MACTEC

July 6, 2004

Project 4097041918 Task 01

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

First Quarter Groundwater Remediation and Monitoring Report
January through May, 2004
BPS Reprographic Services Facility
1700 Jefferson Street
Oakland, California

Dear Mr. Christoff:

MACTEC Engineering and Consulting, Inc., presents this quarterly status letter-report on the groundwater monitoring and remedial activities at the BPS Reprographic Services (BPS) facility located at 1700 Jefferson Street in Oakland, California (Plate 1). This letter-report covers the period from January through May 31, 2004, and was prepared to satisfy the quarterly groundwater monitoring requirements of the Alameda County Department of Health Care Services (ACHCS). The data presented in this letter-report represents the First Quarter 2004 monitoring point despite the actual monitoring not having occurred until May 18, 2004.

BACKGROUND

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

In November 1987, monitoring well MW-2 was abandoned to facilitate the construction of the present BPS facility and, in January 1988, two additional wells, MW-1A and MW-4, were installed as

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groundwater extraction wells. MACTEC also installed one offsite monitoring well, MW-5, in August 1988 and a second offsite well, MW-6, in April 1996. The monitoring well locations are shown on Plate 1.

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

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

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

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

During the Fourth Quarter 2002 groundwater monitoring event MACTEC removed the ORC™ socks from the treatment wells per a request from the ACHCS in a September 27, 2002 letter to BPS. The

ACHCS suggested that contaminant concentrations may not be accurate due to the presence of the ORC™ socks and requested the socks be removed and DO allowed to return to back ground levels. Additionally, the ACHCS suggested in the same letter that the ORC™ socks appear to be ineffective as contaminant concentrations continue to be high in MW-1 and MW-5.

During the Fourth Quarter 2002 groundwater monitoring event MACTEC monitored groundwater monitoring MW-1, MW-3, MW-5 and MW-6 for tert Amyl Methyl Ether, Ethyl tert Butyl Ether, Diisopropyl Ether, tert Butly Alcholol, Ethylene Dibromide, and Ethlene Dichloride (EDC) per a request from the ACHCS in the September 27, 2002 letter to BPS. Analytical results indicated none of these analytes were detected in any wells except EDC in MW-1 and MW-5. EDC is monitored in MW-1 and MW-5 quarterly now as required by the ACHCS.

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

FIRST QUARTER 2004 GROUNDWATER SAMPLING AND ANALYSIS

On May 18, 2004, MACTEC conducted the quarterly groundwater monitoring of MW-1, MW-3, MW-5 and MW-6 (Plate 1) using the non-purge sampling method as described in the Enhanced Insitu-Bioremediation and Groundwater Monitoring Procedures letter dated August 17, 1999. The non-purge sampling method was re-evaluated as requested by the ACHCS in a letter dated September 27, 2003. After review of the evaluation data and analysis presented in the Second Quarter 2003 Groundwater Monitoring Report, the ACHCS approved non-purge sampling for use at the site in a letter dated February 13, 2004.

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

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

- Total petroleum hydrocarbons as gasoline (TPHg) in accordance with EPA Method 8015 modified.

- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) in accordance with EPA Method 8020.
- Methyl tertiary butyl ether (MTBE) in accordance with EPA Method 8020 with confirmation of detections by EPA Method 8260.
- Ethylene Dichloride (EDC) by EPA Method 8260.

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

DISCUSSION

Groundwater Monitoring Data
As shown in Table 2 and on Plate 5, the groundwater surface elevation decreased an average of 0.50 feet across the site as compared to last quarter's measurements. Using the groundwater elevations from MW-1, MW-3, MW-5 and MW-6 as measured on May 18, 2004, groundwater contours were created and are shown on Plate 2. Based on the groundwater elevations, the groundwater gradient is approximately 0.006 ft/ft. The direction of flow appears to be in a Westerly direction.

Table 3 displays a summary of historical groundwater sample results through September 29, 1999, when the typical purge and sample protocol was terminated. Plate 3 presents the sample results from this quarter's sampling event. Table 4 and Plate 4 display historical groundwater sample results since instituting *in situ* bioremediation using ORC™ socks and a non-purge sampling protocol. Sample results from July, September and December 2003 were collected post purge per ACHCS instructions. Sample results from May 18, 2004 were collected using the non-purge method previously used prior to July 2003. As of December 2002 *in situ* bioremediation using ORC™ socks was suspended per ACHCS instructions.

As shown on Plate 4 and Table 4, concentrations of TPH-g, BTEX and MTBE remained within the range of historical values (including historical concentrations monitored prior to September 1999) for all the wells sampled. TPH-g and BTEX concentrations in MW-5 are within the historical range but appear to have rebounded to values typically seen before and just after initiating *in situ* remediation using ORC™ in September 1999. However, TPH-g and BTEX concentrations in MW-5 are the lowest measured in this well since First Quarter 2003. TPH-g and BTEX concentrations in MW-1 have decreased since last quarter to the lowest concentrations measured since the First Quarter 2003. TPH-g and BTEX

concentrations in MW-3 have decreased since last quarter to the lowest concentrations measured since the First Quarter 2002. The reductions in TPH-g and BTEX concentrations in MW-1, MW-3 and MW-5 appear to be associated with the seasonally high groundwater elevations monitored this event. TPH-g and BTEX concentrations in MW-6 remained undetected.

TPH-g ranged from non-detectable with a detection limit of 0.05 mg/l (MW-6) to 23 mg/l (MW-1). Benzene ranged from non-detectable with a detection limit of 0.5 ug/l (MW-6) to 5,000 ug/l (MW-5). Toluene ranged from non-detectable with a detection limit of 0.05 ug/l (MW-6) to 4,700 ug/l (MW-1). Ethylbenzene ranged from non-detectable with a detection limit of 0.5 ug/l (MW-6) to 450 ug/l (MW-1). Total Xylenes ranged from non-detectable with a detection limit of 0.5 ug/l (MW-6) to 1,500 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 50 ug/L (MW-1 and MW-5).

Analytical results for TAME, TBA, DIPE, EDB, ETBE and EDC are displayed on Table 5. As described in the ACHCS September 27, 2002 letter to BPS these analyses were performed per ACHCS request during the Fourth Quarter 2002 monitoring event. None of these analytes were detected in any of the groundwater samples collected from MW-1, MW-3, MW-5 and MW-6 except for EDC. EDC was detected in the samples collected from MW-1 at a concentration of 370 ug/L and MW-5 at a concentration of 220 ug/L. Per ACHCS direction, if any of these analytes were not detected during the Fourth Quarter 2002 monitoring event then the analyte does not need subsequent monitoring. Analysis for EDC was performed in groundwater samples from MW-1 and MW-5 during the First Quarter 2004 event. EDC was detected in the sample from MW-1 at a concentration of 320 ug/L. EDC was detected in the sample from MW-5 at a concentration of 290 ug/L.

As described above, the ORC™ socks were removed from all treatment wells during the Fourth Quarter 2002 monitoring event per ACHCS request (except MW-5, ORC™ socks removed from this well September 17, 2003). The ORC™ socks were removed to allow the DO concentrations in each well to return to background levels. Prior to sampling during the First Quarter 2004 event, DO was monitored in each well. The DO concentrations ranged from 0.42 in MW-1 to 0.45 in MW-6. The DO concentrations appear to have returned to background levels. DO will continue to be monitored in these wells.

RECOMMENDATIONS

MACTEC recommends continued quarterly groundwater monitoring to re-evaluate the use of ORC™ at the site.

MACTEC recommends that Blue Print Services send a copy of this report to the following address:

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

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

If you have any questions, please contact the undersigned at (415) 278-2118.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.

