MACTEC

December 15, 2005

Project 4097041918 Task 01

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

Groundwater Remediation and Monitoring Report
Third Quarter 2005
BPS Reprographic Services Facility
1700 Jefferson Street
Oakland, California

Dear Mr. Blain:

MACTEC Engineering and Consulting, Inc., presents this quarterly status letter-report on the groundwater monitoring and remedial activities at the BPS Reprographic Services (BPS) facility located at 1700 Jefferson Street in Oakland, California (Plate 1). Information presented in this letter-report represents groundwater conditions at the subject site during the Third Quarter 2005 (April through June), and was prepared to satisfy the quarterly groundwater monitoring requirements of the Alameda County Department of Health Care Services (ACHCS).

BACKGROUND

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

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

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

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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.

THIRD QUARTER 2005 GROUNDWATER SAMPLING AND ANALYSIS

On September 9, 2005, 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, 2002. After review of the evaluation data and analysis presented in the Second Quarter 2003 Groundwater Monitoring Report, the ACHCS approved non-purge sampling for use at the site in a letter dated February 13, 2004.

Table 1 shows groundwater parameters collected during sampling including DO concentrations. 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 Third Quarter 2005 event, DO was monitored in each well. The DO concentrations ranged from 0.6 mg/L in MW-1 and MW-3 to 1.1 mg/L in MW-6. 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. These measurements are displayed on Plate 2 and tabulated in Table 2. As shown in Table 2, the groundwater surface elevation decreased an average of 0.34 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.

Using the groundwater elevations from MW-1, MW-3, MW-5 and MW-6 as measured on June 23, 2005, groundwater contours were created and are shown on Plate 3. Based on the groundwater elevations, the groundwater gradient is approximately 0.005 ft/ft. The direction of flow appears to be in the Westerly 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 TPH-g, BTEX and MTBE collected through September 29, 1999 are shown on Table 3. Third Quarter 2005 analytical results for TPH-g, BTEX, MTBE and EDC are displayed on Plate 4. Analytical results collected since September 29, 1999 are shown on Table 4 and presented graphically on Plate 5. 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 Appendix A.

DISCUSSION

As shown on Table 4 and Plate 5, Third Quarter 2005 monitoring event concentrations of TPH-g and BTEX appear generally within the wells historical fluctuation ranges respectively. These results are discussed further below.

Significant spikes in TPH-g and BTEX concentrations occurred in MW-1 during the Second Quarter 2003 monitoring event. Since that event concentrations in MW-1 appear to be trending down. Third Quarter 2005 concentration data in MW-1 indicate an overall significant decrease in TPH-g and BTEX concentrations compared to Second Quarter 2005 concentration data.

Significant spikes in TPH-g and TEX concentrations occurred in MW-3 during the Second Quarter 2003 monitoring event and a significant spike in Benzene in MW-3 occurred during the First Quarter 2003 monitoring event. Except for the spike in benzene concentration detected Fourth Quarter 2004, the overall concentrations in MW-3 appear to be trending down since the Second Quarter 2003. However, Third Quarter 2005 analytical results for Benzene in this well indicate the highest Benzene concentration monitored since the First Quarter 1998. Third Quarter 2005 concentration data for TPH-g and TEX in MW-3 indicate moderate increases compared to Second Quarter 2005 data.

Significant spikes in TPH-g and BTEX concentrations occurred in MW-5 during the Third Quarter 2003 monitoring event. Since that event, TPH-g and BTEX concentrations appeared to be trending down until the Third Quarter 2004. The Third Quarter 2004 monitoring data indicated that TPH-g and BTEX concentrations increased significantly and were approaching high concentration levels monitored during the Third Quarter 2003. Third Quarter 2005 concentration data indicate an overall moderate increase in TPH-g and BTEX concentrations compared to Second Quarter 2005 concentration data.

Typically groundwater collected from MW-6 contains no detectable concentrations of TPH-g or BTEX compounds. Third Quarter 2005 monitoring data for MW-6 indicates no concentrations of TPH-g or BTEX compounds were detected in this well. MW-6 will continue to be monitored for these analytes.

The following show the range of monitored data for the Third Quarter 2005 event as shown on Table 4:

TPH-g ranged from non-detectable [with a detection limit of 0.05 mg/L (MW-6)] to 46 mg/l (MW-5). Benzene ranged from non-detectable with a detection limit of 0.5 ug/L (MW-6) to 10,000 ug/L (MW-5). Toluene ranged from non-detectable with a detection limit of 0.5 ug/L (MW-6) to 2,700 ug/L (MW-5). Ethylbenzene ranged from non-detectable with a detection limit of 0.5 ug/L (MW-6) to 1,100 ug/L (MW-5). Total Xylenes ranged from non-detectable with a detection limit of 0.5 ug/L (MW-6) to 2,100

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 1,200 ug/L (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 Third Quarter 2005 event. Concentrations of EDC in MW-1 and MW-5 remain within a similar range as previously detected. EDC was detected in the sample from MW-1 at a concentration of 290 ug/L, a slight increase from last quarter results of 240 ug/L. EDC was detected in MW-5 at a concentration of 300 ug/L, a moderate increase from last quarter results of 190 ug/L.

RECOMMENDATIONS

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

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

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

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

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.

David S. Nanstad, REA
Project Engineer

Henry Lin, PE
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
HSIN-CHIH LIN
No. 24488
CIVIL
STATE OF CALIFORNIA

Exp. Dec. 31, 2005

4 copies submitted

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

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

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

DSN:/Cityblue/3Q05

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[1]	0.6
12/27/2002	0.9	1.0	NA[2]	1.2
4/1/2003	0.3	1.1	NA[2]	NA[1]
7/1/2003	7.7	7.7	NA[2]	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
REDOX (mvolts)				
5/30/2000	-322	197	-128	203
9/15/2000	-269	3	-89	206
11/17/2000	64	178	296	230
4/2/2001	-194	26	-36	102
6/28/2001	-310	-283	-360	107
8/30/2001	NA[1]	NA[1]	NA[1]	NA[1]
12/26/2001	12	11	11	11
4/23/2002	3	62	-299	158
6/14/2002	0	245	-215	254
8/20/2002	-294	-315	-238	228
12/27/2002	-315	-357	NA[2]	-12
4/1/2003[3]	-82	-75	NA[2]	172
7/1/2003[b]	212	230	NA[2]	227
9/24/2003[b]	-166	-300	-183	50
12/29/2003[b]	-329	-198	-269	114
5/18/2004	-309	-189	-248	115
6/30/2004	-270	-343	-165	104
9/23/2004	-314	-284	-162	96
12/28/2004	-303	101	-110	127
3/16/2005	-36	-50	-162	177
6/23/2005	-225	-42	-117	109
9/9/2005	-30	-52	-152	98
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
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

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

pH	MW-1	MW-3	MW-5	MW-6
9/29/1999	8.4	8.5	8.4	8.4
11/22/1999	6.9	8.4	6.8	6.8
2/11/2000	6.8	6.9	6.8	6.7
5/30/2000	7.0	7.4	7.5	7.6
9/15/2000	7.1	7.5	6.8	6.6
11/17/2000	7.4	7.7	7.1	7.3
4/2/2001	7.0	6.6	7.1	7.0
6/28/2001	6.9	6.7	6.8	6.8
8/30/2001	7.9	7.9	7.9	8.4
12/26/2001	6.2	6.9	7.1	6.7
4/23/2002	6.9	7.0	6.9	6.9
6/14/2002	7.1	7.2	7.1	6.9
8/20/2002	NA[1]	6.9	NA[1]	6.9
12/27/2002	6.3	6.4	NA[2]	6.5
4/1/2003[b]	6.9	7.1	NA[2]	6.7
7/1/2003[b]	7.4	7.6	NA[2]	7.7
9/24/2003[b]	7.1	7.3	7.3	7.2
12/29/2003[b]	6.7	6.5	6.8	6.7
5/18/2004	6.7	6.5	6.7	6.5
6/30/2004	6.6	6.6	6.3	NA[1]
9/23/2004	6.7	6.6	6.5	6.5
12/28/2004	6.5	5.3	6.6	6.8
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

