

**RECEIVED**

*1:34 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



January 5, 2007

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

Subject:           **Groundwater Remediation and Monitoring Report  
Third Quarter 2006  
BPS Reprographic Services Facility  
1700 Jefferson Street  
Oakland, California  
MACTEC Project No. 4097041918 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). Information presented in this letter-report represents groundwater conditions at the subject site during the Third Quarter 2006 (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. 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 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 of 1999, as approved by the ACHCS, groundwater extraction and treatment ceased. In September 1999, MACTEC implemented *in-situ* bioremediation using ORC™ in treatment wells MW-1A, MW-3, MW-4, and MW-5. The ORC™ is contained in fabric “socks” which release oxygen over time to encourage aerobic microbes to metabolize the hydrocarbons. As described in the Groundwater Monitoring Plan, the ORC™ socks were removed from the treatment wells two weeks before each quarterly groundwater monitoring event, then replaced after sampling is 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, the ORC has not been replaced; however, quarterly monitoring has continued.

### THIRD QUARTER 2006 GROUNDWATER SAMPLING AND ANALYSIS

On September 13, 2006, 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 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.

Table 1 shows groundwater field parameters, including DO, collected prior to sampling. During the Third quarter 2006 event, the DO concentrations ranged from 0.6 mg/L in MW-1 to 1.5 mg/L in MW-5. MACTEC will continue to monitor DO in these wells.

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. Current and historical measurements and calculated groundwater elevations are displayed on Plate 2 and tabulated in Table 2. As shown in Table 2, the groundwater surface elevation decreased an average of 0.47 feet across the site, as compared to last quarter’s measurements. Groundwater elevations at the site have generally been increasing since groundwater monitoring began. MACTEC will continue to monitor groundwater elevations in these wells.

The groundwater elevation contours shown on Plate 3 were drawn using the September 13, 2006 groundwater measurements from MW-1, MW-3, MW-5, and MW-6. Based on the groundwater elevations, the groundwater gradient is approximately 0.005 ft/ft. The direction of flow appears to be in the west-northwesterly direction.

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 TPHg, BTEX, and MTBE collected through September 29, 1999 are shown in Table 3. Third Quarter 2006 analytical results for TPHg, BTEX, MTBE, and EDC are displayed on Plate 4. 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) are presented in Appendix A.

## DISCUSSION

As shown in Table 4 and Plates 5a, 5b, and 5c, Third Quarter 2006 monitoring event concentrations of TPHg and BTEX are within the range of historical concentrations of these compounds. The range of chemical concentrations detected in samples collected during the Third Quarter 2006 event are as follows:

- TPHg ranged from non-detectable with a detection limit of 0.05 milligrams (mg/L; MW-6) to 20 mg/l (MW-1).
- Benzene ranged from non-detectable with a detection limit of 0.5 micrograms per liter (ug/L; MW-6) to 4,500 ug/L (MW-1).
- Toluene ranged from non-detectable with a detection limit of 0.5 ug/L (MW-6) to 3,900 ug/L (MW-1).
- Ethylbenzene ranged from non-detectable with a detection limit of 0.5 ug/L (MW-6) to 400 ug/L (MW-1).
- Total Xylenes ranged from non-detectable with a detection limit of 0.5 ug/L (MW-6) to 1,400 ug/L (MW-1).
- 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-1).
- EDC was detected in MW-1 at a concentration of 260 ug/L and in MW-5 at a concentration 55 ug/L.

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

As indicated on Plate 5a, chemical concentrations at MW-1 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. Third Quarter 2006 concentrations of TPHg, benzene and toluene in MW-1 have all decreased since the First and Second Quarter 2006. Third Quarter 2006 concentrations of

January 5, 2007  
4097041918 01  
Mr. David Blain  
BPS Reprographic Services  
Page 4

ethylbenzene and total xylenes in MW-1 have all increased since the Second Quarter 2006 but are still below recent First Quarter 2006 peak values.

As indicated on Plate 5b, significant spikes in TPHg, ethylbenzene, toluene, and xylenes concentrations occurred in MW-3 during the Second Quarter 2003 monitoring event and spikes in benzene in MW-3 occurred during the Fourth Quarter 2004 and Third Quarter 2005 monitoring events. However, since Second Quarter 2004, the overall concentrations in MW-3 have been low and relatively stable. Third Quarter 2006 concentration data in MW-3 indicate a slight increase in TPHg and BTEX compared to Second Quarter 2006 data.

As indicated on Plate 5c, chemical concentrations in MW-5 increased significantly in the Third Quarter 2003 and remained elevated through the Third Quarter 2005. Since then, TPHg and BTEX concentrations have followed decreasing trends with historical lows monitored during the First and Second Quarter 2006. Third Quarter 2006 TPHg and BTEX concentrations were elevated compared to Second Quarter 2006 but remain low compared to historical values.

Typically, groundwater collected from MW-6 contains no detectable concentrations of TPHg or BTEX compounds. Third Quarter 2006 monitoring data for MW-6 indicates no TPHg or BTEX compounds were detected in this well. MW-6 will continue to be monitored for these analytes.

Beginning in the Fourth Quarter 2002, EDC was added to the list of analytes monitored at MW-1 and MW-5. The current concentrations of EDC detected in MW-1 and MW-5 (260 ug/L and 55 ug/L, respectively) represent an increase from the Second Quarter 2006 non-detectable results, but are similar to concentrations detected during previous quarters. EDC concentrations in both wells remain within their respective historical concentration ranges.

## RECOMMENDATIONS

MACTEC recommends continued groundwater monitoring at the Site to satisfy the quarterly groundwater monitoring requirements of the ACHCS and continued evaluation of monitoring parameters for more favorable conditions under which to make a monitoring frequency reduction request. 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 ACHCS.

January 5, 2007  
4097041918 01  
Mr. David Blain  
BPS Reprographic Services  
Page 5

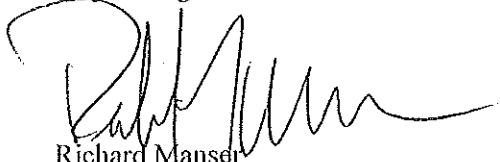
If you have any questions, please contact David S. Nanstad at (415) 278-2118.

Yours very truly,

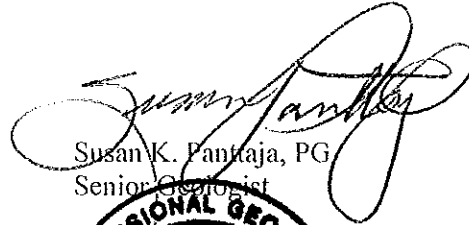
MACTEC ENGINEERING AND CONSULTING, INC.



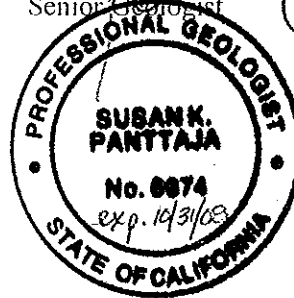
David S. Nanstad, REA  
Project Engineer



Richard Manser  
Principal Scientist



Susan K. Panttaja, PG  
Senior Geologist



DSN/mlb:MB62061.doc-BPS

- 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
    - Table B1. Sample Location/Sample Description Cross-Reference

## **TABLES**

**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
11/5/1999	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

Checked SKP  
 -----  
 Approved ABH



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

REDOX (mvolts)	MW-1	MW-3	MW-5	MW-6
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
Temperature (deg F)	MW-1	MW-3	MW-5	MW-6
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.**  
**Groundwater Parameters**  
**BPS Reprographic Services Facility**  
**1700 Jefferson Street**  
**Oakland, California**

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
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

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

Specific Conductance ( $\mu\text{S}/\text{cm}$ )	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

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

$\mu\text{S}/\text{cm}$  = 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 3. Groundwater Monitoring Analytical Results - Using Purge Method**  
**8/1/1991 to 9/29/1999**  
**BPS Reprographic Services Facility**  
**1700 Jefferson Street**  
**Oakland, California**