David S. Nanstad
Project Engineer

Henry Lin
Principal Engineer

California Civil Engineer
CE 24488
Expire 12/31/2005

DSN SFOmains/Cityblue/3q03

4 copies submitted

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

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

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

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	2.90	1.70	0.40	1.80
11/5/1999	4.00	10.30	4.00	2.80
11/22/1999	1.80	2.40	2.00	3.20
1/28/2000	2.90	8.40	3.60	2.20
2/11/2000	2.50	2.30	1.80	3.50
5/12/2000	2.00	7.40	2.40	1.70
5/30/2000	1.90	2.60	1.80	3.20
9/1/2000	2.90	3.40	2.30	2.70
9/15/2000	2.00	1.80	2.20	3.80
11/9/2000	NA	5.00	5.30	NA
11/17/2000	3.10	4.20	3.40	6.00
3/15/2001	2.00	7.00	1.40	2.10
4/2/2001	1.00	0.78	2.00	0.99
6/1/2001	0.22	0.24	6.62	0.32
6/28/2001	0.32	0.56	0.53	0.71
8/16/2001	0.48	6.52	1.61	0.78
8/30/2001	0.33	0.40	0.23	0.46
12/14/2001	0.03	3.76	2.22	0.16
12/26/2001	0.16	0.28	0.19	0.21
4/10/2002	0.55	0.63	0.20	0.37
4/23/2002	0.30	0.35	0.90	0.45
6/3/2002	0.38	5.16	4.32	0.65
6/14/2002	0.29	0.34	0.38	0.31
8/5/2002	0.33	0.28	0.40	0.39
8/14/2002	0.34	0.28	0.42	0.63
12/6/2002	1.00	0.90	NA[2]	0.62
12/27/2002	0.94	0.96	NA[2]	1.24
4/1/2003[b]	0.30	1.06	NA[2]	NA[1]
7/1/2003[ab]	7.65	7.70	NA[2]	7.2
9/24/2003[ab]	6.25	7.16	0.55	0.9
12/29/2003[b]	0.18	0.33	0.58	0.6
5/18/2004	0.42	0.45	0.44	0.44
REDOX (mvolts)				
5/30/2000	-322	197	-128	203
9/15/2000	-269	3	-89	206
11/17/2000	64	178	296	230
4/2/2001	-194	26	-36	102
6/28/2001	-310	-283	-360	107
8/30/2001	NA	NA	NA	NA
12/26/2001	12	11	11	11
4/23/2002	3	62	-299	158
6/14/2002	0	245	-215	254
8/20/2002	-294	-315	-238	228
12/27/2002	-315	-357	NA[2]	-12
4/1/2003[b]	-82	-75	NA[2]	172
7/1/2003[b]	212	230	NA[2]	227
9/24/2003[b]	-166	-300	-183	50
12/29/2003[b]	-329	-198	-269.1	113.7
5/18/2004	-309	-189	-248	115.4
Temperature (deg F)				
9/29/1999	67.0	72.6	67.7	73.8
11/22/1999	66.4	62.9	65.0	69.8
2/11/2000	61.3	63.2	62.0	68.5
5/30/2000	77.7	74.8	76.3	76.2
9/15/2000	64.4	64.3	64.7	67.0
11/17/2000	54.5	58.1	68.1	65.9
4/2/2001	63.5	64.9	66.2	66.4
6/28/2001	73.0	71.2	74.7	74.3
8/30/2001	74.8	77.6	78.3	78.7
12/26/2001	65.7	65.8	65.8	65.1
4/23/2002	64.4	69.8	37.1	71.6
6/14/2002	66.7	67.5	66.7	68.0
8/20/2002	64.6	67.6	66.2	68.0
12/27/2002	41.7	42.5	NA[2]	41.7
4/1/2003[b]	64.6	67.6	NA[2]	68.0
7/1/2003[ab]	79.4	80.3	NA[2]	81.9
9/24/2003[b]	65.1	67.1	65.7	68.5
12/29/2003[b]	65.0	67.5	67.1	68.0
5/18/2004	69.0	69.0	63.0	68.0

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

pH	MW-1	MW-3	MW-5	MW-6
9/29/1999	8.39	8.53	8.43	8.44
11/22/1999	6.86	8.42	6.84	6.79
2/11/2000	6.80	6.94	6.83	6.72
5/30/2000	7.02	7.35	7.54	7.56
9/15/2000	7.06	7.54	6.76	6.62
11/17/2000	7.37	7.69	7.12	7.34
4/2/2001	6.98	6.61	7.07	6.96
6/28/2001	6.90	6.74	6.78	6.83
8/30/2001	7.85	7.91	7.9	8.41
12/26/2001	6.23	6.91	7.11	6.72
4/23/2002	6.90	6.95	6.94	6.86
6/14/2002	7.05	7.24	7.08	6.89
8/20/2002	NA	6.89	NA[1]	6.91
12/27/2002	6.33	6.41	NA[2]	6.49
4/1/2003[b]	6.90	7.08	NA[2]	6.70
7/1/2003[b]	7.42	7.59	NA[2]	7.68
9/24/2003[b]	7.12	7.34	7.25	7.17
12/29/2003[b]	6.72	6.47	6.75	6.69
5/18/2004	6.67	6.54	6.7	6.48
Specific Conductance (µS/cm)				
9/29/1999	976	880	1,577	966
11/22/1999	1,004	1,500	1,352	1,038
2/11/2000	992	1,327	1,275	1,149
5/30/2000	845	1,020	758	924
9/15/2000	800	917	989	1,009
11/17/2000	785	970	742	886
4/2/2001	725	365	839	821
6/28/2001	1080	704	876	1021
8/30/2001	924	1015	975	931
12/26/2001	848	496	333	891
4/23/2002	922	601	848	977
6/14/2002	932	767	810	961
8/20/2002	1015	809	891	985
12/27/2002	956	791	NA[2]	903
4/1/2003[b]	1128	800	NA[2]	1021
7/1/2003[b]	1020	690	NA[2]	970
9/24/2003[b]	951	697	987	890
12/29/2003[b]	1143	396	993	934
5/18/2004	1060	692	922	1037

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= DO not available due to ORC socks stuck in well on these dates
a = indicates dissolved oxygen and temperature readings collected on this date above typical range and should be considered suspect
b = indicates this data collected post purge

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

	MW-1		MW-3		MW-5		MW-6		Average
	TOC Elev.	32.36	TOC Elev.	31.77	TOC Elev.	30.56	TOC Elev.	31.26	Change
Date	Water	Water	Water	Water	Water	Water	Water	Water	Since
Sampled	Level	Elevation	Level	Elevation	Level	Elevation	Level	Elevation	Preceding
									Quarter
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

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

Table 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																								
TPHg (mg/L)	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[1]
MW-1	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)
Benzene (µg/L)																										
MW-1	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	2,600	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(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Toluene (µg/L)																										
MW-1	FP	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	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(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Ethylbenzene (µg/L)																										
MW-1	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	1,400	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)
Xylenes (µg/L)																										
MW-1	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)
MTBE (µg/L)																										
MW-1	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(50)	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

1 A sample was collected on this date both post and pre purge. The sample results collected pre purge is shown on Table 3.

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

TPHg (mg/L)		9/29/1999[6]	11/22/1999	2/11/2000	5/30/2000	9/15/2000	11/16/2000	4/2/2001	6/28/2001	8/30/2001	12/26/2001	4/24/2002	6/14/2002	8/20/2002	12/27/2002	4/1/2003[5]
	MW-1	14	24	19	19	20	18	19	39	31	34	35	35	26	28	16
	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
	MW-5	10	30	23	19	24	1.8	15	3.6	34	1.9	9.4	1.7	3.2	*6.2	NA[4]
	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
Benzene (µg/L)																
	MW-1	6,200	4,900	4,100	5,700	4,100	3,500	4,700	5,200	5,600	5,300	4,900	5400	4100	4,500	4500
	MW-3	180	6.5	8.3	11	28	20	9	150	42	8	11	130	330	110	370
	MW-5	14,000	11,000	12,000	9,900	3,800	470	7,400	300	8,300	300	2,300	110	320	*2200	NA[4]
	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
Toluene (µg/L)																
	MW-1	5,900	5,000	4,800	8,400	5,700	4,300	5,200	4,200	5,100	5,200	6,000	6,800	4700	5,000	6000
	MW-3	340	33	20	5.6	14	34	6.2	240	48	5.2	4.8	470	170	280	150
	MW-5	470	3,400	4,500	6,900	3,000	220	3,000	11	3,000	110	130	ND<2.5	8.6	*140	NA[4]
	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
Ethylbenzene (µg/L)																
	MW-1	620	730	530	730	540	640	570	660	560	630	740	870	620	660	680
	MW-3	130	27	2.4	0.45	2.6	25	1.4	38	26	1.1	0.72	91	40	57	44
	MW-5	1,100	1,500	1,200	1,200	460	39	1000	16	1,400	55	300	7.2	22	*160	NA[4]
	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
Total Xylenes (µg/L)																
	MW-1	3,500	3,500	2,800	3,500	2,700	3,200	2,600	3,900	2,500	2,400	3,100	3500	2700	3,000	3100
	MW-3	580	260	28	17	160	28	8.1	160	210	7	1.4	390	150	260	230
	MW-5	600	2,500	1,300	2,600	1,200	100	2,200	15	2,600	120	270	ND<2.5	19	*250	NA[4]
	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
MTBE (µg/L) (EPA Method 8020)																
	MW-1	ND<250	ND<100	6.6	ND<5.0[1]	ND<12 [1,2]	ND<40[1,2]	50 [1]	8.5 [1]	ND<100[1,2]	ND<120	ND<120	ND<250	ND<120	ND<120	ND<120
	MW-3	14	ND<1.0	31	ND<5.0[1]	ND<5 [1]	ND<5 [1]	77 [1]	ND<2 [1]	ND<1.2 [1]	ND<0.50[1]	ND<0.50[1]	ND<0.50[1]	ND<5 [1]	19	ND<1.0[1]
	MW-5	ND<100	ND<100	6.6	ND<200	ND<10 [1,2]	ND<5 [1]	ND<50[1]	4.4 [1]	ND<50[1]	ND<10[1]	ND<50	ND<0.50[1]	ND<0.50[1]	*ND(25)	NA[4]
	MW-6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	5 [1,3]	17 [1]	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
Ethylene Dichloride[7] (µg/L) (EPA Method 8260)																
	MW-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	370	ND<120
	MW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<12	NA
	MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	220	NA[4]
	MW-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND<0.5	NA

