

May 15, 2001

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Mr. Jeff Christoff
BPS Reprographic Services
2748 Willow Pass Road
Concord, California 94519

MAY 8 4 2001

Quarterly Groundwater Remediation and Monitoring Report
January 1, through April 4, 2001
BPS Reprographic Services Facility
1700 Jefferson Street
Oakland, California

Dear Mr. Christoff:

Harding ESE, Inc. (Harding ESE), formerly Harding Lawson Associates, presents this quarterly status 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 January 1 through April 4, 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 gasoline 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 ESE 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.

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In 1992, a groundwater extraction system was constructed at the site to remove free phase product from the groundwater surface. Groundwater was extracted from MW-1A and MW-4 and passed through an oil-water separator that removed the free phase gasoline. 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 free-phase gasoline were recovered.

By 1999, the oil-water separator was no longer recovering product and free phase product was no longer present in any of the groundwater monitoring wells. Dissolved hydrocarbon concentrations were decreasing and Harding ESE 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 ESE 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 ESE 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 ESE's quarterly report, dated October 25, 1999).

FIRST QUARTER OF 2001 GROUNDWATER SAMPLING AND ANALYSIS

In accordance with the Groundwater Monitoring Plan, Harding ESE removed the ORC™ socks two weeks before the scheduled sampling event from Wells MW-3 and MW-5 on March 15, 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 April 2, 2001, Harding ESE 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 ESE measured the distance from the top of each well's casing to the groundwater using an electric water level indicator. These measurements are displayed on Plate 2 and tabulated in Table 2. To collect the groundwater samples, Harding ESE 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 EES measured the groundwater's conductivity, pH, DO, oxidation reduction potential, 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 ESE labeled and stored the samples in a cooler with ice. The groundwater samples were kept chilled until submitted to California Laboratory Services (CLS), 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 ESE installed 5 new ORC™ socks in wells MW-3 and MW-5. Harding ESE returned the ORC™ socks to treatment wells MW-1A and MW-4 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 Plate 5, the groundwater surface elevation increased an average of 0.29 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 April 2, 2001, groundwater contours were created and are shown on Plate 2. Based on these contours, the groundwater gradient was at 0.001 ft/ft to the 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 contains the compilation of historical groundwater sample results using the purge method of sampling and Table 4 provides the historical groundwater sample results since instituting *in situ* bioremediation using the non-purge sampling method. Plate 3 and Plate 4 present the sample results from this quarter's sampling event.

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As shown on Plate 3, concentrations of TPH-g, BTEX constituents and MTBE remained within the range of historical values for well MW-1. First quarter sample results indicated that concentrations of TPH-g and BTEX constituents in well MW-3 were the lowest monitored to date. First quarter MTBE concentrations from well MW-3 remained within the range of historical values. First quarter sample results indicated that concentrations of TPH-g, BTEX constituents and MTBE remained within the range of historical values for well MW-5. The groundwater sample from MW-6 did not contain any detectable concentrations of TPH-g or BTEX.

The laboratory analytical result for MTBE from the groundwater sample collected from well MW-6 indicated the presence of MTBE at a concentration value equal to the laboratories detection limit of 5 ug/L. Upon direction from Harding ESE, the laboratory analyzed a second unopened sample container of groundwater sample from this well from the same sampling event and did not detect MTBE at or above the detection limit. The accuracy of the second MTBE analysis is questionable, however, due to its hold time of 14 days being violated by 14 days. MTBE analysis was performed using EPA Method 8260. It should be noted that fingerprint analyses of a product sample from the site in 1998 indicated the product recovered by the treatment system did not contain MTBE.

The DO content in well MW-5 immediately following the removal of the ORC™ socks was 1.4 mg/L indicating that the ORC™ socks had been depleted and were ready to be replaced. The DO content in MW-3 declined in the two week period following removal of the ORC™ socks, which would be expected if a healthy population of hydrocarbon reducing microbes were present.

RECOMMENDATIONS

Harding ESE 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 ESE will replace the ORC™ socks in MW-1A and MW-4 next quarter.

Harding ESE 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.

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While under contract to BPS, Harding ESE 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) 884-3199.

Yours very truly,

HARDING ESE, Inc.



David S. Nanstad
Project Engineer



Luis A. Fraticelli, R.G.
Associate Geologist

DSN/LAF:sp/SP56993-Regulatory

Enclosures:

- Table 1 – Groundwater Parameters
- Table 2 – Groundwater Elevation Data
- Table 3 – Groundwater Monitoring Analytical Results - Using Purge Method
- Table 4 – Groundwater Monitoring Analytical Results – Non-Purge Method
- Plate 1 – Site Map
- Plate 2 – Groundwater Elevation Contours, April 2, 2001
- Plate 3 – TPHg, BTEX and MTBE Concentrations, April 2, 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

cc: 4 copies submitted

**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
9/29/99	2.9	1.7	0.4	1.8
11/5/99	4.0	10.3	4.0	2.8
11/22/99	1.8	2.4	2.0	3.2
1/28/00	2.9	8.4	3.6	2.2
2/11/00	2.5	2.3	1.8	3.5
5/12/00	2.0	7.4	2.4	1.7
5/30/00	1.9	2.6	1.8	3.2
9/1/00	2.9	3.4	2.3	2.7
9/15/00	2.0	1.8	2.2	3.8
11/9/00	--	5.0	5.3	--
11/17/00	3.1	4.2	3.4	6.0
3/15/01	2.0	7.0	1.4	2.1
4/2/01	1.0	0.8	2.0	1.0
REDOX (mvolts)				
5/30/00	-322	197	-128	203
9/15/00	-269	3	-89	206
11/17/00	64	178	296	230
4/2/01	-194	26	-36	102
Temperature (deg F)				
9/29/99	67.0	72.6	67.7	73.8
11/22/99	66.4	62.9	65.0	69.8
2/11/00	61.3	63.2	62.0	68.5
5/30/00	77.7	74.8	76.3	76.2
9/15/00	64.4	64.3	64.7	67.0
11/17/00	54.5	58.1	68.1	65.9
4/2/01	63.5	64.9	66.2	66.4
pH				
9/29/99	8.39	8.53	8.43	8.44
11/22/99	6.86	8.42	6.84	6.79
2/11/00	6.80	6.94	6.83	6.72
5/30/00	7.02	7.35	7.54	7.56
9/15/00	7.06	7.54	6.76	6.62
11/17/00	7.37	7.69	7.12	7.34
4/2/01	6.98	6.61	7.07	6.96
Specific Conductance (µS/cm)				
9/29/99	976	880	1,577	966
11/22/99	1,004	1,500	1,352	1,038
2/11/00	992	1,327	1,275	1,149
5/30/00	845	1,020	758	924
9/15/00	800	917	989	1,009
11/17/00	785	970	742	886
4/2/01	725	365	839	821

