW-5	20,000	13,000	16,000	19,000	14,000	29,000	13,000	15,000	12,000	1,600	13,000	15,000	12,000	12,000	12,000	11,000	8,900	7,900	13,000	10,000	9,500	5,400	8,400	14,000	5,200	9,600	
MW-6	--	--	--	--	--	--	--	--	--	--	--	--	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	
<b>Toluene (µg/L)</b>	FP	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	FP	FP	FP	FP	14,000	4,500	3,000	3,000	3,700	3,800	2,300	4,300	5,900	5,800	10,000
MW-1A	31,000	FP	FP	FP	31,000	21,000	21,000	13,000	9,900	9,200	11,000	22,000	28,000	22,000	FP	15,000	12,000	16,000	16,000	11,000	15,000	830	11,000	1,900	7,800	NA	
MW-3	4,600	FP	FP	FP	FP	2,900	4,200	2,300	550	140	480	170	270	30	FP	FP	13,000	6,000	5,300	3,800	1,500	1,100	85	540	330	340	
MW-4	6,200	FP	FP	FP	2,500	790	4,100	3,400	1,600	2,100	470	3,600	19,000	19,000	FP	6,900	3,200	5,000	11,000	NA	460	11,000	610	2,100	3,000	NA	
MW-5	14,000	5,900	5,000	8,200	3,500	5,400	3,800	2,200	2,100	2,700	2,100	2,800	2,900	4,500	2,200	1,100	560	270	500	400	310	160	120	300	270	710	
MW-6	--	--	--	--	--	--	--	--	--	--	--	--	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	
<b>Ethylbenzene (µg/L)</b>	FP	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	FP	FP	FP	FP	1,500	1,600	1,400	1,100	550	730	820	870	950	1,200	
MW-1A	3,000	FP	FP	FP	2,100	1,500	1,400	910	500	710	790	2,700	2,800	2,100	FP	1,400	1,000	1,400	1,100	870	31	720	1,600	660	NA		
MW-3	670	FP	FP	FP	FP	580	6,000	580	190	68	140	49	68	15	FP	FP	2,400	930	800	870	490	430	25	250	200	230	
MW-4	1,000	FP	FP	FP	520	51	310	280	77	110	14	780	3,700	2,000	FP	540	140	350	580	NA	ND(15)	890	ND(15)	88	150	NA	
MW-5	1,900	1,400	1,800	1,400	1,500	2,800	1,800	2,800	1,400	2,000	16,000	2,000	2,000	2,300	2,700	1,900	1,500	1,500	1,900	2,000	420	1,100	1,500	1,800	1,100	1,100	
MW-6	--	--	--	--	--	--	--	--	--	--	--	--	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.5	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	
<b>Xylenes (µg/L)</b>	FP	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	FP	FP	FP	FP	11,000	8,600	6,600	4,300	3,000	2,100	2,800	3,500	2,500	5,500	
MW-1A	22,000	FP	FP	FP	14,000	12,000	11,000	9,800	6,300	6,800	5,300	22,000	19,000	14,000	FP	100	7,200	8,500	12,000	6,800	5,800	3,000	6,700	2,300	4,100	NA	
MW-3	4,300	FP	FP	FP	FP	4,300	95,000	4,800	1,700	500	1,700	440	1,500	300	FP	FP	16,000	5,900	5,900	5,200	3,700	3,800	360	2,300	1,800	1,300	
MW-4	7,300	FP	FP	FP	3,200	3,400	5,400	5,800	1,800	2,100	1,800	10,000	28,000	13,000	FP	5,500	3,500	4,800	8,200	NA	6,400	5,000	2,300	1,600	2,700	NA	
MW-5	4,900	2,600	2,700	2,700	2,100	4,500	2,900	4,500	1,600	2,100	1,900	2,400	2,700	4,000	6,500	2,800	1,700	1,300	1,700	2,200	850	900	840	1,100	690	1,100	
MW-6	--	--	--	--	--	--	--	--	--	--	--	--	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.60)	ND(0.60)	ND(0.60)	ND(0.60)	ND(0.60)	ND(0.60)	
<b>MTBE (µg/L)</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	FP	FP	ND(500)	ND(500)	300	420	ND(50)	ND(50)	ND(50)	ND(50)	ND(25)	ND(250)	
MW-1A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,800	ND(500)	ND(500)	1,900	300	ND(50)	ND(50)	ND(50)	ND(50)	ND(25)	NA	
MW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	FP	FP	ND(500)	ND(100)	ND(300)	350	ND(25)	ND(50)	ND(50)	ND(25)	ND(25)	10	
MW-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,400	ND(300)	ND(500)	270	NA	ND(50)	ND(50)	ND(50)	ND(25)	ND(25)	NA	
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	600	300	ND(100)	ND(500)	ND(1000)	350	ND(10)	ND(50)	ND(50)	ND(50)	ND(25)	ND(100)	
MW-6	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	

TPHg = total petroleum hydrocarbons as gasoline  
 MTBE = methyl t-butyl ether  
 (mg/l) milligrams per liter  
 (µg/l) micrograms per liter

ND = Not detected above the reporting limit in parenthesis  
 NA = Not analyzed  
 FP = Free Product - well not sampled  
 -- = Well did not exist at date indicated

<sup>1</sup> A sample was collected on this date both post and pre purge. Sample results collected pre purge are shown on Table 3. Sample results collected post purge are shown on Table 4.

Checked *DB*  
 Approved *WAC*

**Table 4. GW Monitoring Analytical Results - No Purge Method**  
**BPS Reprographic Services**  
**1700 Jefferson St**  
**Oakland CA**

	Date Sampled																		
	9/29/1999 <sup>6</sup>	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 <sup>5</sup>	9/25/2003 <sup>5</sup>	12/29/2003 <sup>5</sup>	
<b>TPH<sub>g</sub> (mg/L)</b>	MW-1	14	24	19	19	20	18	19	39	31	34	35	35	26	28	16	61	59	46
	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
	MW-5	10	30	23	19	24	1.8	15	3.6	34	1.9	9.4	1.7	3.2	*6.2	NA <sup>4</sup>	NA <sup>4</sup>	43	26
	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
<b>Benzene (µg/L)</b>	MW-1	6,200	4,900	4,100	5,700	4,100	3,500	4,700	5,200	5,600	5,300	4,900	5400	4100	4,500	4,500	7,700	7600	6600
	MW-3	180	6.5	8.3	11	28	20	9	150	42	8	11	130	330	110	370	200	150	160
	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 <sup>4</sup>	NA <sup>4</sup>	12,000	7700
	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
<b>Toluene (µg/L)</b>	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	4700	5,000	6000	11,000	9400	7900
	MW-3	340	33	20	5.6	14	34	6.2	240	48	5.2	4.8	470	170	280	150	460	300	250
	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 <sup>4</sup>	NA <sup>4</sup>	2800	1900
	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
<b>Ethylbenzene (µg/L)</b>	MW-1	620	730	530	730	540	640	570	660	560	630	740	870	620	660	680	1200	1000	960
	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
	MW-5	1,100	1,500	1,200	1,200	460	39	1000	16	1,400	55	300	7.2	22	*160	NA <sup>4</sup>	NA <sup>4</sup>	1500	910
	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
<b>Total Xylenes (µg/L)</b>	MW-1	3,500	3,500	2,800	3,500	2,700	3,200	2,600	3,900	2,500	2,400	3,100	3500	2700	3,000	3100	6700	4800	4000
	MW-3	580	260	28	17	160	28	8.1	160	210	7	1.4	390	150	260	230	390	280	210
	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 <sup>4</sup>	NA <sup>4</sup>	3000	210
	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
<b>MTBE (µg/L)</b>	MW-1	ND<250	ND<100	6.6	ND<5.0 <sup>1</sup>	ND<12 <sup>1,2</sup>	ND<40 <sup>1,2</sup>	50 <sup>1</sup>	8.5 <sup>1</sup>	ND<100 <sup>1,2</sup>	ND<120	ND<120	ND<250	ND<120	ND<120	ND<120	ND<250	ND<1200	ND<250
	MW-3	14	ND<1.0	31	ND<5.0 <sup>1</sup>	ND<5 <sup>1</sup>	ND<5 <sup>1</sup>	77 <sup>1</sup>	ND<2 <sup>1</sup>	ND<1.2 <sup>1</sup>	ND<0.50 <sup>1</sup>	ND<0.50 <sup>1</sup>	ND<0.50 <sup>1</sup>	ND<5 <sup>1</sup>	19	ND<1.0 <sup>1</sup>	ND<5 <sup>1</sup>	ND<2.5 <sup>1</sup>	ND<2.5 <sup>1</sup>
	MW-5	ND<100	ND<100	6.6	ND<200	ND<10 <sup>1,2</sup>	ND<5 <sup>1</sup>	ND<50 <sup>1</sup>	4.4 <sup>1</sup>	ND<50 <sup>1</sup>	ND<10 <sup>1</sup>	ND<50	ND<0.50 <sup>1</sup>	ND<0.50 <sup>1</sup>	*ND(25)	NA <sup>4</sup>	NA <sup>4</sup>	ND<1200	ND<2.5 <sup>1</sup>
	MW-6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	5 <sup>1,3</sup>	17 <sup>1</sup>	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
<b>Ethylene Dichloride (µg/L)</b>	MW-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	370	ND<120	400	7500	360
	MW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<12	NR	NR	NR	NR
	MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	*220	<sup>4</sup> NA	<sup>4</sup> NA	610	410
	MW-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.5	NR	NR	NR	NR

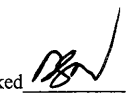
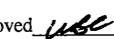
**Table 4. GW Monitoring Analytical Results - No Purge Method**  
**BPS Reprographic Services**  
**1700 Jefferson St**  
**Oakland CA**