Specific Conductance (µS/cm)	MW-1	MW-3	MW-5	MW-6
9/29/1999	976	880	1,577	966
11/22/1999	1,004	1,500	1,352	1,038
2/11/2000	992	1,327	1,275	1,149
5/30/2000	845	1,020	758	924
9/15/2000	800	917	989	1,009
11/17/2000	785	970	742	886
4/2/2001	725	365	839	821
6/28/2001	1080	704	876	1021
8/30/2001	924	1015	975	931
12/26/2001	848	496	333	891
4/23/2002	922	601	848	977
6/14/2002	932	767	810	961
8/20/2002	1015	809	891	985
12/27/2002	956	791	NA[2]	903
4/1/2003[b]	1128	800	NA[2]	1021
7/1/2003[b]	1020	690	NA[2]	970
9/24/2003[b]	951	697	987	890
12/29/2003[b]	1143	396	993	934
5/18/2004	1060	692	922	1037
6/30/2004	1006	725	970	962
9/23/2004	1027	656	966	1007
12/28/2004	875	69	807	873
3/16/2005	899	69	831	872
6/23/2005	799	102	718	814
9/9/2005	852	103	817	881

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

mg/l = milligrams per liter
mvolts = millivolts
deg F = degrees Fahrenheit
µS/cm = micro-ohms per centimeter
NA = Not Available
1 = indicates data not available due to equipment malfunction
2= not available due to ORC socks stuck in well on these dates
a = indicates dissolved oxygen and temperature readings collected on this date above typical range
and should be considered suspect
b = indicates this data collected post purge

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

	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
3/6/1996	NM	--	24.79	6.98	23.53	7.03	NA	--	Quarter
6/11/1996	FP	--	25.60	6.17	23.78	6.78	25.16	6.10	-0.53
9/19/1996	FP	--	26.09	5.68	24.48	6.08	25.76	5.50	-0.60
12/23/1996	FP	--	FP	--	24.83	5.73	25.88	5.38	-0.23
3/27/1997	FP	--	FP	--	23.82	6.74	24.78	6.48	1.06
6/4/1997	26.41	5.95	25.11	6.66	23.92	6.64	24.60	6.66	0.04
9/26/1997	26.80	5.56	25.41	6.36	24.29	6.27	24.80	6.46	-0.32
12/22/1997	26.00	6.36	24.91	6.86	24.02	6.54	24.71	6.55	0.42
3/31/1998	26.06	6.30	24.05	7.72	22.78	7.78	23.75	7.51	0.75
6/18/1998	25.60	6.76	23.71	8.06	22.51	8.05	23.22	8.04	0.40
8/28/1998	25.45	6.91	23.70	8.07	22.74	7.82	22.23	9.03	0.23
12/2/1998	24.92	7.44	23.60	8.17	23.16	7.40	23.72	7.54	-0.32
3/10/1999	24.90	7.46	22.65	9.12	22.82	7.74	23.54	7.72	0.37
6/30/1999	25.53	6.83	23.07	8.70	22.41	8.15	23.04	8.22	-0.04
9/29/1999	24.23	8.13	23.03	8.74	22.81	7.75	23.42	7.84	0.14
11/22/1999	24.33	8.03	23.68	8.09	22.88	7.68	23.64	7.62	-0.26
2/11/2000	24.38	7.98	23.74	8.03	22.74	7.82	23.67	7.59	0.00
5/30/2000	23.57	8.79	22.97	8.80	21.73	8.83	22.82	8.44	0.86
9/15/2000	23.85	8.51	23.12	8.65	22.14	8.42	23.10	8.16	-0.28
11/16/2000	24.14	8.22	23.40	8.37	22.39	8.17	23.41	7.85	-0.28
4/2/2001	23.40	8.96	23.40	8.37	22.07	8.49	23.33	7.93	0.29
6/28/2001	23.58	8.78	23.17	8.60	22.15	8.41	23.15	8.11	0.04
8/30/2001	24.00	8.36	23.35	8.42	22.35	8.21	23.35	7.91	-0.25
12/26/2001	24.18	8.18	23.54	8.23	22.49	8.07	23.27	7.99	-0.11
4/23/2002	NA	NA	22.89	8.88	21.07	9.49	22.89	8.37	0.82
6/14/2002	23.41	8.95	22.85	8.92	21.80	8.76	22.81	8.45	-0.20
8/20/2002	23.85	8.51	23.11	8.66	22.14	8.42	23.15	8.11	-0.31
12/27/2002	24.10	8.26	23.34	8.43	*NA	*NA	23.41	7.85	-0.24
4/1/2003	23.75	8.61	22.90	8.87	*NA	*NA	23.16	8.10	0.35
7/1/2003	23.50	8.86	22.80	8.97	*NA	*NA	22.75	8.51	0.25
9/24/2003	23.82	8.54	23.15	8.62	22.21	8.35	23.16	8.10	-0.27
12/29/2003	24.07	8.29	23.45	8.32	22.56	8.00	23.47	7.79	-0.30
5/18/2004	23.64	8.72	22.98	8.79	21.85	8.71	22.87	8.39	0.55
6/30/2004	23.64	8.72	23.04	8.73	22.00	8.56	22.43	8.83	0.06
9/23/2004	23.98	8.38	23.32	8.45	22.36	8.20	23.30	7.96	-0.46
12/28/2004	24.07	8.29	28.71	3.06**	22.42	8.14	23.42	7.84	-1.42
3/16/2005	23.80	8.56	23.70	8.07	22.11	8.45	23.60	7.66	1.35
6/23/2005	22.90	9.46	22.40	9.37	21.20	9.36	22.27	8.99	1.11
9/9/2005	23.27	9.09	22.63	9.14	21.68	8.88	22.55	8.71	-0.34

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

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	2,900	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(25)	ND(25)	10
MW-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,400	ND(300)	ND(500)	270	NA	ND(50)	ND(50)	ND(50)	ND(25)	ND(25)	NA
MW-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	600	300	ND(100)	ND(500)	ND(1000)	350	ND(10)	ND(50)	ND(50)	ND(50)	ND(25)	ND(100)
MW-6	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

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

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

1 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.

