Shaw™ Shaw Environmental, Inc.

SEMI-ANNUAL
FIRST QUARTER 2004 MONITORING REPORT

HARD CHROME ENGINEERING

OAKLAND, CALIFORNIA

750 107th Oakland

Prepared for:

McLemore Trust

March 19, 2004

Prepared by:

Shaw Environmental, Inc.
1326 North Market Boulevard
Sacramento, California 95834-1912

Project No.: 792775.00005000

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DATE: MARCH 19, 2004

PROJECT NO.: 792775.00005

FROM: David W. Herzog

RE: Submittal of First Quarter 2004 Monitoring Report, McLemore Trust/Hard Chrome Engineering

QUANTITY:	DESCRIPTION:
1	First Quarter 2004 Monitoring Report, McLemore Trust/Hard Chrome Engineering

FOR YOUR:		SENT BY:	
X	USE	X	REGULAR MAIL
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cc: Ms. Cheryl McLemore, 4790 Caughlin Parkway, #429, Reno, Nevada 89509
Mr. Tom Peacock, Alameda County Environmental Health
Ms. Patricia Nettles, Department of Toxic Substances Control (California)
Ms. Sumadhu Arigala, Regional Water Quality Control Board
(San Francisco Bay Area)

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Semi-Annual
First Quarter 2004 Monitoring Report
Hard Chrome Engineering
Oakland, California

The material and data in this report were prepared under the supervision and direction of the undersigned.

Shaw Environmental, Inc.

David W. Herzog, R.G.
Project Manager

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INTRODUCTION

The following report documents the semi-annual first quarter 2004 monitoring event conducted at the Hard Chrome Engineering facility, located at 750 107th Avenue, Oakland, California (see Figure 1). The site currently operates as a chrome plating facility and occupies approximately 27,500 square feet. Groundwater monitoring consists of collecting groundwater samples for laboratory analyses from each monitoring well, measuring groundwater elevation in each monitoring well, and evaluating groundwater gradient and direction of groundwater flow beneath the site.

Background

Based on the Preliminary Environmental Characterization, BSK & Associates, September 29, 1992, Summary and Evaluation of Environmental Conditions, Soil and Groundwater Investigation, March 24, 1998, EMCON, and Recommendations for Future Actions, Levine Fricke, July 2, 1996, it appears that groundwater and, to a lesser extent, soil beneath the site is impacted with chromium. As part of the previous investigations, soil borings SB-1 through SB-17 were drilled, and groundwater monitoring wells MW-1 and MW-1B through MW-6 were installed at the site. Site soil and groundwater impacted with chromium appears to be primarily located near a concrete-lined pit within the Hard Chrome facility (see Figure 2).

SAMPLING AND ANALYSIS PROGRAM

Shaw Environmental, Inc. (Shaw), measured groundwater levels in each well on site using an electronic sounding device and reported the data on the monitoring well data forms included in Appendix A. Groundwater monitoring wells MW-1 through MW-6 were sampled consistent with the protocol presented in Figure 3 and submitted for chemical analysis. Groundwater samples collected on February 24, 2004, were filtered in the field.

Groundwater samples collected from wells MW-1 through MW-6 were submitted to California Laboratory Services (CLS) (a state-certified laboratory, ELAP No. 1233) and analyzed for the CAM 17 listed dissolved metals using U. S. Environmental Protection Agency (EPA) Methods 200.7/200.8, for dissolved hexavalent chromium using EPA Method 7196A, and for dissolved mercury by EPA Method 245.1. See Appendix B for certified analytical results and chain-of-custody reports.

RESULTS

Groundwater Flow and Gradient

Groundwater during the first quarter 2004 monitoring event was measured, and groundwater elevations were calculated in each well and used to construct a groundwater contour map (see Figure 4). During the first quarter 2004 monitoring event, groundwater flowed to the northwest with a gradient of approximately 0.003. These flow conditions are generally similar to those previously reported and generally agree with assumed regional flow patterns.

Quality Control Results

Laboratory Quality Control (QC) data were evaluated to assess the acceptability of the analytical data, and therefore, their usefulness in interpreting groundwater quality. Laboratory QC results are included with the analytical reports in Appendix B. The QC evaluation is summarized below.

