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

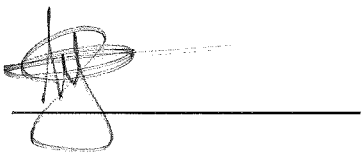
Re: BPS Reprographics (Formerly City Blue Print)
RWQCB Case #01-0210
1700 Jefferson St
Oakland CA, 94612

Dear Barbara Jakub,

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

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

Sincerely,



Authorized Representative

Attachment: Report

Harding ESE
A MACTEC COMPANY

Harding ESE, Inc.
28 Second Street
Suite 700
San Francisco, CA 94105
Telephone: 415/543-8422
Fax: 415/777-9706
Home Page: www.mactec.com

February 14, 2001 2002

Project 53087.1

Mr. Jeff Christoff
Blue Print Service Company
149 Second Street
San Francisco, California 94105

Quarterly Groundwater Remediation and Monitoring Report
October 1 through December 31, 2001
BPS Reprographic Services Facility
1700 Jefferson Street
Oakland, California

Dear Mr. Christoff:

Harding ESE, Inc, (Harding) 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 (see Plate 1). This letter-report covers the period from October 1 through December 31, 2001, and was prepared to satisfy the quarterly groundwater monitoring requirements of the Alameda County Department of Environmental Health Services (County).

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 indicated that the local groundwater gradient was in a north to northwest direction.

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. Harding 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 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 Harding requested approval from The County to terminate groundwater extraction and to modify the remediation technique to insitu-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 County 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.

Harding implemented the *in situ* remediation 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. Harding installed five socks in each treatment well at the approximate depth of the well's screened interval. 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 Harding's quarterly report, dated October 25, 1999).

FOURTH QUARTER 2001 GROUNDWATER SAMPLING AND ANALYSIS

In accordance with the Groundwater Monitoring Plan, Harding removed the ORC™ socks approximately two weeks before the scheduled sampling event from Wells MW-3 and MW-5 on December 14, 2001. The dissolved oxygen was measured in-situ in wells MW-3, MW-5, MW-1 and MW-6. The DO measurements are presented in Table 1.

On December 26, 2001, Harding conducted the quarterly groundwater sampling of wells MW-1, MW-3, MW-5, and MW-6 using the non-purge method outlined in the Groundwater Monitoring Plan. Prior to sampling, Harding measured the depth to groundwater from the top of casing (TOC) of each well using an electronic water level indicator. These measurements are displayed on Plate 2 and tabulated in Table

2. To collect the groundwater samples, Harding raised dedicated Teflon tubing contained in each well until the end of the tubing was 2 to 4 feet below the groundwater surface and connected the tubing to a peristaltic pump with silicon tubing. New silicon tubing was used to sample each well. After removing the approximate volume of groundwater equal to the volume capacity of the Teflon tubing, Harding measured the groundwater's conductivity, pH, DO, and temperature and collected a sample in laboratory provided 40-milliliter vials. The groundwater parameter measurements are also presented in Table 1.

Immediately after sample collection, Harding 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, 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.

The analytical results are displayed on Plates 3 and 4. The laboratory reports are presented in the Appendix.

Upon completion of the groundwater sampling, Harding installed 5 new ORC™ socks in well MW-1A. Harding reinstalled the ORC™ socks in treatment wells MW-3 and 5 and left the ORC™ socks in MW-4 undisturbed where they will remain until the next quarterly monitoring event. Presently, the ORC™ socks are replaced in the treatment wells on six-month intervals.

DISCUSSION

As shown in Table 2 and on Plate 5, the groundwater surface elevation decreased an average of 0.11 feet across the site as compared to last quarter's measurements. Using the groundwater elevations from MW-1, MW-3, MW-5, and MW-6 as measured on December 26, 2001, groundwater contours were created and are shown on Plate 2. Based on the groundwater elevations, the groundwater gradient ranges from 0.001 to 0.002 ft/ft from the west to southwest. At the time MW-5 was constructed, the groundwater flow direction was reportedly north to northwest, and MW-5 was considered a downgradient well. However, presumably because of the construction of new buildings in the immediate vicinity, which extend below the groundwater surface, recent groundwater monitoring has indicated the groundwater flow has been in a west to southwest direction.

Table 3 displays a summary of historical groundwater sample results through September 29, 1999, when the typical purge and sample protocol was terminated. Table 4 displays historical groundwater sample

results since instituting *in situ* bioremediation and a non-purge sampling protocol. Plate 3 and Plate 4 present the sample results from this quarter's sampling event.

As shown on Table 4 and Plate 3, concentrations of TPH-g, Benzene, Ethylbenzene and MTBE remained within the range of historical values for all the wells sampled. However, the groundwater sample collected from MW-6 contained the first detectable concentration of TPH-g at 0.066 mg/L (detection limit 0.05 mg/L) and Benzene at 3.6 µg/L (detection limit 0.50 µg/L) since monitoring of this well began in August, 1991. The remaining analytical results are as follows:

- Concentrations of Toluene remained within the range of historical concentrations for MW-1 and MW-5. However, MW-6 contained a historically high level of Toluene at 3.6 µg/L (detection limit 0.5 µg/L) and MW-3 contained a historically low concentration of Toluene at 5.2 µg/L.

- Concentrations of Xylenes remained within the range of historical concentrations for MW-1 and MW-5. However, MW-6 contained a historically high level of Xylene at 8.7 µg/L (detection limit 0.5 µg/L) and MW-3 contained a historically low concentration of Xylene at 7 µg/L.

A laboratory provided trip blank consisting of organic free water was transported to and from the sampling site with the samples described above. The trip blank was analyzed for TPH-g, BTEX and MTBE with the groundwater samples using EPA Method 8015M/8020M. The trip blank was found to be free of contamination, with the following exceptions:

TPH as Gasoline by EPA Test Method 8015B:

Gasoline was detected in trip blank 0153087-5 at a concentration of 82 µg/L. According to the EPA *National Functional Guidelines for Organic Data Review, October 1999 (*EPA), detected compounds in associated samples at levels less than five times the amount detected in the blank should be qualified as non-detected. As a result the TPH-g concentration detected in MW-6 should be considered non-detect for gasoline with an elevated reporting limit.

BTEX by EPA Test Method 8020:

Benzene, Toluene and Xylenes were reported in trip blank 0153087-5 at concentrations of 1.7, 1.7 and 0.74 µg/L respectively. Since the reported concentrations of Benzene and Toluene in the groundwater sample from MW-6 are above five times the corresponding amounts detected in the trip blank, they should be considered non-detect for Benzene and Toluene with an elevated reporting limit.