	Date Sampled																				
	5/18/2004	6/30/2004	9/23/2004	12/28/2004	3/16/2005	6/23/2005	9/9/2005	12/2/2005	3/24/2006	6/29/2006	9/13/2006	12/27/2006	3/30/2007	7/2/2007	10/2/2007	12/13/2007	3/26/2008	6/2/2008	9/10/2008	11/19/2008	
<b>TPHg (mg/L)</b>	MW-1	23	24	24	22	21	30	7.1	19	29	23	20	31	30	14	19	18	28	20	24	26
	MW-3	1.5	2.0	3.4	3.9	0.97	0.85	3.9	0.76	0.59	1.1	1.3	3	3.1	2.6	1.9	2.9	2.3	2.3	2.9	1
	MW-5	15	18	42	41	37	27	46	21	ND<10	1.2	5.8	16	31	33	36	34	28	43	45	46
	MW-6	ND<0.05	ND<0.05	ND<0.05	0.059	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	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05
<b>Benzene (µg/L)</b>	MW-1	4,100	3,500	3,800	3,400	4,100	5,400	840	3,600	6,200	4,800	4500	6000	5000	2500	3400	3500	4900	3300	4200	4500
	MW-3	77	81	140	340	1.4	56	470	14	83	130	260	250	250	170	250	340	270	300	62	
	MW-5	5,000	5,700	12,000	10,000	11,000	7,700	10,000	5900	2800	240	1600	4300	10000	9400	11000	11,000	7,700	13,000	13,000	14000
	MW-6	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	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	ND<0.5	ND<0.5
<b>Toluene (µg/L)</b>	MW-1	4,700	3,600	3,900	3,400	4,200	5,500	950	3,500	6,000	4,000	3900	5300	4600	2000	2700	2700	4900	3300	4200	4500
	MW-3	72	37	95	37	1.8	7.3	100	8	41	38	71	160	260	140	170	95	250	180	55	
	MW-5	1,300	1,600	3,900	3,800	3,800	1,700	2,700	1500	450	11	210	610	1400	1400	2100	2600	1900	3800	3700	3900
	MW-6	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	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	0.84	0.68	ND<0.5	ND<0.5	ND<0.5
<b>Ethylbenzene (µg/L)</b>	MW-1	450	390	470	380	470	520	120	410	620	330	400	710	520	280	400	390	530	380	470	490
	MW-3	19.00	34.0	36	11	0.66	ND<5	33	2.4	7.3	16	44	49	46	54	24	66	26	59	88	21
	MW-5	380	540	1,200	1,000	1,100	680	1,100	600	190	13	180	460	1100	1000	1100	1200	860	1400	1200	3900
	MW-6	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	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	ND<0.5	ND<0.5
<b>Total Xylenes (µg/L)</b>	MW-1	1,500	1,300	1,400	1,400	1,300	1,900	410	1,300	2,000	1,200	1400	2500	1700	930	1200	1100	2100	1700	2200	2500
	MW-3	59	40	40	60	2.9	12	96	17	33	21	28	140	110	130	48	120	64	130	220	32
	MW-5	770	1,200	2,400	2,300	2,400	1,300	2,100	1200	180	18	270	750	1600	1500	1700	1900	1300	2400	2200	2700
	MW-6	ND<0.5	ND<0.5	ND<0.5	1.6	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	ND<0.5	ND<0.5	ND<0.5	0.88	ND<0.5	ND<0.5	ND<0.5
<b>MTBE (µg/L)</b>	MW-1	ND<50	ND<50	<sup>1</sup> ND<25	ND<250	ND<50 <sup>1</sup>	ND<1,200	ND<120	ND<2.5	ND<500	ND<500	ND<250	ND<500	ND<500	ND<500	ND<500	ND<500	ND<500	ND<500	ND<500	ND<500
	MW-3	ND<12	ND<1.0	<sup>1</sup> ND<10	ND<5 <sup>1</sup>	ND<2.5	ND<25	ND<62	ND<0.5	ND<12	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
	MW-5	ND<50	ND<50	ND<120	ND<250	ND<120	ND<1,200	ND<1,200	ND<500	ND<500	ND<2.5	ND<120	ND<500	ND<500	ND<500	ND<620	ND<1,200	ND<1,200	ND<1,200	ND<1,200	ND<1,200
	MW-6	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	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
<b>Ethylene Dichloride (µg/L)</b>	MW-1	320	320	260	180	190	240	290	300	280	ND<0.50	260	350	220	220	190	180	240	220	200	180
	MW-3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	MW-5	290	610	670	290	610	190	300	320	330	ND<0.50	55	180	360	410	400	340	220	380	420	340
	MW-6	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

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

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



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 [(1,2-DCA) see report text for details]  
 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.  
 7 1,2-DCA Detected at same concentration as detection limit.

Checked   
 Approved 



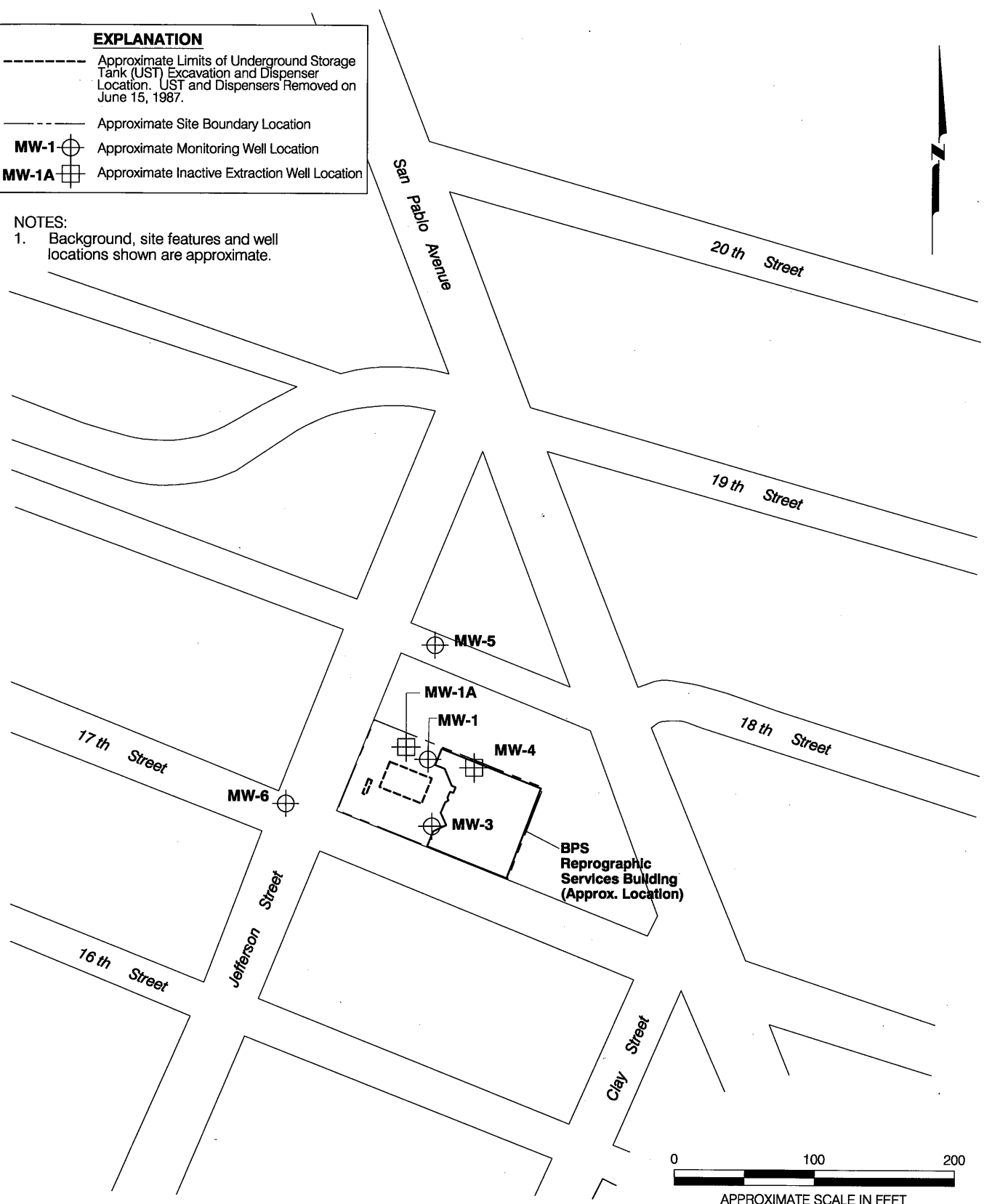
## **PLATES**

**EXPLANATION**

- Approximate Limits of Underground Storage Tank (UST) Excavation and Dispenser Location. UST and Dispensers Removed on June 15, 1987.
- Approximate Site Boundary Location
- MW-1  Approximate Monitoring Well Location
- MW-1A  Approximate Inactive Extraction Well Location

**NOTES:**

1. Background, site features and well locations shown are approximate.



**Site Map**  
**Groundwater Remediation and Monitoring Report**  
 Fourth Quarter 2008  
 BPS Reprographic Services Facility  
 Oakland, California