- All analyses were performed within EPA–recommended holding times
- The results of the daily laboratory method blanks were acceptable
- Matrix spike and matrix spike duplicates (MS/MSD) were performed by the laboratory. MS and MSD recoveries, and the relative percent difference (RPD) between duplicate results were within acceptance limits.
- The laboratory reported the results of laboratory control samples (LCS). Results were within acceptance limits except for cadmium and silver, but were determined to be acceptable based on MS/MSD recoveries and RPD's.
- Routine reporting limits were used to quantify and report the analytical results.

The laboratory QC results indicate that the groundwater analytical data are of acceptable quality and can be used to evaluate groundwater quality.

Groundwater Analytical Results

Antimony was reported in wells MW-1B and MW-2 at concentrations of 0.074 and 0.64 milligrams per liter (mg/L), respectively. Barium and chromium were reported in all wells at concentrations ranging between 0.055 and 0.11 mg/L, and 0.026 and 250 mg/L, respectively. Hexavalent chromium was reported in all of the wells at concentrations ranging between 0.021 and 250 mg/L. Copper was reported in wells, MW-2 at a concentration of 2.8 mg/L. Lead was reported in wells MW-3 and MW-6 at concentrations of 0.0051 and 0.011 mg/L, respectively. Mercury was reported in well MW-2 at a concentration of 0.00061 mg/L. Nickel was reported in wells MW-1 and MW-2 at concentrations of 0.024 and 0.45 mg/L, respectively. Zinc was reported in well MW-2 and MW-5 at concentrations of 0.41 and 0.02 mg/L, respectively. Table 2 summarizes the groundwater analytical results.

SUMMARY AND CONCLUSIONS

Based on analytical results collected from wells MW-1 through MW-6 on February 24, 2004, metals reported include antimony, barium, chromium, hexavalent chromium, copper, lead, mercury, nickel, and zinc. Impacted water extends from the existing sump (well MW-2), west (hydraulically downgradient) toward the locations of wells MW-5 and MW-1B. The lateral extent of impacted groundwater beneath the site appears to be defined to the north by monitoring well MW-4; and to the south and southwest by wells MW-1, MW-3, and MW-6. The lateral extent of impacted groundwater has not been defined to the east or northwest of the site; however, concentrations of total chromium and hexavalent chromium have generally declined in wells MW-1B, MW-2, and MW-5. Vertically, the extent of impacted groundwater has not been defined.

During the February 2004 monitoring event, the monitoring well exhibiting the greatest chromium impact was well MW-2, located hydraulically downgradient from the sump. All monitoring wells showed some chromium impact.

Concentrations of total chromium in all on-site wells except MW-1 currently exceed the maximum contaminant level (MCL) for this compound (.05 mg/L). Overall, concentrations in these wells have declined with respect to historical levels. Total and hexavalent chromium concentrations in downgradient wells MW-1B and MW-5 show declining trends. Historical analytical results are summarized in Table 2.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

Table 1
Groundwater Analytical Data
McLemore Trust
Hard Chrome Engineering Inc.
750 107th Avenue, Oakland, California