As described above the concentrations of TPH-g and Benzene detected in the ground water sample from MW-6 should be considered non-detectable with elevated detection limits. Historically, groundwater from MW-6 has not contained detectable amounts of TPH-g or BTEX. MW-6 will be sampled next quarter (First Quarter 2002) and analyzed for the same set of analytes as described in this report. At that time the analytical results from MW-6 will be examined for the presence of contaminants of concern to confirm that MW-6 does not contain detectable amounts of TPH-g or BTEX.

Possible explanations for the presence of TPH-g, Benzene, Toluene and Xylenes in the trip blank include the following:

- Use of a laboratory supplied cooler containing traces of hydrocarbon contaminant (possibly from a broken sample bottle previously transported in the cooler)
- Contaminated laboratory trip blank water
- Contamination of the sample in the laboratory

Harding will institute protocol to ensure the use of decontaminated coolers and initiate a dialog with the laboratory regarding the quality of their trip blank water. The most likely explanation is contamination of the trip blank water by the presence of residual concentrations of TPH-g, Benzene, Toluene and Xylenes (analytes of concern) in the laboratories analytical equipment. The groundwater sample from MW-1 contained elevated concentrations of the analytes of concern and was analyzed in the laboratory equipment immediately prior to analysis of the trip blank. This suggests that the laboratory analytical equipment contaminated the trip blank with residual concentrations of the analytes of concern left over in the analytical equipment from the MW-1 groundwater sample. A discussion with the laboratory's project manager for this project confirms this explanation.

The DO content in the groundwater in wells MW-3 and MW-5 immediately following the removal of the ORC™ socks were 3.8 and 1.6 milligrams per liter (mg/l) respectively. The DO content in both wells significantly declined in the two week period following removal of the ORC™ socks (from 3.8 to 0.3 mg/L in well MW-3 and from 2.2 to 0.2 in well MW-5), which suggests that a healthy population of hydrocarbon reducing microbes are present.

RECOMMENDATIONS

Harding recommends continued quarterly monitoring utilizing the procedures outlined in our Groundwater Monitoring Plan. ORC™ socks will continue to be replaced on six-month intervals to promote continued biodegradation of the residual petroleum hydrocarbons. Based on this interval, Harding will replace the ORC™ socks in MW-1A and MW-4 next quarter.

Harding 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, Harding 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,

HARDING LAWSON ASSOCIATES

David S. Nanstad
Project Engineer

Luis A. Fraticelli, R.G.
Associate Geologist

DSN Novmain:/Cityblue/1q01

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 – Non-Purge Method
Plate 1 – Site Map
Plate 2 – Groundwater Contours, December 26, 2001
Plate 3 – TPH-g, BTEX and MTBE Concentrations in Groundwater, December 26, 2001
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

TABLES

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

Dissolved Oxygen (mg/l)	MW-1	MW-3	MW-5	MW-6
9/29/1999	2.9	1.7	0.4	1.8
11/5/1999	4.0	10.3	4.0	2.8
11/22/1999	1.8	2.4	2.0	3.2
1/28/2000	2.9	8.4	3.6	2.2
2/11/2000	2.5	2.3	1.8	3.5
5/12/2000	2.0	7.4	2.4	1.7
5/30/2000	1.9	2.6	1.8	3.2
9/1/2000	2.9	3.4	2.3	2.7
9/15/2000	2.0	1.8	2.2	3.8
11/9/2000	--	5.0	5.3	--
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	0.03	3.8	2.2	0.2
12/26/2001	0.16	0.3	0.2	0.2
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
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
pH				
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
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

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

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 Sampled	Water Level	Water Elevation	Water Level	Water Elevation	Water Level	Water Elevation	Water Level	Water Elevation	Since 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

TOC Elev. = top of casing elevation
NM = not monitored
FP = free product
-- = no data collected
NA = not available (MW-6 had not been installed yet)

Table 3. Historical Groundwater Monit. Analytical Results - Using Purge Method
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	#########	3/6/1996	6/11/1996	9/19/1996	#########	3/27/1997	6/4/1997	9/26/1997	########	3/31/1998	6/18/1998	8/28/1998	12/2/1998	3/10/1999	6/30/1999	9/29/1999
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(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 other
(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

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

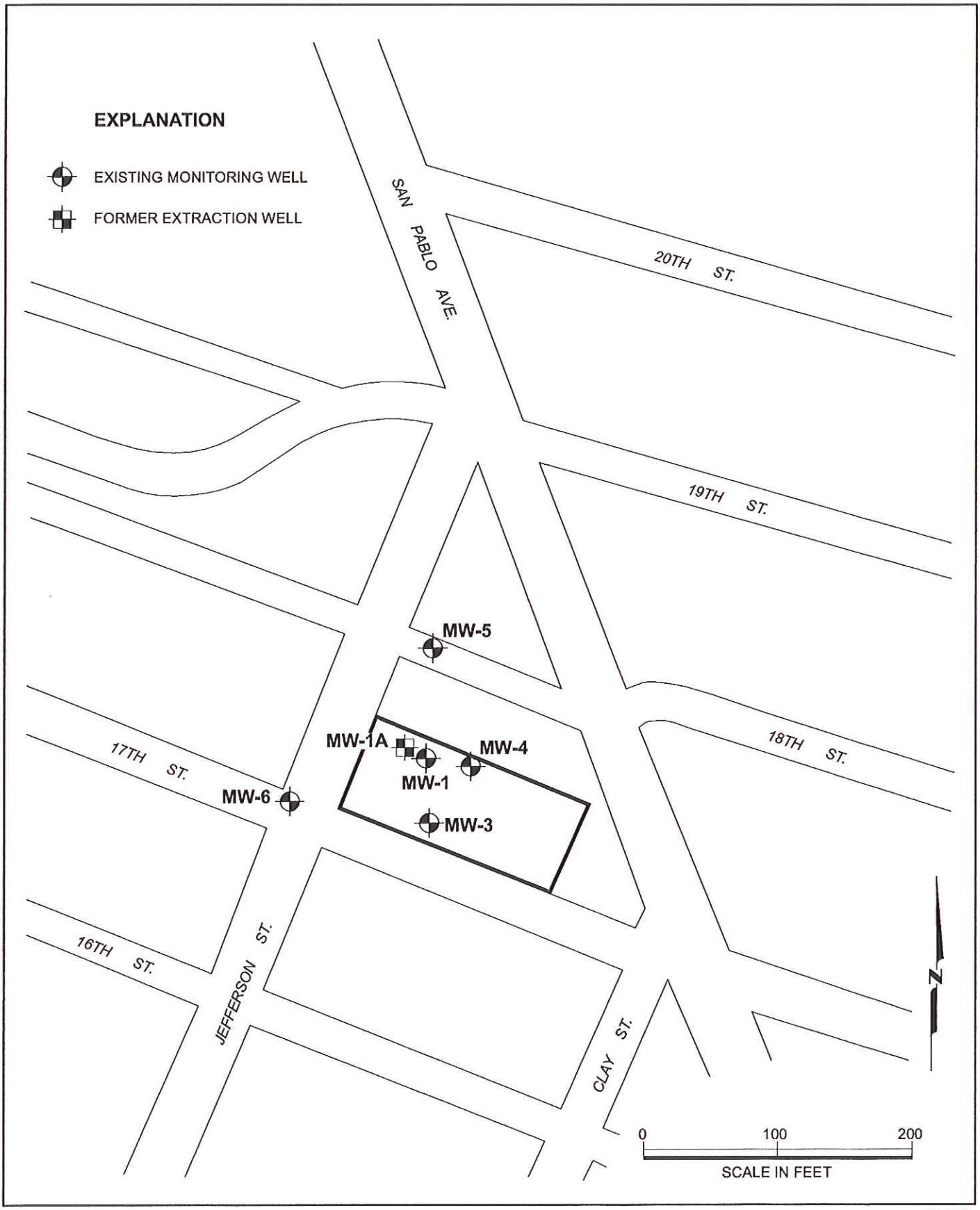
ND = Not detected above the reporting limit in parenthesis
NA = Not analyzed
FP = Free Product - well not sampled
-- = Well did not exist at date indicated