PLATE

**1**

DRAWN  
JHD

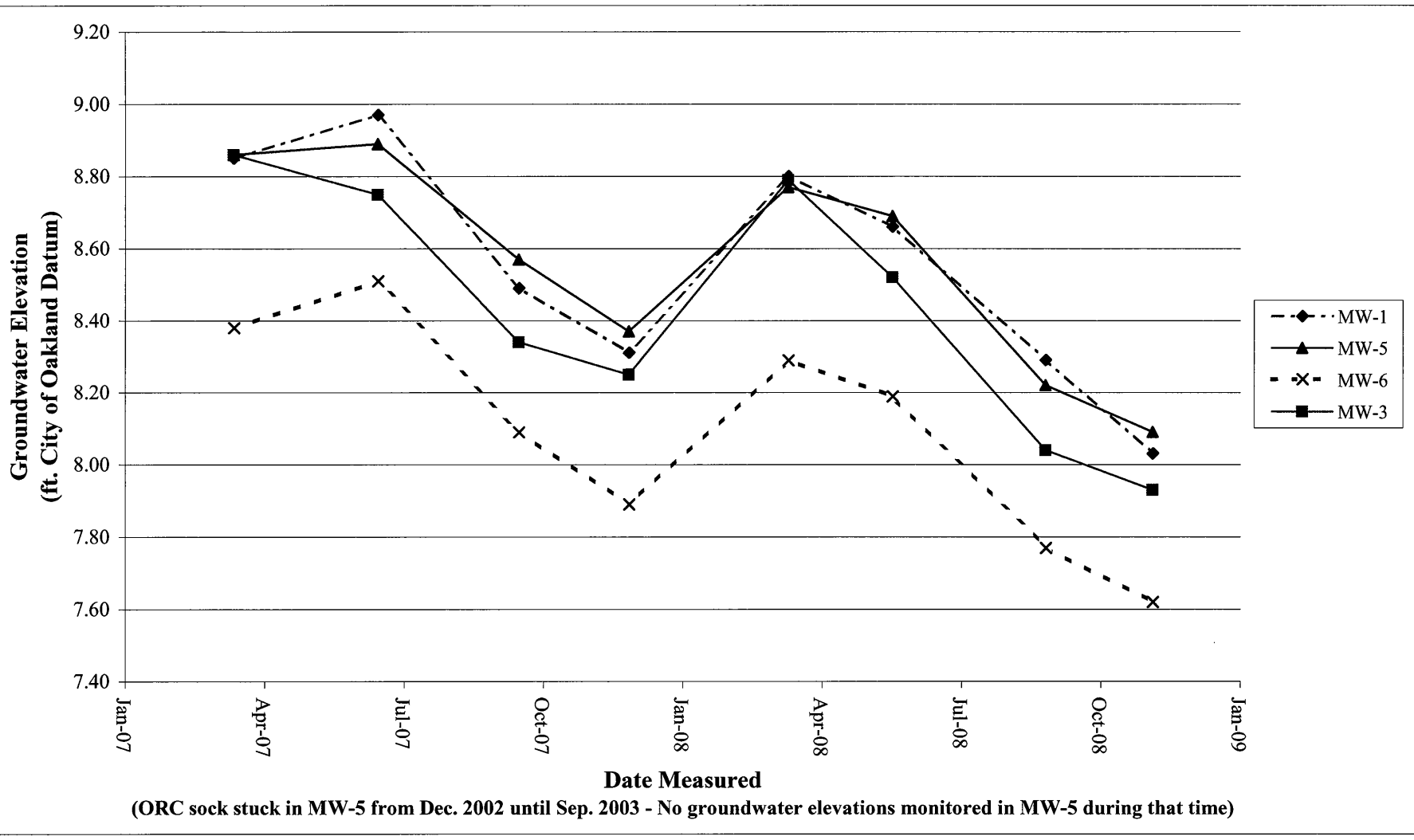
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4088087514 01

CHECKED  
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CHECKED DATE  
02/09

APPROVED  
*[Signature]*

APPROVED DATE  
2/20






**Groundwater Elevation Data**  
 Fourth Quarter 2008  
 BPS Reprographic Services Facility  
 1700 Jefferson Street  
 Oakland, California

Plate

**2**

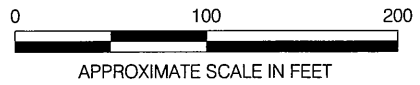
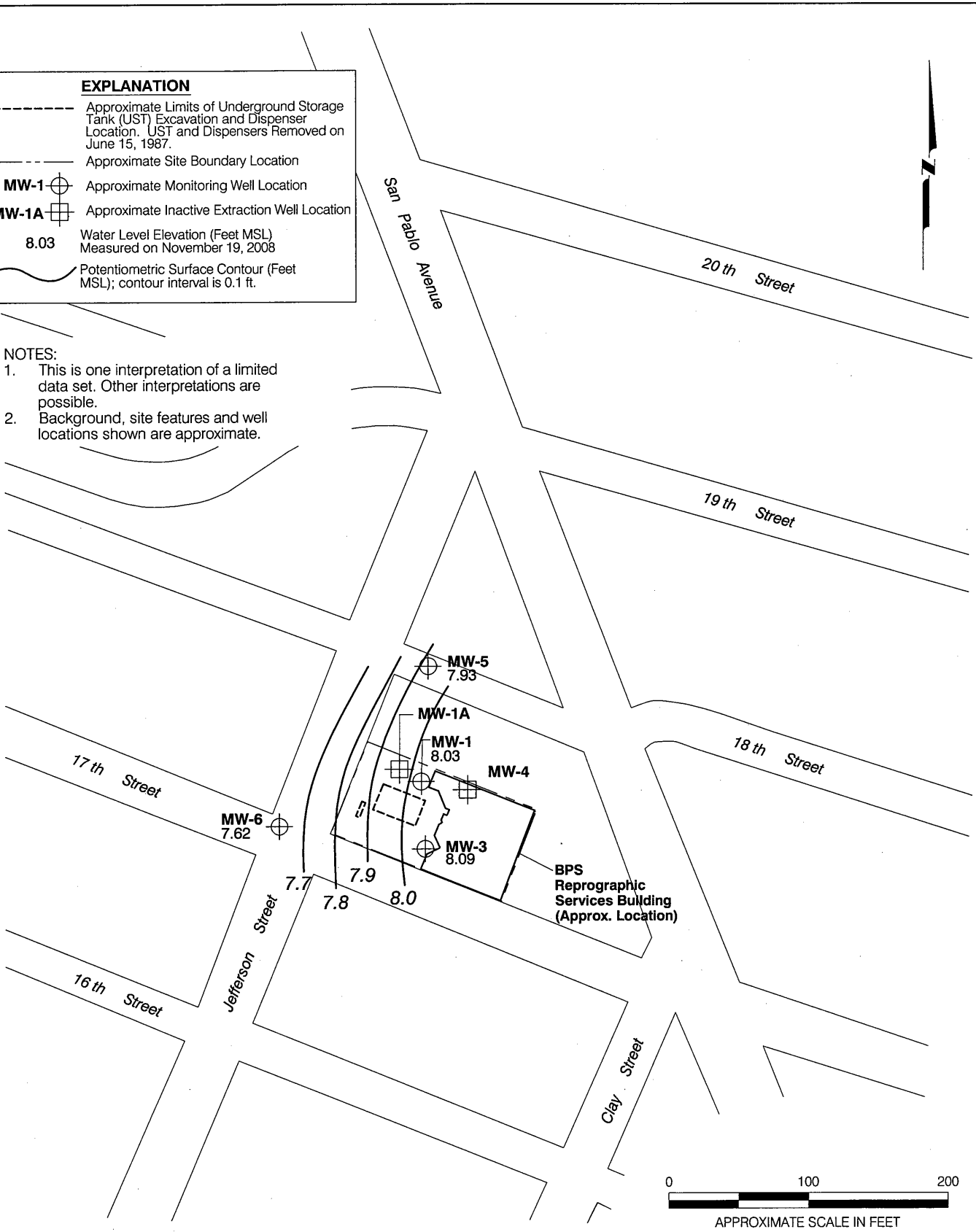
DRAWN	JOB NUMBER	CHECKED	CHECKED DATE	APPROVED	APPROVED DATE
DSN	4088087514	<i>Dov</i>	<i>02/13/09</i>	<i>WBC</i>	<i>2/20</i>

**EXPLANATION**

- Approximate Limits of Underground Storage Tank (UST) Excavation and Dispenser Location. UST and Dispensers Removed on June 15, 1987.
- - - - - Approximate Site Boundary Location
- MW-1  Approximate Monitoring Well Location
- MW-1A  Approximate Inactive Extraction Well Location
- 8.03 Water Level Elevation (Feet MSL)  
Measured on November 19, 2008
-  Potentiometric Surface Contour (Feet MSL); contour interval is 0.1 ft.

**NOTES:**

1. This is one interpretation of a limited data set. Other interpretations are possible.
2. Background, site features and well locations shown are approximate.