mg/l = milligrams per liter
µg/l = micrograms per liter
ND = Not detected above the reporting limit following the less than sign
NA = Not Applicable
MTBE = methyl t-butyl ether
1 Result of MTBE confirmation by EPA Method 8260.
2 Reporting limits elevated due to matrix interference.
3 Detection limit = 5 ug/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 pre-purge
6 A sample was collected on this date both post and pre purge. The sample results collected post purge is shown on Table 3.
7 Monitoring for EDC began 12/27/02 per ACHCS requirement - See Table 5 for complete list of EPA 8260 analytes initially requested for monitoring. EDC was the only analyte detected of the ACHCS list and only in wells MW-1 and MW-5.

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

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

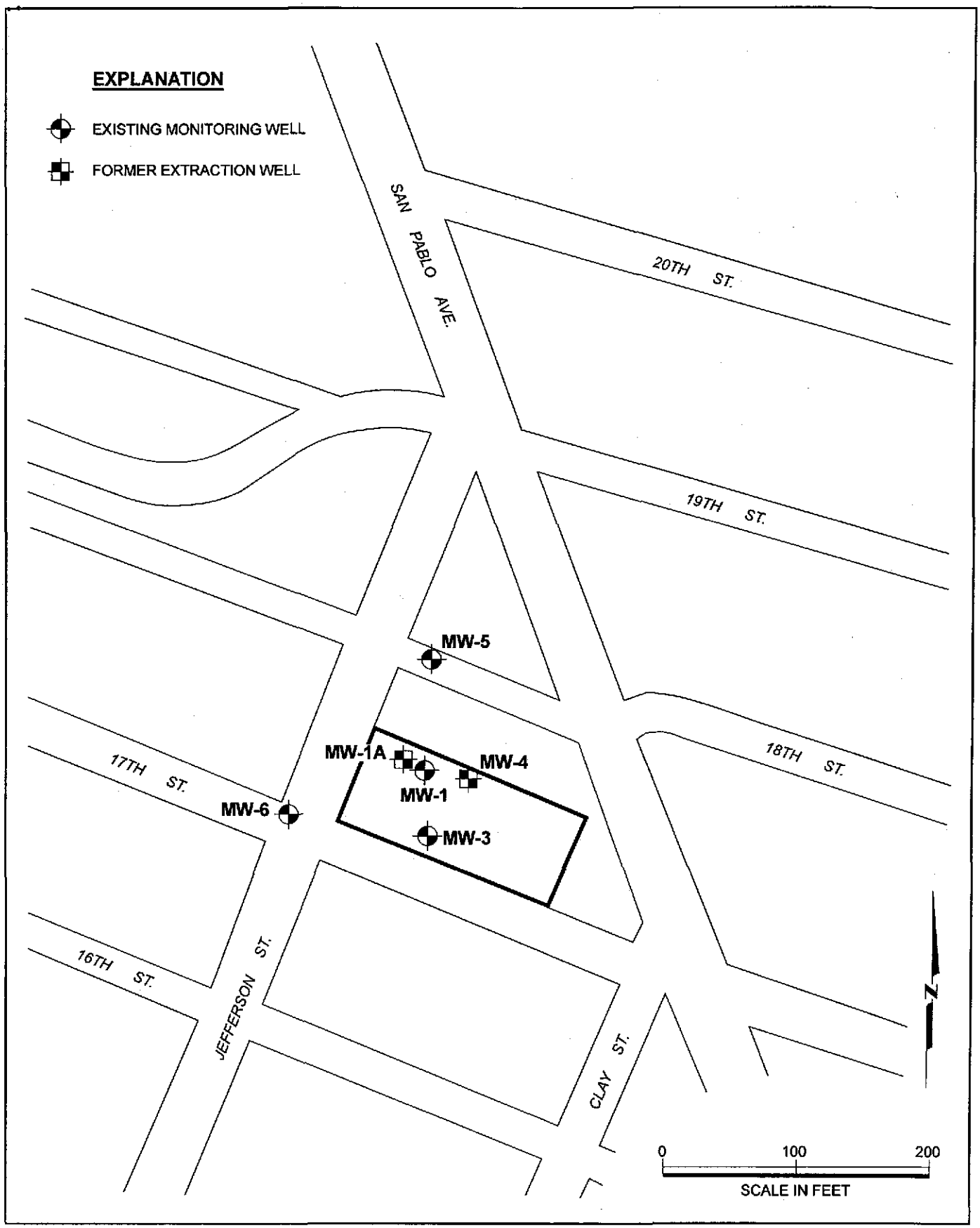
		7/1/2003[5]	9/25/2003[5]	12/29/2003[5]	5/18/2004
TPHg (mg/L)					
	MW-1	61	59	46	23
	MW-3	12	10	7.3	1.5
	MW-5	NA[4]	43	26	15
	MW-6	ND<0.05	ND<0.05	ND<0.05	ND<0.05
Benzene (µg/L)					
	MW-1	7,700	7600	6600	4,100
	MW-3	200	150	160	77
	MW-5	NA[4]	12000	7700	5,000
	MW-6	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Toluene (µg/L)					
	MW-1	11,000	9400	7900	4,700
	MW-3	460	300	250	72
	MW-5	NA[4]	2800	1900	1,300
	MW-6	ND<0.05	ND<0.05	ND<0.05	ND<0.5
Ethylbenzene (µg/L)					
	MW-1	1200	1000	960	450
	MW-3	130	120	79	19.00
	MW-5	NA[4]	1500	910	380
	MW-6	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Total Xylenes (µg/L)					
	MW-1	6700	4800	4000	1,500
	MW-3	390	280	210	59
	MW-5	NA[4]	3000	210	770
	MW-6	ND<2.5	ND<2.5	ND<0.5	ND<0.5
MTBE (µg/L) (EPA Method 8020)					
	MW-1	ND<250	ND<1200	ND<250	ND<50
	MW-3	ND<5[1]	ND<2.5[3]	ND<2.5[1]	ND<12
	MW-5	NA[4]	ND<1200	ND<2.5[1]	ND<50
	MW-6	ND<2.5	ND<2.5	ND<2.5	ND<2.5
Ethylene Dichloride (µg/L) (EPA Method 8260)					
	MW-1	400	[6]500	360	320
	MW-3	NA	NA	NA	NA
	MW-5	NA	610	410	290
	MW-6	NA	NA	NA	NA

mg/l = milligrams per liter
µg/l = micrograms per liter
ND = Not detected above the reporting limit following the less than sign
NA = Not Applicable
MTBE = methyl t-butyl ether
1 Result of MTBE confirmation by EPA Method 8260.
2 Reporting limits elevated due to matrix interference.
3 Detection limit = 5 ug/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 pre-purge
6 A sample was collected on this date both post and pre purge. The sample results collected post purge is shown on Table 3.
7 Monitoring for EDC began 12/27/02 per ACHCS requirement - See Table 5 for complete list of EPA 8260 analytes initially requested for monitoring. EDC was the only analyte detected of the ACHCS list and only in MW-1 and MW-5.