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

		9/29/1999[6]	11/22/1999	2/11/2000	5/30/2000	9/15/2000	11/16/2000	4/2/2001	6/28/2001	8/30/2001	12/26/2001	4/24/2002	6/14/2002	8/20/2002	12/27/2002	4/1/2003	7/1/2003[5]	9/25/2003[5]	12/29/2003[5]	5/18/2004	6/30/2004	9/23/2004	12/28/2004	3/16/2005	6/23/2005	9/9/2005
TPHg (mg/L)																										
	MW-1	14	24	19	19	20	18	19	39	31	34	35	35	26	28	16	61	59	46	23	24	24	22	21	30	7.1
	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	0.97	0.85	3.9
	MW-5	10	30	23	19	24	1.8	15	3.6	34	1.9	9.4	1.7	3.2	*6.2	NA[4]	NA[4]	43	26	15	18	42	41	37	27	46
	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	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	4,500	7,700	7600	6600	4,100	3,500	3,800	3,400	4,100	5,400	840
	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	1.4	56	470
	MW-5	14,000	11,000	12,000	9,900	3,800	470	7,400	300	8,300	300	2,300	110	320	*2200	NA[4]	NA[4]	12,000	7700	5,000	5,700	12,000	10,000	11,000	7,700	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	ND<0.5	ND<0.5	ND<0.5
Toluene (µg/L)																										
	MW-1	5,900	5,000	4,800	8,400	5,700	4,300	5,200	4,200	5,100	5,200	6,000	6,800	4700	5,000	6000	11,000	9400	7900	4,700	3,600	3,900	3,400	4,200	5,500	950
	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	1.8	7.3	100
	MW-5	470	3,400	4,500	6,900	3,000	220	3,000	11	3,000	110	130	ND<2.5	8.6	*140	NA[4]	NA[4]	2800	1900	1,300	1,600	3,900	3,800	3,800	1,700	2,700
	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<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Ethylbenzene (µg/L)																										
	MW-1	620	730	530	730	540	640	570	660	560	630	740	870	620	660	680	1200	1000	960	450	390	470	380	470	520	120
	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	0.66	ND<5	33
	MW-5	1,100	1,500	1,200	1,200	460	39	1000	16	1,400	55	300	7.2	22	*160	NA[4]	NA[4]	1500	910	380	540	1,200	1,000	1,100	680	1,100
	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	ND<0.5	ND<0.5	ND<0.5
Total Xylenes (µg/L)																										
	MW-1	3,500	3,500	2,800	3,500	2,700	3,200	2,600	3,900	2,500	2,400	3,100	3500	2700	3,000	3100	6700	4800	4000	1,500	1,300	1,400	1,400	1,300	1,900	410
	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	2.9	12	96
	MW-5	600	2,500	1,300	2,600	1,200	100	2,200	15	2,600	120	270	ND<2.5	19	*250	NA[4]	NA[4]	3000	210	770	1,200	2,400	2,300	2,400	1,300	2,100
	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	ND<0.5	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	ND<250	ND<1200	ND<250	ND<50	ND<50	[1]ND<25	ND<250	ND<50[1]	ND<1,200	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]	ND<5[1]	ND<2.5[1]	ND<2.5[1]	ND<12	ND<1.0	[1]ND<10	ND<5[1]	ND<2.5	ND<25	ND<62
	MW-5	ND<100	ND<100	6.6	ND<200	ND<10[1,2]	ND<5[1]	ND<50[1]	4.4[1]	ND<50[1]	ND<10[1]	ND<50	ND<0.50[1]	ND<0.50[1]	*ND(25)	NA[4]	NA[4]	ND<1200	ND<2.5[1]	ND<50	ND<50	ND<120	ND<250	ND<120	ND<1,200	ND<1,200
	MW-6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	5[1,3]	17[1]	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5

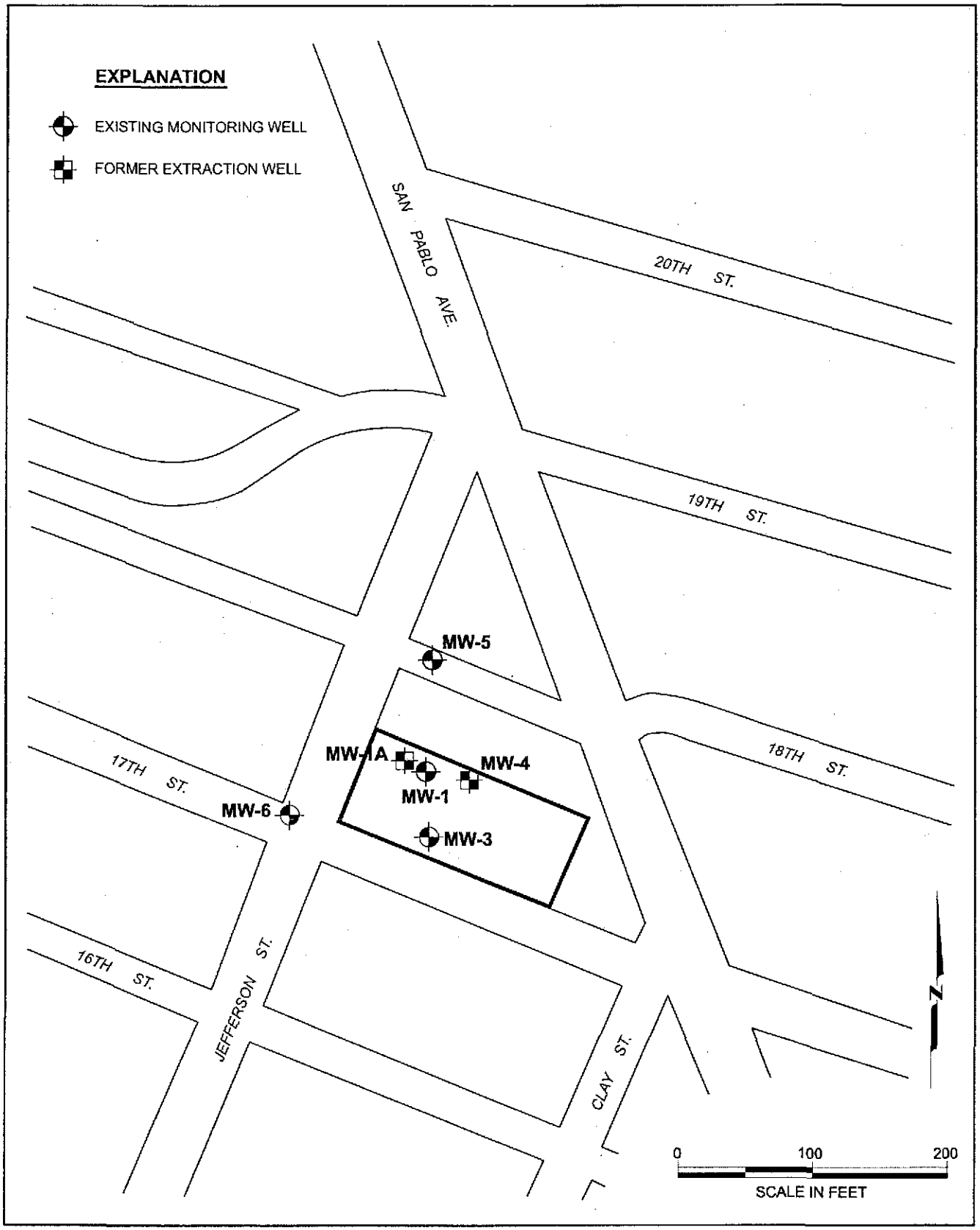
mg/L = milligrams per liter
µg/L = micrograms per liter
ND = Not detected above the reporting limit following the less than sign
NA = Not Available
MTBE = methyl t-butyl ether
1 Result of MTBE confirmation by EPA Method 8260.
2 Reporting limits elevated due to matrix interference.
3 Detection limit = 5 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 without purging (see report for details)
6 A sample was collected on this date both post and pre purge. The sample results collected post purge are shown on Table 3.