Table 4. Groundwater Monitoring Analytical Results – Non-Purge Method
BPS Reprographic Services Facility
1700 Jefferson Street
Oakland, California

TPHg (mg/l)		9/29/1999	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
	MW-1	14	24	19	19	20	18	19	39	31	34
	MW-3	4.1	3.1	0.54	0.49	1.5	1.3	0.17	4.9	3.1	0.95
	MW-5	10	30	23	19	24	1.8	15	3.6	34	1.9
	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
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
	MW-3	180	6.5	8.3	11	28	20	9	150	42	8
	MW-5	14,000	11,000	12,000	9,900	3,800	470	7,400	300	8,300	300
	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
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
	MW-3	340	33	20	5.6	14	34	6.2	240	48	5.2
	MW-5	470	3,400	4,500	6,900	3,000	220	3,000	11	3,000	110
	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
Ethylbenzene (µg/l)											
	MW-1	620	730	530	730	540	640	570	660	560	630
	MW-3	130	27	2.4	0.45	2.6	25	1.4	38	26	1.1
	MW-5	1,100	1,500	1,200	1,200	460	39	1000	16	1,400	55
	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
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
	MW-3	580	260	28	17	160	28	8.1	160	210	7
	MW-5	600	2,500	1,300	2,600	1,200	100	2,200	15	2,600	120
	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
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
	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]
	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]
	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

mg/l = milligrams per liter
µg/l = micrograms per liter
ND = Not detected above the reporting limit following the less than sign
MTBE = methyl t-butyl ether
1 Result of MTBE confirmation by EPA Method 8260.
2 Reporting limits have been 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.

PLATES

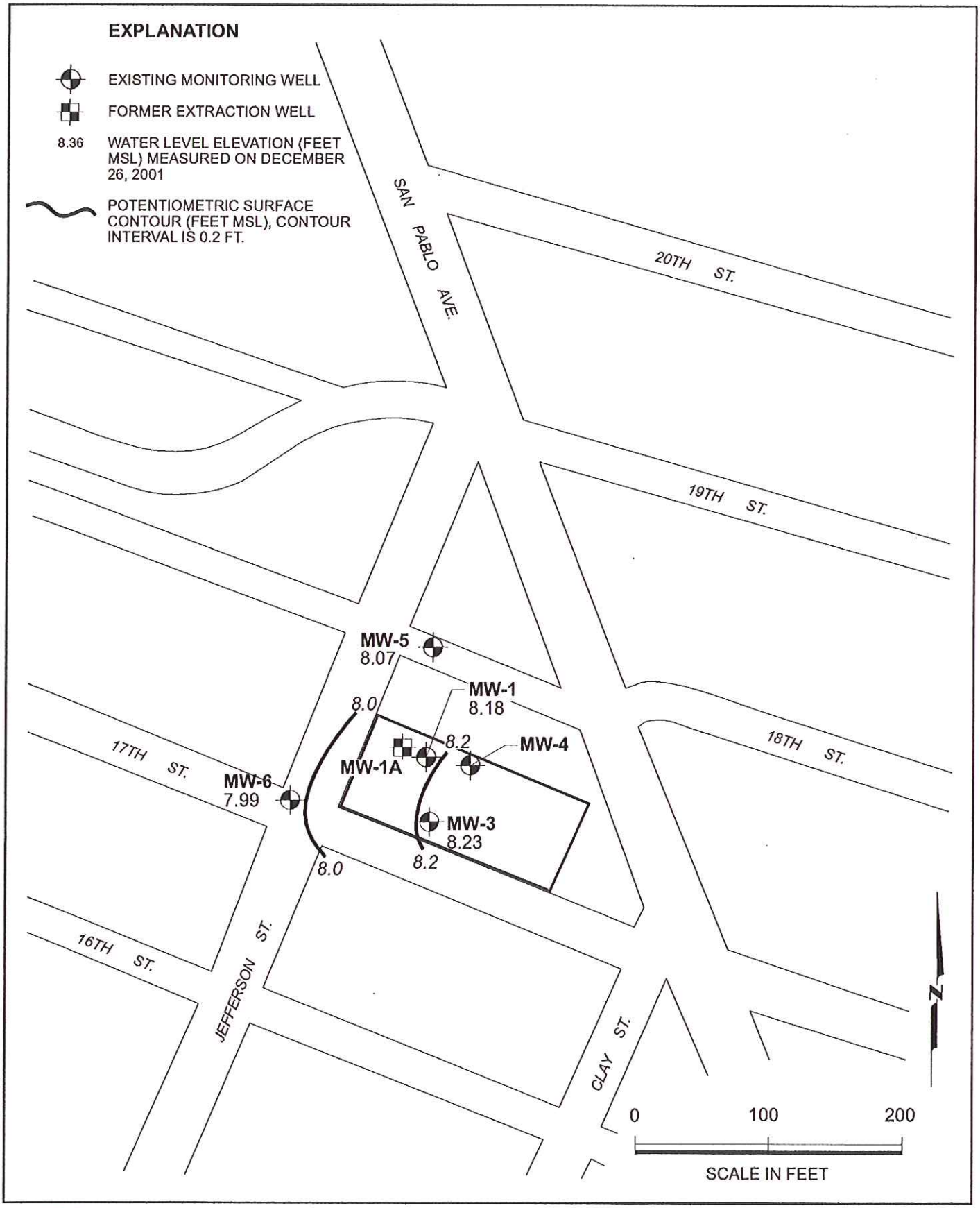


Harding ESE
A MACTEC COMPANY

Site Map
December 26, 2001
1700 Jefferson Street
BPS Reprographic Services Facility
Oakland, California