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

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

Notes:
Analtes shown on this table monitored per ACHCS requriement described in the September 27, 2002 letter to BPS from the ACHCS (see report text for details).
µg/l = micrograms per liter
ND = Not detected above the reporting limit
NR = Not Requried per ACHCS direction indicating if analyte not detected during 12/27/02 sampling event then the anayted does not need continued monitoring/MW-1 and MW-5 are the only wells currently sampled for Ethylene Dichloride (see report text for details)
* = Analytical data collected for MW-5 on January 3, 2003
a = EDC detected at same concentration as detecton limit
1 = Samples on this date collected pre purge
2=Samples on this date collected post purge

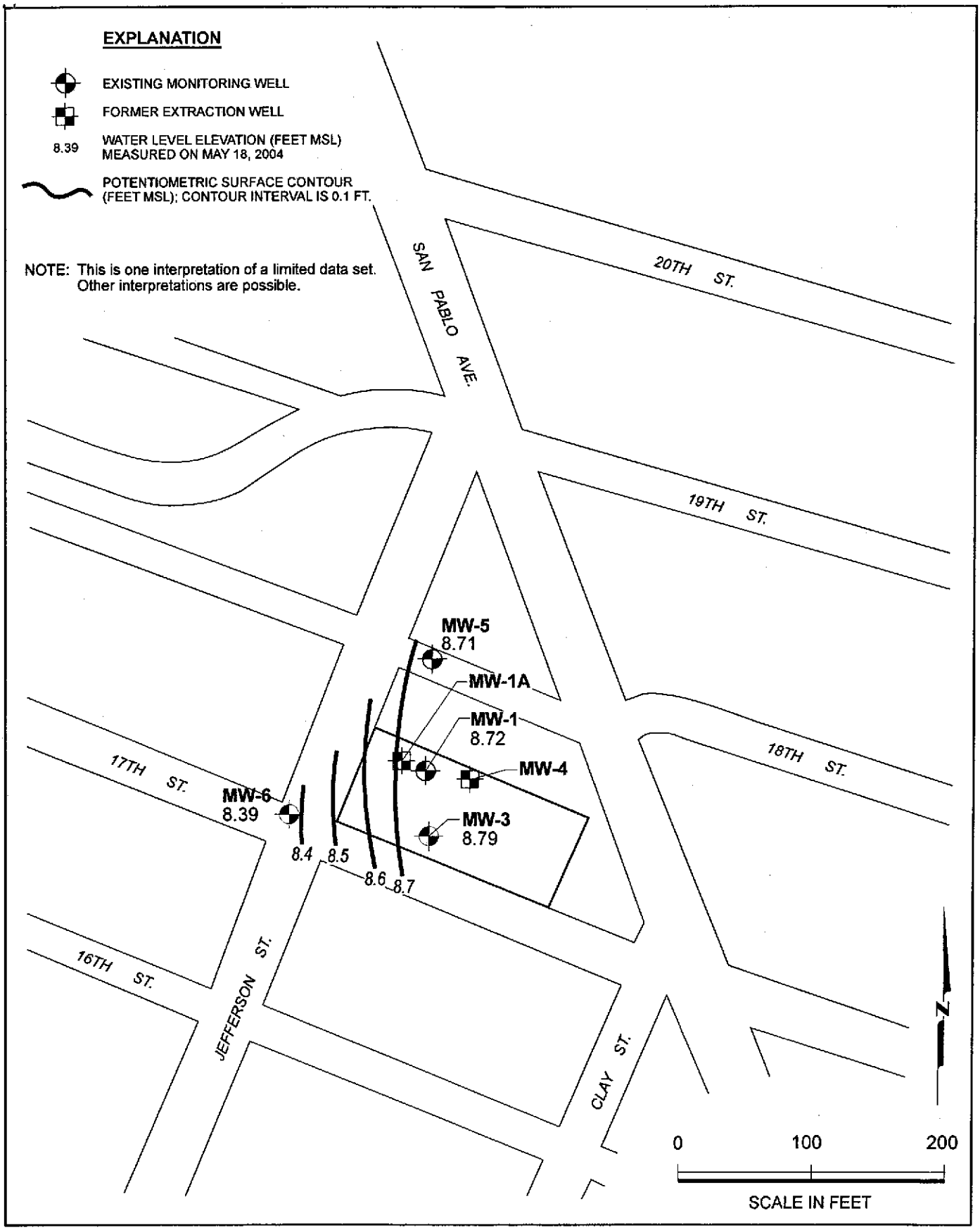


MACTEC

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

PLATE
1

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
CN	4097041918 01		6/04	

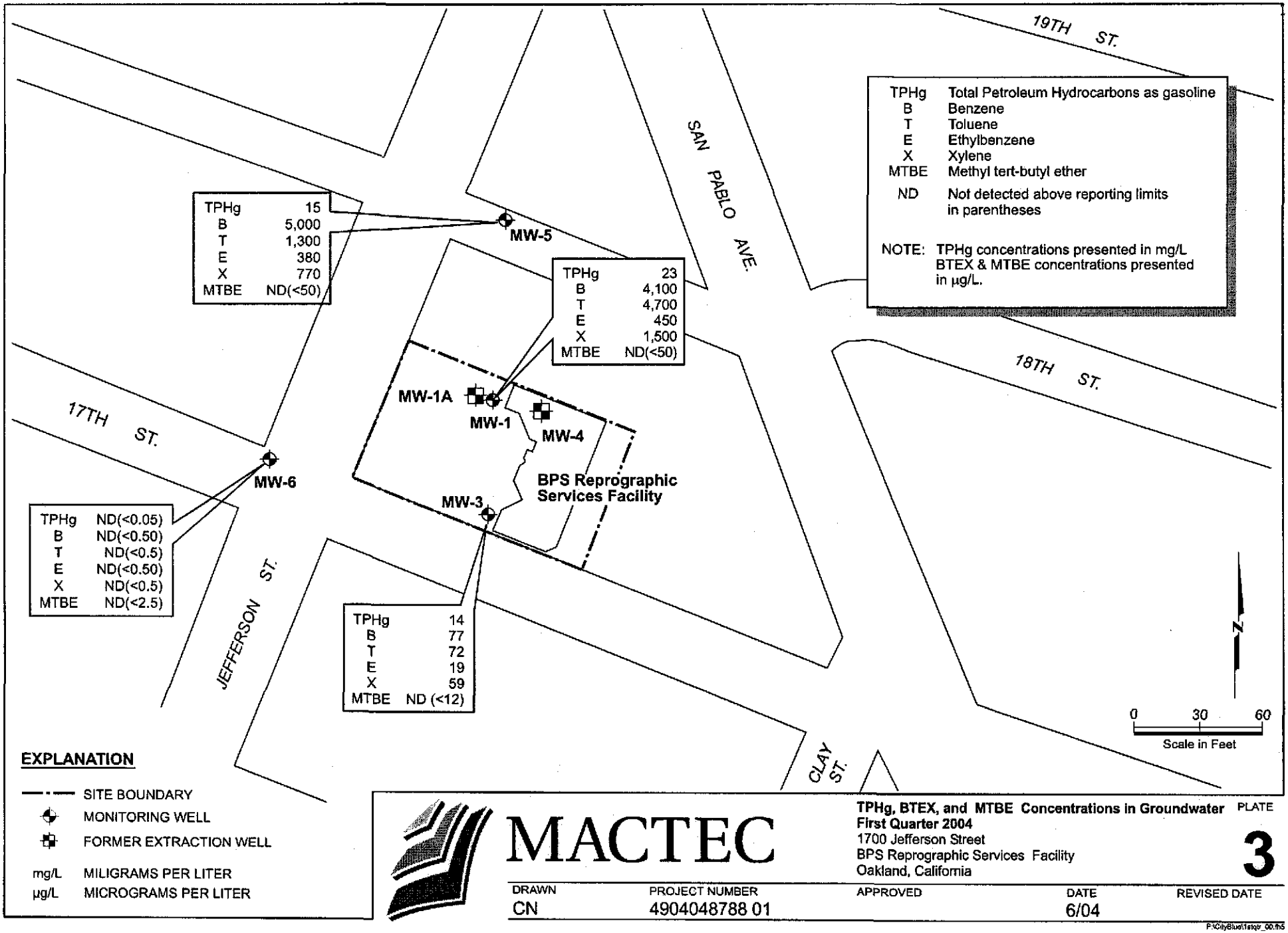


MACTEC

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

PLATE
2

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
CN	4097041918 01		6/04	



MACTEC

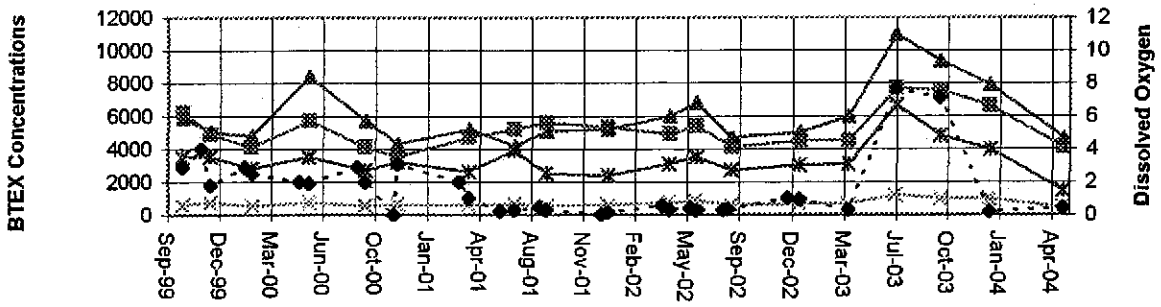
TPHg, BTEX, and MTBE Concentrations in Groundwater
First Quarter 2004
1700 Jefferson Street
BPS Reprographic Services Facility
Oakland, California