	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-1	FP	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	FP	FP	FP	FP	66	54	73	66	51	50	15	41	10	18	NA
MW-1A	350	FP	FP	FP	170	95	190	67	53	52	62	200	140	100	FP	FP	85	47	32	32	16	17	3.2	9.6	7.9	5.0	
MW-3	74	FP	FP	FP	FP	39	4,600	51	20	6.2	19	7	16	6	FP	FP	37	24	41	48	NA	25	48	10	11	8.8	NA
MW-4	86	FP	FP	FP	58	16	92	35	13	14	11	110	260	95	FP	44	35	36	39	48	17	16	15	23	7.7	11	
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)	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-1	FP	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	FP	FP	FP	FP	12,000	11,000	10,000	10,000	9,100	11,000	1,100	8,500	2,300	6,400	NA
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	FP	8,500	610	640	690	180	84	39	86	31	120	
MW-3	1,600	FP	FP	FP	FP	3,200	1,500	1,100	270	70	220	120	170	45	FP	FP	2,600	2,600	2,900	6,000	NA	2,000	9,700	1,700	2,300	1,800	NA
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	2,600	2,900	6,000	NA	2,000	9,700	1,700	2,300	1,800	9,600	
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(0.5)	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-1	FP	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	FP	FP	FP	FP	15,000	12,000	16,000	16,000	11,000	15,000	830	11,000	1,900	7,800	NA
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	FP	13,000	6,000	5,300	3,800	1,500	1,100	85	540	330	340	
MW-3	4,600	FP	FP	FP	FP	2,900	4,200	2,300	550	140	480	170	270	30	FP	FP	6,900	3,200	5,000	11,000	NA	460	11,000	610	2,100	3,000	NA
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(0.5)	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	1,400	1,100	550	730	820	870	950	1,200
MW-1	FP	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	FP	FP	FP	FP	1,400	1,000	1,400	1,400	1,100	870	31	720	1,600	660	NA
MW-1A	3,000	FP	FP	FP	2,100	1,500	1,400	910	500	710	790	2,700	2,800	2,100	FP	FP	2,400	930	800	870	490	430	25	250	200	230	
MW-3	670	FP	FP	FP	FP	580	6,000	580	190	68	140	49	68	15	FP	FP	540	140	350	580	NA	890	ND(15)	88	150	NA	
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	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)	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-1	FP	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	FP	FP	FP	FP	100	7,200	8,500	12,000	6,300	5,800	3,000	6,700	2,300	4,100	NA
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	FP	16,000	5,900	5,900	5,200	3,700	3,800	360	2,300	1,800	1,300	
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	5,500	3,500	4,800	8,200	NA	6,400	5,000	2,300	1,600	2,700	NA
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)	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-1	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)	ND(25)	NA
MW-1A	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)	ND(25)	10
MW-3	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-4	NA	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-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
MW-6	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	ND(5)	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 SKP  
Approved [Signature]

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

	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>	5/18/2004	6/30/2004	9/23/2004	12/28/2004	
<b>TPHg (mg/L)</b>	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 <sup>4</sup>	NA <sup>4</sup>	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
<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	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 <sup>4</sup>	NA <sup>4</sup>	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
<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	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 <sup>4</sup>	NA <sup>4</sup>	2,800	1,900	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
<b>Ethylbenzene (µg/L)</b>	MW-1	620	730	530	730	540	640	570	660	560	630	740	870	620	660	680	1,200	1,000	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	1,000	16	1,400	55	300	7.2	22	*160	NA <sup>4</sup>	NA <sup>4</sup>	1,500	910	380	540	1,200	1,000
	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	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
<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	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 <sup>4</sup>	NA <sup>4</sup>	3,000	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
<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<250	ND<1200	ND<250	ND<50	ND<50	ND<25	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<7.5 <sup>1</sup>	ND<2.5 <sup>1</sup>	ND<12	ND<1.0	ND<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>	ND<50	ND<50	ND<120	
	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	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	500	360	320	320	260	180
	MW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<12	NR	NR	NR	NR	NR	NR	NR	NR
	MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	*220	NA <sup>4</sup>	NA <sup>4</sup>	610	410	290	610	670	290
	MW-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.5	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  
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)  
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 EDC Detected at same concentration as detection limit.

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

Checked SLP  
Approved BOV



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

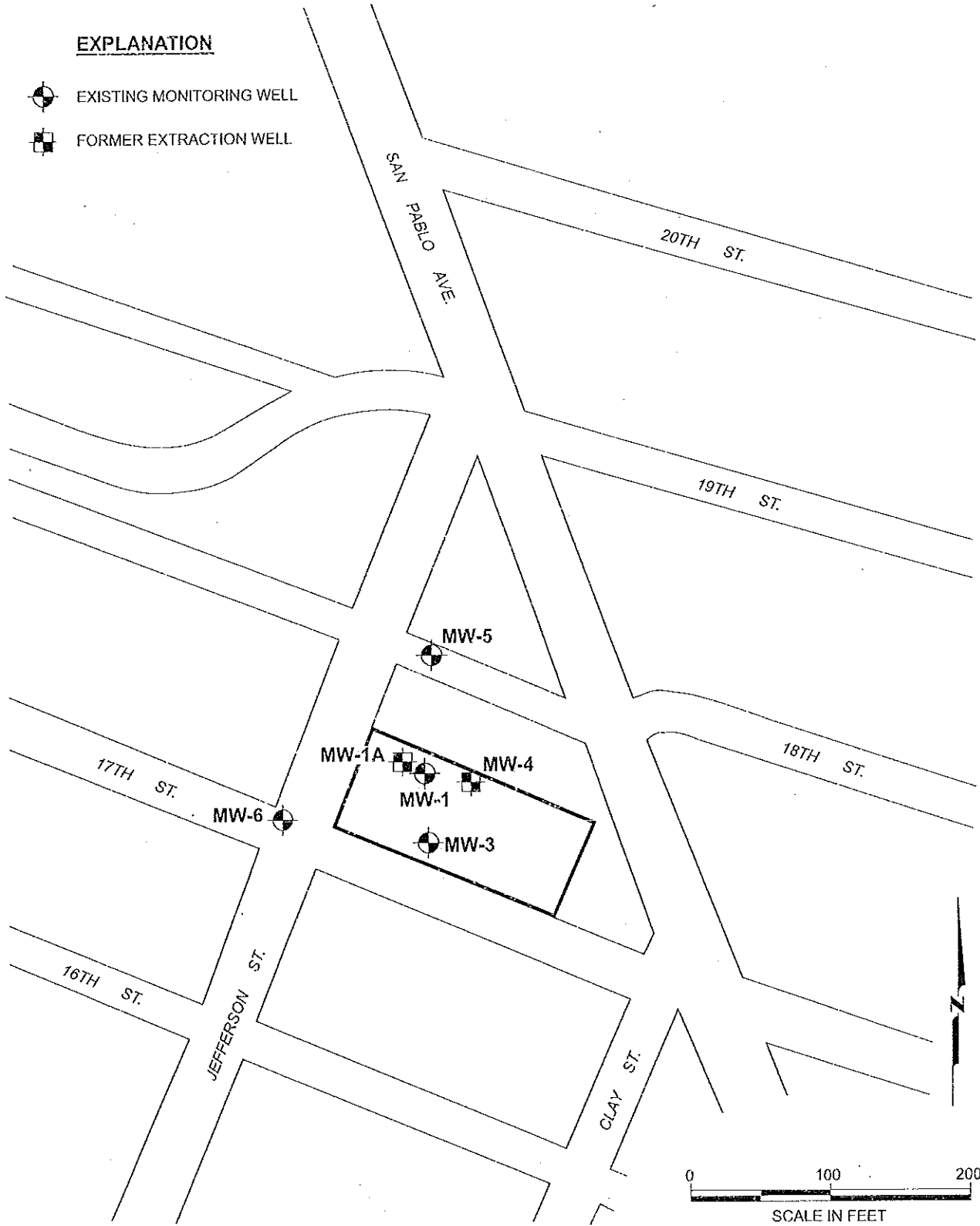
	3/16/2005	6/23/2005	9/9/2005	12/2/2005	3/24/2006	6/29/2006	9/13/2006
<b>TPHg (mg/L)</b>							
MW-1	21	30	7.1	19	29	23	20
MW-3	0.97	0.85	3.9	0.76	0.59	1.1	1.3
MW-5	37	27	46	21	ND<10	1.2	5.8
MW-6	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05
<b>Benzene (µg/L)</b>							
MW-1	4,100	5,400	840	3,600	6,200	4,800	4500
MW-3	1.4	56	470	14	83	130	260
MW-5	11,000	7,700	10,000	5900	2800	240	1600
MW-6	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	4,200	5,500	950	3,500	6,000	4,000	3900
MW-3	1.8	7.3	100	8	41	38	71
MW-5	3,800	1,700	2,700	1500	450	11	210
MW-6	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
<b>Ethylbenzene (µg/L)</b>							
MW-1	470	520	120	410	620	330	400
MW-3	0.66	ND<5	33	2.4	7.3	16	44
MW-5	1,100	680	1,100	600	190	13	180
MW-6	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	1,300	1,900	410	1,300	2,000	1,200	1400
MW-3	2.9	12	96	17	33	21	28
MW-5	2,400	1,300	2,100	1200	180	18	270
MW-6	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
<b>MTBE (µg/L)</b>							
MW-1	ND<50 <sup>1</sup>	ND<1,200	ND<120	ND<2.5	ND<500	ND<500	ND<250
MW-3	ND<2.5	ND<25	ND<62	ND<0.5	ND<12	ND<25	ND<25
MW-5	ND<120	ND<1,200	ND<1,200	ND<500	ND<500	ND<2.5	ND<120
MW-6	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	190	240	290	300	280	ND<0.50	260
MW-3	NR	NR	NR	NR	NR	NR	NR
MW-5	610	190	300	320	330	ND<0.50	55
MW-6	NR	NR	NR	NR	NR	NR	NR