PLATE
1

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
CN	53087 001		2/02	



Harding ESE
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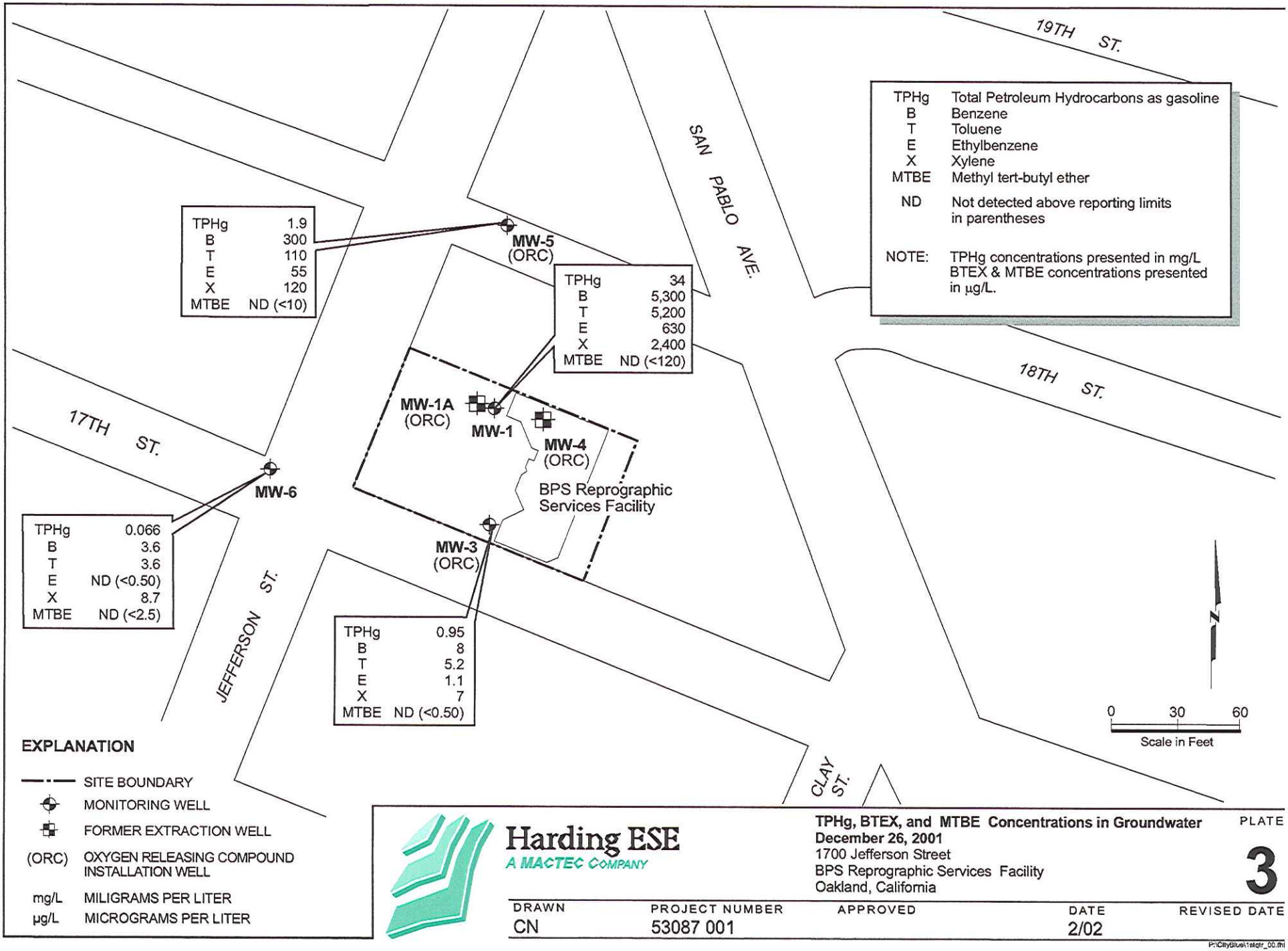
Groundwater Contours
December 26, 2001
1700 Jefferson Street
BPS Reprographic Services Facility
Oakland, California