PLATE **3**

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
CN	4904048788 01		6/04	

P:\City\Bus\1\sqtr_00.fh5

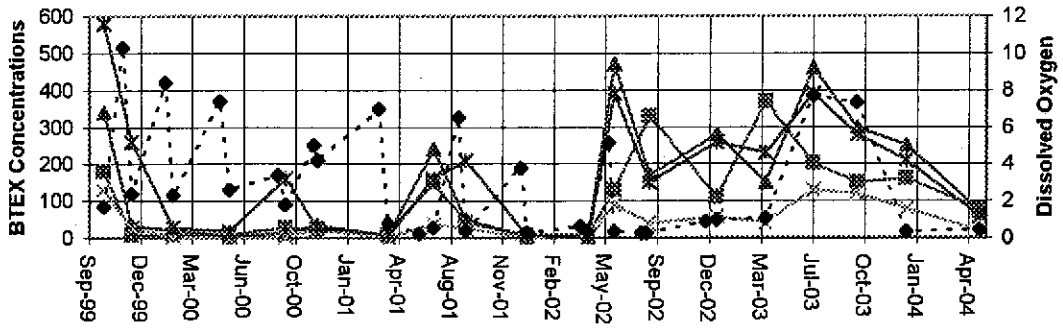
MW-1



Date Sampled

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

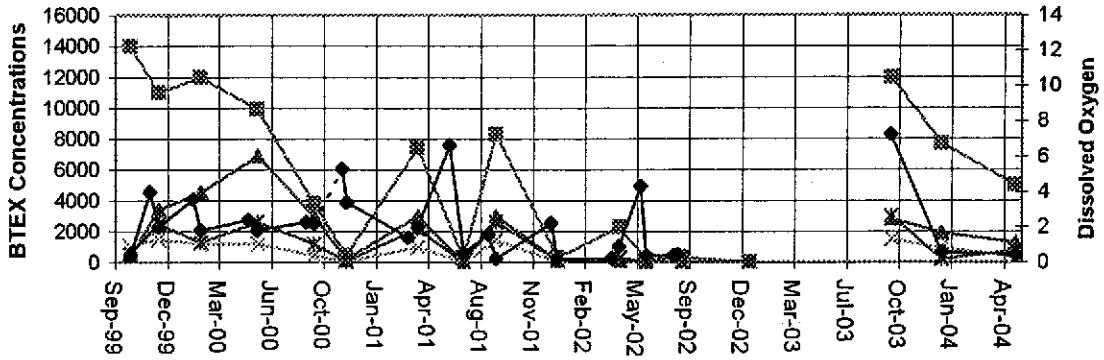
MW-3



Date Sampled

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

MW-5



Date Sampled

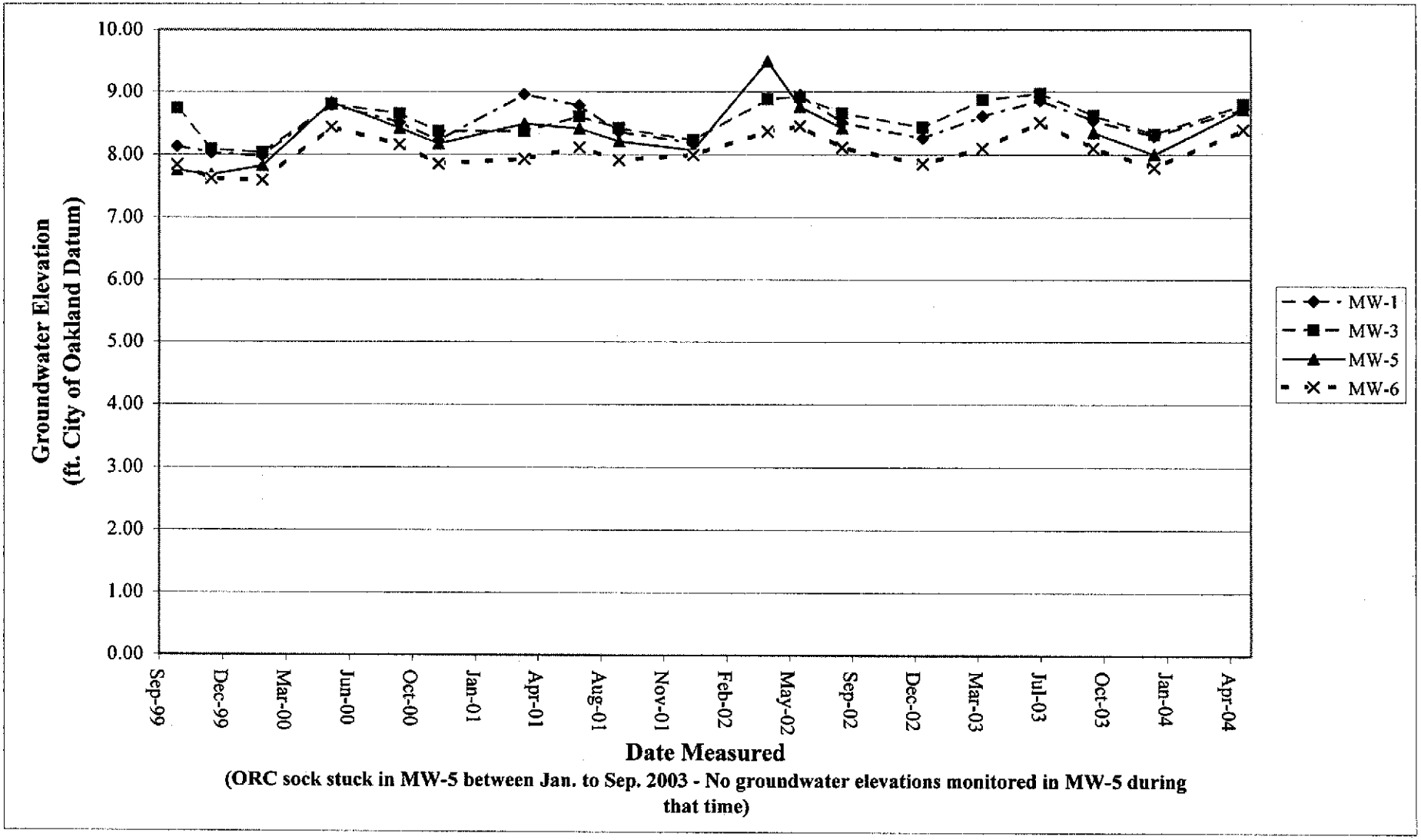
(Samples collected post purge between July 2003 and December 2003, all other samples collected pre-purge.
ORC Sock stuck in MW-5 from Jan. 2003 to Sep. 2003.)