**PLATES**



**EXPLANATION**

-  EXISTING MONITORING WELL
-  FORMER EXTRACTION WELL



Site Map  
 Third Quarter 2006  
 1700 Jefferson Street  
 BPS Reprographic Services Facility  
 Oakland, California

PLATE

**1**

DRAWN  
CN

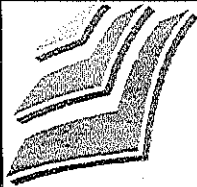
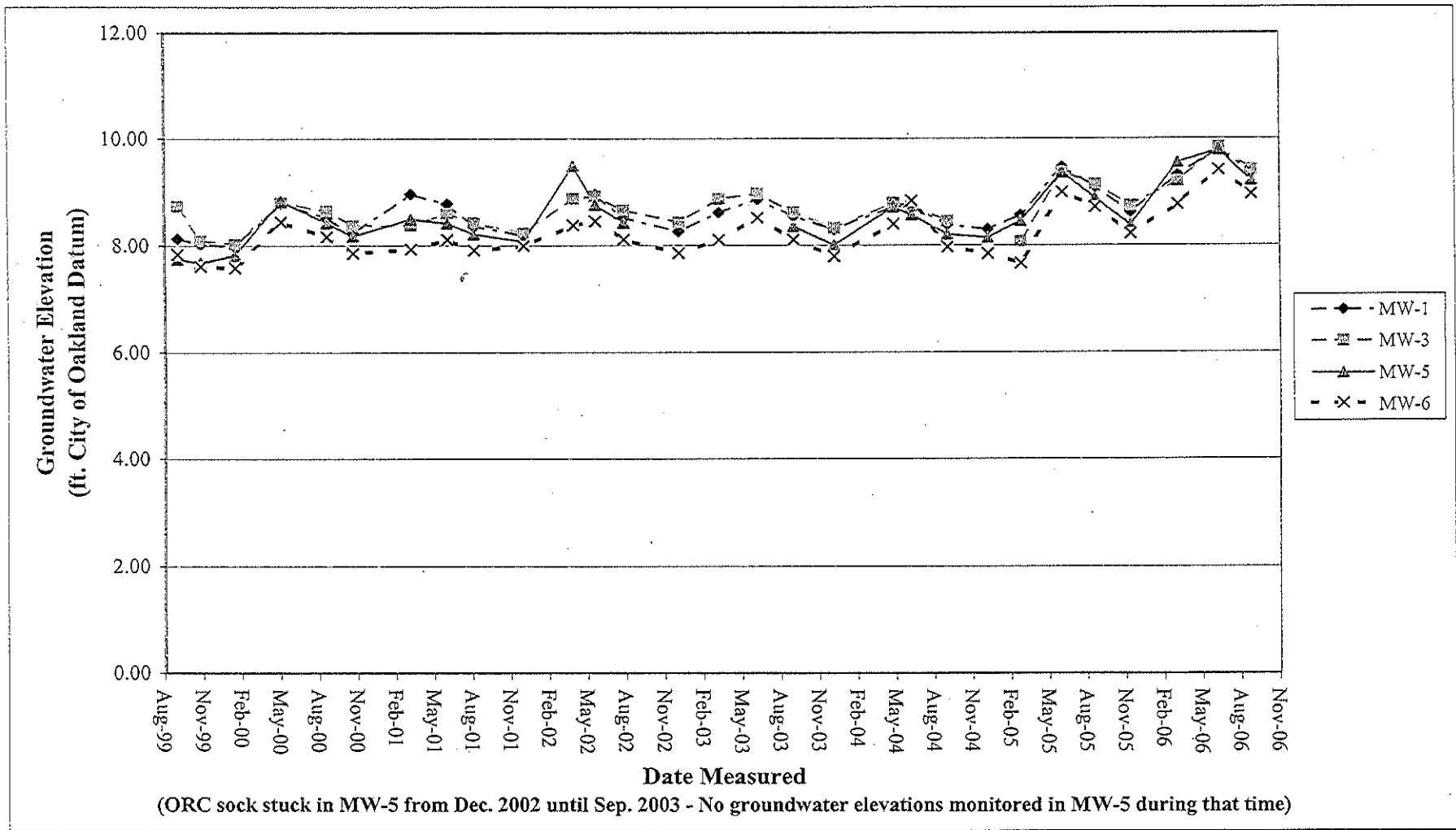
PROJECT NUMBER  
4097041918 01

CHECKED  
ASV

CHECKED DATE  
12/06

APPROVED  
SUP RAY

APPROVED DATE  
12/66



**MACTEC**

**Groundwater Elevation Data**  
 Third Quarter 2006  
 BPS Reprographic Services Facility  
 1700 Jefferson Street  
 Oakland, California

Plate

**2**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISION DATE
DSN	4097041918	<i>DSN SLP</i>	12/06	

**EXPLANATION**



EXISTING MONITORING WELL



FORMER EXTRACTION WELL

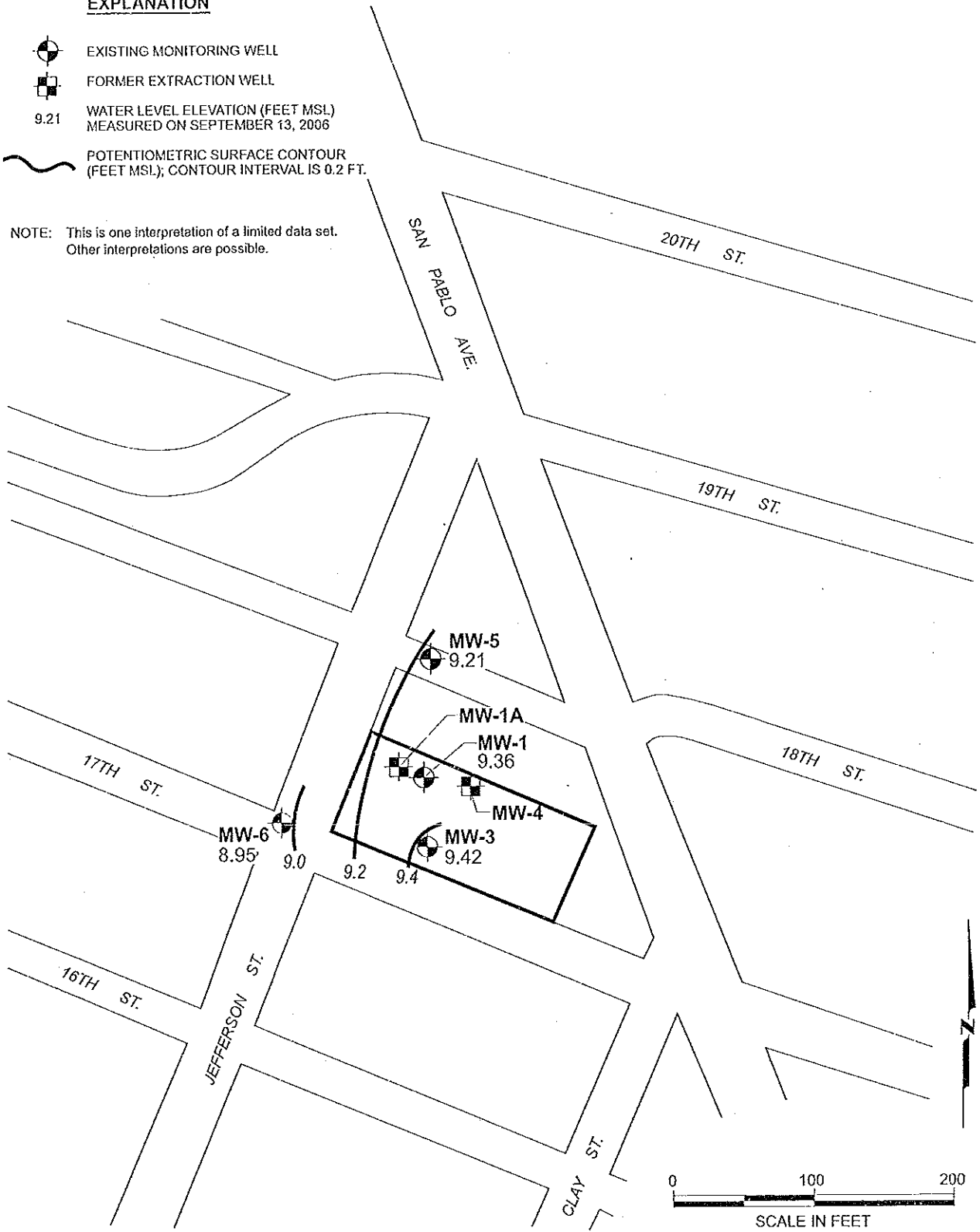
9.21

WATER LEVEL ELEVATION (FEET MSL)  
MEASURED ON SEPTEMBER 13, 2006



POTENTIOMETRIC SURFACE CONTOUR  
(FEET MSL); CONTOUR INTERVAL IS 0.2 FT.