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

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

Date Sampled	MW-1		MW-3		MW-5		MW-6		Average Change Since Preceding Quarter
	TOC Elev.	32.36	TOC Elev.	31.77	TOC Elev.	30.56	TOC Elev.	31.26	
	Water Level	Water Elevation	Water Level	Water Elevation	Water Level	Water Elevation	Water Level	Water Elevation	
3/6/96	NM	--	24.79	6.98	23.53	7.03	NA	--	
6/11/96	FP	--	25.60	6.17	23.78	6.78	25.16	6.10	-0.53
9/19/96	FP	--	26.09	5.68	24.48	6.08	25.76	5.50	-0.60
12/23/96	FP	--	FP	--	24.83	5.73	25.88	5.38	-0.23
3/27/97	FP	--	FP	--	23.82	6.74	24.78	6.48	1.06
6/4/97	26.41	5.95	25.11	6.66	23.92	6.64	24.60	6.66	0.04
9/26/97	26.80	5.56	25.41	6.36	24.29	6.27	24.80	6.46	-0.32
12/22/97	26.00	6.36	24.91	6.86	24.02	6.54	24.71	6.55	0.42
3/31/98	26.06	6.30	24.05	7.72	22.78	7.78	23.75	7.51	0.75
6/18/98	25.60	6.76	23.71	8.06	22.51	8.05	23.22	8.04	0.40
8/28/98	25.45	6.91	23.70	8.07	22.74	7.82	22.23	9.03	0.23
12/2/98	24.92	7.44	23.60	8.17	23.16	7.40	23.72	7.54	-0.32
3/10/99	24.90	7.46	22.65	9.12	22.82	7.74	23.54	7.72	0.37
6/30/99	25.53	6.83	23.07	8.70	22.41	8.15	23.04	8.22	-0.04
9/29/99	24.23	8.13	23.03	8.74	22.81	7.75	23.42	7.84	0.14
11/22/99	24.33	8.03	23.68	8.09	22.88	7.68	23.64	7.62	-0.26
2/11/00	24.38	7.98	23.74	8.03	22.74	7.82	23.67	7.59	0.00
5/30/00	23.57	8.79	22.97	8.80	21.73	8.83	22.82	8.44	0.86
9/15/00	23.85	8.51	23.12	8.65	22.14	8.42	23.10	8.16	-0.28
11/16/00	24.14	8.22	23.40	8.37	22.39	8.17	23.41	7.85	-0.28
4/2/01	23.40	8.96	23.40	8.37	22.07	8.49	23.33	7.93	0.29

TOC Elev. = top of well casing elevation based on City of Oakland Datum

NM = not measured

FP = free product

-- = no data

NA = not applicable (MW-6 was installed in April 1996)

Table 3. Historical Groundwater Monitoring Analytical Results - Using Purge Method
BPS Reprographic Services Facility
1700 Jefferson Street
Oakland, California

TPHg (mg/l)	Date Sampled																											
	8/1/91	9/30/92	3/30/93	1/13/94	4/13/94	6/29/94	12/8/94	4/3/95	6/27/95	9/19/95	12/13/95	3/6/96	6/11/96	9/19/96	12/23/96	3/27/97	6/4/97	9/16/97	12/23/97	3/31/98	6/18/98	8/28/98	12/2/98	3/10/99	6/30/99	9/29/99		
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	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	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	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)	ND(0.05)	
Benzene (ug/l)	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	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	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	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	11,000	8,900	7,900	13,000	10,000	9,500	5,400	8,400	14,000	5,200	9,600	NA		
MW-6	--	--	--	--	--	--	--	--	--	--	--	--	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	
Toluene (ug/l)	FP	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	FP	FP	FP	FP	14,000	4,500	3,000	3,000	3,700	3,800	2,300	4,300	5,900	5,800	10,000	
MW-1A	31,000	FP	FP	FP	FP	31,000	21,000	21,000	13,000	9,900	9,200	11,000	22,000	28,000	22,000	FP	15,900	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	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	340	330	340	
MW-4	6,200	FP	FP	FP	FP	2,500	790	4,100	3,400	1,600	2,100	470	3,600	19,000	19,000	FP	6,900	3,200	5,000	11,000	NA	460	11,000	610	2,100	3,000	NA	
MW-5	14,000	5,900	5,000	8,200	3,500	5,400	3,800	2,200	2,100	2,700	2,100	2,800	2,900	4,500	2,200	1,100	560	270	500	400	310	160	120	300	270	710		
MW-6	--	--	--	--	--	--	--	--	--	--	--	--	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	
Ethylbenzene (ug/l)	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	FP	2,100	1,500	1,400	910	500	710	790	2,700	2,800	2,100	FP	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	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	FP	520	51	310	280	77	110	14	780	3,700	2,000	FP	540	140	350	580	NA	ND(1.5)	890	ND(1.5)	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)	ND(0.30)	
Xylenes (ug/l)	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	FP	14,000	12,000	11,000	9,800	6,300	6,800	5,300	22,000	19,000	14,000	FP	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	FP	4,300	93,000	4,800	1,700	500	1,700	440	1,500	300	FP	FP	16,000	3,900	5,900	5,200	3,700	3,800	360	2,300	1,800	1,300	
MW-4	7,300	FP	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(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	
MTBE (ug/l)	NA	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	NA	NA	1,800	ND(500)	ND(500)	1,900	300	ND(50)	ND(50)	ND(50)	ND(50)	ND(25)	ND(250)
MW-3	NA	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)	NA	
MW-4	NA	NA	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	NA	600	300	ND(100)	ND(500)	ND(1,000)	350	ND(10)	ND(50)	ND(50)	ND(50)	ND(25)	ND(100)	
MW-6	--	--	--	--	--	--	--	--	--	--	--	--	NA	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)	ND(1.0)

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

	9/29/99	11/22/99	2/11/00	5/30/00	9/15/00	11/16/00	4/2/01
TPHg (mg/l)							
MW-1	14	24	19	19	20	18	19
MW-3	4.1	3.1	0.54	0.49	1.5	1.3	0.17
MW-5	10	30	23	19	24	1.8	15
MW-6	ND<0.5	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05
Benzene (µg/l)							
MW-1	6,200	4,900	4,100	5,700	4,100	3,500	4,700
MW-3	180	6.5	8.3	11	28	20	9
MW-5	14,000	11,000	12,000	9,900	3,800	470	7,400
MW-6	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.30	ND<0.30
Toluene (µg/l)							
MW-1	5,900	5,000	4,800	8,400	5,700	4,300	5,200
MW-3	340	33	20	5.6	14	34	6.2
MW-5	470	3,400	4,500	6,900	3,000	220	3,000
MW-6	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.30	ND<0.30
Ethylbenzene (µg/l)							
MW-1	620	730	530	730	540	640	570
MW-3	130	27	2.4	0.45	2.6	25	1.4
MW-5	1,100	1,500	1,200	1,200	460	39	1000
MW-6	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.30	ND<0.30
Xylenes (µg/l)							
MW-1	3,500	3,500	2,800	3,500	2,700	3,200	2,600
MW-3	580	260	28	17	160	28	8.1
MW-5	600	2,500	1,300	2,600	1,200	100	2,200
MW-6	ND<0.6	ND<0.6	ND<0.6	ND<0.6	ND<0.6	ND<0.60	ND<0.30
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
MW-3	14	ND<1.0	31	ND<5.0 ¹	ND<5 ¹	ND<5 ¹	77 ¹
MW-5	ND<100	ND<100	6.6	ND<200	ND<10 ^{1,2}	ND<5 ¹	ND<50 ¹
MW-6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	5 ^{1,3}