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

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

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	[1]6/30/2004	[1]9/23/2004	[1]12/28/2004	[1]3/16/2005	6/23/2005	9/9/2005
MW-1	ND<250	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-3	ND<25	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-5	*ND<100	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-6	ND<1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethyl tert Butyl Ether (µg/L)												
MW-1	ND<250	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-3	ND<25	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-5	*ND<100	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-6	ND<1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Di-isopropyl Ether (µg/L)												
MW-1	ND<250	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-3	ND<25	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-5	*ND<100	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-6	ND<1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
tert Butyl Alcohol (µg/L)												
MW-1	ND<5000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-3	ND<500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-5	*ND<2000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-6	ND<20	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylene Dibromide (µg/L)												
MW-1	ND<120	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-3	ND<12	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-5	*ND<50	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-6	ND<0.5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylene Dichloride (µg/L)												
MW-1	370	ND<120	400	*500	360	320	320	260	180	190	240	290
MW-3	ND<12	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
MW-5	*220	[3]NA	[3]NA	610	410	290	610	670	290	610	190	300
MW-6	ND<0.5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Notes:
Analytes 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
NA = Not Applicable
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 without purging
2= Samples on this date collected post purge
3 = Data from April 1 and July 1, 2003 sampling event not available due to stuck ORC socks obstruckting well (see Report for details).

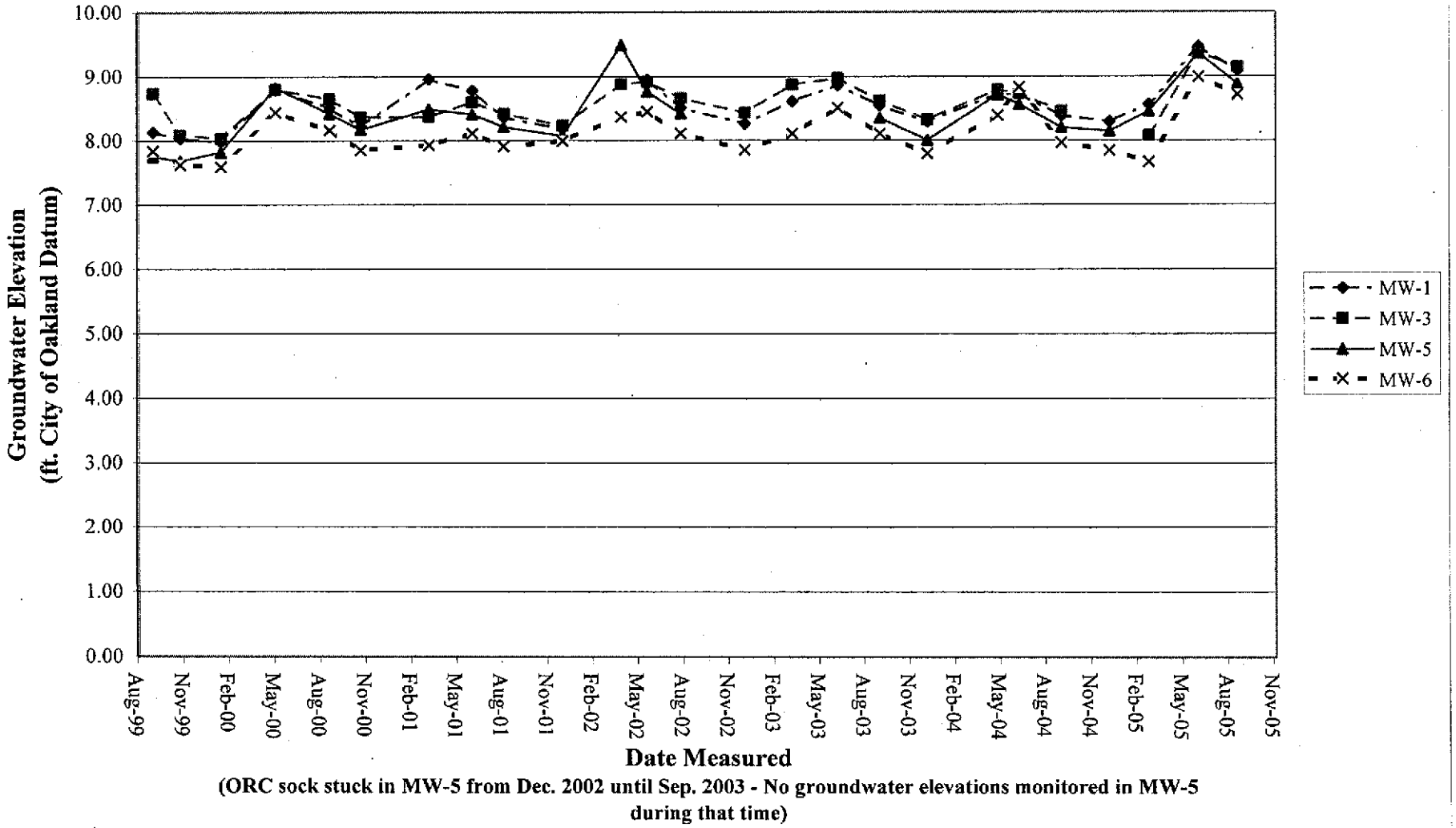


MACTEC

Site Map
Third Quarter 2005
1700 Jefferson Street
BPS Reprographic Services Facility
Oakland, California

PLATE **1**

DRAWN	PROJECT NUMBER	CHECKED	DATE	APPROVED	DATE
CN	4097041918 02	BN	11/05		



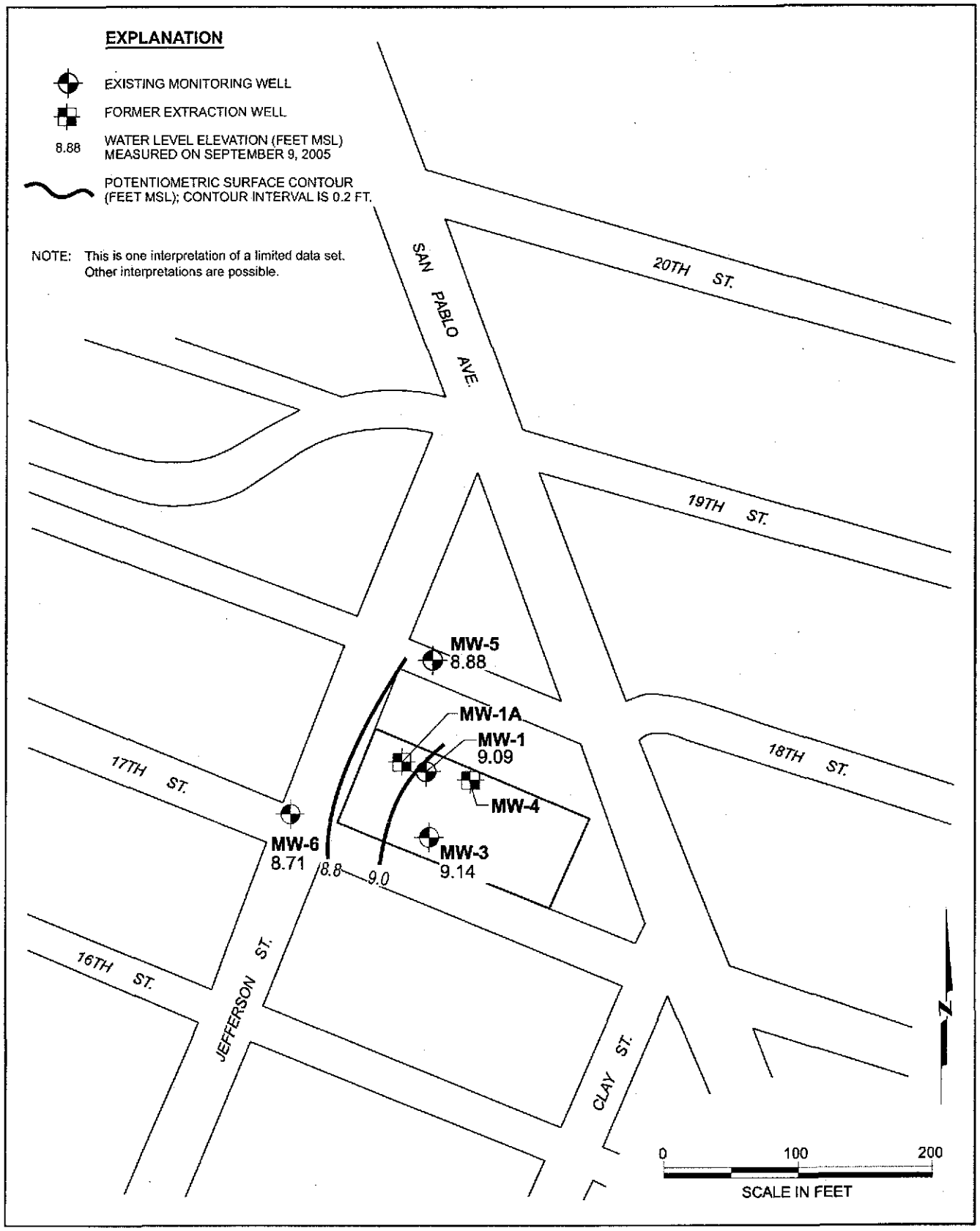
(ORC sock stuck in MW-5 from Dec. 2002 until Sep. 2003 - No groundwater elevations monitored in MW-5 during that time)