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



Groundwater Contours  
Third Quarter 2006  
1700 Jefferson Street  
BPS Reprographic Services Facility  
Oakland, California

PLATE

**3**

DRAWN  
CN

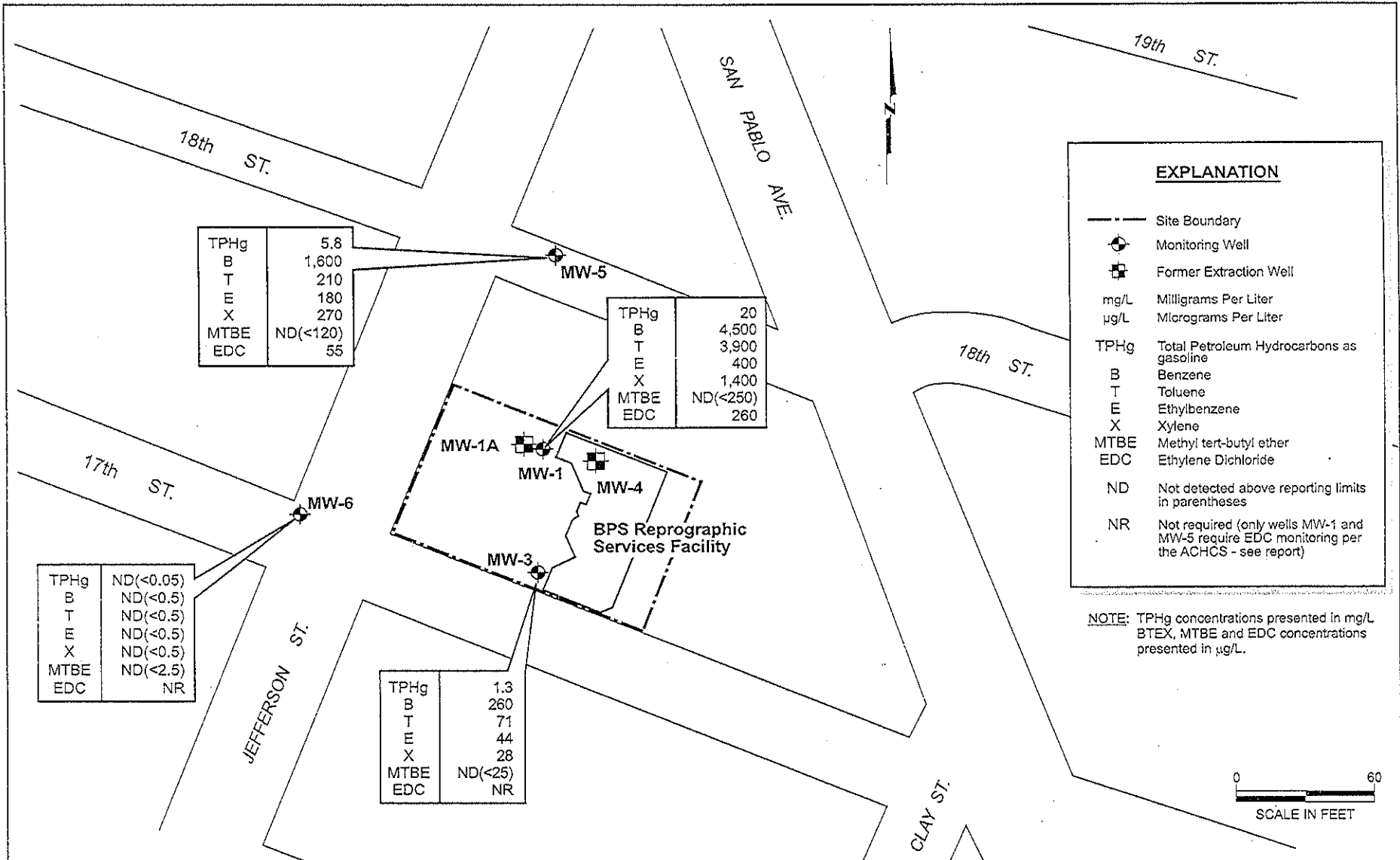
PROJECT NUMBER  
4097041918 01

CHECKED  
*BT*

CHECKED DATE  
12/06

APPROVED  
*SVP*

APPROVED DATE  
12/06



TPHg	5.8
B	1,600
T	210
E	180
X	270
MTBE	ND(<120)
EDC	55

TPHg	20
B	4,500
T	3,900
E	400
X	1,400
MTBE	ND(<250)
EDC	260

TPHg	ND(<0.05)
B	ND(<0.5)
T	ND(<0.5)
E	ND(<0.5)
X	ND(<0.5)
MTBE	ND(<2.5)
EDC	NR

TPHg	1.3
B	260
T	71
E	44
X	28
MTBE	ND(<25)
EDC	NR

**MACTEC**

TPHg, BTEX, MTBE and EDC Concentrations in Groundwater  
Third Quarter 2006  
1700 Jefferson Street  
BPS Reprographic Services Facility  
Oakland, California