Well ID / Elevation (feet SSD)	Sampling Date	Depth to Water (feet btoc)	Groundwater Elevation (feet SSD)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	pH (units)
MW-1/	06/26/97	16.27	83.96	NA	<0.05	NA	<0.005	NA	0.33	<0.01	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	6.57
100.23	08/11/97	17.62	82.61	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.46
	09/29/97	17.87	82.36	NA	<0.05	NA	<0.005	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	6.53
	12/30/97	16.32	83.91	NA	<0.01	NA	<0.005	NA	0.01	<0.01	NA	NA	NA	NA	NA	NA	<0.01	NA	NA	NA	NA	7.18
	04/23/98	15.67	84.56	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/13/00	12.47	87.76	<0.1	<0.1	<0.1	<0.01	<0.01	0.0305	0.0261	<0.04	<0.01	<0.1	<0.0002	<0.04	<0.04	<0.1	<0.01	<0.1	<0.04	0.0107	6.51
	09/20/00	17.12	83.11	<0.05	<0.05	0.105	<0.005	<0.005	<0.005	<0.005	<0.02	<0.005	<0.05	<0.0002	<0.02	<0.02	<0.05	<0.005	<0.05	<0.02	<0.0005	6.31
	03/20/01	15.77	84.46	<0.1	<0.1	<0.1	<0.01	<0.01	0.0951	0.0486	<0.04	<0.01	<0.1	<0.0002	<0.04	<0.04	<0.1	<0.01	<0.1	<0.04	0.0236	6.88
	09/13/01	17.49	82.74	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	0.0052	<0.04	<0.01	<0.1	<0.0002	<0.04	<0.04	<0.1	<0.01	<0.1	<0.04	<0.01	5.54
	03/12/02	14.63	85.60	<0.05	<0.005	0.068	<0.005	<0.01	0.016	<0.01	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.005	<0.02	<0.02	5.80
	09/23/02	17.20	83.03	<0.05	<0.005	0.1	<0.005	<0.01	<0.02	<0.01	<0.02	<0.02	<0.005	<0.0002	<0.02	0.022	<0.005	<0.01	<0.01	<0.02	<0.02	6.86
	03/26/03	16.18	84.05	<0.05	<0.005	0.098	<0.005	<0.01	<0.02	<0.01	<0.02	<0.02	<0.005	0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	7.11
	09/24/03	17.32	82.91	<0.05	<0.005	0.11	<0.005	<0.01	<0.02	<0.01	<0.02	<0.02	<0.005	<0.0002	<0.02	0.036	<0.005	<0.01	<0.01	<0.02	<0.02	6.63
	02/24/04	14.63	85.60	<0.05	<0.005	0.095	<0.005	<0.01	0.026	0.021	<0.02	<0.02	<0.005	<0.0002	<0.02	0.024	<0.005	<0.01	<0.01	<0.02	<0.02	6.71
MW-1B/	06/27/97	16.38	82.63	NA	<0.05	NA	0.011	NA	430	360	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	6.57
99.01	08/11/97	16.73	82.28	NA	NA	NA	NA	NA	340	330	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.48
	09/29/97	17.06	81.95	NA	<0.5	NA	<0.05	NA	280	260	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	7.59
	12/30/97	15.50	83.51	NA	<0.05	NA	<0.025	NA	200	160	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	6.91
	04/23/98	15.05	83.96	NA	NA	NA	NA	NA	580	520	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.47
	03/13/00	12.10	86.91	<0.1	<0.1	<0.1	<0.01	<0.01	252	258	<0.04	<0.01	<0.1	<0.0002	<0.04	<0.04	<0.1	<0.01	<0.1	<0.04	<0.01	6.56
	09/20/00	17.89	81.12	0.56	<0.5	<0.5	<0.05	<0.05	134	122	<0.2	<0.05	<0.5	<0.0002	<0.2	<0.2	<0.5	<0.05	<0.5	<0.2	<0.005	6.01
	03/20/01	15.08	83.93	<0.5	<0.5	<0.5	<0.05	<0.05	72.6	74.6	<0.2	<0.05	<0.5	<0.0002	<0.2	<0.2	<0.5	<0.05	<0.5	<0.2	<0.05	6.95
	09/13/01	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/12/02	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/23/02	16.38	82.63	0.16	<0.005	0.051	<0.005	<0.01	33	35	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	0.071	<0.02	6.58