MACTEC

Groundwater Elevation Data
Third Quarter 2005
BPS Reprographic Services Facility
1700 Jefferson Steet
Oakland, California

Plate
2

DRAWN	JOB NUMBER	APPROVED	DATE	REVISION DATE
DSN	4097041918		October-05	

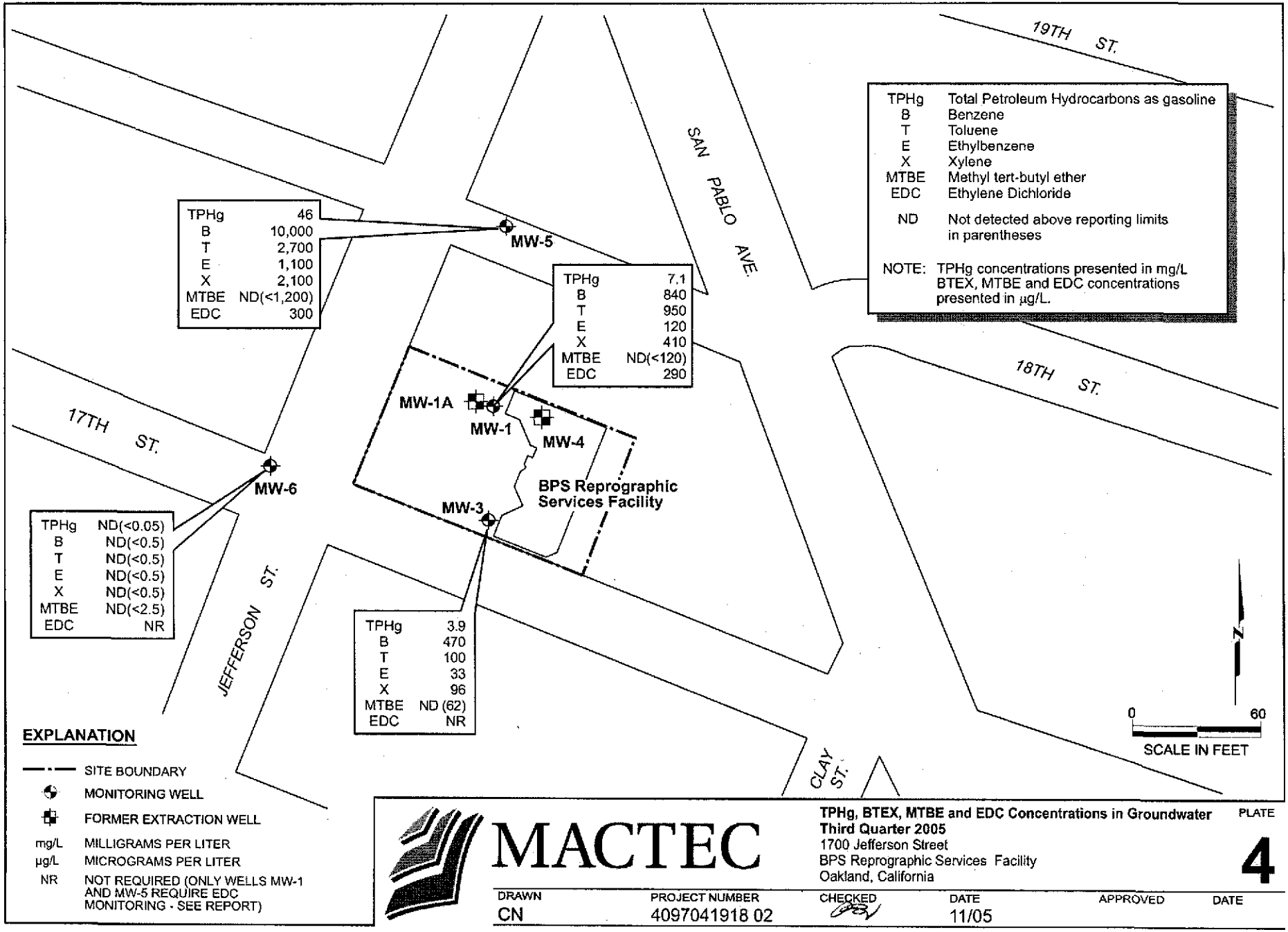


MACTEC

Groundwater Contours
Third Quarter 2005
1700 Jefferson Street
BPS Reprographic Services Facility
Oakland, California

PLATE **3**

DRAWN	PROJECT NUMBER	CHECKED	DATE	APPROVED	DATE
CN	4097041918 02		11/05		



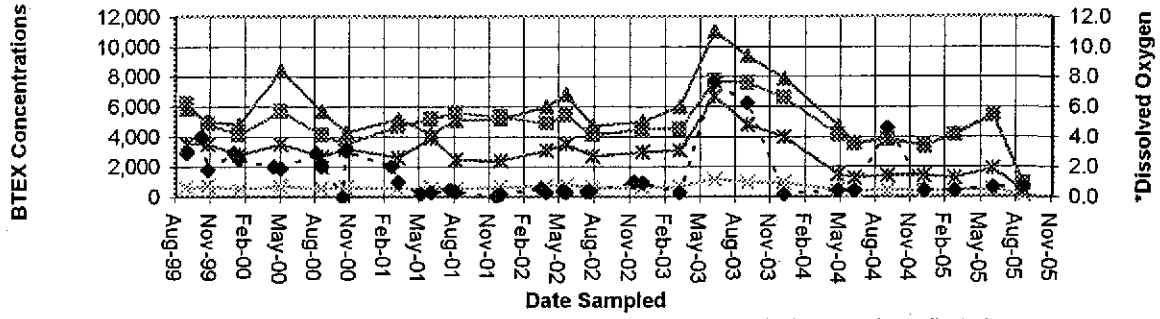
MACTEC

TPHg, BTEX, MTBE and EDC Concentrations in Groundwater
Third Quarter 2005
1700 Jefferson Street
BPS Reprographic Services Facility
Oakland, California