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

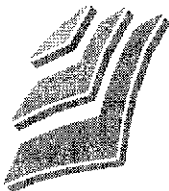
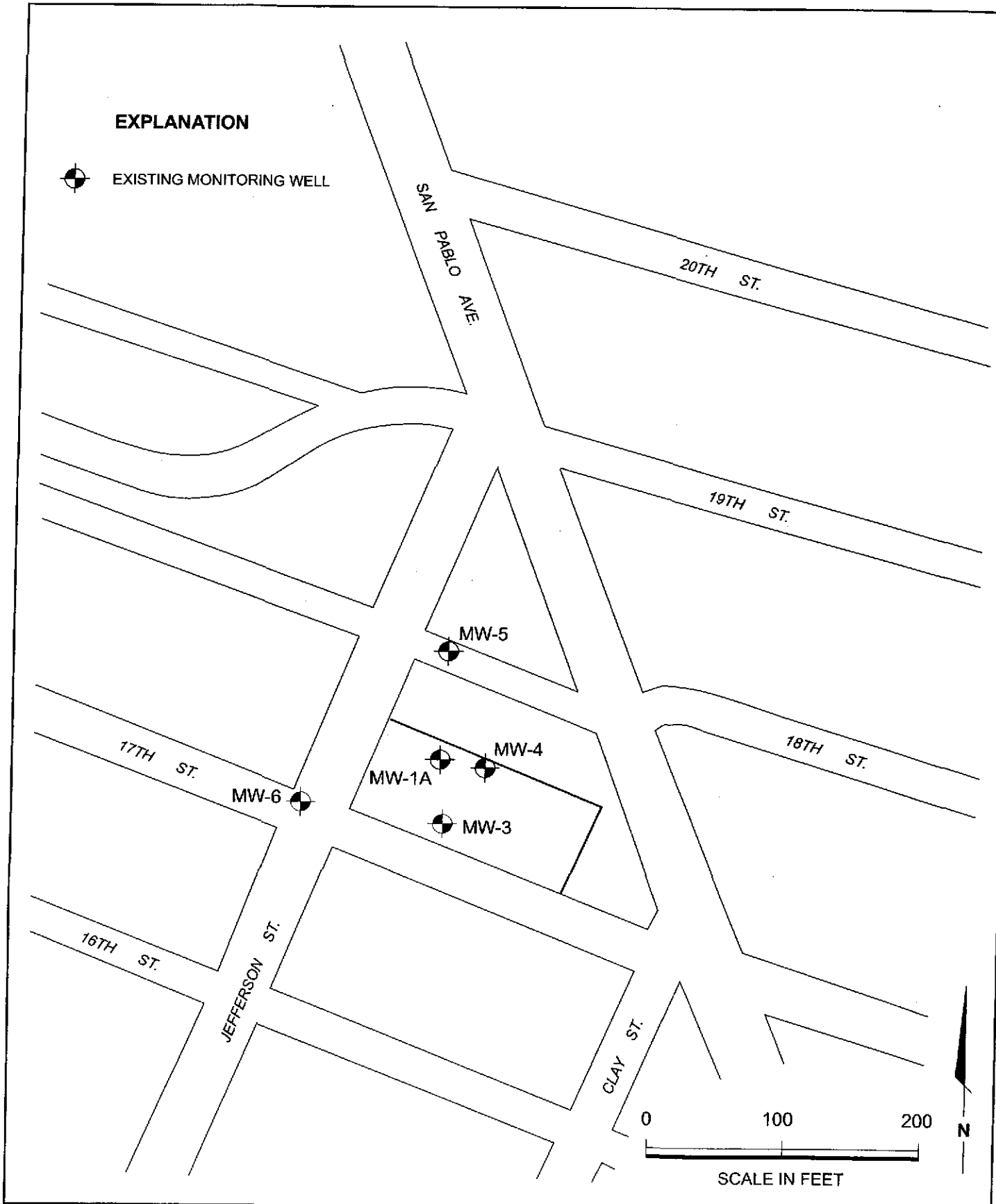
1 Result of MTBE confirmation by EPA Method 8260.

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.

EXPLANATION

 EXISTING MONITORING WELL



Harding ESE
A MACTEC COMPANY

Site Map
City Blue Production Facility
Oakland, California

PLATE

1

DRAWN
CN




PROJECT NUMBER
53087 001

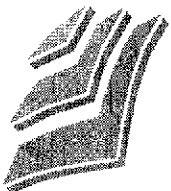
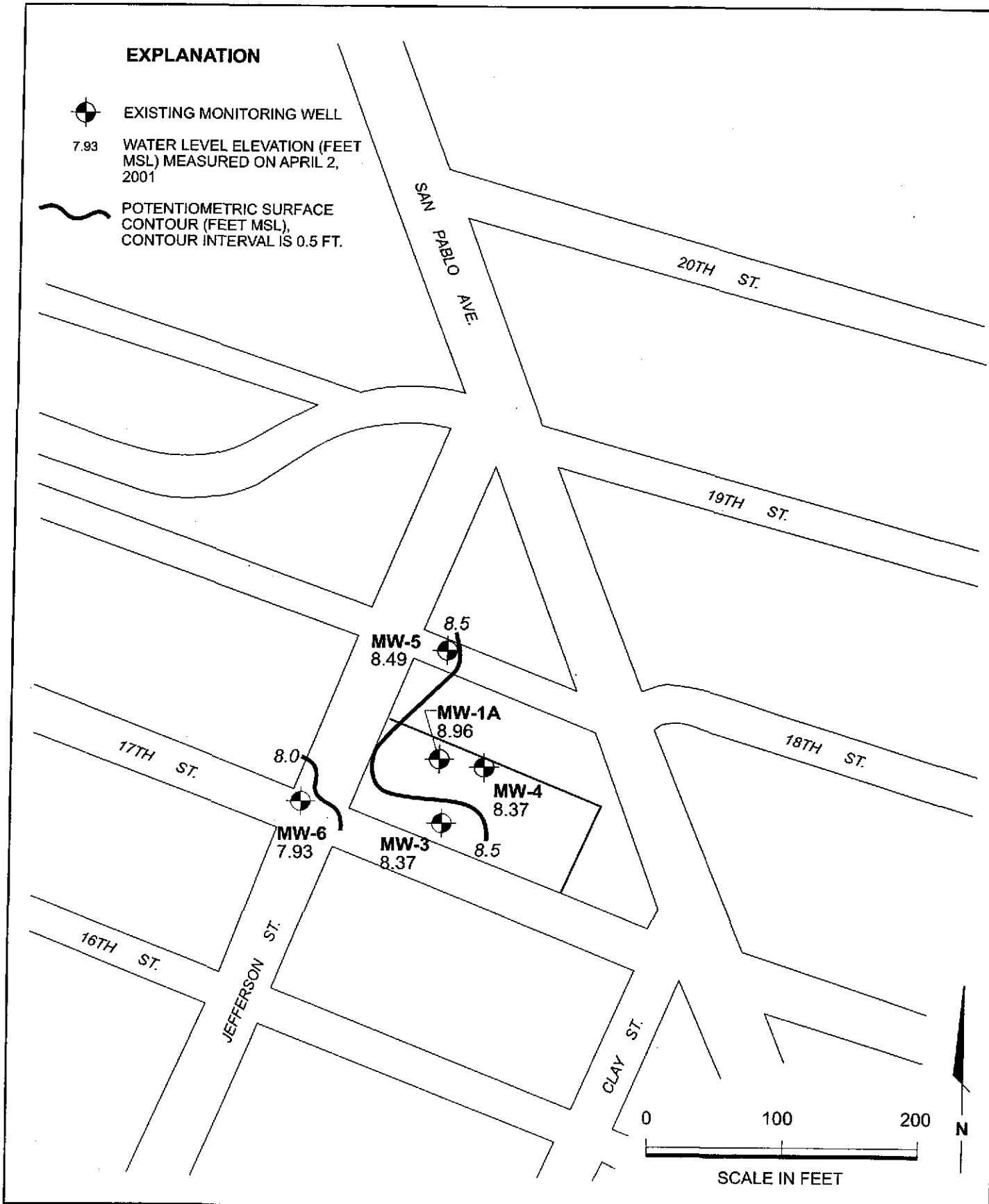
APPROVED

DATE
4/01

REVISED DATE

EXPLANATION

-  EXISTING MONITORING WELL
- 7.93  WATER LEVEL ELEVATION (FEET MSL) MEASURED ON APRIL 2, 2001
-  POTENTIOMETRIC SURFACE CONTOUR (FEET MSL), CONTOUR INTERVAL IS 0.5 FT.