MACTEC

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

Plate
4

Drawn by	JOB NUMBER	APPROVED	DATE	REVISION DATE
DSN	4097041918		6/1/2004	



(ORC sock stuck in MW-5 between Jan. to Sep. 2003 - No groundwater elevations monitored in MW-5 during that time)

MACTEC

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

Plate
5

DRAWN	JOB NUMBER	APPROVED	DATE	REVISION DATE
DSN	4097041918		6/1/2004	

APPENDIX A

LABORATORY REPORTS

Sequoia
Analytical

1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
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10 June, 2004

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

RE: General Commercial
Work Order: P405531

Enclosed are the results of analyses for samples received by the laboratory on 05/18/04 14:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stacy P. Hoch

Stacy P. Hoch
Dept Manager - Client Services

CA ELAP Certificate #2374

Sequoia Analytical

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MACTEC E&C - Petaluma	Project:General Commercial	P405531
5341 Old Redwood Highway, Suite 300	Project Number:BPS Services Formerly City Blue	**Reported:**
Petaluma CA, 94954	Project Manager:Basil Falcone	06/10/04 09:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
530876	P405531-01	Water	05/18/04 08:15	05/18/04 14:15
530875	P405531-02	Water	05/18/04 09:20	05/18/04 14:15
530873	P405531-03	Water	05/18/04 10:25	05/18/04 14:15
530871	P405531-04	Water	05/18/04 11:00	05/18/04 14:15
530877	P405531-05	Water	05/18/04 11:50	05/18/04 14:15

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Sequoia Analytical

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MACTEC E&C - Petaluma	Project: General Commercial	P405531
5341 Old Redwood Highway, Suite 300	Project Number: BPS Services Formerly City Blue	**Reported:**
Petaluma CA, 94954	Project Manager: Basil Falcone	06/10/04 09:58

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
530876 (P405531-01) Water Sampled: 05/18/04 08:15 Received: 05/18/04 14:15									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	4050700	05/28/04	05/28/04	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		*103 %*		*65-135*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*		*65-135*	"	"	"	"	
530875 (P405531-02) Water Sampled: 05/18/04 09:20 Received: 05/18/04 14:15									
Gasoline Range Organics (C6-C10)	**15000**	1000	ug/l	20	4050700	05/28/04	05/28/04	EPA 8015B/8021B	
Benzene	**5000**	10	"	"	"	"	"	"	
Toluene	**1300**	10	"	"	"	"	"	"	
Ethylbenzene	**380**	10	"	"	"	"	"	"	
Xylenes (total)	**770**	10	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*101 %*		*65-135*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*		*65-135*	"	"	"	"	
530873 (P405531-03) Water Sampled: 05/18/04 10:25 Received: 05/18/04 14:15									
Gasoline Range Organics (C6-C10)	**1500**	250	ug/l	5	4050700	05/28/04	05/28/04	EPA 8015B/8021B	
Benzene	**77**	2.5	"	"	"	"	"	"	
Toluene	**72**	2.5	"	"	"	"	"	"	
Ethylbenzene	**19**	2.5	"	"	"	"	"	"	
Xylenes (total)	**59**	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	12	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*102 %*		*65-135*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*		*65-135*	"	"	"	"	

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MACTEC E&C - Petaluma	Project:General Commercial	P405531
5341 Old Redwood Highway, Suite 300	Project Number:BPS Services Formerly City Blue	**Reported:**
Petaluma CA, 94954	Project Manager:Basil Falcone	06/10/04 09:58

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
530871 (P405531-04) Water Sampled: 05/18/04 11:00 Received: 05/18/04 14:15									
Gasoline Range Organics (C6-C10)	**23000**	1000	ug/l	20	4050700	05/28/04	05/28/04	EPA 8015B/8021B	
Benzene	**4100**	10	"	"	"	"	"	"	
Toluene	**4700**	10	"	"	"	"	"	"	
Ethylbenzene	**450**	10	"	"	"	"	"	"	
Xylenes (total)	**1500**	10	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*105 %*	*65-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99 %*	*65-135*		"	"	"	"	
530877 (P405531-05) Water Sampled: 05/18/04 11:50 Received: 05/18/04 14:15									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	4050700	05/28/04	05/28/04	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		*103 %*	*65-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*65-135*		"	"	"	"	

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5341 Old Redwood Highway, Suite 300	Project Number: BPS Services Formerly City Blue	**Reported:**
Petaluma CA, 94954	Project Manager: Basil Falcone	06/10/04 09:58

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
530875 (P405531-02) Water Sampled: 05/18/04 09:20 Received: 05/18/04 14:15									
1,2-Dichloroethane	**290**	100	ug/l	100	4060017	06/01/04	06/01/04	EPA 8260B	
Surrogate: Dibromofluoromethane		*97 %*		*84-122*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*100 %*		*74-135*	"	"	"	"	
Surrogate: Toluene-d8		*87 %*		*84-119*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*94 %*		*86-119*	"	"	"	"	
530871 (P405531-04) Water Sampled: 05/18/04 11:00 Received: 05/18/04 14:15									
1,2-Dichloroethane	**320**	100	ug/l	100	4060017	06/01/04	06/01/04	EPA 8260B	
Surrogate: Dibromofluoromethane		*90 %*		*84-122*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*95 %*		*74-135*	"	"	"	"	
Surrogate: Toluene-d8		*88 %*		*84-119*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*90 %*		*86-119*	"	"	"	"	

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5341 Old Redwood Highway, Suite 300	Project Number:BPS Services Formerly City Blue	**Reported:**
Petaluma CA, 94954	Project Manager:Basil Falcone	06/10/04 09:58

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

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4050700 - EPA 5030B, waters										
Blank (4050700-BLK1)				Prepared & Analyzed: 05/28/04						
Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*304*		"	*300*		*101*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*325*		"	*300*		*108*	*65-135*			
Laboratory Control Sample (4050700-BS1)				Prepared & Analyzed: 05/28/04						
Gasoline Range Organics (C6-C10)	2080	50	ug/l	2750		76	65-135			
Benzene	33.6	0.50	"	34.0		99	65-135			
Toluene	186	0.50	"	192		97	65-135			
Ethylbenzene	39.8	0.50	"	46.0		87	65-135			
Xylenes (total)	204	0.50	"	222		92	65-135			
Methyl tert-butyl ether	74.2	2.5	"	56.5		131	65-135			
Surrogate: a,a,a-Trifluorotoluene	*328*		"	*300*		*109*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*329*		"	*300*		*110*	*65-135*			
Matrix Spike (4050700-MS1)	**Source: P405437-09**			Prepared & Analyzed: 05/28/04						
Gasoline Range Organics (C6-C10)	1950	50	ug/l	2750	21	70	65-135			
Benzene	32.8	0.50	"	34.0	0.23	96	65-135			
Toluene	183	0.50	"	192	ND	95	65-135			
Ethylbenzene	38.7	0.50	"	46.0	ND	84	65-135			
Xylenes (total)	201	0.50	"	222	0.41	90	65-135			
Methyl tert-butyl ether	72.6	2.5	"	56.5	0.36	128	65-135			
Surrogate: a,a,a-Trifluorotoluene	*333*		"	*300*		*111*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*314*		"	*300*		*105*	*65-135*			

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MACTEC E&C - Petaluma	Project: General Commercial	P405531
5341 Old Redwood Highway, Suite 300	Project Number: BPS Services Formerly City Blue	**Reported:**
Petaluma CA, 94954	Project Manager: Basil Falcone	06/10/04 09:58

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

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4050700 - EPA 5030B, waters										
Matrix Spike Dup (4050700-MSD1)	**Source: P405437-09**			Prepared & Analyzed: 05/28/04						
Gasoline Range Organics (C6-C10)	1970	50	ug/l	2750	21	71	65-135	1	20	
Benzene	32.5	0.50	"	34.0	0.23	95	65-135	0.9	20	
Toluene	185	0.50	"	192	ND	96	65-135	1	20	
Ethylbenzene	39.3	0.50	"	46.0	ND	85	65-135	2	20	
Xylenes (total)	202	0.50	"	222	0.41	91	65-135	0.5	20	
Methyl tert-butyl ether	72.1	2.5	"	56.5	0.36	127	65-135	0.7	20	
Surrogate: a,a,a-Trifluorotoluene	*334*		"	*300*		*111*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*319*		"	*300*		*106*	*65-135*			

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5341 Old Redwood Highway, Suite 300	Project Number: BPS Services Formerly City Blue	**Reported:**
Petaluma CA, 94954	Project Manager: Basil Falcone	06/10/04 09:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4060017 - EPA 5030B waters										
Blank (4060017-BLK1)				Prepared & Analyzed: 06/01/04						
Acetone	ND	10	ug/l							
Benzene	ND	1.0	"							
Bromobenzene	ND	1.0	"							
Bromochloromethane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
2-Butanone	ND	10	"							
n-Butylbenzene	ND	1.0	"							
sec-Butylbenzene	ND	1.0	"							
tert-Butylbenzene	ND	1.0	"							
Carbon disulfide	ND	10	"							
Carbon tetrachloride	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	1.0	"							
Chloromethane	ND	1.0	"							
2-Chlorotoluene	ND	1.0	"							
4-Chlorotoluene	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
1,2-Dibromo-3-chloropropane	ND	1.0	"							
1,2-Dibromoethane (EDB)	ND	1.0	"							
Dibromomethane	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
Dichlorodifluoromethane	ND	1.0	"							
1,1-Dichloroethane	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
1,1-Dichloroethene	ND	1.0	"							
cis-1,2-Dichloroethene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
1,3-Dichloropropane	ND	1.0	"							
2,2-Dichloropropane	ND	1.0	"							
1,1-Dichloropropene	ND	1.0	"							