	03/26/03	15.35	83.66	0.092	<0.005	0.056	<0.005	<0.01	35	37	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	6.91
	09/24/03	16.52	82.49	0.059	<0.005	0.061	<0.005	<0.01	28	28	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	6.86
	02/24/04	14.08	84.93	0.074	<0.005	0.066	<0.005	<0.01	24	27	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	7.08
MW-2/	06/27/97	17.57	82.81	NA	0.21	NA	0.032	NA	3000	3000	NA	NA	NA	NA	NA	NA	0.14	NA	NA	NA	NA	4.65
100.38	08/11/97 *	17.91	82.47	NA	NA	NA	NA	NA	2600	2600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.66
	09/29/97	18.22	82.16	NA	<0.5	NA	<0.05	NA	1500	1400	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	4.82
	12/30/97	16.54	83.84	NA	<0.05	NA	<0.025	NA	86	83	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	6.42
	04/23/98	16.15	84.23	NA	NA	NA	NA	NA	150	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.31
	03/13/00	13.12	87.26	<0.1	<0.1	<0.1	<0.01	<0.01	139	136	<0.04	1.24	<0.1	<0.0002	<0.04	0.3	<0.1	<0.01	<0.1	<0.04	0.294	4.77
	09/20/00	17.48	82.90	2.67	<2.5	<2.5	<0.25	<0.25	598	611	<1.0	7.06	<2.5	0.00078	<1.0	1.04	<2.5	<0.25	<2.5	<1.0	1.12	3.49
	03/20/01	16.21	84.17	2.24	<2	<2	<0.2	<0.2	752	757	<0.8	17.2	<2	0.00122	<0.8	1.69	<2	<0.2	<2	<0.8	1.88	6.37
	09/13/01	17.83	82.55	<10	<10	<10	<1	<1	1000	55	<4	14	<10	0.00088	<4	<4	<10	<1	<10	<4	2.3	5.19
	03/12/02	15.11	85.27	<0.05	<0.005	<0.02	<0.005	<0.01	410	410	<0.02	7.0	<0.005	0.00045	<0.02	0.94	<0.005	<0.01	<0.005	1.5	0.97	5.47
	09/23/02	17.56	82.82	2.9	<0.05	0.12	<0.025	<0.05	610	510	<0.1	2.9	<0.05	0.00041	<0.1	0.78	<0.05	<0.05	<0.1	1.2	0.75	6.24
	03/26/03	16.58	83.80	1.2	<0.05	0.22	<0.01	<0.02	530	530	<0.04	6.7	<0.05	0.00095	<0.04	0.95	<0.05	<0.02	<0.1	<0.04	0.94	5.91
	09/24/03	17.67	82.71	1.7	<0.025	0.22	<0.025	<0.05	750	650	<0.1	9.4	<0.025	0.00075	<0.1	1.3	<0.025	<0.05	<0.05	<0.1	1.3	5.37
	02/24/04	15.16	85.22	0.64	<0.005	0.11	<0.005	<0.01	250	250	<0.02	2.8	<0.005	0.00061	<0.02	0.45	<0.005	<0.01	<0.01	<0.02	0.41	5.84
MW-3/	06/26/97	17.43	82.94	NA	<0.05	NA	0.011	NA	1	<0.01	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	6.86
100.37	08/11/97	17.74	82.63	NA	NA	NA	NA	NA	<0.01	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.84
	09/29/97	18.02	82.35	NA	<0.05	NA	<0.005	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	0.05	NA	NA	NA	NA	7.55
	12/30/97	16.55	83.82	NA	<0.01	NA	<0.005	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	<0.01	NA	NA	NA	NA	7.42
	04/23/98	15.94	84.43	NA	NA	NA	NA	NA	0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.94
	03/13/00	12.80	87.57	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	0.00623	<0.04	<0.01	<0.1	<0.0002	<0.04	<0.04	<0.1	<0.01	<0.1	<0.04	<0.01	6.68
	09/20/00	17.34	83.03	<0.05	<0.05	0.0553	<0.005	<0.005	0.014	<0.005	<0.02	<0.005	<0.05	<0.0002	<0.02	<0.02	<0.05	0.0056	<0.05	<0.02	<0.0005	6.56
	03/20/01	16.06	84.31	<0.1	<0.1	<0.1	<0.01	<0.01	0.0368	0.017	<0.04	<0.01	<0.1	<0.0002	<0.04	<0.04	<0.1	<0.01	<0.1	<0.04	0.0135	7.00
	09/13/01	17.70	82.67	<0.1	<0.1	<0.1	<0.01	<0.01	0.11	0.074	<0.04	<0.01	<0.1	<0.0002	<0.04	<0.04	<0.1	<0.01	<0.1	<0.04	<0.01	6.28