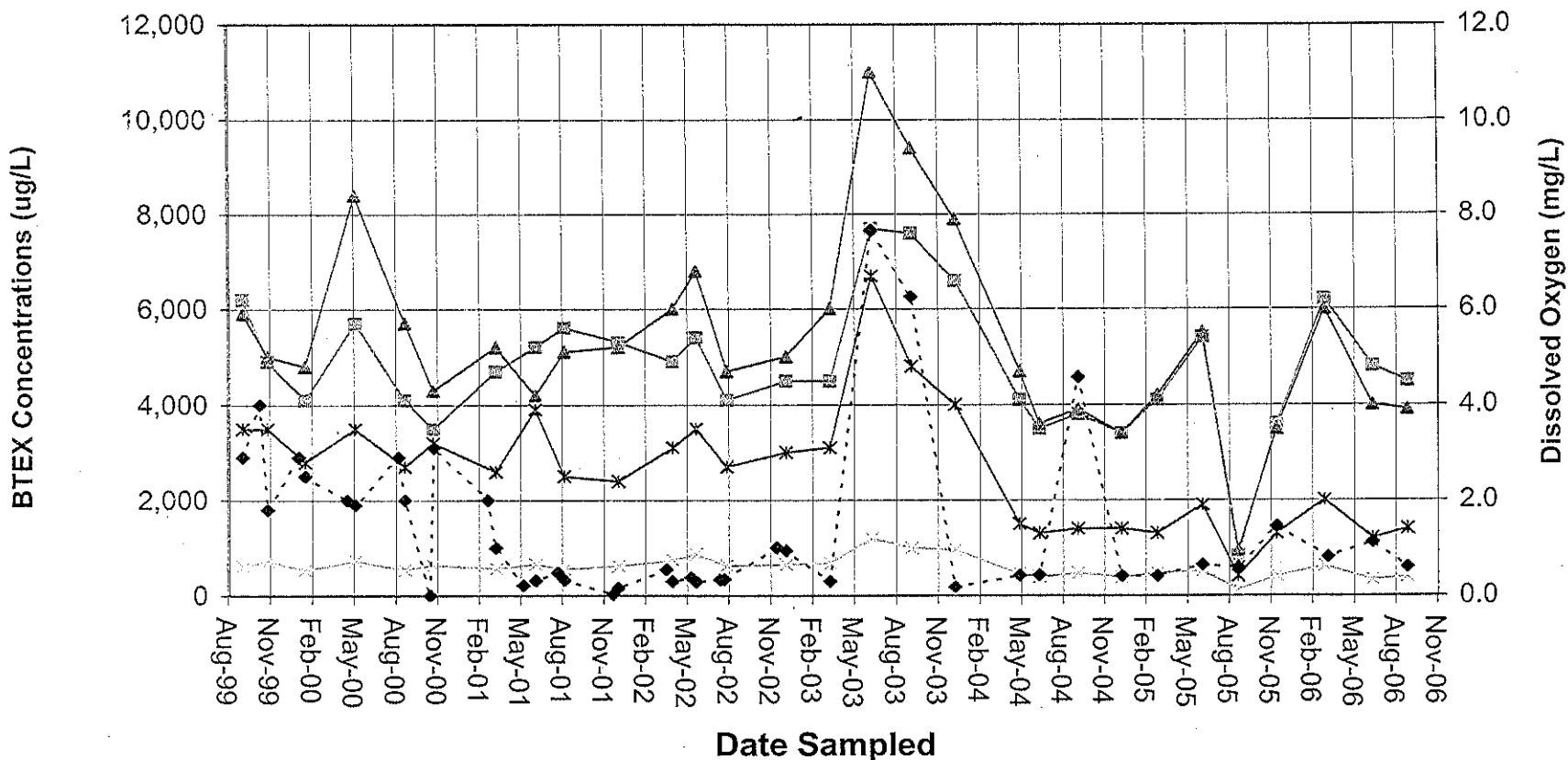
PLATE  
**4**

DRAWN CN JOB NUMBER 4097041918 01

CHECKED [Signature] CHECKED DATE 12/06

APPROVED [Signature] APPROVED DATE 12/16

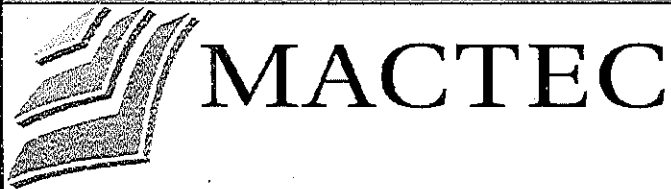
MW-1



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 pre-purge. ORC removed after Sept. 2002.)

—■— Benzene
—▲— Toluene
- - - × - - - Ethylbenzene
—\*— Xylenes
- - - ◆ - - - Dissolved Oxygen



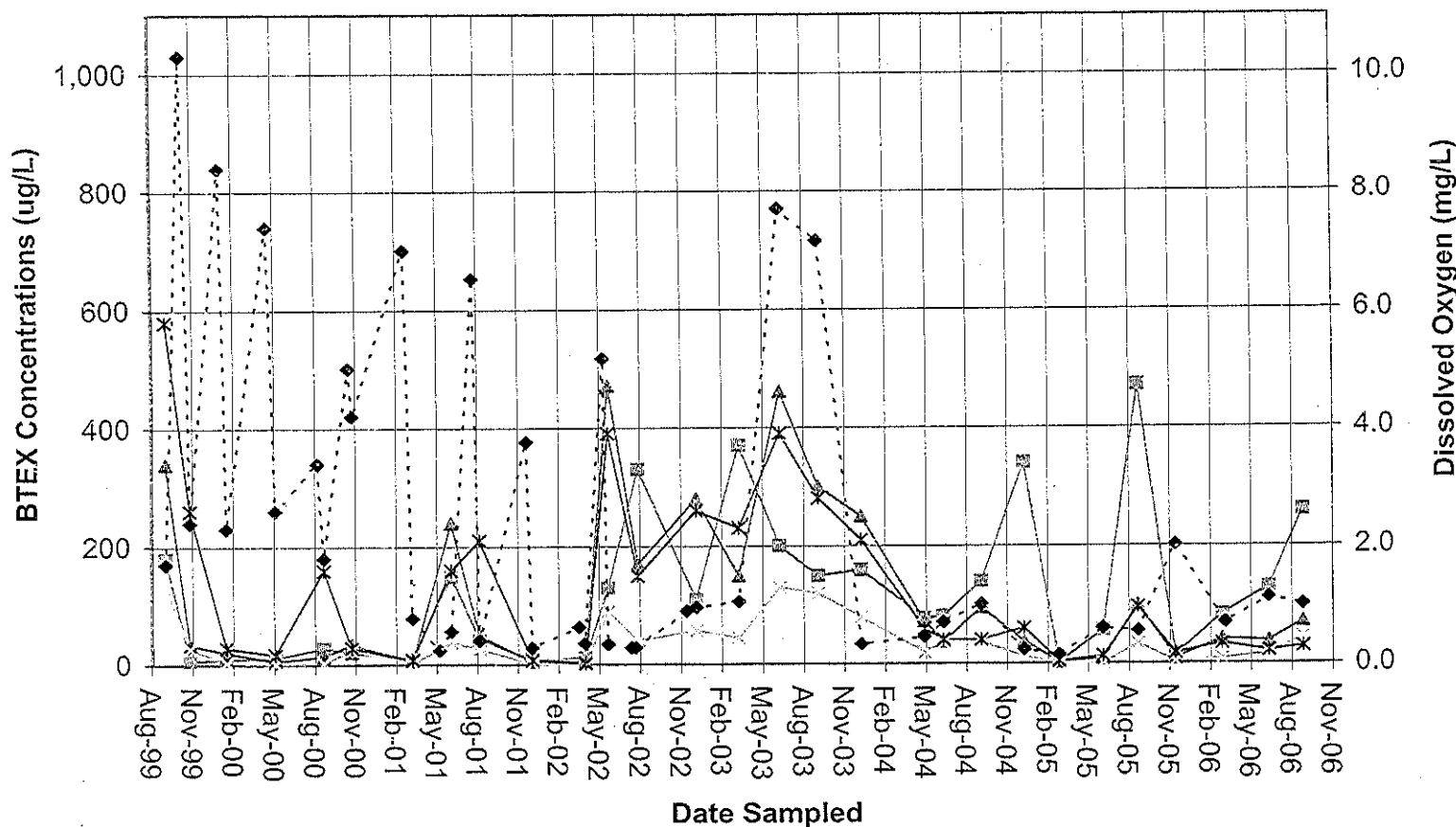
MW-1 BTEX and DO Results  
 Third Quarter 2006  
 BPS Reprographic Services Facility  
 1700 Jefferson Street  
 Oakland, California

Plate

**5a**

DRAWN DSN	JOB NUMBER 4097041918	APPROVED <i>BSV SCP</i>	DATE 12/06	REVISION DATE
--------------	--------------------------	----------------------------	---------------	---------------

MW-3



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

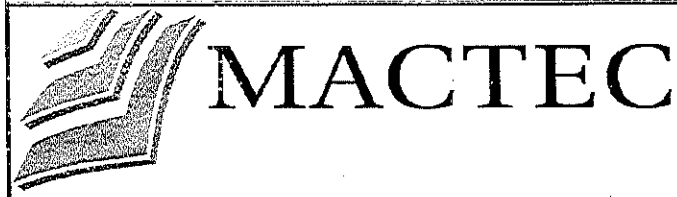
(Samples collected post purge between July 2003 and December 2003, all other samples collected pre-purge. ORC removed after Sept. 2002.)

Legend: Benzene (square), Toluene (triangle), Ethylbenzene (cross), Total Xylenes (asterisk), Dissolved Oxygen (diamond)

MW-3 BTEX and DO Results  
 Third Quarter 2006  
 BPS Reprographic Services Facility  
 1700 Jefferson Steet  
 Oakland, California