Harding ESE
A MACTEC COMPANY

Groundwater Contours
City Blue Production Facility
Oakland, California

PLATE

2

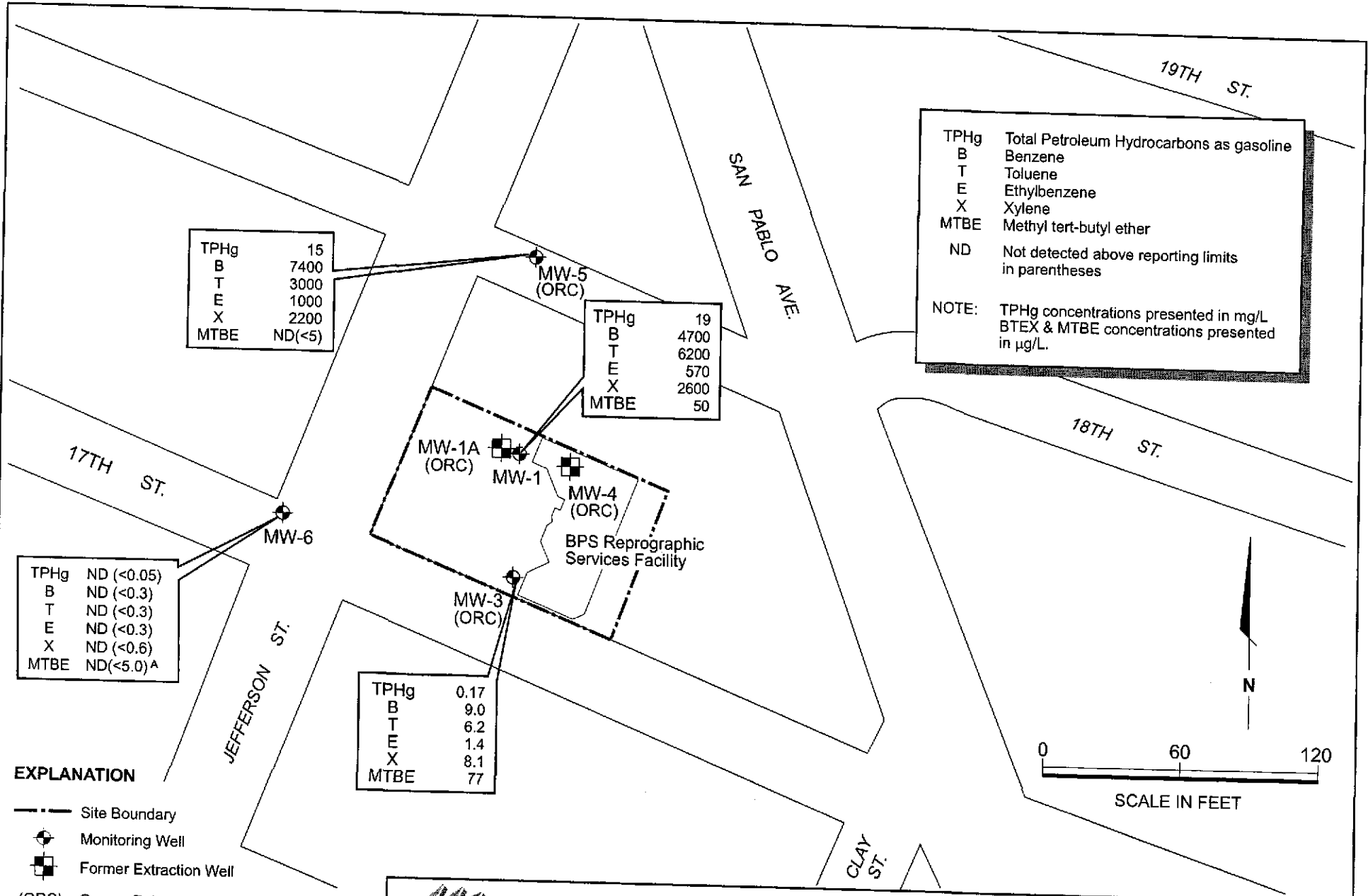
DRAWN
CN

PROJECT NUMBER
53087 001

APPROVED

DATE
4/01

REVISED DATE



TPHg	15
B	7400
T	3000
E	1000
X	2200
MTBE	ND(<5)

TPHg	19
B	4700
T	6200
E	570
X	2600
MTBE	50

TPHg	ND (<0.05)
B	ND (<0.3)
T	ND (<0.3)
E	ND (<0.3)
X	ND (<0.6)
MTBE	ND(<5.0) ^A

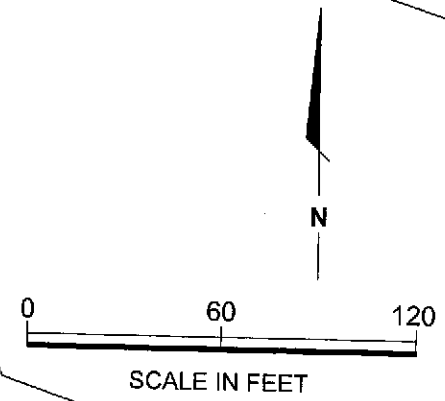
TPHg	0.17
B	9.0
T	6.2
E	1.4
X	8.1
MTBE	77

TPHg Total Petroleum Hydrocarbons as gasoline
 B Benzene
 T Toluene
 E Ethylbenzene
 X Xylene
 MTBE Methyl tert-butyl ether
 ND Not detected above reporting limits in parentheses

NOTE: TPHg concentrations presented in mg/L
 BTEX & MTBE concentrations presented in µg/L.

EXPLANATION

- Site Boundary
- Monitoring Well
- Former Extraction Well
- (ORC) Oxygen Releasing Compound Installation Well
- mg/L Miligrams Per Liter
- µg/L Micrograms Per Liter
- A See Text and Table for Comment on April 2, 2001 MTBE Analysis for this well