**Groundwater Elevation Map**  
**Groundwater Remediation and Monitoring Report**  
 Fourth Quarter 2008  
 BPS Reprographic Services Facility  
 Oakland, California

PLATE  
**3**

DRAWN  
 JHD

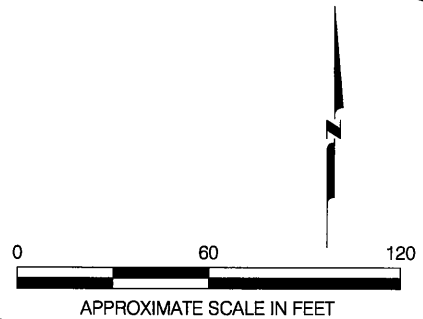
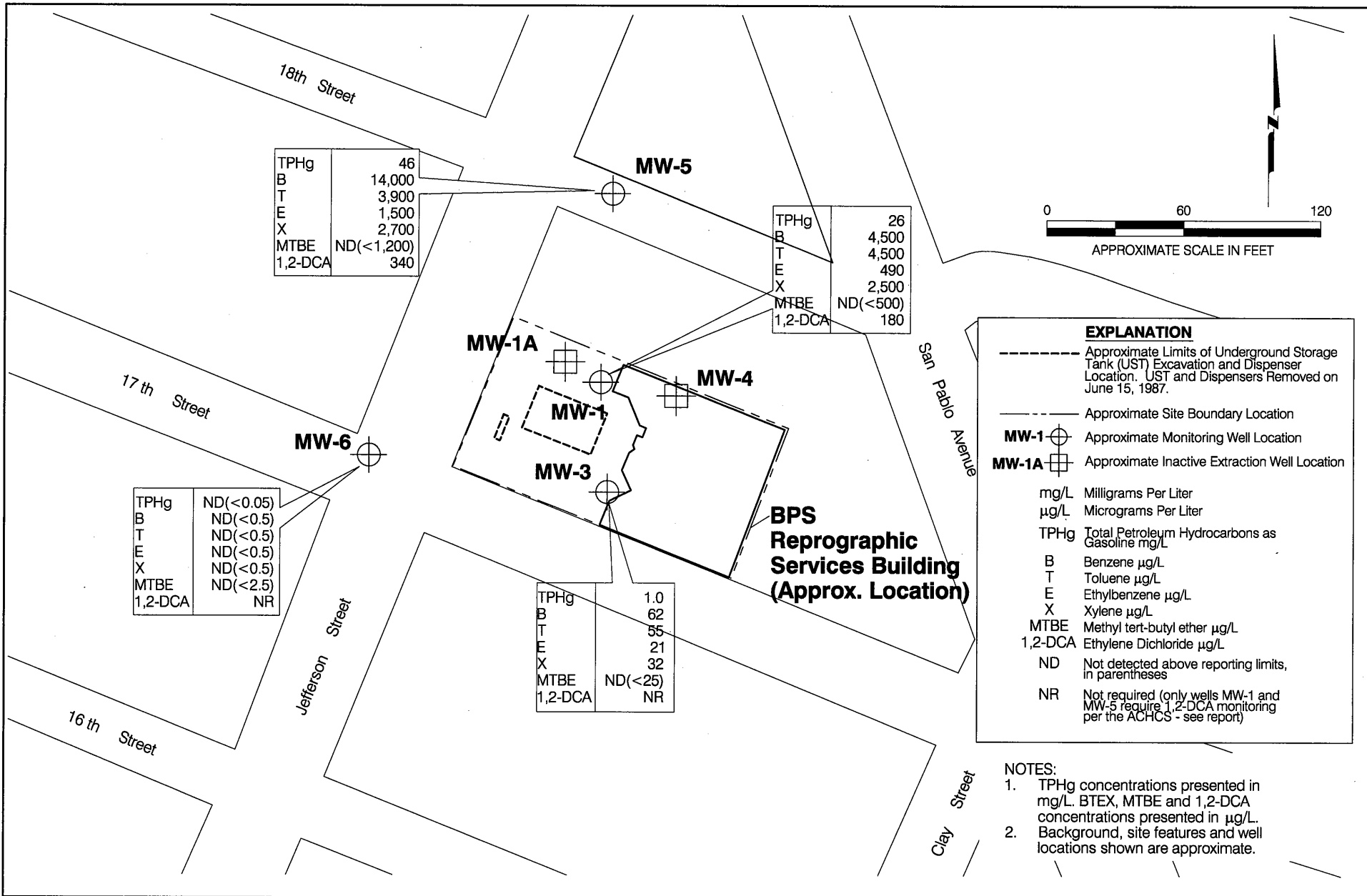
JOB NUMBER  
 4088087514 01

CHECKED  


CHECKED DATE  
 02/09

APPROVED  


APPROVED DATE  

**EXPLANATION**

- Approximate Limits of Underground Storage Tank (UST) Excavation and Dispenser Location. UST and Dispensers Removed on June 15, 1987.
- Approximate Site Boundary Location
- MW-1 (circle with crosshair) Approximate Monitoring Well Location
- MW-1A (square with crosshair) Approximate Inactive Extraction Well Location
- mg/L Milligrams Per Liter
- µg/L Micrograms Per Liter
- TPHg Total Petroleum Hydrocarbons as Gasoline mg/L
- B Benzene µg/L
- T Toluene µg/L
- E Ethylbenzene µg/L
- X Xylene µg/L
- MTBE Methyl tert-butyl ether µg/L
- 1,2-DCA Ethylene Dichloride µg/L
- ND Not detected above reporting limits, in parentheses
- NR Not required (only wells MW-1 and MW-5 require 1,2-DCA monitoring per the ACHCS - see report)

- NOTES:**
1. TPHg concentrations presented in mg/L. BTEX, MTBE and 1,2-DCA concentrations presented in µg/L.
  2. Background, site features and well locations shown are approximate.



**TPHg, BTEX, MTBE and 1,2-DCA Concentrations in Groundwater**  
**Groundwater Remediation and Monitoring Report**  
 Fourth Quarter 2008  
 BPS Reprographic Services Facility  
 Oakland, California

PLATE  
**4**

DRAWN  
 JHD

JOB NUMBER  
 4088087514 01

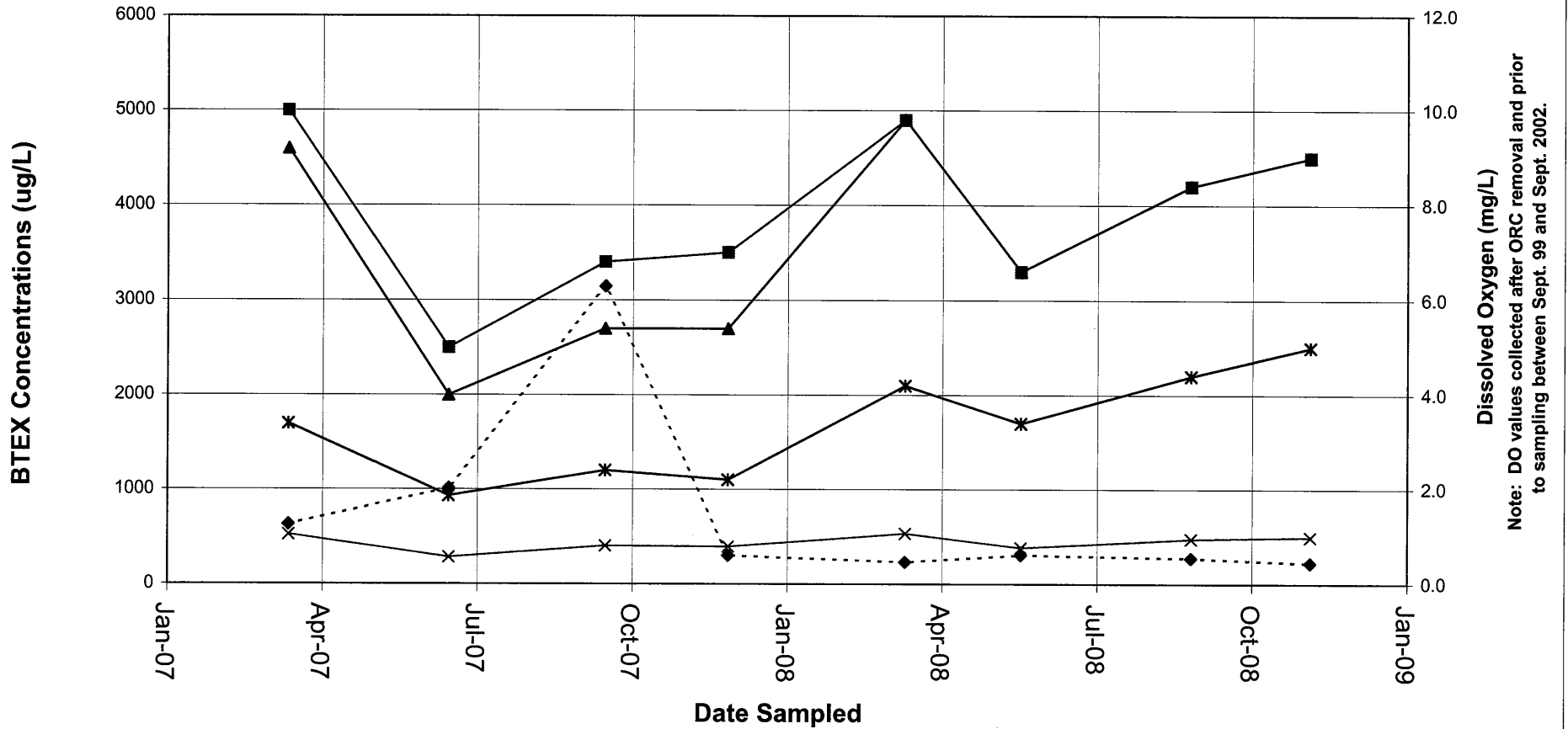
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APPROVED DATE  
 2/9/09

MW-1



(Samples collected post purge between July 2003 and December 2003, all other samples collected with no purge. ORC removed after Sept. 2002.)