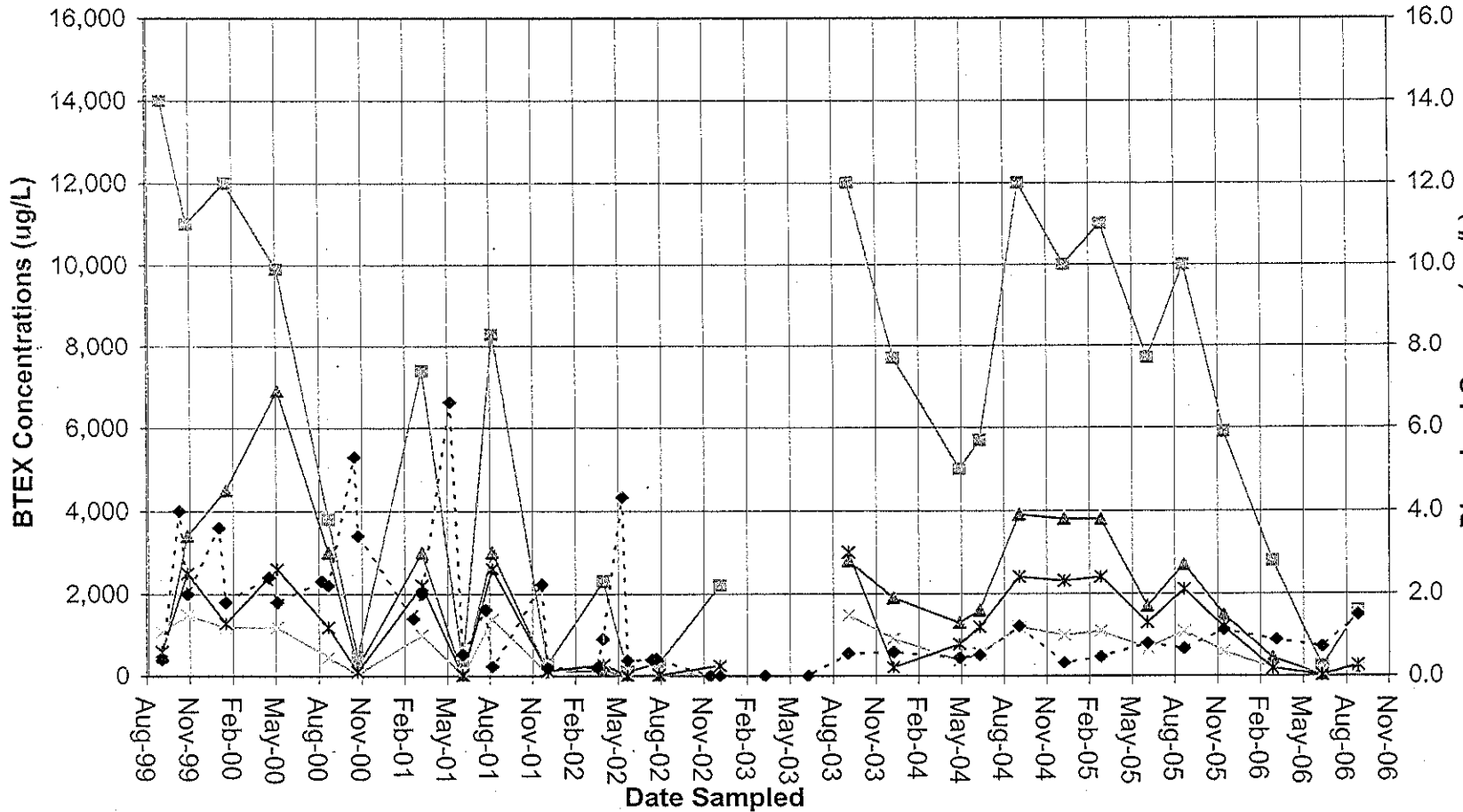
Plate

5b



DRAWN DSN	JOB NUMBER 4097041918	APPROVED <i>[Signature]</i>	DATE 12/06	REVISION DATE
--------------	--------------------------	--------------------------------	---------------	---------------

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.)

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

—■— Benzene      —▲— Toluene      —×— Ethylbenzene      —\*— Total Xylenes      - - ◆ - - Dissolved Oxygen



**MACTEC**

MW-5 BTEX and DO Results  
 Third Quarter 2006  
 BPS Reprographic Services Facility  
 1700 Jefferson Steet  
 Oakland, California

Plate

**5c**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISION DATE
DSN	4097041918	<i>Am SKP</i>	12/06	

**APPENDIX A**  
**LABORATORY REPORTS**



10 October, 2006

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

RE: BPS City Blue  
Work Order: MPI0490

Enclosed are the results of analyses for samples received by the laboratory on 09/15/06 10:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Lisa Race  
Senior Project Manager

CA ELAP Certificate # 1210

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

Project: BPS City Blue  
Project Number: 4097041918.01  
Project Manager: David Nanstad

MPI0490  
Reported:  
10/10/06 16:18

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
4097041918-4	MPI0490-01	Water	09/13/06 08:18	09/15/06 10:15
4097041918-2	MPI0490-02	Water	09/13/06 08:45	09/15/06 10:15
4097041918-1	MPI0490-03	Water	09/13/06 09:05	09/15/06 10:15
4097041918-3	MPI0490-04	Water	09/13/06 09:35	09/15/06 10:15
4097041918-5	MPI0490-05	Water	09/13/06 09:45	09/15/06 10:15

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

Project: BPS City Blue  
Project Number: 4097041918.01  
Project Manager: David Nanstad

MPI0490  
Reported:  
10/10/06 16:18

**Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>4097041918-4 (MPI0490-01) Water</b> Sampled: 09/13/06 08:18    Received: 09/15/06 10:15									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6126001	09/26/06	09/26/06	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 %		85-120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %		75-125	"	"	"	"	
<b>4097041918-2 (MPI0490-02) Water</b> Sampled: 09/13/06 08:45    Received: 09/15/06 10:15									
Gasoline Range Organics (C4-C12)	1300	500	ug/l	10	6126001	09/26/06	09/26/06	EPA 8015B/8021B	
Benzene	260	5.0	"	"	"	"	"	"	
Toluene	71	5.0	"	"	"	"	"	"	
Ethylbenzene	44	5.0	"	"	"	"	"	"	
Xylenes (total)	28	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	25	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		104 %		85-120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99 %		75-125	"	"	"	"	
<b>4097041918-1 (MPI0490-03) Water</b> Sampled: 09/13/06 09:05    Received: 09/15/06 10:15									
Gasoline Range Organics (C4-C12)	20000	5000	ug/l	100	6126001	09/26/06	09/26/06	EPA 8015B/8021B	
Benzene	4500	50	"	"	"	"	"	"	
Toluene	3900	50	"	"	"	"	"	"	
Ethylbenzene	400	50	"	"	"	"	"	"	
Xylenes (total)	1400	50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		106 %		85-120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99 %		75-125	"	"	"	"	

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

Project: BPS City Blue  
 Project Number: 4097041918.01  
 Project Manager: David Nanstad

MPI0490  
 Reported:  
 10/10/06 16:18

**Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
4097041918-3 (MPI0490-04) Water    Sampled: 09/13/06 09:35    Received: 09/15/06 10:15										
Gasoline Range Organics (C4-C12)	5800	2500		ug/l	50	6126001	09/26/06	09/26/06	EPA 8015B/8021B	
Benzene	1600	25	"	"	"	"	"	"	"	
Toluene	210	25	"	"	"	"	"	"	"	
Ethylbenzene	180	25	"	"	"	"	"	"	"	
Xylenes (total)	270	25	"	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	120	"	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		105 %		85-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98 %		75-125		"	"	"	"	

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

Project: BPS City Blue  
Project Number: 4097041918.01  
Project Manager: David Nanstad

MPI0490  
Reported:  
10/10/06 16:18

**Volatile Organic Compounds by EPA Method 8260B**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
4097041918-1 (MPI0490-03) Water Sampled: 09/13/06 09:05 Received: 09/15/06 10:15									
1,2-Dichloroethane	260	50	ug/l	100	6126014	09/26/06	09/27/06	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		118 %	60-145		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		79 %	60-120		"	"	"	"	
Surrogate: Dibromofluoromethane		112 %	75-130		"	"	"	"	
Surrogate: Toluene-d8		73 %	70-130		"	"	"	"	
4097041918-3 (MPI0490-04) Water Sampled: 09/13/06 09:35 Received: 09/15/06 10:15									
1,2-Dichloroethane	55	2.5	ug/l	5	6126014	09/26/06	09/27/06	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		136 %	60-145		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86 %	60-120		"	"	"	"	
Surrogate: Dibromofluoromethane		96 %	75-130		"	"	"	"	
Surrogate: Toluene-d8		92 %	70-130		"	"	"	"	

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

Project: BPS City Blue  
Project Number: 4097041918.01  
Project Manager: David Nanstad

MPI0490  
Reported:  
10/10/06 16:18

## Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

### Batch 6126001 - EPA 5030B [P/T] / EPA 8015B/8021B

Blank (6126001-BLK1)										
Prepared & Analyzed: 09/26/06										
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	86.9		"	80.0		109	85-120			
Surrogate: 4-Bromofluorobenzene	80.1		"	80.0		100	75-125			

Laboratory Control Sample (6126001-BS1)										
Prepared & Analyzed: 09/26/06										
Gasoline Range Organics (C4-C12)	208	50	ug/l	275		76	60-115			
Benzene	4.65	0.50	"	4.85		96	45-150			
Toluene	23.1	0.50	"	23.5		98	70-115			
Ethylbenzene	4.54	0.50	"	4.70		97	65-115			
Xylenes (total)	26.3	0.50	"	26.5		99	70-115			
Methyl tert-butyl ether	5.16	2.5	"	6.50		79	45-150			
Surrogate: a,a,a-Trifluorotoluene	85.3		"	80.0		107	85-120			
Surrogate: 4-Bromofluorobenzene	81.0		"	80.0		101	75-125			

Matrix Spike (6126001-MS1)										
Source: MPI0457-01										
Prepared & Analyzed: 09/26/06										
Gasoline Range Organics (C4-C12)	200	50	ug/l	275	ND	73	60-115			
Benzene	4.06	0.50	"	4.85	ND	84	45-150			
Toluene	19.6	0.50	"	23.5	ND	83	70-115			
Ethylbenzene	3.77	0.50	"	4.70	ND	80	65-115			
Xylenes (total)	21.8	0.50	"	26.5	ND	82	70-115			
Methyl tert-butyl ether	4.63	2.5	"	6.50	ND	71	45-150			
Surrogate: a,a,a-Trifluorotoluene	74.9		"	80.0		94	85-120			
Surrogate: 4-Bromofluorobenzene	80.9		"	80.0		101	75-125			