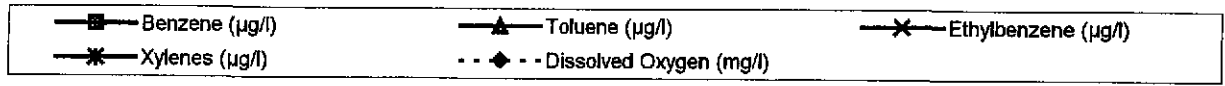


Harding ESE
 A MACTEC COMPANY

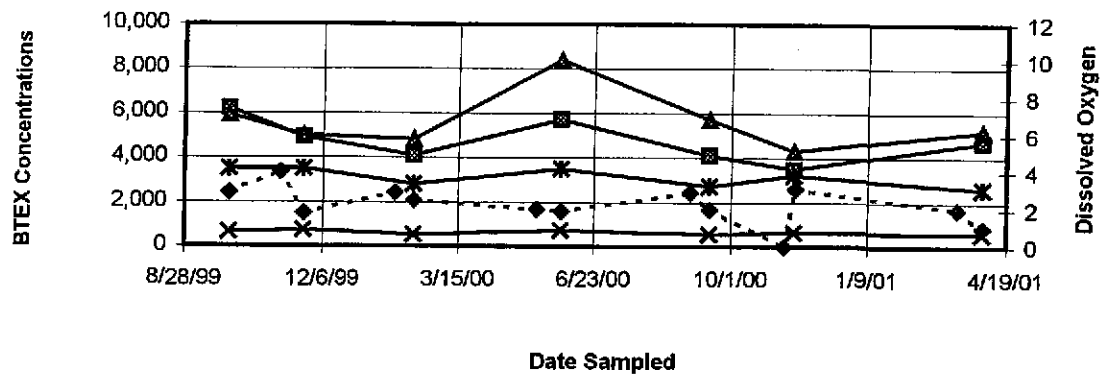
TPHg, BTEX, and MTBE Concentrations in Groundwater
 April 2, 2001
 1700 Jefferson Street
 BPS Reprographic Services Facility
 Oakland, California

PLATE
3

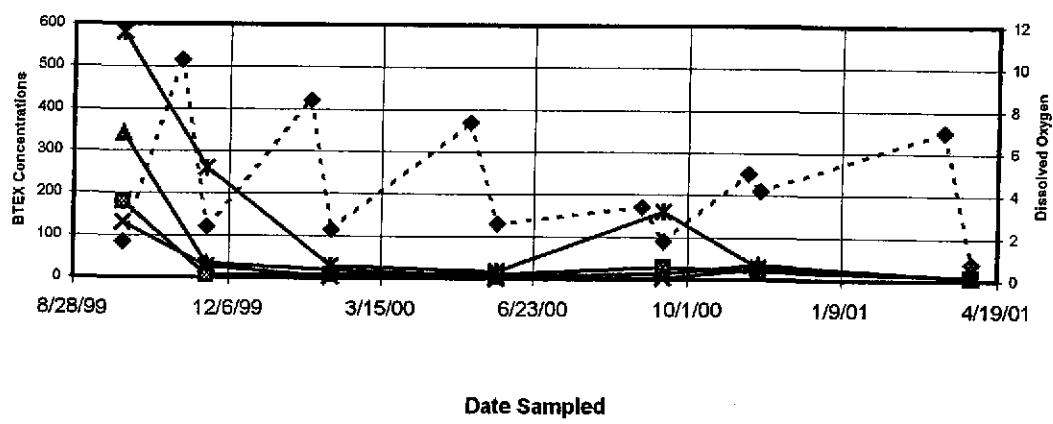
DRAWN jgm	PROJECT NUMBER 53087 001	APPROVED	DATE 4/01	REVISED DATE
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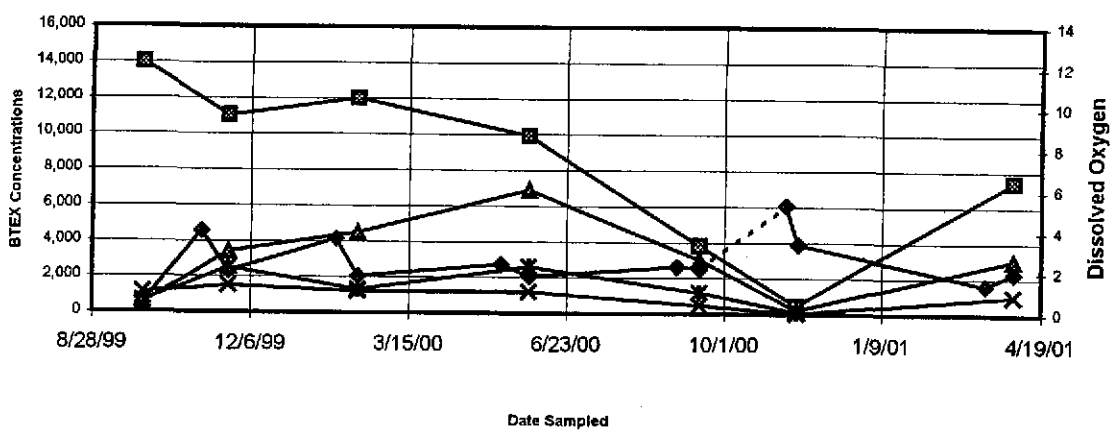
MW-1



MW-3



MW-5



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

Plate
4

Drawn by
 dsn

JOB NUMBER
 53087.001

APPROVED

DATE
 4/2/01

REVISED DATE

APPENDIX A

LABORATORY REPORTS

Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

04/19/2001

Attention: David Nanstad

Reference: Analytical Results

Project Name: City Blue Oakland
Project No.: 53087.001
Date Received: 04/03/2001
Chain Of Custody: 1384

CLS ID No.: S7390
CLS Job No.: 837390

The following analyses were performed on the above referenced project:

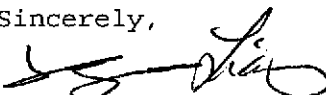
<u>No. of Samples</u>	<u>Turnaround Time</u>	<u>Analysis Description</u>
5	10 Days	TPH Gasoline and BTXE (water)
5	10 Days	Oxygenates by EPA Method 8260 Modified

These samples were received by CLS Labs in a chilled, intact state and accompanied by a valid chain of custody document.

Calibrations for analytical testing have been performed in accordance to and pass the EPA's criteria for acceptability.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,


James Liang, Ph.D.
Laboratory Director

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Lab Contact: James Liang
Lab ID No.: S7390-1A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIF
Matrix: WATER

Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001
Client ID No.: 53087-1

SURROGATE

Analyte	CAS No.	Results (ug/L)	Surr Conc. (ug/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	531	500	106	72	132

53087-1

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71432	4700	300	1000
Toluene	108883	5200	300	1000
Ethylbenzene	100414	570	7.5	25
Xylenes, total	1330207	2600	15	25

ND = Not detected at or above indicated Reporting Limit

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001
Client ID No.: 53087-2

Lab Contact: James Liang
Lab ID No.: S7390-2A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIF
Matrix: WATER

SURROGATE

Analyte	CAS No.	Results (ug/L)	Surr Conc. (ug/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	19.2	20.0	96	72	132

53087-2

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71432	9.0	0.30	1.0
Toluene	108883	6.2	0.30	1.0
Ethylbenzene	100414	1.4	0.30	1.0
Xylenes, total	1330207	8.1	0.60	1.0

ND = Not detected at or above indicated Reporting Limit

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001
Client ID No.: 53087-3

Lab Contact: James Liang
Lab ID No.: S7390-3A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIF
Matrix: WATER

SURROGATE

Analyte	CAS No.	Results (ug/L)	Surr Conc. (ug/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	547	500	109	72	132

53087-3

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71432	7400	300	1000
Toluene	108883	3000	300	1000
Ethylbenzene	100414	1000	7.5	25
Xylenes, total	1330207	2200	15	25

ND = Not detected at or above indicated Reporting Limit



Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001
Client ID No.: 53087-4

Lab Contact: James Liang
Lab ID No.: S7390-4A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIF
Matrix: WATER

SURROGATE

Analyte	CAS No.	Results (ug/L)	Surr Conc. (ug/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	20.1	20.0	101	72	132

53087-4

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71432	ND	0.30	1.0
Toluene	108883	ND	0.30	1.0
Ethylbenzene	100414	ND	0.30	1.0
Xylenes, total	1330207	ND	0.60	1.0