PLATE
2

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
CN	53087 001		2/02	



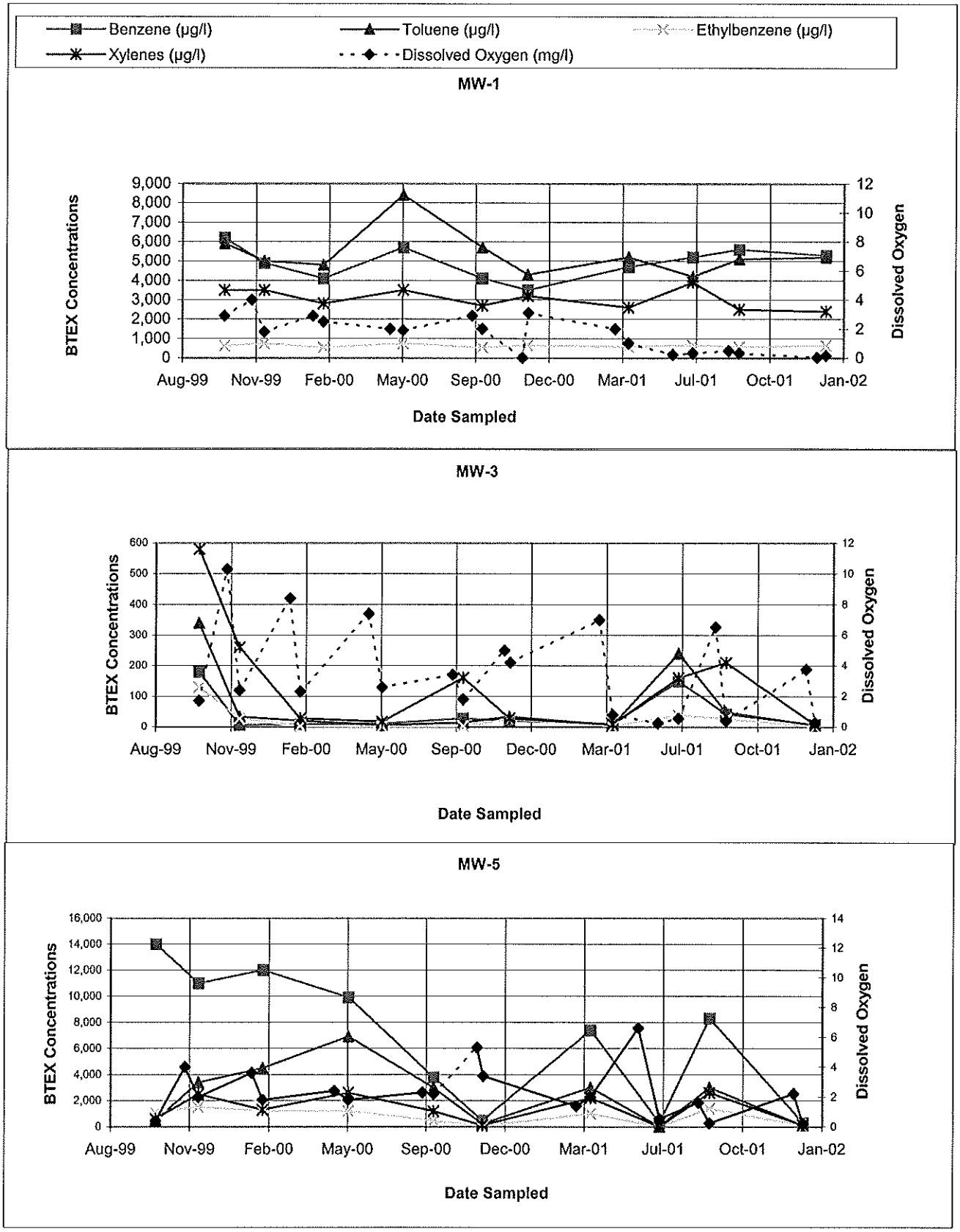
Harding ESE
A MACTEC COMPANY

TPHg, BTEX, and MTBE Concentrations in Groundwater
December 26, 2001
1700 Jefferson Street
BPS Reprographic Services Facility
Oakland, California

PLATE **3**

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
CN	53087 001		2/02	

P:\CityBlue\1stqtr_00.fhl

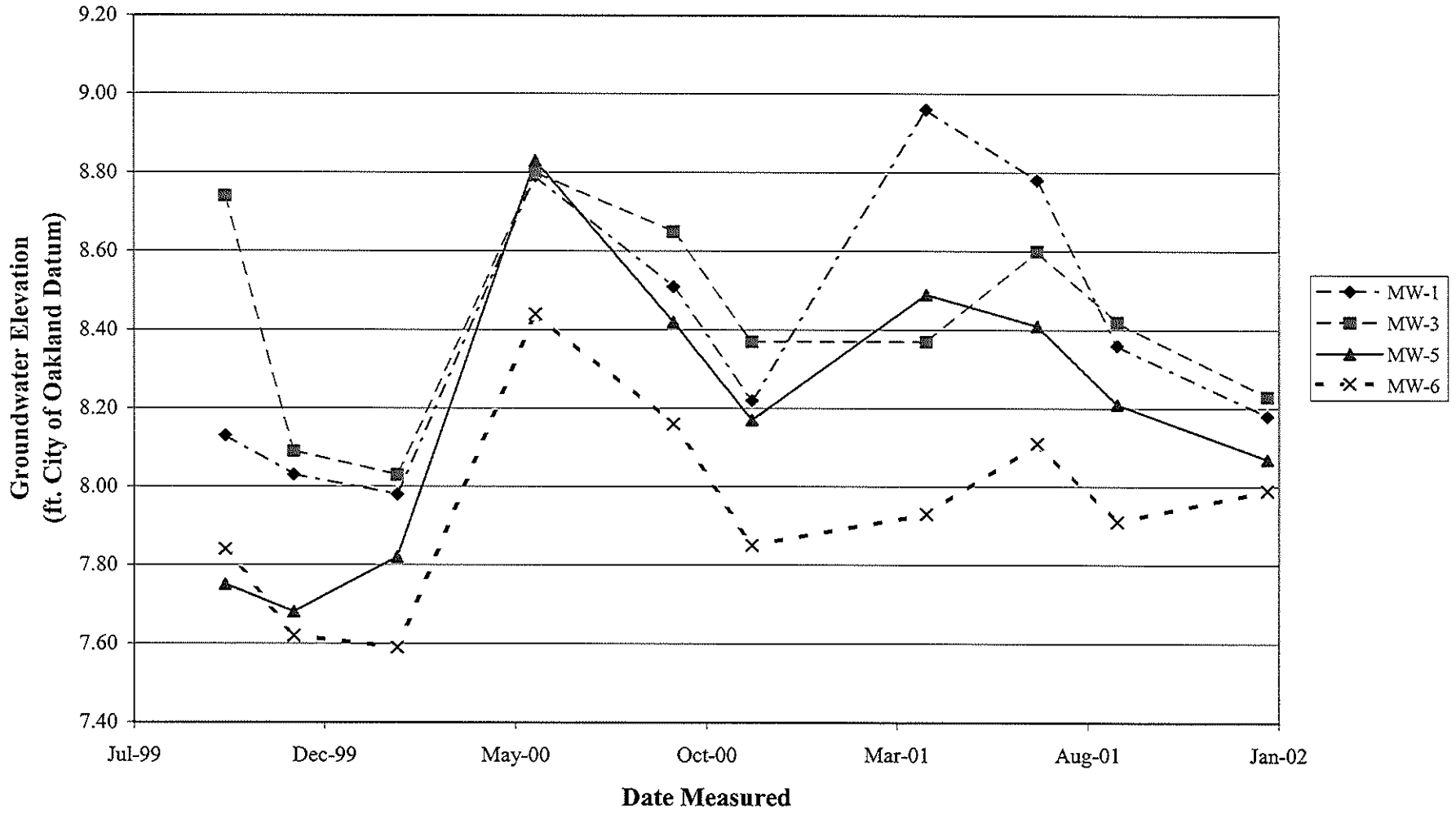


Harding ESE
A MACTEC COMPANY

BTEX and DO Results
Quarterly Groundwater Monitoring Report
BPS Reprographic Services Facility
1700 Jefferson Steet
Oakland, California

Plate
4

Drawn by	JOB NUMBER	APPROVED	DATE	REVISED DATE
DSN	53087.001		2/6/2002	



Harding ESE
A MACTEC COMPANY

Groundwater Elevation Data
Quarterly Groundwater Monitoring Report
BPS Reprographic Services Facility
1700 Jefferson Steet
Oakland, California

Plate
5

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
DSN	53087.001		2/7/2001	

APPENDIX A

LABORATORY REPORTS

Sequoia
Analytical

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

7 January, 2002

David Nanstad
Harding ESE - SF
28 2nd Street, Suite 700
San Francisco, CA 94105

RE: City Blue
Sequoia Work Order: P112539

Enclosed are the results of analyses for samples received by the laboratory on 12/27/01 15:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Michelle M. Wiita

Michelle M. Wiita
Project Manager

CA ELAP Certificate #2374

Sequoia Analytical

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

·ding ESE - SF	Project: City Blue	
2nd Street, Suite 700	Project Number: 53087.001	**Reported:**
San Francisco CA, 94105	Project Manager: David Nanstad	01/07/02 17:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
0153087-4	P112539-01	Water	12/26/01 09:10	12/27/01 15:30
0153087-2	P112539-02	Water	12/26/01 09:55	12/27/01 15:30
0153087-3	P112539-03	Water	12/26/01 10:44	12/27/01 15:30
0153087-1	P112539-04	Water	12/26/01 11:23	12/27/01 15:30
0153087-5	P112539-05	Water	12/26/01 11:45	12/27/01 15:30