Benzene    
  Toluene    
  Ethylbenzene    
  Xylenes    
  Dissolved Oxygen



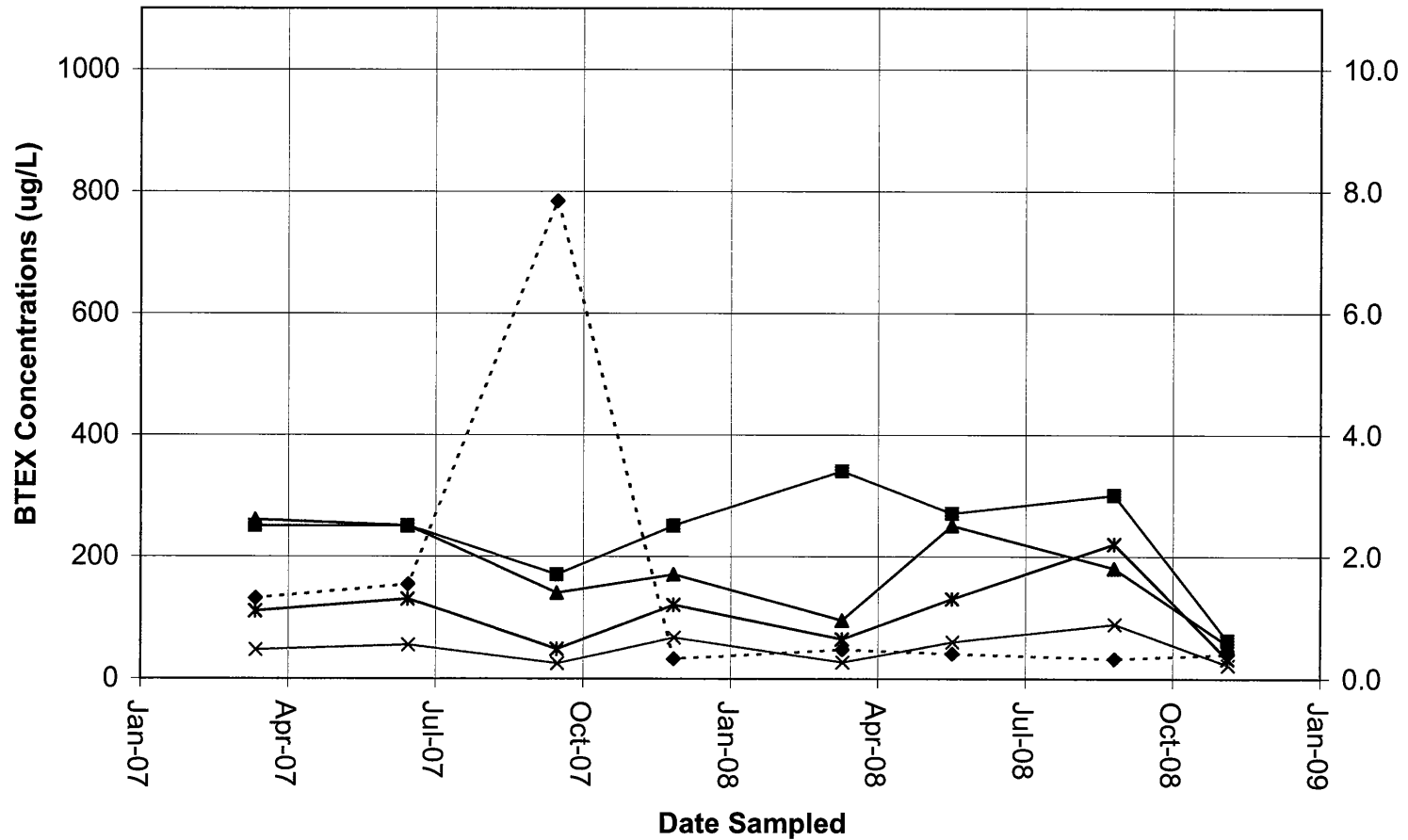
**MW-1 BTEX and DO Results**  
 Fourth Quarter 2008  
 BPS Reprographic Services Facility  
 1700 Jefferson Steet  
 Oakland, California

Plate

**5a**

DRAWN DSN	JOB NUMBER 4088087514	CHECKED <i>[Signature]</i>	CHECKED DATE 02/09	APPROVED <i>[Signature]</i>	APPROVED DATE 2/20
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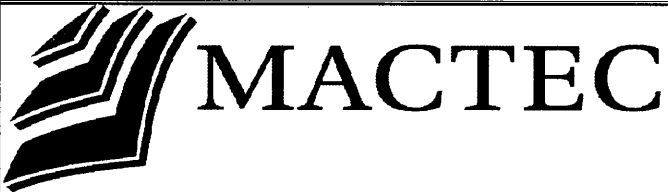
MW-3



Dissolved Oxygen (mg/L)  
 Note: DO values collected after ORC removal and prior to sampling between Sept. 99 and Sept. 2002.

(Samples collected post purge between July 2003 and December 2003, all other samples collected with no purge. ORC removed after Sept. 2002.)

Benzene
  Toluene
  Ethylbenzene
  Total Xylenes
  Dissolved Oxygen



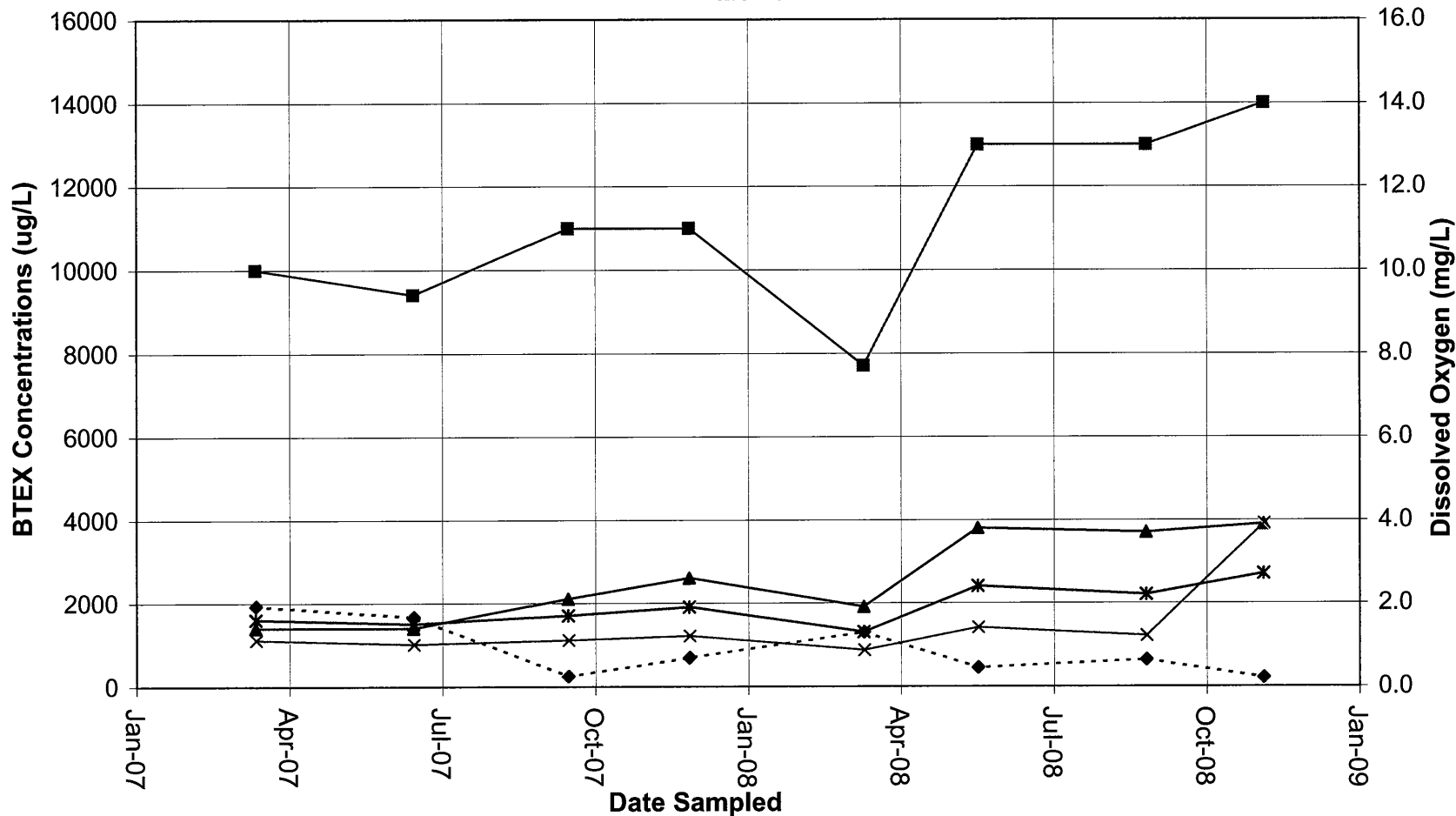
MW-3 BTEX and DO Results  
 Fourth Quarter 2008  
 BPS Reprographic Services Facility  
 1700 Jefferson Steet  
 Oakland, California

Plate

**5b**

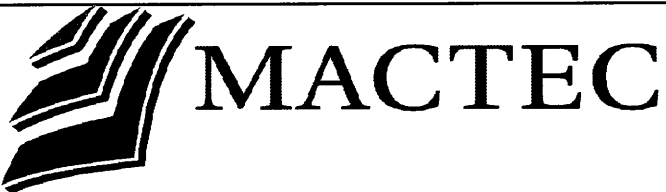
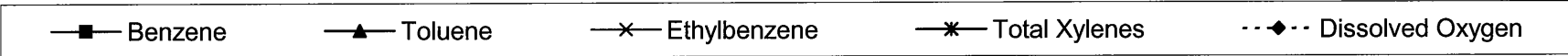
DRAWN	JOB NUMBER	CHECKED	CHECKED DATE	APPROVED	APPROVED DATE
DSN	4088087514	<i>DSN</i>	02/09	<i>WDR</i>	2/20

MW-5



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

(Samples collected post purge between July 2003 and December 2003, all other samples collected with no purge. ORC sock stuck in MW-5 for April 2003 and July 2003 sampling events.)