ND = Not detected at or above indicated Reporting Limit

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001
Client ID No.: 53087-5

Lab Contact: James Liang
Lab ID No.: S7390-5A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIP
Matrix: WATER

SURROGATE

Analyte	CAS No.	Results (ug/L)	Surr Conc. (ug/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	20.0	20.0	100	72	132

53087-5

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Benzene	71432	ND	0.30	1.0
Toluene	108883	ND	0.30	1.0
Ethylbenzene	100414	ND	0.30	1.0
Xylenes, total	1330207	ND	0.60	1.0

ND = Not detected at or above indicated Reporting Limit

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Lab Contact: James Liang
Lab ID No.: S7390
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIF
Matrix: WATER

Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001

MB SURROGATE

Analyte	CAS No.	Observed Conc. (ug/L)	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	20.0	20.0	100	75	132

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Reporting Limit (ug/L)
Benzene	71432	ND	0.30
Toluene	108883	ND	0.30
Ethylbenzene	100414	ND	0.30
Xylenes, total	1330207	ND	0.60

ND = Not detected at or above indicated Reporting Limit

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry

Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Lab Contact: James Liang
Lab ID No.: S7390
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIF
Matrix: WATER

Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001

MS SURROGATE

Analyte	CAS No.	Observed Conc. (ug/L)	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	19.4	20.0	97	69	132

MATRIX SPIKE

Analyte	CAS No.	Observed Conc. (ug/L)	MS Conc. (ug/L)	MS Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Benzene	71432	20.4	20.0	102	64	138
Toluene	108883	20.8	20.0	104	68	134
Ethylbenzene	100414	20.6	20.0	103	80	129
Xylenes, total	1330207	60.5	60.0	101	81	127

MSD SURROGATE

Analyte	CAS No.	Observed Conc. (ug/L)	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	19.7	20.0	99	69	132

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	Observed Conc. (ug/L)	MSD Conc. (ug/L)	MSD Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Benzene	71432	20.0	20.0	100	64	138
Toluene	108883	21.2	20.0	106	68	134
Ethylbenzene	100414	21.2	20.0	106	80	128
Xylenes, total	1330207	62.4	60.0	104	82	124

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)	Lower Spec (Limit)	Upper Spec (Limit)
---------	---------	---------------------------------------	--------------------	--------------------

CA DOHS ELAP Accreditation/Registration Number 1233



Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Lab Contact: James Liang
Lab ID No.: S7390
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIF
Matrix: WATER

Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001

RELATIVE % DIFFERENCE(cont.)

Analyte	CAS No.	Relative Percent Difference (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Benzene	71432	2	0	32
Toluene	108883	2	0	32
Ethylbenzene	100414	3	0	32
Xylenes, total	1330207	3	0	32



Analysis Report: BTEX, EPA Method 602
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Lab Contact: James Liang
Lab ID No.: S7390
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIF
Matrix: WATER

Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001

LCS SURROGATE

Analyte	CAS No.	LCS Surr Conc. (ug/L)	LCS Conc. (ug/L)	LCS Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	19.5	20.0	98	68	134

LAB CONTROL SAMPLE

Analyte	CAS No.	Observed Value (ug/L)	LCS Conc. (ug/L)	LCS Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Benzene	71432	20.5	20.0	103	70	130
Toluene	108883	21.3	20.0	106	70	130
Ethylbenzene	100414	21.7	20.0	109	82	124
Xylenes, total	1330207	62.2	60.0	104	84	128

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry 

**Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Purge and Trap, EPA Method 5030**

**Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607**

**Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001**

Project: City Blue Oakland

**Lab Contact: James Liang
Lab ID No.: S7390-1A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIF
Matrix: WATER**

**Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001
Client ID No.: 53087-1**

SURROGATE

Analyte	CAS No.	Results (mg/L)	Surr Conc. (mg/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	0.705	0.500	141 MA	70	130

53087-1

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)	Dilution (factor)
TPH as Gasoline	N/A	19	1.3	25

MA = Recovery data is outside standard QC limits due to matrix interference. LCS recovery data validates methodology.

ND = Not detected at or above indicated Reporting Limit

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry



**Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Purge and Trap, EPA Method 5030**

**Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607**

**Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001**

Project: City Blue Oakland

**Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001
Client ID No.: 53087-2**

**Lab Contact: James Liang
Lab ID No.: S7390-2A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIF
Matrix: WATER**

SURROGATE

Analyte	CAS No.	Results (mg/L)	Surr Conc. (mg/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	0.0212	0.0200	106	70	130

53087-2

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)	Dilution (factor)
TPH as Gasoline	N/A	0.17	0.050	1.0

ND = Not detected at or above indicated Reporting Limit

Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001
Client ID No.: 53087-3

Lab Contact: James Liang
Lab ID No.: S7390-3A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIF
Matrix: WATER

SURROGATE

Analyte	CAS No.	Results (mg/L)	Surr Conc. (mg/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	0.710	0.500	142 MA	70	130

53087-3

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)	Dilution (factor)
TPH as Gasoline	N/A	15	1.3	25

MA = Recovery data is outside standard QC limits due to matrix interference. LCS recovery data validates methodology.

ND = Not detected at or above indicated Reporting Limit

**Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Purge and Trap, EPA Method 5030**

**Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607**

**Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001**

Project: City Blue Oakland

**Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001
Client ID No.: 53087-4**

**Lab Contact: James Liang
Lab ID No.: S7390-4A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIF
Matrix: WATER**

SURROGATE

Analyte	CAS No.	Results (mg/L)	Surr Conc. (mg/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	0.0207	0.0200	103	70	130

53087-4

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)	Dilution (factor)
TPH as Gasoline	N/A	ND	0.050	1.0

ND = Not detected at or above indicated Reporting Limit

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry

Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Purge and Trap, EPA Method 5030

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Lab Contact: James Liang
Lab ID No.: S7390-5A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIF
Matrix: WATER

Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001
Client ID No.: 53087-5

SURROGATE

Analyte	CAS No.	Results (mg/L)	Surr Conc. (mg/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	0.0221	0.0200	111	70	130

53087-5

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)	Dilution (factor)
TPH as Gasoline	N/A	ND	0.050	1.0

ND = Not detected at or above indicated Reporting Limit



**Analysis Report: Total Petroleum Hydrocarbons, EPA Method 8015
Purge and Trap, EPA Method 5030**

**Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607**

**Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001**

Project: City Blue Oakland

**Lab Contact: James Liang
Lab ID No.: S7390
Job No.: 837390
COC Log No.: 1384
Batch No.: 30976
Instrument ID: GC007
Analyst ID: LEVIP
Matrix: WATER**

**Date Extracted: N/A
Date Analyzed: 04/04/2001
Date Reported: 04/06/2001**

MB SURROGATE

Analyte	CAS No.	Observed Conc. (mg/L)	Surr Conc. (mg/L)	MB Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
o-Chlorotoluene	95498	0.0195	0.0200	97	70	130

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Reporting Limit (mg/L)
TPH as Gasoline	N/A	ND	0.050

ND = Not detected at or above indicated Reporting Limit

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry 

Analysis Report: Volatile Organics (Oxygenates) by Capillary GC/MS, EPA 8260B- Modified

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Lab Contact: James Liang

Lab ID No.: S7390-1A

Job No.: 837390

COC Log No.: 1384

Batch No.: 30979

Instrument ID: MS05

Analyst ID: MINH

Matrix: WATER

Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Date Reported: 04/19/2001
Client ID No.: 53087-1

SURROGATE

Analyte	CAS No.	Results (ug/L)	Surr Conc. (ug/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Toluene-d8	N/A	114	100	114	72	125

53087-1

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Methyl t-butyl ether	1634044	ND	50 (SI)	10

SI = Reporting limit was elevated due to matrix interference.