·oia Analytical - Petaluma

Michelle M. Wiita

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Michelle M. Wiita, Project Manager

Sequoia Analytical

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

ding ESE - SF	Project: City Blue	
2nd Street, Suite 700	Project Number: 53087.001	**Reported:**
San Francisco CA, 94105	Project Manager: David Nanstad	01/07/02 17:25

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0153087-4 (P112539-01) Water Sampled: 12/26/01 09:10 Received: 12/27/01 15:30									
Gasoline (C6-C12)	**66**	50	ug/l	1	1120652	12/31/01	12/31/01	EPA 8015M/8020M	
Benzene	**3.6**	0.50	"	"	"	"	"	"	
Toluene	**3.6**	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	**8.7**	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*101 %*	*65-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*65-135*		"	"	"	"	
0153087-2 (P112539-02) Water Sampled: 12/26/01 09:55 Received: 12/27/01 15:30									
Gasoline (C6-C12)	**950**	50	ug/l	1	1120652	12/31/01	12/31/01	EPA 8015M/8020M	
Benzene	**8.0**	0.50	"	"	"	"	"	"	
Toluene	**5.2**	0.50	"	"	"	"	"	"	
lbenzene	**1.1**	0.50	"	"	"	"	"	"	
enes (total)	**7.0**	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**11**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*95 %*	*65-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*65-135*		"	"	"	"	
0153087-3 (P112539-03) Water Sampled: 12/26/01 10:44 Received: 12/27/01 15:30									
Gasoline (C6-C12)	**1900**	50	ug/l	1	1120652	12/31/01	12/31/01	EPA 8015M/8020M	
Benzene	**300**	0.50	"	"	"	"	"	"	
Toluene	**110**	0.50	"	"	"	"	"	"	
Ethylbenzene	**55**	0.50	"	"	"	"	"	"	
Xylenes (total)	**120**	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**12**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*100 %*	*65-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*		"	"	"	"	

Sequoia Analytical

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Petaluma, CA 94954
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ding ESE - SF	Project: City Blue	
nd Street, Suite 700	Project Number: 53087.001	**Reported:**
San Francisco CA, 94105	Project Manager: David Nanstad	01/07/02 17:25

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0153087-1 (P112539-04) Water Sampled: 12/26/01 11:23 Received: 12/27/01 15:30									
Gasoline (C6-C12)	**34000**	2500	ug/l	50	1120652	12/31/01	12/31/01	EPA 8015M/8020M	
Benzene	**5300**	25	"	"	"	"	"	"	
Toluene	**5200**	25	"	"	"	"	"	"	
Ethylbenzene	**630**	25	"	"	"	"	"	"	
Xylenes (total)	**2400**	25	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	120	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*98 %*	*65-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*114 %*	*65-135*		"	"	"	"	
0153087-5 (P112539-05) Water Sampled: 12/26/01 11:45 Received: 12/27/01 15:30									
Gasoline (C6-C12)	**82**	50	ug/l	1	1120652	12/31/01	12/31/01	EPA 8015M/8020M	
Benzene	**1.7**	0.50	"	"	"	"	"	"	
Toluene	**1.7**	0.50	"	"	"	"	"	"	
lbenzene	ND	0.50	"	"	"	"	"	"	
nes (total)	**0.74**	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*99 %*	*65-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*65-135*		"	"	"	"	

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ding ESE - SF	Project: City Blue	
2nd Street, Suite 700	Project Number: 53087.001	**Reported:**
San Francisco CA, 94105	Project Manager: David Nanstad	01/07/02 17:25

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0153087-2 (P112539-02) Water Sampled: 12/26/01 09:55 Received: 12/27/01 15:30									
Methyl tert-butyl ether	ND	0.50	ug/l	1	2010080	01/04/02	01/04/02	EPA 8260B	
Surrogate: Dibromofluoromethane		*98 %*	*84-122*		"	"	"	"	
0153087-3 (P112539-03) Water Sampled: 12/26/01 10:44 Received: 12/27/01 15:30									**R-05**
Methyl tert-butyl ether	ND	10	ug/l	20	2010080	01/04/02	01/04/02	EPA 8260B	
Surrogate: Dibromofluoromethane		*100 %*	*84-122*		"	"	"	"	

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Petaluma, CA 94954
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www.sequoialabs.com

·ding ESE - SF	Project: City Blue	
2nd Street, Suite 700	Project Number: 53087.001	**Reported:**
San Francisco CA, 94105	Project Manager: David Nanstad	01/07/02 17:25

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1120652 - EPA 5030, waters										
Blank (1120652-BLK1)				Prepared & Analyzed: 12/31/01						
Gasoline (C6-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	*308*		"	*300*		*103*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*314*		"	*300*		*105*	*65-135*			
Blank (1120652-BLK2)				Prepared & Analyzed: 01/02/02						
Gasoline (C6-C12)	ND	50	ug/l							
·ne	ND	0.50	"							
·ne	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*293*		"	*300*		*98*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*320*		"	*300*		*107*	*65-135*			
LCS (1120652-BS1)				Prepared & Analyzed: 12/31/01						
Gasoline (C6-C12)	2970	50	ug/l	2750		108	65-135			
Benzene	35.3	0.50	"	33.0		107	65-135			
Toluene	201	0.50	"	198		102	65-135			
Ethylbenzene	52.1	0.50	"	46.0		113	65-135			
Xylenes (total)	241	0.50	"	230		105	65-135			
Methyl tert-butyl ether	65.2	2.5	"	52.5		124	65-135			
Surrogate: a,a,a-Trifluorotoluene	*326*		"	*300*		*109*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*349*		"	*300*		*116*	*65-135*			

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·ding ESE - SF	Project: City Blue	
2nd Street, Suite 700	Project Number: 53087.001	**Reported:**
San Francisco CA, 94105	Project Manager: David Nanstad	01/07/02 17:25