MW-5 BTEX and DO Results  
 Fourth Quarter 2008  
 BPS Reprographic Services Facility  
 1700 Jefferson Steet  
 Oakland, California

Plate

5c

DRAWN	JOB NUMBER	CHECKED	CHECKED DATE	APPROVED	APPROVED DATE
DSN	4088087514	<i>DS</i>	02/09	<i>WBC</i>	2/09



**APPENDIX A**

**LABORATORY REPORTS**



MACTEC Engineering & Consulting [Petaluma]  
5341 Old Redwood Highway, Suite 300  
Petaluma CA, 94954

Project: BPS City Blue  
Project Number: 4088087514-01  
Project Manager: Debbie Leibensberger

MRK0623  
**Reported:**  
12/08/08 16:59

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-6	MRK0623-01	Water	11/19/08 09:40	11/20/08 16:20
MW-3	MRK0623-02	Water	11/19/08 10:05	11/20/08 16:20
MW-5	MRK0623-03	Water	11/19/08 10:20	11/20/08 16:20
MW-1	MRK0623-04	Water	11/19/08 10:35	11/20/08 16:20

MACTEC Engineering & Consulting [Petaluma]  
5341 Old Redwood Highway, Suite 300  
Petaluma CA, 94954

Project: BPS City Blue  
Project Number: 4088087514-01  
Project Manager: Debbie Leibensberger

MRK0623  
Reported:  
12/08/08 16:59

## Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B

### TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-6 (MRK0623-01) Water</b> Sampled: 11/19/08 09:40 Received: 11/20/08 16:20									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	8K25012	11/25/08	11/25/08	EPA 8015B/8021B	
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		112 %	80-120	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92 %	60-140	"	"	"	"	"	
<b>MW-3 (MRK0623-02) Water</b> Sampled: 11/19/08 10:05 Received: 11/20/08 16:20									
Gasoline Range Organics (C4-C12)	1000	500	ug/l	10	8K25012	11/25/08	11/25/08	EPA 8015B/8021B	
Benzene	62	5.0	"	"	"	"	"	"	
Toluene	55	5.0	"	"	"	"	"	"	
Ethylbenzene	21	5.0	"	"	"	"	"	"	
Xylenes (total)	32	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	25	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		109 %	80-120	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95 %	60-140	"	"	"	"	"	
<b>MW-5 (MRK0623-03) Water</b> Sampled: 11/19/08 10:20 Received: 11/20/08 16:20									
Gasoline Range Organics (C4-C12)	46000	25000	ug/l	500	8K25012	11/25/08	11/25/08	EPA 8015B/8021B	
Benzene	14000	250	"	"	"	"	"	"	
Toluene	3900	250	"	"	"	"	"	"	
Ethylbenzene	1500	250	"	"	"	"	"	"	
Xylenes (total)	2700	250	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		111 %	80-120	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93 %	60-140	"	"	"	"	"	

MACTEC Engineering & Consulting [Petaluma] 5341 Old Redwood Highway, Suite 300 Petaluma CA, 94954	Project: BPS City Blue Project Number: 4088087514-01 Project Manager: Debbie Leibensberger	MRK0623 Reported: 12/08/08 16:59
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## Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B

### TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (MRK0623-04) Water</b> Sampled: 11/19/08 10:35 Received: 11/20/08 16:20									
<b>Gasoline Range Organics (C4-C12)</b>	<b>26000</b>	10000	ug/l	200	8K25012	11/25/08	11/25/08	EPA 8015B/8021B	
<b>Benzene</b>	<b>4500</b>	100	"	"	"	"	"	"	
<b>Toluene</b>	<b>4500</b>	100	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>490</b>	100	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>2500</b>	100	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		110 %		80-120	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		94 %		60-140	"	"	"	"	

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5341 Old Redwood Highway, Suite 300  
Petaluma CA, 94954

Project: BPS City Blue  
Project Number: 4088087514-01  
Project Manager: Debbie Leibensberger

MRK0623  
Reported:  
12/08/08 16:59

## Volatile Organic Compounds by EPA Method 8260B

### TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**MW-5 (MRK0623-03) Water** Sampled: 11/19/08 10:20 Received: 11/20/08 16:20

<b>1,2-Dichloroethane</b>	<b>340</b>	<b>10</b>	ug/l	20	8L01027	12/01/08	12/02/08	EPA 8260B	
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Surrogate: Dibromofluoromethane	98 %	80-120			"	"	"	"	
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Surrogate: 1,2-Dichloroethane-d4	98 %	75-130			"	"	"	"	
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Surrogate: Toluene-d8	96 %	80-120			"	"	"	"	
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Surrogate: 4-Bromofluorobenzene	97 %	70-120			"	"	"	"	
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**MW-1 (MRK0623-04) Water** Sampled: 11/19/08 10:35 Received: 11/20/08 16:20

<b>1,2-Dichloroethane</b>	<b>180</b>	<b>5.0</b>	ug/l	10	8L01027	12/01/08	12/02/08	EPA 8260B	
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Surrogate: Dibromofluoromethane	99 %	80-120			"	"	"	"	
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Surrogate: 1,2-Dichloroethane-d4	99 %	75-130			"	"	"	"	
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Surrogate: Toluene-d8	97 %	80-120			"	"	"	"	
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Surrogate: 4-Bromofluorobenzene	96 %	70-120			"	"	"	"	
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MACTEC Engineering & Consulting [Petaluma] 5341 Old Redwood Highway, Suite 300 Petaluma CA, 94954	Project: BPS City Blue Project Number: 4088087514-01 Project Manager: Debbie Leibensberger	MRK0623 Reported: 12/08/08 16:59
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## Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control

### TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 8K25012 - EPA 5030B [P/T] / EPA 8015B/8021B

##### Blank (8K25012-BLK1)

Prepared & Analyzed: 11/25/08

Gasoline Range Organics (C4-C12)	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	44.9		"	40.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	36.4		"	40.0		91	60-140			

##### Laboratory Control Sample (8K25012-BS1)

Prepared & Analyzed: 11/25/08

Benzene	10.2	0.50	ug/l	10.0		102	85-115			
Toluene	10.4	0.50	"	10.0		104	85-115			
Ethylbenzene	10.3	0.50	"	10.0		103	85-115			
Xylenes (total)	31.8	0.50	"	30.0		106	85-115			
Methyl tert-butyl ether	9.48	2.5	"	10.0		95	80-125			
Surrogate: a,a,a-Trifluorotoluene	44.5		"	40.0		111	80-120			

##### Laboratory Control Sample (8K25012-BS2)

Prepared & Analyzed: 11/25/08

Gasoline Range Organics (C4-C12)	205	50	ug/l	250		82	60-120			
Surrogate: 4-Bromofluorobenzene	38.4		"	40.0		96	60-140			

##### Laboratory Control Sample Dup (8K25012-BSD2)

Prepared & Analyzed: 11/25/08

Gasoline Range Organics (C4-C12)	246	50	ug/l	250		98	60-120	18	20	
Surrogate: 4-Bromofluorobenzene	40.3		"	40.0		101	60-140			

##### Matrix Spike (8K25012-MS1)

Source: MRK0671-04

Prepared & Analyzed: 11/25/08

Gasoline Range Organics (C4-C12)	105	50	ug/l	91.0	14.2	100	70-145			
Benzene	9.90	0.50	"	10.0	0.393	95	80-120			
Toluene	9.76	0.50	"	10.0	ND	98	80-125			
Ethylbenzene	9.81	0.50	"	10.0	ND	98	85-120			
Xylenes (total)	30.9	0.50	"	30.0	1.06	100	80-125			
Methyl tert-butyl ether	10.1	2.5	"	10.0	0.554	95	70-135			
Surrogate: a,a,a-Trifluorotoluene	44.9		"	40.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	40.1		"	40.0		100	60-140			

MACTEC Engineering & Consulting [Petaluma]  
5341 Old Redwood Highway, Suite 300  
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Project: BPS City Blue  
Project Number: 4088087514-01  
Project Manager: Debbie Leibensberger

MRK0623  
Reported:  
12/08/08 16:59

## Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control

### TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 8K25012 - EPA 5030B [P/T] / EPA 8015B/8021B

Matrix Spike Dup (8K25012-MSD1)	Source: MRK0671-04			Prepared & Analyzed: 11/25/08						
Gasoline Range Organics (C4-C12)	105	50	ug/l	91.0	14.2	100	70-145	0.3	20	
Benzene	9.76	0.50	"	10.0	0.393	94	80-120	1	25	
Toluene	9.63	0.50	"	10.0	ND	96	80-125	1	20	
Ethylbenzene	9.66	0.50	"	10.0	ND	97	85-120	2	25	
Xylenes (total)	30.6	0.50	"	30.0	1.06	98	80-125	1	20	
Methyl tert-butyl ether	10.1	2.5	"	10.0	0.554	95	70-135	0.3	25	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	44.9		"	40.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	40.7		"	40.0		102	60-140			



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5341 Old Redwood Highway, Suite 300  
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Project: BPS City Blue  
Project Number: 4088087514-01  
Project Manager: Debbie Leibensberger

MRK0623  
Reported:  
12/08/08 16:59

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**TestAmerica Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 8L01027 - EPA 5030B P/T / EPA 8260B**

**Blank (8L01027-BLK1)**

Prepared & Analyzed: 12/01/08

1,2-Dichloroethane	ND	0.50	ug/l							
Surrogate: Dibromofluoromethane	7.36		"	7.50		98	80-120			
Surrogate: 1,2-Dichloroethane-d4	7.46		"	7.50		99	75-130			
Surrogate: Toluene-d8	7.23		"	7.50		96	80-120			
Surrogate: 4-Bromofluorobenzene	7.09		"	7.50		95	70-120			

**Laboratory Control Sample (8L01027-BS1)**

Prepared & Analyzed: 12/01/08

1,2-Dichloroethane	10.2	0.50	ug/l				80-125			
Surrogate: Dibromofluoromethane	7.38		"	7.50		98	80-120			
Surrogate: 1,2-Dichloroethane-d4	7.37		"	7.50		98	75-130			
Surrogate: Toluene-d8	7.32		"	7.50		98	80-120			
Surrogate: 4-Bromofluorobenzene	7.30		"	7.50		97	70-120			