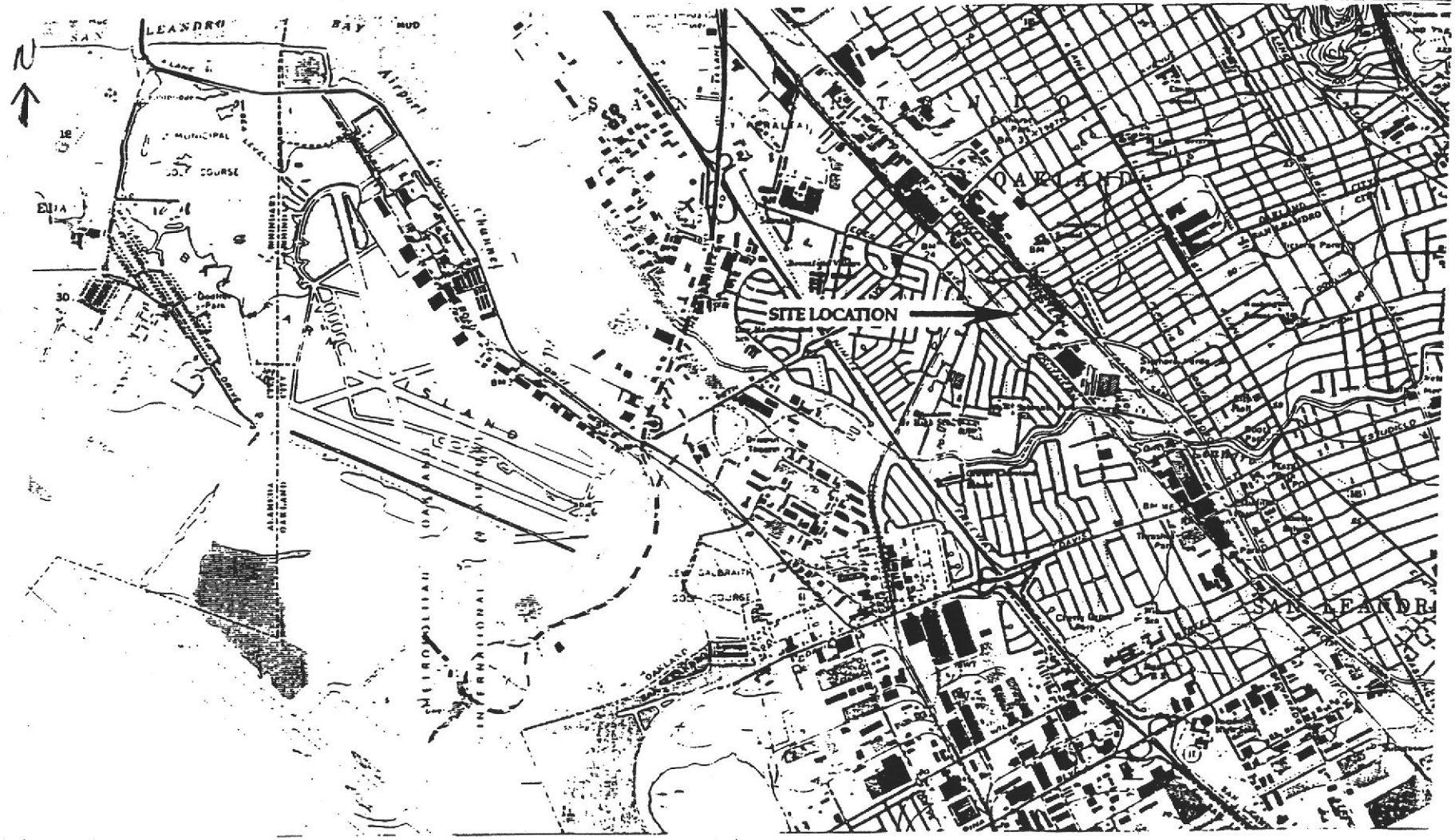
Table 1
Groundwater Analytical Data
McLemore Trust
Hard Chrome Engineering Inc.
750 107th Avenue, Oakland, California