ND = Not detected at or above indicated Reporting Limit

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry



Analysis Report: Volatile Organics (Oxygenates) by Capillary GC/MS, EPA 8260B- Modified

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Lab Contact: James Liang
Lab ID No.: S7390-2A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30979
Instrument ID: MS05
Analyst ID: MINH
Matrix: WATER

Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Date Reported: 04/19/2001
Client ID No.: 53087-2

SURROGATE

Analyte	CAS No.	Results (ug/L)	Surr Conc. (ug/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Toluene-d8	N/A	10.1	10.0	101	72	125

53087-2

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Methyl t-butyl ether	1634044	77	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

Analysis Report: Volatile Organics (Oxygenates) by Capillary GC/MS, EPA 8260B- Modified

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Lab Contact: James Liang
Lab ID No.: S7390-3A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30979
Instrument ID: MS05
Analyst ID: MINH
Matrix: WATER

Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Date Reported: 04/19/2001
Client ID No.: 53087-3

SURROGATE

Analyte	CAS No.	Results (ug/L)	Surr Conc. (ug/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Toluene-d8	N/A	107	100	107	72	125

53087-3

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Methyl t-butyl ether	1634044	ND	50(SI)	10

SI = Reporting limit was elevated due to matrix interference.

ND = Not detected at or above indicated Reporting Limit

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry 

Analysis Report: Volatile Organics (Oxygenates) by Capillary GC/MS, EPA 8260B- Modified

Client: **Harding Lawson Associates**
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: **53087.001**
Contact: **David Nanstad**
Phone: **(510)451-1001**

Project: **City Blue Oakland**

Lab Contact: **James Liang**
Lab ID No.: **S7390-4A**
Job No.: **837390**

Date Sampled: **04/02/2001**
Date Received: **04/03/2001**
Date Extracted: **04/05/2001**
Date Analyzed: **04/05/2001**
Date Reported: **04/19/2001**
Client ID No.: **53087-4**

COC Log No.: **1384**
Batch No.: **30979**
Instrument ID: **MS05**
Analyst ID: **MINH**
Matrix: **WATER**

SURROGATE

Analyte	CAS No.	Results (ug/L)	Surr Conc. (ug/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Toluene-d8	N/A	10.1	10.0	101	72	125

53087-4

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Methyl t-butyl ether	1634044	5.0	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry 

Analysis Report: Volatile Organics (Oxygenates) by Capillary GC/MS, EPA 8260B- Modified

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Lab Contact: James Liang
Lab ID No.: S7390-5A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30979
Instrument ID: MS05
Analyst ID: MINH
Matrix: WATER

Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Date Reported: 04/19/2001
Client ID No.: 53087-5

SURROGATE

Analyte	CAS No.	Results (ug/L)	Surr Conc. (ug/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Toluene-d8	N/A	10.0	10.0	100	72	125

53087-5

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Methyl t-butyl ether	1634044	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry 

Analysis Report: Volatile Organics (Oxygenates) by Capillary GC/MS, EPA 8260B- Modified

Client: **Harding Lawson Associates**
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Lab Contact: James Liang
Lab ID No.: S7390
Job No.: 837390
COC Log No.: 1384
Batch No.: 30979
Instrument ID: MS05
Analyst ID: MINH
Matrix: WATER

Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Date Reported: 04/19/2001

MB SURROGATE

Analyte	CAS No.	Observed Conc. (ug/L)	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Toluene-d8	N/A	10.2	10.0	102	72	125

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Reporting Limit (ug/L)
Methyl t-butyl ether	1634044	ND	5.0

ND = Not detected at or above indicated Reporting Limit

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry 

Analysis Report: Volatile Organics (Oxygenates) by Capillary GC/MS, EPA 8260B- Modified

Client: **Harding Lawson Associates**
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: **53087.001**
Contact: **David Nanstad**
Phone: **(510)451-1001**

Project: **City Blue Oakland**

Lab Contact: **James Liang**
Lab ID No.: **S7390**
Job No.: **837390**
COC Log No.: **1384**
Batch No.: **30979**
Instrument ID: **MS05**
Analyst ID: **MINH**
Matrix: **WATER**

Date Extracted: **04/05/2001**
Date Analyzed: **04/05/2001**
Date Reported: **04/19/2001**

MATRIX SPIKE

Analyte	CAS No.	Observed Conc. (ug/L)	MS Conc. (ug/L)	MS Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Methyl t-butyl ether	1634044	11.1	10.0	111	52	140

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	Observed Conc. (ug/L)	MSD Conc. (ug/L)	MSD Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Methyl t-butyl ether	1634044	10.6	10.0	106	52	140

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Methyl t-butyl ether	1634044	5	0	25

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry



Analysis Report: Volatile Organics (Oxygenates) by Capillary GC/MS, EPA 8260B- Modified

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Lab Contact: James Liang
Lab ID No.: S7390
Job No.: 837390

Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Date Reported: 04/19/2001

COC Log No.: 1384
Batch No.: 30979
Instrument ID: MS05
Analyst ID: MINH
Matrix: WATER

LAB CONTROL SAMPLE

Analyte	CAS No.	Observed Value (ug/L)	LCS Conc. (ug/L)	LCS Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Methyl t-butyl ether	1634044	9.80	10.0	98	52	130

CA DOHS ELAP Accreditation/Registration Number 1233

REVISION

Date : 05/07/01

ALICIA Client: Harding Lawson Associates

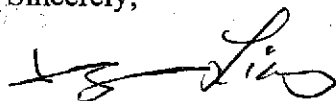
Project : City Blue Oakland

Lab Job # : S7390

Attention : David Nanstad

Revision Remarks: The MTBE result for sample "5-3087-4" has been revised based upon the re-analysis on 5/1/01.

Sincerely,



James Liang Ph.D.
Laboratory Director

CALIFORNIA LABORATORY SERVICES

Environmental
Chemistry 

Analysis Report: Volatile Organics (Oxygenates) by Capillary GC/MS, EPA 8260B- Modified

Client: Harding Lawson Associates
Engineering and Environmental
383 4th Street, Third Floor
Oakland, CA 94607

Project No.: 53087.001
Contact: David Nanstad
Phone: (510)451-1001

Project: City Blue Oakland

Lab Contact: James Liang
Lab ID No.: S7390-4A
Job No.: 837390
COC Log No.: 1384
Batch No.: 30979
Instrument ID: MS05
Analyst ID: MINH
Matrix: WATER

Date Sampled: 04/02/2001
Date Received: 04/03/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Date Reported: 05/02/2001
Client ID No.: 53087-4

SURROGATE

Analyte	CAS No.	Results (ug/L)	Surr Conc. (ug/L)	Surrogate Recovery (percent)	Lower Spec (Limit)	Upper Spec (Limit)
Toluene-d8	N/A	10.1	10.0	101	72	125

53087-4

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)	Dilution (factor)
Methyl t-butyl ether	1634044	ND	5.0	1.0

ND = Not detected at or above indicated Reporting Limit

APPENDIX B

GROUNDWATER SAMPLING FORMS



Harding Lawson Associates
Engineering and Environmental Services

GROUNDWATER SAMPLING FORM

Job Name: City Blue
Job Number: 53087.001
Recorded By: David Boone
(Signature)