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

Project: BPS City Blue  
 Project Number: 4097041918.01  
 Project Manager: David Nanstad

MPI0490  
 Reported:  
 10/10/06 16:18

**Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 6I26001 - EPA 5030B [P/T] / EPA 8015B/8021B**

Matrix Spike Dup (6I26001-MSD1)	Source: MPI0457-01			Prepared & Analyzed: 09/26/06						
Gasoline Range Organics (C4-C12)	187	50	ug/l	275	ND	68	60-115	7	20	
Benzene	3.92	0.50	"	4.85	ND	81	45-150	4	25	
Toluene	18.9	0.50	"	23.5	ND	80	70-115	4	20	
Ethylbenzene	3.62	0.50	"	4.70	ND	77	65-115	4	25	
Xylenes (total)	20.9	0.50	"	26.5	ND	79	70-115	4	25	
Methyl tert-butyl ether	4.58	2.5	"	6.50	ND	70	45-150	1	30	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	78.0		"	80.0		98	85-120			
Surrogate: 4-Bromofluorobenzene	80.8		"	80.0		101	75-125			

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

Project: BPS City Blue  
Project Number: 4097041918.01  
Project Manager: David Nanstad

MPI0490  
Reported:  
10/10/06 16:18

## Volatile Organic Compounds by EPA Method 8260B - Quality Control TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6I26014 - EPA 5030B P/T / EPA 8260B</b>										
<b>Blank (6I26014-BLK1)</b>										
Prepared & Analyzed: 09/26/06										
1,2-Dichloroethane	ND	0.50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.79		"	2.50		112	60-145			
Surrogate: 4-Bromofluorobenzene	1.81		"	2.50		72	60-120			
Surrogate: Dibromofluoromethane	2.81		"	2.50		112	75-130			
Surrogate: Toluene-d8	1.99		"	2.50		80	70-130			
<b>Laboratory Control Sample (6I26014-BS1)</b>										
Prepared & Analyzed: 09/26/06										
1,2-Dichloroethane	10.0	0.50	ug/l	10.0		100	75-125			
Surrogate: 1,2-Dichloroethane-d4	2.45		"	2.50		98	60-145			
Surrogate: 4-Bromofluorobenzene	2.42		"	2.50		97	60-120			
Surrogate: Dibromofluoromethane	2.49		"	2.50		100	75-130			
Surrogate: Toluene-d8	2.53		"	2.50		101	70-130			
<b>Matrix Spike (6I26014-MS1)</b>										
Source: MPI0478-01										
Prepared & Analyzed: 09/26/06										
1,2-Dichloroethane	49.8	2.5	ug/l	50.0	ND	100	75-125			
Surrogate: 1,2-Dichloroethane-d4	2.49		"	2.50		100	60-145			
Surrogate: 4-Bromofluorobenzene	2.34		"	2.50		94	60-120			
Surrogate: Dibromofluoromethane	2.46		"	2.50		98	75-130			
Surrogate: Toluene-d8	2.58		"	2.50		103	70-130			
<b>Matrix Spike Dup (6I26014-MSD1)</b>										
Source: MPI0478-01										
Prepared & Analyzed: 09/26/06										
1,2-Dichloroethane	48.3	2.5	ug/l	50.0	ND	97	75-125	3	10	
Surrogate: 1,2-Dichloroethane-d4	2.43		"	2.50		97	60-145			
Surrogate: 4-Bromofluorobenzene	2.42		"	2.50		97	60-120			
Surrogate: Dibromofluoromethane	2.49		"	2.50		100	75-130			
Surrogate: Toluene-d8	2.54		"	2.50		102	70-130			



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

Project: BPS City Blue  
Project Number: 4097041918.01  
Project Manager: David Nanstad

MPI0490  
Reported:  
10/10/06 16:18

**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



5341 Old Redwood Highway  
Suite 300  
Petaluma, CA 94954  
(707) 793-3800

CHAIN OF CUSTODY, SRM

Seq. No.: No 2078

Samplers: C. Simpson

Lab: Saguoa Analytical

Job Number: 4097041918.01

Name/Location: BPS Oakland, Ca

Project Manager: D. Nanstad Recorder: CWJ  
(Signature Required)

MPI 0490

Water Soil Air	MATRIX	# CONTAINERS & PRESERV.				SAMPLE NUMBER		DATE			
		Unpres.	H2SO4	HNO3	HCL						
		YR	SEQ	YR	MO	DAY	TIME				
X					3	4097041918-4	06	09	13	08	18
X					3	4097041918-2	06	09	13	08	45
X					6	4097041918-1	06	09	13	09	05
X					6	4097041918-3	06	09	13	09	35
X					3	4097041918-5	06	09	13	09	45

STATION DESCRIPTION	
	DEPTH
01	
02	
03	
04	
05	

ANALYSIS REQUESTED	
XX	
XX	
XXX	
XXX	
XX	

*Handwritten notes:* BOK T.P.H.G., 8020 KTEX/MPI, E-Hylene, Disalynce, CWJ 9/13/06

ADDITIONAL INFORMATION		
SAMPLE NUMBER		TURNAROUND TIME/REMARKS
YR	SEQ	
		Detection of MTBE are to be confirmed by EPA 8260
		Standard TAT
	97041918-5	Hold Sample
		APO # 62177
		Please include APO on Invoices

CHAIN OF CUSTODY RECORD			
<u>CWJ</u>	<u>Chad Simpson</u>	<u>Macler</u>	<u>9/14/06/6800</u>
Relinquished By (Signature)	(Print Name)	(Company)	Date/Time
<u>JWJ</u>	<u>JULIE NG (MH)</u>		<u>9.15.06 1015</u>
Received By (Signature)	(Print Name)	(Company)	Date/Time
Relinquished By (Signature)	(Print Name)	(Company)	Date/Time
Received By (Signature)	(Print Name)	(Company)	Date/Time
Relinquished By (Signature)	(Print Name)	(Company)	Date/Time
Received By (Signature)	(Print Name)	(Company)	Date/Time
Method of Shipment:			

## TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: VAOTEC  
 REC. BY (PRINT) JULIE NG.  
 WORKORDER: MPL 0490

DATE REC'D AT LAB: 9.15.06  
 TIME REC'D AT LAB: 1015  
 DATE LOGGED IN: 9/16/06

For Regulatory Purposes?  
 DRINKING WATER YES  NO   
 WASTE WATER YES / NO

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present / Absent Intact / Broken*								
2. Chain-of-Custody	Present / Absent*								
3. Traffic Reports or Packing List:	Present / Absent								
4. Airbill:	Airbill / Sticker Present / Absent								
5. Airbill #:	See attached								* Trip blank 4097041918-5 : 3 VOA
6. Sample Labels:	Present / Absent								
7. Sample IDs:	Listed / Not Listed on Chain-of-Custody								
8. Sample Condition:	Intact / Broken* / Leaking*								
9. Does information on chain-of-custody, traffic reports and sample labels agree?	Yes / No*								
10. Sample received within hold time?	Yes / No*								
11. Adequate sample volume received?	Yes / No*								
12. Proper preservatives used?	Yes / No*								
13. Trip Blank / Temp Blank Received? (circle which, if yes)	Yes / No*								
14. Read Temp: <u>4.8°C</u> Corrected Temp: <u>↓</u> Is corrected temp 4 +/- 2°C? <input checked="" type="checkbox"/> Yes / No**									

JULIE NG. 9/15/06  
SEE COC.

(Acceptance range for samples requiring thermal pres.)  
 \*\*Exception (if any): METALS / DEF ON ICE or Problem COC

**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	Sample ID
MW-1	409704191-1
MW-3	409704191-2
MW-5	409704191-3
MW-6	409704191-4



Report was  
 received w/  
 this scan  
error

**WATER SAMPLING**

Well ID: **MW-6**  
 Date: **9/13/2006**  
 Initials: *CS*

Sampled By: \_\_\_\_\_

PURGE METHOD  
 Bailer - Type:  
 Submersible - Type:  
 Other - Type: **Micro Purge**

PUMP INTAKE SETTING  
 Near Bottom  
 Other  
 Middle of screen  
 Near Top

PURGE RATE  
 GPM: \_\_\_\_\_  
 GPM: \_\_\_\_\_

PURGE TIME  
 Purge Start: **0756**  
 Purge Stop: **0800**  
 Elapsed: **10 min**

PURGE VOLUME  
 Volume: **1.4** gallons  
 D.O. **107** Redox **36**

Observations During Purging (Well Condition, Color, Odor):  
**9201°C**

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

Turbidity (NTU)
21.8

WELL SAMPLING		Sample Time: <b>0818</b>	Comments
Volume/Cont.	Analysis Requested	Preservatives	Lab
3 VOA's	T.P.H gas (8015 Modified) BTEX (8020) MTBE (8020)	HCL	Sequoia

QUALITY CONTROL SAMPLES	
Type	Sample No.
Blank Samples	

Other Samples	
Type	Sample No.