**Matrix Spike (8L01027-MS1)**

Source: MRK0705-31

Prepared & Analyzed: 12/01/08

1,2-Dichloroethane	11.9	0.50	ug/l		1.15		80-140			
Surrogate: Dibromofluoromethane	7.57		"	7.50		101	80-120			
Surrogate: 1,2-Dichloroethane-d4	7.72		"	7.50		103	75-130			
Surrogate: Toluene-d8	7.32		"	7.50		98	80-120			
Surrogate: 4-Bromofluorobenzene	7.52		"	7.50		100	70-120			

**Matrix Spike Dup (8L01027-MSD1)**

Source: MRK0705-31

Prepared & Analyzed: 12/01/08

1,2-Dichloroethane	11.8	0.50	ug/l		1.15		80-140	0.6	25	
Surrogate: Dibromofluoromethane	7.63		"	7.50		102	80-120			
Surrogate: 1,2-Dichloroethane-d4	7.64		"	7.50		102	75-130			
Surrogate: Toluene-d8	7.36		"	7.50		98	80-120			
Surrogate: 4-Bromofluorobenzene	7.47		"	7.50		100	70-120			

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

885 Jarvis Drive  
Morgan Hill, CA 95037  
(408) 776-9600  
FAX (408) 782-6308  
www.testamericainc.com

MACTEC Engineering & Consulting [Petaluma]  
5341 Old Redwood Highway, Suite 300  
Petaluma CA, 94954

Project: BPS City Blue  
Project Number: 4088087514-01  
Project Manager: Debbie Leibensberger

MRK0623  
**Reported:**  
12/08/08 16:59

## Notes and Definitions

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

MACTEC Engineering and Consulting, Inc.  
5341 Old Redwood Highway, Suite 300  
Petaluma, CA 94954  
(707) 793-3800 • FAX (707) 793-3900

MRK0623

**SAMPLING INFORMATION**

NAME OF FACILITY: Test America  
STREET ADDRESS: \_\_\_\_\_  
CITY / STATE: Morgan Hill, CA ZIP: \_\_\_\_\_

PROJECT NAME <u>BPS Services (Formerly City Blue)</u>				JOB NO. <u>4093087514-01</u>		TOTAL NO. OF CONTAINERS	ANALYSES TPH-a (EPA 8015 modified) BTEX (EPA 8020) MMBE (EPA 8020) EDC (EPA 8020)										FOR LAB USE ONLY				
SAMPLERS (SIGNATURE) <u>David Allbut</u>				SAMPLERS INITIALS (PRINT) <u>DA</u>																	
SAMPLING DATE <u>11/19/08</u>																					
TIME	GRAB	COMB.	MATRIX	SAMPLE NO.	SAMPLE LOCATION	FIELD MEASUREMENT															
0940	X		W	MW-6			3	X	X	X											
1005	X		W	MW-3			3	X	X	X											
1020	X		W	MW-5			3	X	X	X	X										
1035	X		W	MW-1			3	X	X	X	X										
0800	X		W	TB			2	X	X	X											
RELINQUISHED BY: <u>David Allbut</u> (SIGNATURE)				DATE / TIME <u>11/19/08</u>	RECEIVED BY: <u>JULIE H. (TAMH)</u> (SIGNATURE)				DATE / TIME <u>11/20/08 6:20</u>	RELINQUISHED BY:				DATE / TIME	RECEIVED BY:				DATE / TIME		

\*MATRIX  
WATER - W  
SOIL / SEDIMENT - SO  
OTHER - NA

REMARKS

DISTRIBUTION: ORIGINAL AND YELLOW COPIES ACCOMPANY SAMPLE SHIPMENT TO LABORATORY.  
PINK COPY RETAINED BY SAMPLERS, YELLOW COPIES RETAINED BY LABORATORY.  
Standard TAT Project Manager = Debra Leibenberger  
Detections of MMBE are to be confirmed by EPA 8260  
"TB" is on Hold.

For Lab Use Only

Custody Seals Present? Yes  No  Are Custody Seals Intact? Yes  No  N/A  Inspected By: \_\_\_\_\_ Date: \_\_\_\_\_

### TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: MACTEC  
 REC. BY (PRINT) JULIE (H.)  
 WORKORDER: MRK0623

DATE REC'D AT LAB: 11/20/08  
 TIME REC'D AT LAB: 1620  
 DATE LOGGED IN: 11/21/08

For Regulatory Purposes?  
 DRINKING WATER  
 WASTE WATER  
 OTHER

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH**	SAMPLE MATRIX	DATE SAMPLED	Temp. >6°C	REMARKS: CONDITION
1. Custody Seal(s) Present / Absent Intact / Broken*									<div style="position: absolute; top: 0; right: 0; text-align: right;"> <u>11/20/08</u> </div> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); font-size: 2em; font-weight: bold;">                     JULIE H. SEE COC                 </div>
2. Chain-of-Custody Present / Absent*									
3. Traffic Reports or Packing List: Present / Absent*									
4. Airbill / Sticker - Present / Absent Tracking #									
5. Sample Condition: Intact / Leaking* / Broken*									
6. Samples labeled Yes / No*									
7. Sample ID's listed on COC Yes / No*									
8. Does information on COC and sample labels agree? Yes / No*									
9. Sample received within hold time: Yes / No*									
10. Adequate sample volume received Yes / No*									
11. Proper preservatives used Yes / No*									
12. Trip Blank / Temp Blank Received? (circle which if yes) Yes / No*									
13. Thermometer Used : IR-1 / IR-3 / Backup									
14. Cooler RT*** CF*** CT***									
1. <u>2.6</u> <u>-1.0</u> <u>1.6</u>									
2. _____									
3. _____									
4. _____									
5. _____									
15. Is/Are corrected temp 0-6°C? Yes / No*									

\*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION

\*\*CHECK SAMPLE PREP LOG IF NOT INDICATED

\*\*\* Read Temperature/Correction Factor/Corrected Temperature

**APPENDIX B**  
**GROUNDWATER SAMPLING FORM**

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	11/19/08	0918	24.33	24.33	OK	N/A	OK	OK	4	
MW-3		0911	23.68	23.68	OK	N/A	OK	OK	4	
MW-5		0915	22.63	22.63	OK	N/A	OK	OK	2	
MW-6		0906	23.64	23.64	OK	N/A	OK	OK	2	
MW-1A		0920	22.77	22.77	bad 4"	N/A	OK	OK	4	1/3 tabs stripped, 1/3 bolts missing. In street.
MW-4	↓	0926	24.23	24.23	bad 4"	N/A	OK	OK	4	2/2 tabs stripped.

Please record all monitoring equipment model numbers, serial numbers and calibration dates here. Also record expiration dates of calibration fluids if applicable: Equipment calibrated 11/19/08. YSI 556 MPS # 08C101081

pH: pH 7 Lot # 7A4002 EXP 8/09 pH 10 Lot 1706759 EXP 12/23/08

Temperature: N/A

Specific Conductance: Lot 6341 EXP 7/14/09

Dissolved Oxygen: YSI 55/50 FT # 01D0700AD

Turbidity: La Motte 2020 # 2766-3601 11/19/08

Approved

WBC

Checked

OBZ



# GROUNDWATER SAMPLING FORM

Job Name: BPS Services  
 Job Number: 4088087514-01  
 Recorded By: David Hunt  
 (Signature)

Well Number: MW-6  
 Well Type:  Monitor  Extraction  Other  
 PVC  St. Steel  Other  
 Date: 11/19/2008  
 Sampled By: DA  
 (initials)

### WELL PURGING

#### PURGE VOLUME

Casing Diameter (D in inches): 2  
 Total Depth of Casing (TD in ft BTOC): -  
 Water Level Depth (WL in ft BTOC): 23.64  
 No. of Well Volumes to be purged (# V) no purge

#### PURGE METHOD

Bailer - Type: \_\_\_\_\_  
 Submersible - Type: \_\_\_\_\_  
 Other - Type: Peristaltic w/dedicated tubing

#### PUMP INTAKE SETTING

Near Bottom  Near Top  
 Other  
 Depth in feet (BTOC): 26.5  
 Screen Interval in feet (BTOC): from \_\_\_\_\_ to \_\_\_\_\_

#### PURGE VOLUME CALCULATION

(- - -) X 2 X 3 X 0.0408 = - gals  
 TD (feet) WL (Feet) D (inches) #V Calculated Purge Volume

#### Field Parameter Measurement

Minutes	pH	Conductivity (µS)	Temp. <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Turbidity (NTU)
Initial	<u>5.74</u>	<u>995</u>	<u>68.14</u>	<u>12.1</u>
		<u>pre-purge</u>	<u>0.20 mg/l</u>	<u>ORP 236.0 mv</u>

Meter S/N YSI # 08C101081 La Motte 2020 # 2766-3601

**PURGE TIME**  
 Purge Start: 0932  
 Purge Stop: 0937  
 Elapsed: 5 min

**PURGE RATE**  
 GPM: 100 ml/min  
 GPM: " "

**PURGE VOLUME**  
 Volume: 500 ml gallons

Observations During Purging (Well Condition, Color, Odor):

clear,

Discharge Water Disposal:  Sanitary Sewer  Other  
 Storm Sewer

### WELL SAMPLING

Bailer - Type: dedicated tubing Sample Time: 0940

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
<u>MW-6</u>	<u>3x40ml voa</u>	<u>TPH-g, BTEX, MTBE</u>	<u>HCL</u>	<u>TA</u>	

### QUALITY CONTROL SAMPLES

Duplicate Samples	
Original Sample No.	Dupl. Sample No.
<u>MW-</u>	

Blank Samples	
Type	Sample No.
<u>Top Blank</u>	<u>TB</u> <u>@ 0800</u>

Other Samples	
Type	Sample No.