Well ID / Elevation (feet SSD)	Sampling Date	Depth to Water (feet btoc)	Groundwater Elevation (feet SSD)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	pH (units)
MW-3	03/12/02	14.94	85.43	<0.05	<0.005	0.066	<0.005	<0.01	0.024	<0.01	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.005	<0.02	<0.02	6.28
(cont.)	09/23/02	17.43	82.94	<0.05	<0.005	0.053	<0.005	<0.01	0.044	0.049	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	6.86
	03/26/03	16.45	83.92	<0.05	<0.005	0.059	<0.005	<0.01	0.14	0.039	<0.02	<0.02	<0.005	0.00022	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	6.36
	09/24/03	17.55	82.82	<0.05	<0.005	0.066	<0.005	<0.01	0.083	0.022	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	6.74
	02/24/04	15.09	85.28	<0.05	<0.005	0.082	<0.005	<0.01	0.14	0.032	<0.02	<0.02	0.0051	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	7.01
MW-4/	06/26/97	17.40	82.90	NA	<0.05	NA	0.006	NA	0.55	<0.01	NA	NA	NA	NA	NA	NA	0.06	NA	NA	NA	NA	6.88
100.3	08/11/97	17.76	82.54	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.72
	09/29/97	18.30	82.00	NA	<0.05	NA	<0.005	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	0.07	NA	NA	NA	NA	7.61
	12/30/97	16.50	83.80	NA	<0.01	NA	<0.005	NA	0.01	<0.01	NA	NA	NA	NA	NA	NA	<0.01	NA	NA	NA	NA	7.40
	04/23/98	15.93	84.37	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/13/00	13.24	87.06	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	0.00623	<0.04	<0.01	<0.1	<0.0002	<0.04	<0.04	<0.1	<0.01	<0.1	<0.04	<0.01	6.60
	09/20/00	18.88	81.42	<0.05	<0.05	0.0624	<0.005	<0.005	<0.005	<0.005	<0.02	<0.005	<0.05	<0.0002	<0.02	<0.02	<0.05	<0.005	<0.05	<0.02	<0.0005	6.62
	03/20/01	15.99	84.31	<0.1	<0.1	0.118	<0.01	<0.01	1.03	0.475	<0.04	<0.01	<0.1	<0.0002	<0.04	0.059	<0.1	<0.01	<0.1	<0.04	<0.01	6.64
	09/13/01	17.62	82.68	<0.1	<0.1	0.1	<0.01	<0.01	1.3	0.011	<0.04	<0.01	<0.1	<0.0002	<0.04	0.052	<0.1	<0.01	<0.1	<0.04	<0.01	5.94
	03/12/02	14.96	85.34	<0.05	<0.005	0.078	<0.005	<0.01	0.028	<0.01	<0.02	<0.02	<0.005	0.00032	<0.02	0.024	<0.005	<0.01	<0.005	<0.02	<0.02	6.15
	09/23/02	17.34	82.96	<0.05	<0.005	0.077	<0.005	<0.01	<0.02	<0.01	<0.02	<0.02	<0.005	<0.0002	<0.02	0.028	<0.005	<0.01	<0.01	<0.02	<0.02	7.00
	03/26/03	16.36	83.94	<0.05	<0.005	0.08	<0.005	<0.01	0.064	0.049	<0.02	<0.02	<0.005	0.0002	<0.02	0.02	<0.005	<0.01	<0.01	<0.02	<0.02	6.74
	09/24/03	17.64	82.66	<0.05	<0.005	0.077	<0.005	<0.01	0.034	<0.01	<0.02	<0.02	<0.005	<0.0002	<0.02	0.022	<0.005	<0.01	<0.01	<0.02	<0.02	6.79
	02/24/04	15.00	85.30	<0.05	<0.005	0.066	<0.005	<0.01	0.15	0.12	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	6.98
MW-5/	06/27/97	16.69	82.60	NA	<0.05	NA	0.005	NA	110	90	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	6.70
99.29	08/11/97	16.95	82.34	NA	NA	NA	NA	NA	120	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.67
	09/29/97	17.20	82.09	NA	<0.5	NA	<0.05	NA	130	100	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	7.13
	12/30/97	15.80	83.49	NA	<0.05	NA	<0.025	NA	110	98	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	7.13
	04/23/98	15.28	84.01	NA	NA	NA	NA	NA	70	58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.67
	03/13/00	12.36	86.93	<0.1	<0.1	<0.1	<0.01	<0.01	49.4	54.3	<0.04	<0.01	<0.1	<0.0002	<0.04	<0.04	<0.1	<0.01	<0.1	<0.04	<0.01	6.63
	09/20/00	18.11	81.18	<0.5	<0.5	<0.5	<0.05	<0.05	81.6	81.4	<0.2	<0.05	<0.5	<0.0002	<0.2	<0.2	<0.5	<0.05	<0.5	<0.2	<0.005	6.56