PLATE **4**

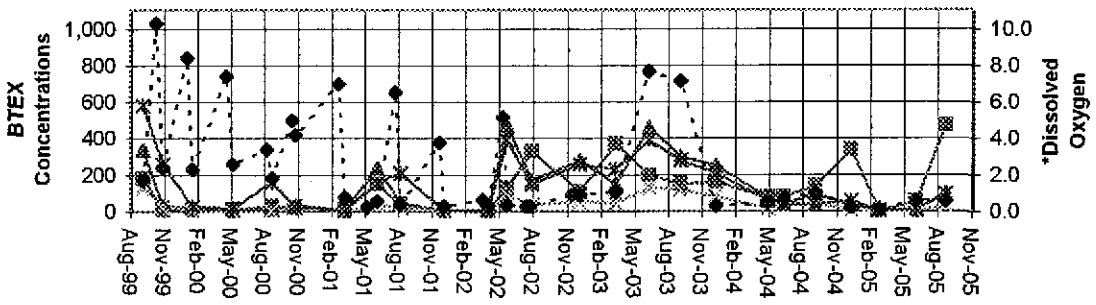
DRAWN	PROJECT NUMBER	CHECKED	DATE	APPROVED	DATE
CN	4097041918 02		11/05		

MW-1



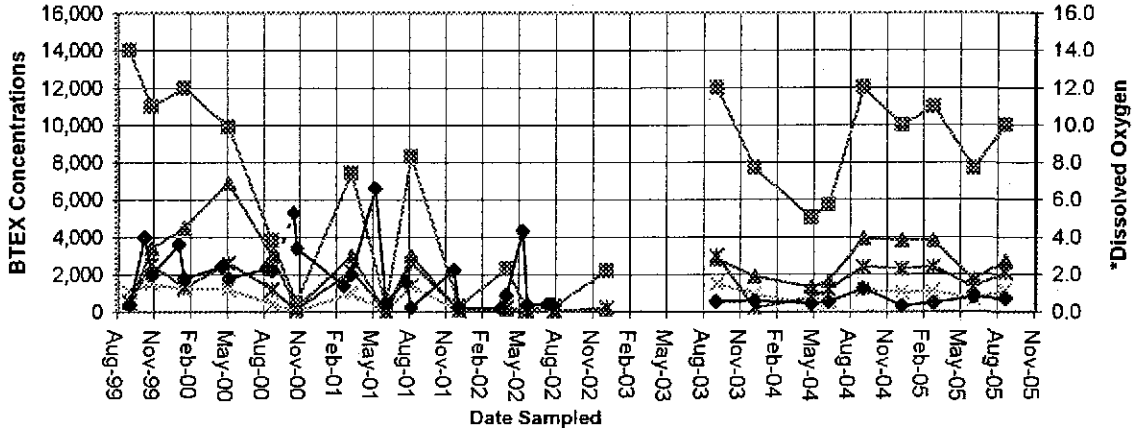
(Samples collected post purge between July 2003 and December 2003, all other samples collected pre-purge. ORC removed after Sept. 2002.)

MW-3



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

MW-5



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

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

MACTEC

BTEX and DO Results
Third Quarter 2005
BPS Reprographic Services Facility
1700 Jefferson Steet
Oakland, California

Plate
5

Drawn by	JOB NUMBER	APPROVED	DATE	REVISION DATE
DSN	4097041918		Oct-05	

APPENDIX A

LABORATORY REPORTS

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

Well/Sample Number	Sample ID
MW-1	05364097-1
MW-3	05364097-2
MW-5	05364097-3
MW-6	05364097-4
Trip Blank	05364097-5

Sequoia
Analytical

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

September 28 , 2005

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

RE: BPS City Blue
Work Order: MOI0382

Enclosed are the results of analyses for samples received by the laboratory on 09/10/05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race
Senior Project Manager

CA ELAP Certificate Number 1210

Sequoia Analytical

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MACTEC Engineering & Consulting [Petaluma]	Project: BPS City Blue	MOI0382
5341 Old Redwood Highway, Suite 300	Project Number: 4097041918.01	**Reported:**
Petaluma CA, 94954	Project Manager: David Nanstad	09/28/05 11:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
05364097-4	MOI0382-01	Water	09/09/05 08:00	09/10/05 08:30
05364097-2	MOI0382-02	Water	09/09/05 08:45	09/10/05 08:30
05364097-3	MOI0382-03	Water	09/09/05 10:15	09/10/05 08:30
05364097-1	MOI0382-04	Water	09/09/05 09:30	09/10/05 08:30
05364097-5	MOI0382-05	Water	09/09/05 10:00	09/10/05 08:30

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MACTEC Engineering & Consulting [Petaluma]	Project: BPS City Blue	MOI0382
5341 Old Redwood Highway, Suite 300	Project Number: 4097041918.01	**Reported:**
Petaluma CA, 94954	Project Manager: David Nanstad	09/28/05 11:27

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
05364097-4 (MOI0382-01) Water Sampled: 09/09/05 08:00 Received: 09/10/05 08:30									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	5I21027	09/21/05	09/22/05	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		*106 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*80-120*		"	"	"	"	
05364097-2 (MOI0382-02) Water Sampled: 09/09/05 08:45 Received: 09/10/05 08:30									
Gasoline Range Organics (C4-C12)	**3900**	1200	ug/l	25	5I21027	09/21/05	09/21/05	EPA 8015B/8021B	
Benzene	**470**	12	"	"	"	"	"	"	
Toluene	**100**	12	"	"	"	"	"	"	
Ethylbenzene	**33**	12	"	"	"	"	"	"	
Xylenes (total)	**96**	12	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	62	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*94 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*80-120*		"	"	"	"	
05364097-3 (MOI0382-03) Water Sampled: 09/09/05 10:15 Received: 09/10/05 08:30									
Gasoline Range Organics (C4-C12)	**46000**	25000	ug/l	500	5I21027	09/21/05	09/21/05	EPA 8015B/8021B	
Benzene	**10000**	250	"	"	"	"	"	"	
Toluene	**2700**	250	"	"	"	"	"	"	
Ethylbenzene	**1100**	250	"	"	"	"	"	"	
Xylenes (total)	**2100**	250	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*100 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*80-120*		"	"	"	"	

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MACTEC Engineering & Consulting [Petaluma]	Project: BPS City Blue	MOI0382
5341 Old Redwood Highway, Suite 300	Project Number: 4097041918.01	**Reported:**
Petaluma CA, 94954	Project Manager: David Nanstad	09/28/05 11:27

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
05364097-1 (MOI0382-04) Water Sampled: 09/09/05 09:30 Received: 09/10/05 08:30									
Gasoline Range Organics (C4-C12)	**7100**	2500	ug/l	50	5I21027	09/21/05	09/21/05	EPA 8015B/8021B	
Benzene	**840**	25	"	"	"	"	"	"	
Toluene	**950**	25	"	"	"	"	"	"	
Ethylbenzene	**120**	25	"	"	"	"	"	"	
Xylenes (total)	**410**	25	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	120	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*96 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		"	"	"	"	
05364097-5 (MOI0382-05) Water Sampled: 09/09/05 10:00 Received: 09/10/05 08:30									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	5I21027	09/21/05	09/22/05	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		*105 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		"	"	"	"	

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MACTEC Engineering & Consulting [Petaluma]	Project: BPS City Blue	MOI0382
5341 Old Redwood Highway, Suite 300	Project Number: 4097041918.01	**Reported:**
Petaluma CA, 94954	Project Manager: David Nanstad	09/28/05 11:27