# GROUNDWATER SAMPLING FORM

Job Name: BPS Services  
 Job Number: 4088087514-01  
 Recorded By: David Allert  
 (Signature)

Well Number: MW-3  
 Well Type:  Monitor  Extraction  Other  
 PVC  St. Steel  Other  
 Date: 11/19/2008  
 Sampled By: DA  
 (initials)

### WELL PURGING

#### PURGE VOLUME

Casing Diameter (D in inches): 4  
 Total Depth of Casing (TD in ft BTOC): 23.68  
 Water Level Depth (WL in ft BTOC): 23.68  
 No. of Well Volumes to be purged (# V) no purge

#### PURGE METHOD

Bailer - Type: \_\_\_\_\_  
 Submersible - Type: \_\_\_\_\_  
 Other - Type: Peristaltic w/dedicated tubing

#### PUMP INTAKE SETTING

Near Bottom  Near Top   
 Other  
 Depth in feet (BTOC): 26.5  
 Screen Interval in feet (BTOC): from \_\_\_\_\_ to \_\_\_\_\_

#### PURGE VOLUME CALCULATION

$(\text{TD (feet)} - \text{WL (feet)}) \times \text{D (inches)}^2 \times 3 \times 0.0408 = \text{Calculated Purge Volume (gals)}$

#### Field Parameter Measurement

Minutes	pH	Conductivity (μS)	Temp. <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Turbidity (NTU)
Initial	5.01	124	67.12	7.13
		pre-purge	D.O.	0.39 mg/l
			ORP	24.9 mV

Meter S/N YSI #08C101081 La Motte 2020 # 2766-3601

#### PURGE TIME

Purge Start: 0957  
 Purge Stop: 1002  
 Elapsed: 5 min

#### PURGE RATE

GPM: 100 ml/min  
 GPM: \_\_\_\_\_

#### PURGE VOLUME

Volume: 500 ml gallons

Observations During Purging (Well Condition, Color, Odor):

slight hydrocarbon odor

Discharge Water Disposal:  Sanitary Sewer  
 Storm Sewer  Other

### WELL SAMPLING

Bailer - Type: dedicated tubing Sample Time: 1005

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
<u>MW-3</u>	<u>3x40ml voa</u>	<u>TPH-g, BTEX, MTBE</u>	<u>HCL</u>	<u>TA</u>	

#### QUALITY CONTROL SAMPLES

Duplicate Samples	
Original Sample No.	Dupl. Sample No.
<u>MW-</u>	

Blank Samples	
Type	Sample No.

Other Samples	
Type	Sample No.





# GROUNDWATER SAMPLING FORM

Job Name: BPS Services  
 Job Number: 4088087514-01  
 Recorded By: *Daniel Albert*  
 (Signature)

Well Number: MW-5  
 Well Type:  Monitor  Extraction  Other  
 PVC  St. Steel  Other  
 Date: 11/19/2008  
 Sampled By: DA  
 (initials)

### WELL PURGING

#### PURGE VOLUME

Casing Diameter (D in inches): 2  
 Total Depth of Casing (TD in ft BTOC): -  
 Water Level Depth (WL in ft BTOC): 22.63  
 No. of Well Volumes to be purged (# V) no purge

#### PURGE METHOD

Bailer - Type: \_\_\_\_\_  
 Submersible - Type: \_\_\_\_\_  
 Other - Type: Peristaltic w/dedicated tubing

#### PUMP INTAKE SETTING

Near Bottom  Near Top  
 Other  
 Depth in feet (BTOC): 25.5  
 Screen Interval in feet (BTOC): from \_\_\_\_\_ to \_\_\_\_\_

#### PURGE VOLUME CALCULATION

(- - -) X 2<sup>2</sup> X 3 X 0.0408 = - gals  
 TD (feet) WL (Feet) D (inches) # V Calculated Purge Volume

#### Field Parameter Measurement

Minutes	pH	Conductivity (µS)	Temp.		Turbidity (NTU)
			<input type="checkbox"/> °C	<input checked="" type="checkbox"/> °F	
Initial	<u>6.38</u>	<u>960</u>	<u>62.72</u>		<u>3.42</u>
		<u>pre-purge</u>	<u>DO</u>		<u>0.17</u>
			<u>ORP</u>		<u>-50.4</u>

Meter S/N YSI # 08C101081 La Motte 2020 # 2766-3601

#### PURGE TIME

Purge Start: 1012  
 Purge Stop: 1017  
 Elapsed: 5 min

#### PURGE RATE

GPM: 100 ml/min  
 GPM: 100 ml/min

#### PURGE VOLUME

Volume: 500 ml gallons

Observations During Purging (Well Condition, Color, Odor):

Clear, slight hydrocarbon odor

Discharge Water Disposal:

Sanitary Sewer

Storm Sewer

Other

### WELL SAMPLING

Bailer - Type: dedicated tubing

Sample Time: 1020

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
<u>MW-5</u>	<u>3x40ml voa</u>	<u>TPH-g, BTEX, MTBE</u>	<u>HCL</u>	<u>TA</u>	

#### QUALITY CONTROL SAMPLES

##### Duplicate Samples

Original Sample No.	Dupl. Sample No.
<u>MW-</u>	

##### Blank Samples

Type	Sample No.

##### Other Samples

Type	Sample No.



# GROUNDWATER SAMPLING FORM

Job Name: BPS Services  
 Job Number: 4088087514-01  
 Recorded By: *Dani M. Allen*  
 (Signature)

Well Number: MW-1  
 Well Type:  Monitor  Extraction  Other  
 PVC  St. Steel  Other  
 Date: 11/19/2008  
 Sampled By: DA  
 (Initials)

## WELL PURGING

### PURGE VOLUME

Casing Diameter (D in inches): 4  
 Total Depth of Casing (TD in ft BTOC): -  
 Water Level Depth (WL in ft BTOC): 24.33  
 No. of Well Volumes to be purged (# V) no purge

### PURGE METHOD

Bailer - Type: \_\_\_\_\_  
 Submersible - Type: \_\_\_\_\_  
 Other - Type: Peristaltic w/dedicated tubing

### PUMP INTAKE SETTING

Near Bottom  Near Top   
 Other  
 Depth in feet (BTOC): 27.5  
 Screen Interval in feet (BTOC): from \_\_\_\_\_ to \_\_\_\_\_

### PURGE VOLUME CALCULATION

$$\left( \frac{\text{TD (feet)} - \text{WL (Feet)}}{D (\text{inches})} \right) \times 3 \times 0.0408 = \text{Calculated Purge Volume (gals)}$$

### Field Parameter Measurement

Minutes	pH	Conductivity (µS)	Temp. <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Turbidity (NTU)
Initial	6.51	1200	64.69	9.06
		pre-purge DO	0.44 mg/L	
		ORP	-58.3	

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**PURGE TIME**  
 Purge Start: 1029  
 Purge Stop: 1034  
 Elapsed: 5

**PURGE RATE**  
 GPM: 1000 ml/min  
 GPM: \_\_\_\_\_

**PURGE VOLUME**  
 Volume: 500 ml gallons

Observations During Purging (Well Condition, Color, Odor):  
grey, slight hydrocarbon odor

Discharge Water Disposal:  Sanitary Sewer  Storm Sewer  Other

## WELL SAMPLING

Bailer - Type: dedicated tubing Sample Time: 1035

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
<u>MW-1</u>	<u>3x40ml voa</u>	<u>TPH-g, BTEX, MTBE</u>	<u>HCL</u>	<u>TA</u>	

### QUALITY CONTROL SAMPLES

Duplicate Samples	
Original Sample No.	Dupl. Sample No.
<u>MW-</u>	

Blank Samples	
Type	Sample No.

Other Samples	
Type	Sample No.

MACTEC Engineering and Consulting, Inc.  
5341 Old Redwood Highway, Suite 300  
Petaluma, CA 94954  
(707) 793-3800 • FAX (707) 793-3900

**SAMPLING INFORMATION**

NAME OF FACILITY: Test America

STREET ADDRESS: \_\_\_\_\_

CITY / STATE: Morgan Hill, CA ZIP: \_\_\_\_\_

PROJECT NAME: BPS Services (Formerly City Blue) JOB NO.: 4099087514-01

SAMPLERS (SIGNATURE): David Allent SAMPLERS INITIALS (PRINT): DA

SAMPLING DATE: 11/19/08 APO # 200909376

TIME	GRAB	CONT.	MATRIX	SAMPLE NO.	SAMPLE LOCATION	FIELD MEASUREMENT	TOTAL NO. OF CONTAINERS	ANALYSES										FOR LAB USE ONLY		
								TPH-g (EPA 815 Modified)	BTX (EPA 8020)	MtBE (EPA 8020)	EDC (EPA 8160 D, 16xide)									
0940	X		W	MW-6			3	X	X	X										
1005	X		W	MW-3			3	X	X	X										
1020	X		W	MW-5			3	X	X	X	X									
1035	X		W	MW-1			3	X	X	X	X									
0800	X		W	TB			2	X	X	X										

RELINQUISHED BY: David Allent DATE / TIME: 11/19/08

RECEIVED BY: JILLIE H. (LAP 41) DATE / TIME: 11/20/08

RELINQUISHED BY: \_\_\_\_\_ RECEIVED BY: \_\_\_\_\_ DATE / TIME: \_\_\_\_\_

\*MATRIX: WATER - W, SOIL / SEDIMENT - SO, OTHER - NA

REMARKS: Standard TAT Project Manager = Debra Leibensberger  
Detections of MtBE are to be confirmed by EPA 8260  
"TB" is On Hold!

**For Lab Use Only**

Are Custody Seals Present? Yes  No  Are Custody Seals Intact? Yes  No  N/A  Inspected By: \_\_\_\_\_ Date: \_\_\_\_\_