Well Number: MW-01
Well Type: Monitor Extraction Other
 PVC St. Steel Other
Date: 4/2/01
Sampled By: DSB
(initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches): 4
Total Depth of Casing (TD in ft BTOC): _____
Water Level Depth (WL in ft BTOC): 23.40
No. of Well Volumes to be purged (# V): _____

PURGE METHOD

Bailer - Type: _____
 Submersible - Type: _____
 Other - Type: Micro purge/Parastatic

PURGE VOLUME CALCULATION

$(\text{TD} - \text{WL}) \times \frac{\pi}{4} \times D^2 \times 2.31 \times \text{# V} \times 0.0408 = \text{gals}$
TD (feet) WL (feet) D (inches) # V Calculated Purge Volume

PUMP INTAKE SETTING

Near Bottom Near Top
 Other _____
Depth in feet (BTOC): 20'
Screen Interval in feet (BTOC): from _____ to _____

Field Parameter Measurement

Gallons or Minutes	pH	Conductivity (µS)	Temp. <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	Turbidity (NTU)
Initial	<u>6.98</u>	<u>725 µS</u>	<u>17.5</u>	<u>20.0</u>
Meter S/N	DB02	DO953	DO953	9092

PURGE TIME

Purge Start: _____
Purge Stop: _____
Elapsed: _____

PURGE RATE

GPM: _____
GPM: _____

PURGE VOLUME

Volume: _____ gallons
Observations During Purging (Well Condition, Color, Odor): _____

D.O. Initial 1.00 mg/l at 20.8°C Redox initial -199.16

D.O. final _____ Redox final _____

Discharge Water Disposal: Storm Sewer Other _____

WELL SAMPLING

Bailer - Type: _____

Sample Time: 1500

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
53087-1	3-VOA's	TPH gas, BTEX, MTBE	HCL	CLS	

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Dupl. Sample No.

Blank Samples

Type	Sample No.
<u>trip</u>	<u>53087-5</u>

Other Samples

Type	Sample No.



Harding Lawson Associates
Engineering and Environmental Services

GROUNDWATER SAMPLING FORM

Job Name: City Blue
Job Number: 53087.001
Recorded By: David Boone
(Signature)

Well Number: MW-03
Well Type: Monitor Extraction Other
 PVC St. Steel Other
Date: 4/2/01
Sampled By: DSB
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches): 4
Total Depth of Casing (TD in ft BTOC): _____
Water Level Depth (WL in ft BTOC): 23.40
No. of Well Volumes to be purged (# V): _____

PURGE METHOD

Bailer - Type: _____
 Submersible - Type: _____
 Other - Type: Micropurge / Parastatic

PURGE VOLUME CALCULATION

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

PUMP INTAKE SETTING

Near Bottom Near Top
 Other
Depth in feet (BTOC): 26'
Screen Interval in feet (BTOC): from _____ to _____

Field Parameter Measurement

Gallons or Minutes	pH	Conductivity (µS)	Temp.		Turbidity (NTU)
			<input checked="" type="checkbox"/> °C	<input type="checkbox"/> °F	
Initial	<u>6.61</u>	<u>365</u>	<u>18.3</u>		<u>19.7</u>
Meter S/N	DB02	DO953	DO953		9092

PURGE TIME **PURGE RATE**

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

PURGE VOLUME

Volume: _____ gallons
Observations During Purging (Well Condition, Color, Odor):
mslet cloudy gray slight hydrocarbon odor
D.O. Initial 0.78e 20.4% Redox initial 25.8
D.O. final _____ Redox final _____
Discharge Water Disposal:
 Storm Sewer Other _____

WELL SAMPLING

Bailer - Type: _____ Sample Time: 1305

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
<u>53087-2</u>	<u>3-VOA's</u>	<u>TPH gas, BTEX, MTBE</u>	<u>HCl</u>	<u>CLS</u>	

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Dupl. Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.



Harding Lawson Associates
Engineering and Environmental Services

GROUNDWATER SAMPLING FORM

Job Name: City Blue
Job Number: 53087.001
Recorded By: David Brown
(Signature)

Well Number: MW-05
Well Type: Monitor Extraction Other
 PVC St. Steel Other
Date: 4/2/01
Sampled By: DSB
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches): 2
Total Depth of Casing (TD in ft BTOC): _____
Water Level Depth (WL in ft BTOC): 22.07
No. of Well Volumes to be purged (# V): _____

PURGE METHOD

Bailer - Type: _____
 Submersible - Type: _____
 Other - Type: Micropurge / Peristaltic

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): 25'
Screen Interval in feet (BTOC): from _____ to _____

Field Parameter Measurement

Gallons or Minutes	pH	Conductivity (µS)	Temp. <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	Turbidity (NTU)
Initial	<u>7.07</u>	<u>839.45</u>	<u>19.0</u>	<u>11.8</u>
Meter S/N	DB02	DO953	DO953	9092

PURGE TIME

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

PURGE RATE

PURGE VOLUME

Volume: _____ gallons
Observations During Purging (Well Condition, Color, Odor):
cloudy gray odorless
D.O. Initial 2.01 2.11 Redox initial -35.5 mV
D.O. final _____ Redox final _____
Discharge Water Disposal:
 Storm Sewer Other _____

WELL SAMPLING

Bailer - Type: _____ Sample Time: 1350

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
53087-3	3-VOA's	TPH gas, BTEX, MTBE			

QUALITY CONTROL SAMPLES

Duplicate Samples	
Original Sample No.	Dupl. Sample No.

Blank Samples	
Type	Sample No.

Other Samples	
Type	Sample No.



Harding Lawson Associates
Engineering and Environmental Services

GROUNDWATER SAMPLING FORM

Job Name: City Blue
Job Number: 53087.001
Recorded By: David Stone
(Signature)

Well Number: MW-06
Well Type: Monitor Extraction Other
 PVC St. Steel Other
Date: 4/2/01
Sampled By: DSW
(Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches): 2
Total Depth of Casing (TD in ft BTOC):
Water Level Depth (WL in ft BTOC): 23.33
No. of Well Volumes to be purged (# V):

PURGE METHOD

Bailor - Type:
 Submersible - Type:
 Other - Type: Micro purge

PURGE VOLUME CALCULATION

23.33 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): 26'
Screen Interval in feet (BTOC): from _____ to _____

Field Parameter Measurement

Gallons or Minutes	pH	Conductivity (µS)	Temp. <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	Turbidity (NTU)
Initial	<u>6.96</u>	<u>821</u>	<u>19.1</u>	<u>6.01</u>
Meter S/N	DB02	DO953	DO853	9092

PURGE TIME

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

PURGE RATE

PURGE VOLUME

Volume: _____ gallons
Observations During Purging (Well Condition, Color, Odor):
cloudy gray odorless
D.O. Initial 0.99 @ 25.4°C Redox initial 102.4
D.O. final _____ Redox final _____
Discharge Water Disposal:
 Storm Sewer Other _____

WELL SAMPLING

Bailor - Type: _____ Sample Time: 1140

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
<u>53087-4</u>	<u>3-VOA's</u>	<u>TPH gas, BTEX, MTBE</u>	<u>HCl</u>	<u>CLS</u>	

QUALITY CONTROL SAMPLES

Duplicate Samples	
Original Sample No.	Dupl. Sample No.

Blank Samples	
Type	Sample No.

Other Samples	
Type	Sample No.

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

Well/Sample Number	Client Sample ID
MW-1	53087-1
MW-3	53087-2
MW-5	53087-3
MW-6	53087-4
Trip Blank	53087-5