Duplicate Samples	
No.	Dupl. Sample No.

# MACTEC

Job Name: BPS  
Job Number: 4097041918.01  
Recorded By: [Signature]  
(Signature)

Well Number: MW-6  
Well Type:  Monitor  Extraction  Other  
 PVC  St. Steel  Other  
Date: 9/13/2006  
Sampled By: CS  
(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): 22.31  
No. of Well Volumes to be purged: 3

No Construction logs

#### PURGE VOLUME CALCULATION

$$\frac{\pi}{4} \times (2)^2 \times 3 \times 0.0408 = \text{gals}$$

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

#### PURGE METHOD

Bailor - Type: \_\_\_\_\_  
 Submersible - Type: \_\_\_\_\_  
 Other - Type: Micro Purge

#### 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. <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	Turbidity (NTU)
Initial	<u>8.34</u>	<u>656</u>	<u>20.3</u>	<u>21.8</u>
Meter S/N				

**PURGE TIME**    **PURGE RATE**  
Purge Start: 0750    GPM: N/A  
Purge Stop: 0800    GPM: \_\_\_\_\_  
Elapsed: 10 min  
**PURGE VOLUME**  
Volume: 1 Lt.    gallons  
D.O. 1.07    Redox 36  
Observations During Purging (Well Condition, Color, Odor):  
20.1 °C  
Discharge Water Disposal:  Sanitary Sewer  
 Storm Sewer     Other 55 Gal. drum on site

### WELL SAMPLING

Bailor - Type: peri pump    Sample Time: 0818

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
<u>4097041918-4</u>	<u>3 VOA's</u>	<u>T.P.H gas (8015 Modified)</u> <u>BTEX (8020)</u> <u>MTBE (8020)</u>	<u>HCL</u>	<u>Sequoia</u>	

### QUALITY CONTROL SAMPLES

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





GROUNDWATER SAMPLING FORM

Job Name: BPS
Job Number: 4097041918.01
Recorded By: [Signature]

Well Number: MW-1
Well Type: [X] Monitor [ ] Extraction [ ] Other
[ ] PVC [ ] St. Steel [ ] Other
Date: 9/13/2006
Sampled By: [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): 23.0
No. of Well Volumes to be purged: 3

Screen Interval = 22-32 ft.

PURGE VOLUME CALCULATION

TD (feet) x WL (Feet) x D (inches) # V x 0.0408 = Calculated Purge Volume gals

PURGE METHOD

[ ] Bailer - Type:
[ ] Submersible - Type:
[X] Other - Type: Micro Purge

PUMP INTAKE SETTING

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

Field Parameter Measurement

Table with columns: Minutes, pH, Conductivity (µS), Temp. (°C/°F), Turbidity (NTU). Initial values: pH 6.90, Conductivity 1088, Temp 19.2, Turbidity 16.9.

PURGE TIME PURGE RATE

Purge Start: 0853 GPM: N/A
Purge Stop: 0902 GPM:
Elapsed: 10

PURGE VOLUME

Volume: 147 gallons
D.O. 6.1 Redox -270
Observations During Purging (Well Condition, Color, Odor):

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

WELL SAMPLING

[ ] Bailer - Type: per pump Sample Time: 0905

Table with columns: Sample No., Volume/Cont., Analysis Requested, Preservatives, Lab, Comments. Sample No. 4097041918-1, 6 VOA's, T.P.H gas (8015 Modified), BTEX (8020), MTBE (8020), Ethylene Dichloride.

QUALITY CONTROL SAMPLES

Table for Duplicate Samples with columns: Original Sample No., Dupl. Sample No.

Table for Blank Samples with columns: Type, Sample No.

Table for Other Samples with columns: Type, Sample No.



Job Name: BPS  
 Job Number: 4097041918.01  
 Recorded By: *CS* (Signature)

Well Number: MW-3  
 Well Type:  Monitor  Extraction  Other  
 PVC  St. Steel  Other  
 Date: 9/13/2006  
 Sampled By: *CS* (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): 22.35  
 No. of Well Volumes to be purged: 3  
 Screen Interval = 22-32 ft.

**PURGE METHOD**

Bailer - Type: \_\_\_\_\_  
 Submersible - Type: \_\_\_\_\_  
 Other - Type: Micro Purge

**PUMP INTAKE SETTING**

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

**PURGE VOLUME CALCULATION**

( )  $\times$  2  $\times$  3  $\times$  0.0408 = \_\_\_\_\_ gals  
TD (feet) WL (feet) D (inches) # V Calculated Purge Volume

**Field Parameter Measurement**

Minutes	pH	Conductivity (µS)	<input checked="" type="checkbox"/> °C	Turbidity (NTU)
			Temp. <input type="checkbox"/> °F	
Initial	<u>7.41</u>	<u>591</u>	<u>19.2</u>	<u>18.0</u>

Meter S/N: \_\_\_\_\_

**PURGE TIME** and **PURGE RATE**

Purge Start: 0820 GPM: 1.5  
 Purge Stop: 0830 GPM: \_\_\_\_\_  
 Elapsed: 10

**PURGE VOLUME**

Volume: 167 gallons  
 D.O. 9.00 Redox -257  
 Observations During Purging (Well Condition, Color, Odor):  
Strong color  
 Discharge Water Disposal:  Sanitary Sewer  
 Storm Sewer  Other 55 Gal. drum on site

**WELL SAMPLING**

Bailer - Type: peri-pump Sample Time: 0845

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
<u>4097041918-2</u>	<u>3 VOA's</u>	<u>T.P.H gas (8015 Modified)</u> <u>BTEX (8020)</u> <u>MTBE (8020)</u>	<u>HCL</u>	<u>Sequoia</u>	

**QUALITY CONTROL SAMPLES**

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

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	9/11/06	0850	23.00	23.00	Y	N	OK	Y	4"	
MW-3	9/13/06	0815	22.35	22.35	Y	N	OK	Y	4"	
MW-5	9/13/06	0915	21.35	21.35	Y	N	OK	Y	2"	
MW-6	9/13/06	0737	22.31	22.31	N	N	OK	Y	2"	
MW-1A	9/12/06	0852	21.45	21.45	Y	N	OK	Y	4"	
MW-4										unable to locate

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

pH: YSI 63 SN 00M086  
" " "

Temperature: " "

Specific Conductance: " "

Dissolved Oxygen: YSI 55 SN 01D0873AD

Turbidity: 2100P Turbidimeter SN 911000263

Redox Orion Research model SA230 equipo 4A

Sounder unit # 01 M200 BAYA 02

Project: BPS Job No.: 4097041918.01  
 Subject: FIELD INVESTIGATION DAILY REPORT Date: 9/13/06  
 Equipment Rental: N/A Company: Mactee To: D. Nonstad  
 Equipment Hours: \_\_\_\_\_ F.E. Time from: \_\_\_\_\_ to: \_\_\_\_\_ By: C. Simpson

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

0600 Depart Suisun City, Ca toward Oakland, Ca  
 0730 Arrive Oakland City Blue/BPS  
 0715 Calibrate meters.  
 PH/Temp/Conductance YSI 63 SN 00M086  
 4.0 / 7.0 pH standards = 3.99 and 7.01  
 DO meter YSI 55 SN 01D0873AD to 0' elevation  
 Turbidity 2100P SN 911000263  
 0-10 = 5.2      10-100 = 51.6      100-1,000 = 549

0737 well observation at mw-6  
 0750 Start Purge w/ peri. pump for 1 Lt.  
 0800 End Purge Sampled well Sample # 4097041918-4 @mw-6  
 0815 well observation at mw-3  
 0820 Start Purge w/ peri. pump for 1 Lt.  
 0830 End Purge Sampled well Sample # 4097041918-2 @mw-3  
 0850 well observation at mw-1  
 0852 well observation at mw-1A  
 0853 Start Purge w/ peri. pump for 1 Lt.  
 0902 End Purge Sampled well Sample # 4097041918-1 @mw-1  
 0915 well observation at mw-5  
 0920 Start Purge w/ peri. pump. Battery Dead and did not work w/ car battery. Used Disposable Bailer to purge and pull sample  
 0930 End Bailing and sampled well Sample # 4097041918-3 @mw-5  
 0945 Trip Blantu  
 1030 Departed BPS to package samples.

Attachments:

Initial