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1120652 - EPA 5030, waters										
LCS (1120652-BS2)				Prepared & Analyzed: 01/02/02						
Gasoline (C6-C12)	2970	50	ug/l	2750		108	65-135			
Benzene	35.6	0.50	"	33.0		108	65-135			
Toluene	184	0.50	"	198		93	65-135			
Ethylbenzene	50.4	0.50	"	46.0		110	65-135			
Xylenes (total)	220	0.50	"	230		96	65-135			
Methyl tert-butyl ether	64.7	2.5	"	52.5		123	65-135			
Surrogate: a,a,a-Trifluorotoluene	*304*		"	*300*		*101*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*346*		"	*300*		*115*	*65-135*			
Matrix Spike (1120652-MS1)		**Source: P112528-03**		Prepared & Analyzed: 12/31/01						
Gasoline (C6-C12)	2950	50	ug/l	2750	ND	107	65-135			
[illegible]ene	36.9	0.50	"	33.0	ND	112	65-135			
[illegible]ne	208	0.50	"	198	ND	105	65-135			
Ethylbenzene	53.5	0.50	"	46.0	ND	116	65-135			
Xylenes (total)	241	0.50	"	230	ND	105	65-135			
Methyl tert-butyl ether	71.9	2.5	"	52.5	6.1	125	65-135			
Surrogate: a,a,a-Trifluorotoluene	*337*		"	*300*		*112*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*345*		"	*300*		*115*	*65-135*			
Matrix Spike Dup (1120652-MSD1)		**Source: P112528-03**		Prepared & Analyzed: 12/31/01						
Gasoline (C6-C12)	3030	50	ug/l	2750	ND	110	65-135	3	20	
Benzene	38.8	0.50	"	33.0	ND	118	65-135	5	20	
Toluene	189	0.50	"	198	ND	95	65-135	10	20	
Ethylbenzene	51.5	0.50	"	46.0	ND	112	65-135	4	20	
Xylenes (total)	225	0.50	"	230	ND	98	65-135	7	20	
Methyl tert-butyl ether	76.3	2.5	"	52.5	6.1	134	65-135	6	20	
Surrogate: a,a,a-Trifluorotoluene	*310*		"	*300*		*103*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*348*		"	*300*		*116*	*65-135*			

Sequoia Analytical

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

·ding ESE - SF	Project: City Blue	
2nd Street, Suite 700	Project Number: 53087.001	**Reported:**
San Francisco CA, 94105	Project Manager: David Nanstad	01/07/02 17:25

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 2010080 - EPA 5030 waters										
Blank (2010080-BLK1)				Prepared & Analyzed: 01/04/02						
Methyl tert-butyl ether	ND	0.50	ug/l							
Surrogate: Dibromofluoromethane	*5.77*		"	*5.50*		*105*	*84-122*			
LCS (2010080-BS1)				Prepared & Analyzed: 01/04/02						
Methyl tert-butyl ether	4.45	0.50	ug/l	5.00		89	79-118			
Surrogate: Dibromofluoromethane	*5.74*		"	*5.50*		*104*	*84-122*			
Matrix Spike (2010080-MS1)		**Source: P112539-03**		Prepared & Analyzed: 01/04/02						
Methyl tert-butyl ether	88.9	10	ug/l	100	ND	89	79-118			
gate: Dibromofluoromethane	*5.65*		"	*5.50*		*103*	*84-122*			
Matrix Spike Dup (2010080-MSD1)		**Source: P112539-03**		Prepared & Analyzed: 01/04/02						
Methyl tert-butyl ether	82.9	10	ug/l	100	ND	83	79-118	7	20	
Surrogate: Dibromofluoromethane	*5.68*		"	*5.50*		*103*	*84-122*			

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ding ESE - SF	Project: City Blue	
nd Street, Suite 700	Project Number: 53087.001	**Reported:**
San Francisco CA, 94105	Project Manager: David Nanstad	01/07/02 17:25

Notes and Definitions

R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
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.: № 10011

Lab: SEQUOIA

Samplers: M. Hucks

Job Number: 53087.001

Name/Location: CITY BLUE

Project Manager: DAVID NANSTAD

Recorder: Milton Hucks (Signature Required)

MATRIX				#CONTAINERS & PRESERV.						SAMPLE NUMBER		DATE				STATION DESCRIPTION	
Water	Soil	Air		Unpres	H_2SO_4	HNO_3	HCL			YR	SEQ	YR	MO	DAY	TIME		DEPTH
X							3			01	153087-4	01	12	26	0910	P11253a-1	
X							3			01	153087-2	01	12	26	0955	-2	
X							3			01	153087-3	01	12	26	1044	-3	
X							3			01	153087-1	01	12	26	1123	-4	
X							2			01	153087-5	01	12	26	1145	-5	

ANALYSIS REQUESTED

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

ADDITIONAL INFORMATION

SAMPLE NUMBER YR	SAMPLE NUMBER SEQ	TURNAROUND TIME/REMARKS
		MTBE TO BE CONFIRMED BY 8260
		STANDARD TAT

CHAIN OF CUSTODY RECORD

Relinquished By (Signature)	(Print Name)	(Company)	Date/Time
Milton Hucks	MHucks	HARDING ESE	12-26-01 1600
Received By (Signature)	(Print Name)	(Company)	Date/Time
	C. Mainway	Seq	12-27-01 1125
Relinquished By (Signature)	(Print Name)	(Company)	Date/Time
Received By (Signature)	(Print Name)	(Company)	Date/Time
Relinquished By (Signature)	(Print Name)	(Company)	Date/Time
Received By (Signature)	(Print Name)	(Company)	Date/Time
Received By (Signature)	(Print Name)	(Company)	Date/Time

Method of Shipment:

APPENDIX B

GROUNDWATER SAMPLING FORMS

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	0153087-1
MW-3	0153087-2
MW-5	0153087-3
MW-6	0153087-4
Trip Blank	0153087-5

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GROUNDWATER SAMPLING FORM

Job Name: City Blue
Job Number: 53087.001
Recorded By: Milton Duchon

Well Number: MW-1
Well Type: [X] Monitor [ ] Extraction [ ] Other
[X] PVC [ ] St. Steel [ ] Other
Date: 12-26-01
Sampled By: MD

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
Total Depth of Casing (TD in ft BTOC):
Water Level Depth (WL in ft BTOC): 24.18
No. of Well Volumes to be purged (# V):
Measured Depth to Water(TD in ft. BTOC)

PURGE VOLUME CALCULATION

(____ - ____) X ____ ^{2} X ____ X 0.0408 = ____ gallons
TD (feet) WL (Feet) D (inches) # Vols Calculated Purge Volume

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

METER CALIBRATION

Initial Time: 0900 (See Daily Field Invest. Notes for Calibrations)
pH S/N 91464 [✓] 4 [✓] 7 [ ] 10
EC S/N 8146 [ ] Temp [ ] E.C. Cond.Stand 1000
Turb S/N 5875 [✓] 0 - 10 [✓] 10-100 [✓] 100 - 1,000

PURGE METHOD

[ ] Bailer - Type:
[ ] Submersible - Type:
[ ] Other - Type:

Field Parameters

Gallons or Minutes	pH	Conductivity	Temp [X] °C [ ] °F	Turbidity (NTU)
	6.23	844	18.7	11.6

PUMP INTAKE SETTING

[ ] Near Bottom [ ] Near Top
[ ] Other
Depth in feet (BTOC):
Screen Interval in feet (BTOC): from to
Observations During Purging (Well Condition, Turbidity, Color, Odor):