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
05364097-3 (MOI0382-03) Water	**Sampled: 09/09/05 10:15**		**Received: 09/10/05 08:30**						
1,2-Dichloroethane	**300**	100	ug/l	200	5I22002	09/22/05	09/22/05	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*114 %*	*60-135*		"	"	"	"	
05364097-1 (MOI0382-04) Water	**Sampled: 09/09/05 09:30**		**Received: 09/10/05 08:30**						
1,2-Dichloroethane	**290**	10	ug/l	20	5I22002	09/22/05	09/22/05	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*128 %*	*60-135*		"	"	"	"	

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MACTEC Engineering & Consulting [Petaluma]	Project: BPS City Blue	MOI0382
5341 Old Redwood Highway, Suite 300	Project Number: 4097041918.01	**Reported:**
Petaluma CA, 94954	Project Manager: David Nanstad	09/28/05 11:27

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5I21027 - EPA 5030B [P/T] / EPA 8015B/8021B										
Blank (5I21027-BLK1)				Prepared & Analyzed: 09/21/05						
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	*41.2*		"	*40.0*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*44.4*		"	*40.0*		*111*	*80-120*			
Laboratory Control Sample (5I21027-BS1)				Prepared & Analyzed: 09/21/05						
Gasoline Range Organics (C4-C12)	271	50	ug/l	275		99	55-130			
Benzene	3.66	0.50	"	4.10		89	75-150			
Toluene	20.6	0.50	"	20.7		100	80-115			
Ethylbenzene	4.08	0.50	"	4.85		84	75-115			
Xylenes (total)	22.8	0.50	"	23.8		96	75-115			
Surrogate: a,a,a-Trifluorotoluene	*40.8*		"	*40.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*46.5*		"	*40.0*		*116*	*80-120*			
Matrix Spike (5I21027-MS1)	**Source: MOI0499-01**			Prepared & Analyzed: 09/21/05						
Gasoline Range Organics (C4-C12)	236	50	ug/l	275	ND	86	55-130			
Benzene	3.25	0.50	"	4.10	ND	79	75-150			
Toluene	19.6	0.50	"	20.7	ND	95	80-115			
Ethylbenzene	3.89	0.50	"	4.85	ND	80	75-115			
Xylenes (total)	22.0	0.50	"	23.8	ND	92	75-115			
Surrogate: a,a,a-Trifluorotoluene	*42.3*		"	*40.0*		*106*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*45.5*		"	*40.0*		*114*	*80-120*			
Matrix Spike Dup (5I21027-MSD1)	**Source: MOI0499-01**			Prepared & Analyzed: 09/21/05						
Gasoline Range Organics (C4-C12)	223	50	ug/l	275	ND	81	55-130	6	35	
Benzene	3.13	0.50	"	4.10	ND	76	75-150	4	25	
Toluene	16.9	0.50	"	20.7	ND	82	80-115	15	25	
Ethylbenzene	3.32	0.50	"	4.85	ND	68	75-115	16	25	QM02
Xylenes (total)	19.0	0.50	"	23.8	ND	80	75-115	15	25	
Surrogate: a,a,a-Trifluorotoluene	*39.2*		"	*40.0*		*98*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*46.8*		"	*40.0*		*117*	*80-120*			

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MACTEC Engineering & Consulting [Petaluma]	Project: BPS City Blue	MOI0382
5341 Old Redwood Highway, Suite 300	Project Number: 4097041918.01	**Reported:**
Petaluma CA, 94954	Project Manager: David Nanstad	09/28/05 11:27

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5I22002 - EPA 5030B P/T / EPA 8260B										
Blank (5I22002-BLK1)				Prepared & Analyzed: 09/22/05						
1,2-Dichloroethane	ND	0.50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	*5.13*		"	*5.00*		*103*	*60-135*			
Blank (5I22002-BLK2)				Prepared & Analyzed: 09/22/05						
1,2-Dichloroethane	ND	0.50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	*5.71*		"	*5.00*		*114*	*60-135*			
Laboratory Control Sample (5I22002-BS1)				Prepared & Analyzed: 09/22/05						
1,2-Dichloroethane	16.0	0.50	ug/l	14.7		109	85-130			
Surrogate: 1,2-Dichloroethane-d4	*5.25*		"	*5.00*		*105*	*60-135*			
Laboratory Control Sample (5I22002-BS2)				Prepared & Analyzed: 09/22/05						
1,2-Dichloroethane	17.2	0.50	ug/l	14.7		117	85-130			
Surrogate: 1,2-Dichloroethane-d4	*5.50*		"	*5.00*		*110*	*60-135*			
Matrix Spike (5I22002-MS1)	**Source: MOI0432-18**			Prepared & Analyzed: 09/22/05						
1,2-Dichloroethane	95.6	2.5	ug/l	73.6	1.0	129	85-130			
Surrogate: 1,2-Dichloroethane-d4	*5.62*		"	*5.00*		*112*	*60-135*			
Matrix Spike Dup (5I22002-MSD1)	**Source: MOI0432-18**			Prepared & Analyzed: 09/22/05						
1,2-Dichloroethane	88.1	2.5	ug/l	73.6	1.0	118	85-130	8	20	
Surrogate: 1,2-Dichloroethane-d4	*5.60*		"	*5.00*		*112*	*60-135*			

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MACTEC Engineering & Consulting [Petaluma]	Project: BPS City Blue	MOI0382
5341 Old Redwood Highway, Suite 300	Project Number: 4097041918.01	**Reported:**
Petaluma CA, 94954	Project Manager: David Nanstad	09/28/05 11:27

Notes and Definitions

QM02	The spike recovery was below control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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

CHAIN OF CUSTODY FORM

Seq. No.: № 1121

Samplers: C. Simpson (CCS)

Lab: Seq.

Job Number: 4097041918.01

Name/Location: BPS City Blue — MOI0382

Project Manager: D. Nanstad

Recorder: (Signature Required)

Matrix: Water	Soil	Air	Unpres.	H2SO4	HNO3	HCL	Sample Number YR	SEQ	Date YR	MO	DAY	TIME	Station Description	Depth	TPH-g 8015	BTEX 8020	MTBE 8020*	Ethylene Dichloride
X						3	05	364097-4	05	09	09	0800	MW-6	01	X	X	X	
X						3	05	364097-2	05	09	09	0845	MW-3	02	X	X	X	
X						5	05	364097-3	05	09	09	1015	MW-5	03	X	X	X	X
X						5	05	364097-1	05	09	09	0930	MW-1	04	X	X	X	X
X						3	05	364097-5	05	09	09	1000	TB	05	X	X	X	

ADDITIONAL INFORMATION

Sample Number YR	SEQ	Turnaround Time/ Remarks
		Standard TAT
		* MTBE confirmed using EPA 8260

CHAIN OF CUSTODY RECORD

	Signature	Print Name	Company	Date/Time
Relinquished By	[signature]	Chad Simpson	Mactec	9/9/05 / 1400
Received By	[signature]	GAIL HERRMANN	Sequoia	9/9/05 / 1400
Relinquished By	[signature]	E. Fallin	SA	9/10/05 830
Received By				
Relinquished By				
Received By				

Method of Shipment:

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Mactec
REC. BY (PRINT): E. Fallin
WORKORDER: 4104.0382

DATE REC'D AT LAB: 9/10/05
TIME REC'D AT LAB: 930
DATE LOGGED IN: 9-13-05

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

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / Absent	01	A-C	053640974	VOA(3)	HCl	—	L	9-9-05	
Intact / Broken*	02	L	-2	↓	↓	↓	↓	↓	
2. Chain-of-Custody Present / Absent*	03	A-E	-3	VOA(5)					
3. Traffic Reports or	04	L	-1	↓					
Packing List: Present / Absent	05	A-C	-5	VOA(3)	↓	↓	↓	↓	
4. Airbill: Airbill / Sticker									
Present / Absent									
5. Airbill #: CON 010010066772 009									
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: 5.1 °C									
Corrected Temp: 5.1 °C									
Is corrected temp 4 +/-2°C? Yes / No**									

(Acceptance range for samples requiring thermal pres.)