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MACTEC E&C - Petaluma	Project: General Commercial	P405531
5341 Old Redwood Highway, Suite 300	Project Number: BPS Services Formerly City Blue	**Reported:**
Petaluma CA, 94954	Project Manager: Basil Falcone	06/10/04 09:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4060017 - EPA 5030B waters										
Blank (4060017-BLK1)				Prepared & Analyzed: 06/01/04						
cis-1,3-Dichloropropene	ND	1.0	ug/l							
trans-1,3-Dichloropropene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Freon 113	ND	1.0	"							
Hexachlorobutadiene	ND	1.0	"							
2-Hexanone	ND	10	"							
Isopropylbenzene	ND	1.0	"							
p-Isopropyltoluene	ND	1.0	"							
Methylene chloride	ND	1.0	"							
4-Methyl-2-pentanone	ND	10	"							
Methyl tert-butyl ether	ND	1.0	"							
Naphthalene	ND	1.0	"							
n-Propylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,1,2-Tetrachloroethane	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
Toluene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	1.0	"							
1,2,4-Trichlorobenzene	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
1,2,3-Trichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
Vinyl acetate	ND	20	"							
Vinyl chloride	ND	1.0	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	1.0	"							
Surrogate: Dibromofluoromethane	*4.02*		"	*4.50*		*89*	*84-122*			
Surrogate: 1,2-Dichloroethane-d4	*4.17*		"	*4.50*		*93*	*74-135*			
Surrogate: Toluene-d8	*4.07*		"	*4.50*		*90*	*84-119*			
Surrogate: 4-Bromofluorobenzene	*4.13*		"	*4.50*		*92*	*86-119*			

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MACTEC E&C - Petaluma	Project:General Commercial	P405531
5341 Old Redwood Highway, Suite 300	Project Number:BPS Services Formerly City Blue	**Reported:**
Petaluma CA, 94954	Project Manager:Basil Falcone	06/10/04 09:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4060017 - EPA 5030B waters										
Laboratory Control Sample (4060017-BS1)				Prepared & Analyzed: 06/01/04						
Benzene	4.80	1.0	ug/l	5.00		96	81-118			
Chlorobenzene	4.88	1.0	"	5.00		98	88-119			
1,1-Dichloroethene	4.21	1.0	"	5.00		84	77-121			
Toluene	4.93	1.0	"	5.00		99	84-119			
Trichloroethene	4.67	1.0	"	5.00		93	83-126			
Surrogate: Dibromofluoromethane	*3.87*		"	*4.50*		*86*	*84-122*			
Surrogate: 1,2-Dichloroethane-d4	*4.03*		"	*4.50*		*90*	*74-135*			
Surrogate: Toluene-d8	*4.42*		"	*4.50*		*98*	*84-119*			
Surrogate: 4-Bromofluorobenzene	*4.61*		"	*4.50*		*102*	*86-119*			
Laboratory Control Sample Dup (4060017-BSD1)				Prepared & Analyzed: 06/01/04						
Benzene	5.13	1.0	ug/l	5.00		103	81-118	7	20	
lorobenzene	5.10	1.0	"	5.00		102	88-119	4	20	
1-Dichloroethene	4.41	1.0	"	5.00		88	77-121	5	20	
Toluene	5.25	1.0	"	5.00		105	84-119	6	20	
Trichloroethene	5.09	1.0	"	5.00		102	83-126	9	20	
Surrogate: Dibromofluoromethane	*4.03*		"	*4.50*		*90*	*84-122*			
Surrogate: 1,2-Dichloroethane-d4	*4.02*		"	*4.50*		*89*	*74-135*			
Surrogate: Toluene-d8	*4.38*		"	*4.50*		*97*	*84-119*			
Surrogate: 4-Bromofluorobenzene	*4.64*		"	*4.50*		*103*	*86-119*			

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MACTEC E&C - Petaluma	Project:General Commercial	P405531
5341 Old Redwood Highway, Suite 300	Project Number:BPS Services Formerly City Blue	**Reported:**
Petaluma CA, 94954	Project Manager:Basil Falcone	06/10/04 09:58

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

Harding ESE
A MACTEC COMPANY
90 Digital Drive
Novato, CA 94949
(415) 883-0112

CHAIN OF CUSTODY FORM

Seq. No.: № 10271

Lab: Segouq

Samplers: David Browne

Job Number: BPS Services formerly City Blue

Name/Location: Oakland

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

MATRIX: Water	Soil	Air	#CONTAINERS & PRESERV.: Unpres	H_2SO_4	HNO_3	HCL	SAMPLE NUMBER: YR	SEQ	DATE: YR	MO	DAY	TIME	STATION DESCRIPTION	DEPTH
X					3		53087	6	04	05	18	0915	P405531-01	
X					6		53087	5	04	05	18	0920	-02	
X					3		53087	3	04	05	18	1025	-03	
X					6		53087	1	04	05	18	1100	-04	
X					3		53087	7	04	05	18	1150	-05	

ANALYSIS REQUESTED

Gasoline Range Organics 8015B	Diesel Range Organics 8015B	BTEX plus MTBE	CCR Title 22 Metals (17)	EPA 8021B	EPA 8260B	EPA 8270C	TPH gas (8015)	BTEX	MTBE	Ethylene Dichloride
							X	X	X	
							X	X	X	X
							X	X	X	
							X	X	X	X
							X	X	X	

ADDITIONAL INFORMATION

SAMPLE NUMBER: YR	SEQ

TURNAROUND TIME/REMARKS: STANDARD TAT

COOLER CUSTODY SEAL INTACT

NO HEADSPACE

COOLER TEMPERATURE 5.7 °F

CHAIN OF CUSTODY RECORD

	(Print Name)	(Company)	Date/Time
Relinquished By: (signature) David Browne	David Browne	MACTEC	5/18/04 1410
Received By: (signature) Gail Newman	GAIL HOFFMANN	Segouq	5/18/04 1410
Relinquished By: (signature)			
Received By: (signature)			
Relinquished By: (signature)			
Received By: (signature)			
Received By: (signature)			

Method of Shipment:

APPENDIX B

GROUNDWATER SAMPLING FORM

APPENDIX B

GROUNDWATER SAMPLING FORM

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

Well/Sample Number	Client Sample ID
MW-1	53087-1
MW-3	53087-3
MW-5	53087-5
MW-6	53087-6

MACTEC

GROUNDWATER SAMPLING FORM

Well Number: MW-1

Well Type: ☐ Monitor ☐ Extraction ☐ Other ___ ☐ PVC ☐ St. Steel ☐ Other ___

Job Name: City Blue

Job Number: 53087 007

Date: 5/18/2004

Recorded By: _____ (Signature)

Sampled By: D.S.B (Initials)

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): _____

No. of Well Volumes to be purged (# V): 3

PURGE METHOD

☒ ~~Bailer - Type: P.V.C.~~ DSB

☐ Submersible - Type: _____

☒ Other - Type: Micro Purge

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top

☐ Other _____

Depth in feet (BTOC): 5' off bottom

Screen Interval in feet (BTOC): from _____ to ___

PURGE VOLUME CALCULATION

(_____ - _____) X ~~3~~ X 3 X 0.0408 = _____ gals

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

Field Parameter Measurement

Minutes	pH	Conductivity (µS)	Temp. ☑ °C ☐ °F	Turbidity (NTU)
Initial	6.67	1060 us	20.0	15.2
Meter S/N				

PURGE TIME

Purge Start: _____

Purge Stop: _____

Elapsed: _____

PURGE RATE

GPM: _____

GPM: _____

PURGE VOLUME

Volume: _____ gallons

D.O. 042 mg/lt Redox -309.8 mv

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

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

WELL SAMPLING

☐ Bailer - Type: Grab

Sample Time: 1100

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
53087-1	6 VOA's	T.P.H gas (8015 Modified)	HCL	Sequoia	
		BTEX (8020)			
		MTBE (8020)			
		Ethylene Dichloride			

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Dupl. Sample No.