D.O.initial 0.16 Redox initial 120.33

WELL SAMPLING

[x] Bailer - Type: TEFLON Sample Time: 1123 Cooler temp: 0°C

Sample No.	Volume/Con	Analysis Requested	Preservatives	Lab	Comments
0153087-1	3 VA	8015B, 8020 MTBE 8020 BTEX	HCl HCl	SEQUOIA	

QUALITY CONTROL SAMPLES

Duplicate Samples		Blank Samples		Other Samples	
Original Sample No.	Duplicate Sample No.	Type	Sample No.	Type	Sample No.
		TRIP	0153087-5		

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GROUNDWATER SAMPLING FORM

Job Name: City Blue
Job Number: 53087.001
Recorded By: Milton Duncan

Well Number: MW-3
Well Type: [X] Monitor [ ] Extraction [ ] Other
[X] PVC [ ] St. Steel [ ] Other
Date: 12-26-01
Sampled By: MD

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
Total Depth of Casing (TD in ft BTOC):
Water Level Depth (WL in ft BTOC): 23.54
No. of Well Volumes to be purged (# V):
Measured Depth to Water(TD in ft. BTOC)

PURGE VOLUME CALCULATION

(____ - ____) X ____ ^{2} X ____ X 0.0408 = ____ gallons
TD (feet) WL (Feet) D (inches) # Vols Calculated Purge Volume

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

METER CALIBRATION

Initial Time: 0900 (See Daily Field Invest. Notes for Calibrations)
pH S/N 91864 [✓] 4 [✓] 7 [ ] 10
EC S/N 8146 [ ] Temp [ ] E.C. Cond.Stand 1000
Turb S/N 5875 [✓] 0 - 10 [✓] 10-100 [✓] 100 - 1,000

PURGE METHOD

[ ] Bailer - Type:
[ ] Submersible - Type:
[ ] Other - Type:

PUMP INTAKE SETTING

[ ] Near Bottom [ ] Near Top
[ ] Other
Depth in feet (BTOC):
Screen Interval in feet (BTOC): from to
Observations During Purging (Well Condition, Turbidity, Color, Odor):

D.O.initial 0.28 Redox initial 10.67

Field Parameters

Gallons or Minutes	pH	Conductivity	Temp [X] °C [ ] °F	Turbidity (NTU)
	6.91	496	18.8	11.2

WELL SAMPLING

[x] Bailer - Type: TEFLON
Sample Time: 0955 Cooler temp: 0°C

Sample No.	Volume/Con	Analysis Requested	Preservatives	Lab	Comments
0153087-2	3VA	8015B, 8020 BTEX	HCl	SEQUOIA	
		8020 MTBE	HCl		

QUALITY CONTROL SAMPLES

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

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GROUNDWATER SAMPLING FORM

Job Name: City Blue
Job Number: 53087.001
Recorded By: Milton Duchs

Well Number: MW-5
Well Type: [X] Monitor [ ] Extraction [ ] Other
[X] PVC [ ] St. Steel [ ] Other
Date: 12-26-01
Sampled By: MD

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
Total Depth of Casing (TD in ft BTOC):
Water Level Depth (WL in ft BTOC): 22.49
No. of Well Volumes to be purged (# V):
Measured Depth to Water(TD in ft. BTOC)

PURGE VOLUME CALCULATION

(_____ - _____) X _____ ^{2} X _____ X 0.0408 = _____ gallons
TD (feet) WL (Feet) D (inches) # Vols Calculated Purge Volume

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

METER CALIBRATION

Initial Time: 0900 (See Daily Field Invest. Notes for Calibrations)

pH S/N 91864 [✓] 4 [✓] 7 [ ] 10
EC S/N 8146 [✓] Temp [ ] E.C. Cond.Stand 1000
Turb S/N 5875 [✓] 0 - 10 [✓] 10-100 [✓] 100 - 1,000

PURGE METHOD

[ ] Bailer - Type:
[ ] Submersible - Type:
[ ] Other - Type:

PUMP INTAKE SETTING

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

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

D.O.initial 0.19 Redox initial 11.21

Field Parameters

Gallons or Minutes	pH	Conductivity	Temp [X] °C [ ] °F	Turbidity (NTU)
	7.11	332.8	18.8	5.5

WELL SAMPLING

[x] Bailer - Type: TEFLON
Sample Time: 1044 Cooler temp: 0°C

Sample No.	Volume/Con	Analysis Requested	Preservatives	Lab	Comments
015308 7-3	3 VA	8015B, 8020 MTBE	HCl	SEQUOIA	
		8020 BTEX	HCl		

QUALITY CONTROL SAMPLES

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

Other Samples	
Type	Sample No.

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GROUNDWATER SAMPLING FORM

Job Name: City Blue
Job Number: 53087.001
Recorded By: Milton Morales

Well Number: MW-6
Well Type: [X] Monitor [ ] Extraction [ ] Other
[X] PVC [ ] St. Steel [ ] Other
Date: 12-26-01
Sampled By: MM

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
Total Depth of Casing (TD in ft BTOC):
Water Level Depth (WL in ft BTOC): 23.27
No. of Well Volumes to be purged (# V):
Measured Depth to Water(TD in ft. BTOC)

PURGE VOLUME CALCULATION

(_____ - _____) X _____ ² X _____ X 0.0408 = _____ gallons
TD (feet) WL (Feet) D (inches) # Vols Calculated Purge Volume

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

METER CALIBRATION

Initial Time: 0900 (See Daily Field Invest. Notes for Calibrations)
pH S/N 91864 [✓] 4 [✓] 7 [ ] 10
EC S/N 9166 [ ] Temp [ ] E.C. Cond.Stand 4000
Turb S/N 5875 [✓] 0 - 10 [✓] 10-100 [✓] 100 - 1,000

PURGE METHOD

[ ] Bailer - Type:
[ ] Submersible - Type:
[ ] Other - Type:

PUMP INTAKE SETTING

[ ] Near Bottom [ ] Near Top
[ ] Other
Depth in feet (BTOC):
Screen Interval in feet (BTOC): from _____ to _____
Observations During Purging (Well Condition, Turbidity, Color, Odor):

D.O.initial 0.21 Redox initial 10.89

Field Parameters

Gallons or Minutes	pH	Conductivity	Temp [X] °C [ ] °F	Turbidity (NTU)
	6.72	891	18.4	14.3

WELL SAMPLING

[x] Bailer - Type: TEFLON
Sample Time: 0910 Cooler temp: 0°C

Sample No.	Volume/Con	Analysis Requested	Preservatives	Lab	Comments
0153087-4	3 VOA	8015B) 8020 MTBE	HCl	SEQUOIA	
		8020 BTEX	HCl		

QUALITY CONTROL SAMPLES

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