**Exception (if any): METALS / DFF ON ICE or Problem COC

DFF 9/10/05

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

APPENDIX B

GROUNDWATER SAMPLING FORM

Sheet 1 of 1

Project: BPS - City Blue
Subject: FIELD INVESTIGATION DAILY REPORT
Equipment Rental: N/A Company: Mactec
Equipment Hours: N/A F.E. Time from: _____ to: _____
Job No.: 409704918.01
Date: 9/9/05
To: D. Nanstad
By: C Simpson

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

0530 Depart Suisun city, Ca for Oakland, Ca
0700 Arrive BPS City Blue
0710 Calibrate Meters:
DO YSI 55 SN# 01008073 to elevation 0
PH, Cond, Temp YSI 63 SN # 00M0186 at 7.00 / 4.00 standard
Turbidity SN# 92050000 1210
0-10 = 5.08 10-100 = 50.8 100-1000 = 555

0730 MW-6 WL = 22.55 DO = 1.09 Redox = 98
no tubing in well casing will use Bailer to purge / sample.
added rubber expansion plug to PVC
0800 sampled MW-6
05364097-4 3 VOAs w/ HCl
0815 MW-3 WL = 22.63 DO = .55 Redox = -51.8
Tubing cracked and broken - used disposable Bailer
0845 sampled MW-3
05364097-2 3 VOAs w/ HCl
0910 MW-1 WL = 23.27 DO = .59 Redox = -29.7
0930 Sampled MW-1
05364097-1 5 VOAs
0940 MW-1A WL = 21.73
0950 MW-5 WL = 21.68 DO = .67 Redox = -152.1
1000 start micro purge
1015 Sampled MW-5
05364097-3 5 VOAs
1400 Sequoia dropped off Samplers - for Tuesday

Attachments:

Initial

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	9/9/05	0910	23.27	23.27	Y	N	ok	ok	4"	Remove tubing - old - need new
MW-3	9/9/05	0915	22.63	22.63	Y	N	ok	ok	4"	Remove Tubing - Broken / cracked.
MW-5	9/9/05	1000	21.68	21.68	Y	N	ok	ok	2"	
MW-6	9/9/05	0730	22.55	22.55	N	N	ok	ok	2"	added 2" rubber expansion plug.
MW-1A	9/9/05	0940	21.73	21.73	Y	N	ok	ok	4"	Debris in well.
MW-4	not able to locate / Boxes in the wall									

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

pH: 00M0166 SN # ~~0100873~~

Temperature:

Specific Conductance:

Dissolved Oxygen: 0100873

Turbidity: 9205000001210

MACTEC

GROUNDWATER SAMPLING FORM

Well Number: MW-3

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

Job Name: City Blue

Job Number: 4097041918

Date: 9/9/05

Recorded By: CWS (Signature)

Sampled By: CCS (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): 22.63
No. of Well Volumes to be purged (# V: 3

PURGE METHOD

☒ ~~Bailer - Type: P.V.C.~~ Bailer
☐ Submersible - Type:
☒ ~~Other - Type:~~ Micro Purge

PUMP INTAKE SETTING

☐ Near Bottom ☐ Near Top
☐ Other
Depth in feet (BTOC):
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. ☒ °C ☐ °F	Turbidity (NTU)
Initial	5.99	97	20.9	19.2
1 ct	6.13	102.6	21.3	28.6
Meter S/N				

PURGE TIME
Purge Start: 0830
Purge Stop: 0845
Elapsed: 05

PURGE RATE
GPM: -
GPM: -

PURGE VOLUME
Volume: 1 ct gallons
D.O. .55 Redox -51.8

Observations During Purging (Well Condition, Color, Odor): Tubing Bent and cracked - hand Bailed w/ Disposable Bailer.

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

WELL SAMPLING

☒ Bailer - Type: ~~Grab~~ Disposable Bailer

Sample Time: 0845

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
05364097-2	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: 4097041918

Recorded By: CJ (Signature)

Date: 9/9/05

Sampled By: CCS (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): 21.69
No. of Well Volumes to be purged (# V 3

PURGE METHOD

[X] Bailer - Type: P.V.C.
[ ] Submersible - Type:
[X] 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):
Screen Interval in feet (BTOC): from _____ to ____

Field Parameter Measurement

Minutes	pH	Conductivity (µS)	Temp. [X] °C [ ] °F	Turbidity (NTU)
Initial	5.98	821	20.9	6.78
1CV	6.14	817	21.0	8.0
Meter S/N				

PURGE TIME

Purge Start: 1000
Purge Stop: 1010
Elapsed: 10

PURGE RATE

GPM: _____
GPM: _____

PURGE VOLUME

Volume: 1CV gallons

D.O. .67 Redox -152.1

Observations During Purging (Well Condition, Color, Odor):
Slight odor - yellowish tint

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

WELL SAMPLING

[X] Bailer - Type: Grab

Sample Time: 1015

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
05364097-3	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-1

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

Job Name: City Blue

Job Number: 4097041918

Recorded By: CWJ (Signature)

Date: 9/ 9 /05

Sampled By: CCS (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): 23.27
No. of Well Volumes to be purged (# V 3

PURGE METHOD

☒ Bailer - Type: P.V.C.
☐ Submersible - Type: _____
☐ Other - Type: _____

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

Field Parameter Measurement

Minutes	pH	Conductivity (µS)	Temp. ☒ °C ☐ °F	Turbidity (NTU)
Initial	6.27	810	21.2	24.7
1Ct.	6.47	852	21.6	13.6
Meter S/N				

PURGE TIME

Purge Start: 0920
Purge Stop: 0925
Elapsed: 05

PURGE RATE

GPM: —
GPM: —

PURGE VOLUME

Volume: 1Ct gallons

D.O. .59 Redox -29.7

Observations During Purging (Well Condition, Color, Odor): Slight oder - yellow tint

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

WELL SAMPLING

☒ Bailer - Type: ~~Grab~~ Bailer

Sample Time: 0930

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
05364097-1	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.

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: 4097041918

Date: 09/ 09 /05

Recorded By: CWS (Signature)

Sampled By: CCS (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): 22.55
No. of Well Volumes to be purged (# V 3

PURGE METHOD

[X] ~~Bailer - Type: P.V.C.~~ Bailer
[ ] Submersible - Type:
[X] ~~Other - Type: Mi'ero Purge~~

PUMP INTAKE SETTING

[ ] Near Bottom [ ] Near Top
[ ] Other
Depth in feet (BTOC):
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	6.46	862	21.6	101.6
1 Ct.	6.99	881	21.7	98.7
Meter S/N				

PURGE TIME

Purge Start: 0745
Purge Stop: 0750
Elapsed: 05

PURGE RATE

GPM: —
GPM: —

PURGE VOLUME

Volume: 1 Ct gallons
D.O. 1.09 Redox 98

Observations During Purging (Well Condition, Color, Odor):
Dedicated tubing missing
added rubber plug to PVC

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

WELL SAMPLING

[X] Bailer - Type: Grab - Bailer Sample Time: 0800

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
05364097-4	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.