Blank Samples

Type	Sample No.
Trip	1150
	53087

Other Samples

Type	Sample No.

MACTEC

GROUNDWATER SAMPLING FORM

Well Number: MW-3

Well Type: [X] Monitor [ ] Extraction [ ] Other ___
[X] PVC [ ] St. Steel [ ] Other ___

Job Name: City Blue

Job Number: 53087.007

Date: 5/18/2004

Recorded By: David Browne (Signature)

Sampled By: D.S.B (Initials)

WELL PURGING

PURGE VOLUME

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

PURGE METHOD

[X] Bailer - Type: P.V.C.
[ ] Submersible - Type: ___
[ ] Other - Type: Micro Purge

PURGE VOLUME CALCULATION

(_____ - _____) X ___ X 3 X 0.0408 = _____ gals
TD (feet) WL (Feet) D (Inches) # V Calculated Purge Volume

PUMP INTAKE SETTING

[X] Near Bottom [ ] Near Top
[ ] Other ___
Depth in feet (BTOC): 5 ft off bottom
Screen Interval in feet (BTOC): from ___ to ___

Field Parameter Measurement

Minutes	pH	Conductivity (µS)	Temp. [X] °C [ ] °F	Turbidity (NTU)
Initial	6.54	692 µs	20.0	10.6
Meter S/N				

PURGE TIME

Purge Start: _____
Purge Stop: _____
Elapsed: _____

PURGE RATE

GPM: _____
GPM: _____

PURGE VOLUME

Volume: _____ gallons

D.O. 0.45 mg/lt Redox -189 mV

Observations During Purging (Well Condition, Color, Odor):
clear slight hydrocarbon odor - No sheen

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

WELL SAMPLING

[ ] Bailer - Type: Grab / Micro Purge

Sample Time: 1025

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
53087-3	3 VOA's	T.P.H gas (8015 Modified)	HCL	Sequoia	
↓		BTEX (8020)	↓	↓	
		MTBE (8020)			

QUALITY CONTROL SAMPLES

Duplicate Samples	
Original Sample No.	Dupl. Sample No.

Blank Samples	
Type	Sample No.

Other Samples	
Type	Sample No.

MACTEC

GROUNDWATER SAMPLING FORM

Well Number: MW-5

Well Type: ☐ Monitor ☐ Extraction ☐ Other ___ ☐ PVC ☐ St. Steel ☐ Other ___

Job Name: City Blue

Job Number: 53087 007

Date: 5/18/2004

Recorded By: David Boone (Signature)

Sampled By: D.S.B (initials)

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): ___

No. of Well Volumes to be purged (# V 3

PURGE METHOD

☒ Bailer - Type: P.V.C.

☐ Submersible - Type: ___

☐ Other - Type: Micro Purge

PURGE VOLUME CALCULATION

(_____ - _____) X ___ ² X 3 X 0.0408 = _____ gals

TD (feet) WL (Feet) D (Inches) # V Calculated Purge Volume

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top

☐ Other ___

Depth in feet (BTOC): 5 feet off bottom

Screen Interval in feet (BTOC): from ___ to ___

Field Parameter Measurement

Minutes	pH	Conductivity (µS)	Temp. ☑ °C ☐ °F	Turbidity (NTU)
Initial	6.70	92245	17.6	174
Meter S/N				

PURGE TIME

Purge Start: ___

Purge Stop: ___

Elapsed: ___

PURGE RATE

GPM: ___

GPM: ___

PURGE VOLUME

Volume: ___ gallons

D.O. 0.49 mg/lt Redox -248 MV

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

Cloudy gray - Slight hydrocarbon odor No sheen

Discharge Water Disposal: ☐ Sanitary Sewer

☐ Storm Sewer DS ☒ Other 55 Gal. drum on site

WELL SAMPLING

☐ Bailer - Type: Grab / Micro Purge

Sample Time: 0920

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
53087-5	6 VOA's	T.P.H gas (8015 Modified)	HCL	Sequoia	
		BTEX (8020)			
		MTBE (8020)			
		Ethylene Dichloride			

QUALITY CONTROL SAMPLES

Duplicate Samples	
Original Sample No.	Dupl. Sample No.

Blank Samples	
Type	Sample No.

Other Samples	
Type	Sample No.

MACTEC

GROUNDWATER SAMPLING FORM

Well Number: MW-6

Well Type: [X] Monitor [ ] Extraction [ ] Other ___
[X] PVC [ ] St. Steel [ ] Other ___

Job Name: City Blue

Job Number: 53087 007

Date: 5/18/2004

Recorded By: David Boone (Signature)

Sampled By: D.S.B (initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches): 2
Total Depth of Casing (TD in ft BTOC): 32.5
Water Level Depth (WL in ft BTOC): 22.87
No. of Well Volumes to be purged (# V 3

PURGE METHOD

[X] Bailer - Type: ~~P.V.C.~~ DSB
[ ] Submersible - Type:
[ ] Other - Type: Micro purge

PUMP INTAKE SETTING

[X] Near Bottom [ ] Near Top
[ ] Other
Depth in feet (BTOC): 5' off Bottom
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. [X] °C [ ] °F	Turbidity (NTU)
Initial	6.48	1037 µS	19.8	>1000
Meter S/N				

PURGE TIME

Purge Start: ___
Purge Stop: ___
Elapsed: ___

PURGE RATE

GPM: ___
GPM: ___

PURGE VOLUME

Volume: ___ gallons

D.O. 0.49 mg/l Redox 115.4 MV

Observations During Purging (Well Condition, Color, Odor):
cloudy olive brown
odorless

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

WELL SAMPLING

[ ] Bailer - Type: Micro Purge/Grab

Sample Time: 0815

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
53087-6	3 VOA's	T.P.H gas (8015 Modified)	HCL	Sequoia	
		BTEX (8020)			
		MTBE (8020)			

QUALITY CONTROL SAMPLES

Duplicate Samples	
Original Sample No.	Dupl. Sample No.

Blank Samples	
Type	Sample No.

Other Samples	
Type	Sample No.

Sheet 1 of 1

Project: BPS - City Bus — Job No.: 53087.007
Subject: FIELD INVESTIGATION DAILY REPORT — Date: 5/18/04
Equipment Rental: ____ Company: ____ — To: Dave Navstad
Equipment Hours: ____ F.E. Time from: ____ to: ____ — By: D. Brown

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

0530 Depart Petaluma for Oakland
0640 BPS Oakland Start Water levels
0715 @ MW-6 Measure out Poly Tubing & Remain in Christy Box for Micro Purge
0800 D.O. = 0.44 mg/lt Redox = 115.4 mv
0815 Sample MW-6
Sample # 53087-6 3 VOAs for TPHg, BTEX, MTBE
0840 ICE up Samples
0850 @ MW-5
D.O. = 0.49 mg/lt Redox = -298 mv
Set up Tubing - Tubing is 6' longer than TD. -
0920 Sample MW-5
Sample # 53087-5 6 VOAs for TPHg, BTEX, MTBE
0950 @ MW-3 Ethylene Dichloride
D.O. = 0.45 mg/lt Redox = 189 mv
1025 Sample MW-3
Sample # 53087-3 3 VOAs for TPHg, BTEX, MTBE
1040 @ MW-1
D.O. = 0.42 mg/lt Redox = -309.8 mv
1100 Sample MW1
Sample # 53087-1 6 VOAs for TPHg, BTEX MTBE (EDC)
1150 TRIP
Sample # 53087-7 3 VOAs for TPHg, BTEX, MTBE
1200 Depart S.F.
1255 @ MACTEC Petaluma
1415 Relinquish Samples to Seqouia

DSB
5/18/04

Attachments:

Initial DSB

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		0705	23.64	23.64	Yes	No	Good	Good	4"	
MW-3		0650	22.98	22.98	Yes	No	Good	Good	4"	
MW-5		0700	21.85	21.85	Yes	No	Good	Good	2"	
MW-6		0645	22.87	22.87	Yes	No	Good	Good	2"	
MW-1A		0715	22.05	22.05	Yes	No	Good	Good	4"	
MW-4										

MW-1A 22.0

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

pH: Hanna 902C Serial # DB03

Temperature: " " "

Specific Conductance: YSI 30 Serial # ~~9090~~ 1394

Dissolved Oxygen: Serial 0075

Turbidity: Hach 2100P Serial # 9090