	03/20/01	15.27	84.02	<0.1	<0.1	<0.1	<0.01	<0.01	0.448	<0.005	<0.04	<0.01	<0.1	<0.0002	<0.04	<0.04	<0.1	<0.01	<0.1	<0.04	<0.01	6.94
	09/13/01	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/12/02	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/23/02	16.60	82.69	<0.05	<0.005	0.084	<0.005	<0.01	2.4	2.5	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	6.86
	03/26/03	15.59	83.70	<0.05	<0.005	0.067	<0.005	<0.01	6	6.1	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	6.69
	09/24/03	16.72	82.57	<0.05	<0.005	0.1	<0.005	<0.01	9.7	10	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	6.70
	02/24/04	14.19	85.10	<0.05	<0.005	0.055	<0.005	<0.01	8	8.8	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	0.02	7.05
MW-6/	06/26/97	17.68	82.80	NA	<0.05	NA	0.005	NA	0.47	<0.01	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	6.91
100.48	08/11/97	18.08	82.40	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.84
	09/29/97	18.00	82.48	NA	<0.05	NA	<0.005	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	0.05	NA	NA	NA	NA	7.79
	12/30/97	16.77	83.71	NA	<0.01	NA	<0.005	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	<0.01	NA	NA	NA	NA	7.40
	04/23/98	16.22	84.26	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/13/00	13.19	87.29	<0.1	<0.1	0.102	<0.01	<0.01	<0.01	0.00733	<0.04	<0.01	<0.1	<0.0002	<0.04	<0.04	<0.1	<0.01	<0.1	<0.04	<0.01	6.71
	09/20/00	17.57	82.91	<0.05	<0.05	0.0667	<0.005	<0.005	0.00665	<0.005	<0.02	<0.005	<0.05	<0.0002	<0.02	<0.02	<0.05	<0.005	<0.05	<0.02	0.0133	6.65
	03/20/01	16.29	84.19	<0.1	<0.1	<0.1	<0.01	<0.01	0.028	0.0249	<0.04	<0.01	<0.1	<0.0002	<0.04	<0.04	<0.1	<0.01	<0.1	<0.04	<0.01	6.83
	09/13/01	17.93	82.55	<0.1	<0.1	<0.1	<0.01	<0.01	0.031	<0.005	<0.04	<0.01	<0.1	<0.0002	<0.04	<0.04	<0.1	<0.01	<0.1	<0.04	<0.01	6.36
	03/12/02	15.18	85.30	<0.05	<0.005	0.075	<0.005	<0.01	0.018	<0.01	<0.02	<0.02	<0.005	0.00044	<0.02	<0.02	<0.005	<0.01	<0.005	<0.02	<0.02	6.37
	09/23/02	17.66	82.82	<0.05	<0.005	0.067	<0.005	<0.01	<0.02	0.028	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	6.87
	03/26/03	16.64	83.84	<0.05	<0.005	0.074	<0.005	<0.01	0.066	0.13	<0.02	<0.02	0.0082	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	7.03
	09/24/03	17.78	82.70	<0.05	<0.005	0.062	<0.005	<0.01	0.034	0.028	<0.02	<0.02	<0.005	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	6.61
	02/24/04	15.27	85.21	<0.05	<0.005	0.071	<0.005	<0.01	0.071	0.021	<0.02	<0.02	0.011	<0.0002	<0.02	<0.02	<0.005	<0.01	<0.01	<0.02	<0.02	6.87
MCL				0.006	0.05	1	0.004	0.005	0.05	***	---	1.0 **	---	0.002	---	0.1	0.05	0.1 **	0.002	---	5.0 **	---

Table 1
Groundwater Analytical Data
McLemore Trust
Hard Chrome Engineering Inc.
750 107th Avenue, Oakland, California

Well ID / Elevation (feet SSD)	Sampling Date	Depth to Water (feet btoc)	Groundwater Elevation (feet SSD)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	pH (units)

Note: Samples collected on 06/26/97 and 06/27/97 were unfiltered and analyzed for total metals; all other samples were field filtered and analyzed for dissolved metals.
Concentrations in milligrams per liter (mg/L)
NA = Not analyzed.
NM = Not monitored
* Total dissolved solids and total suspended solids were analyzed and detected at concentrations of 5,200 and 13,000 mg/L.
MCL = California primary maximum contaminant level (MCL).
** = Secondary MCL
*** = Primary MCL to be adopted by January 1, 2004.
--- = MCL not established.

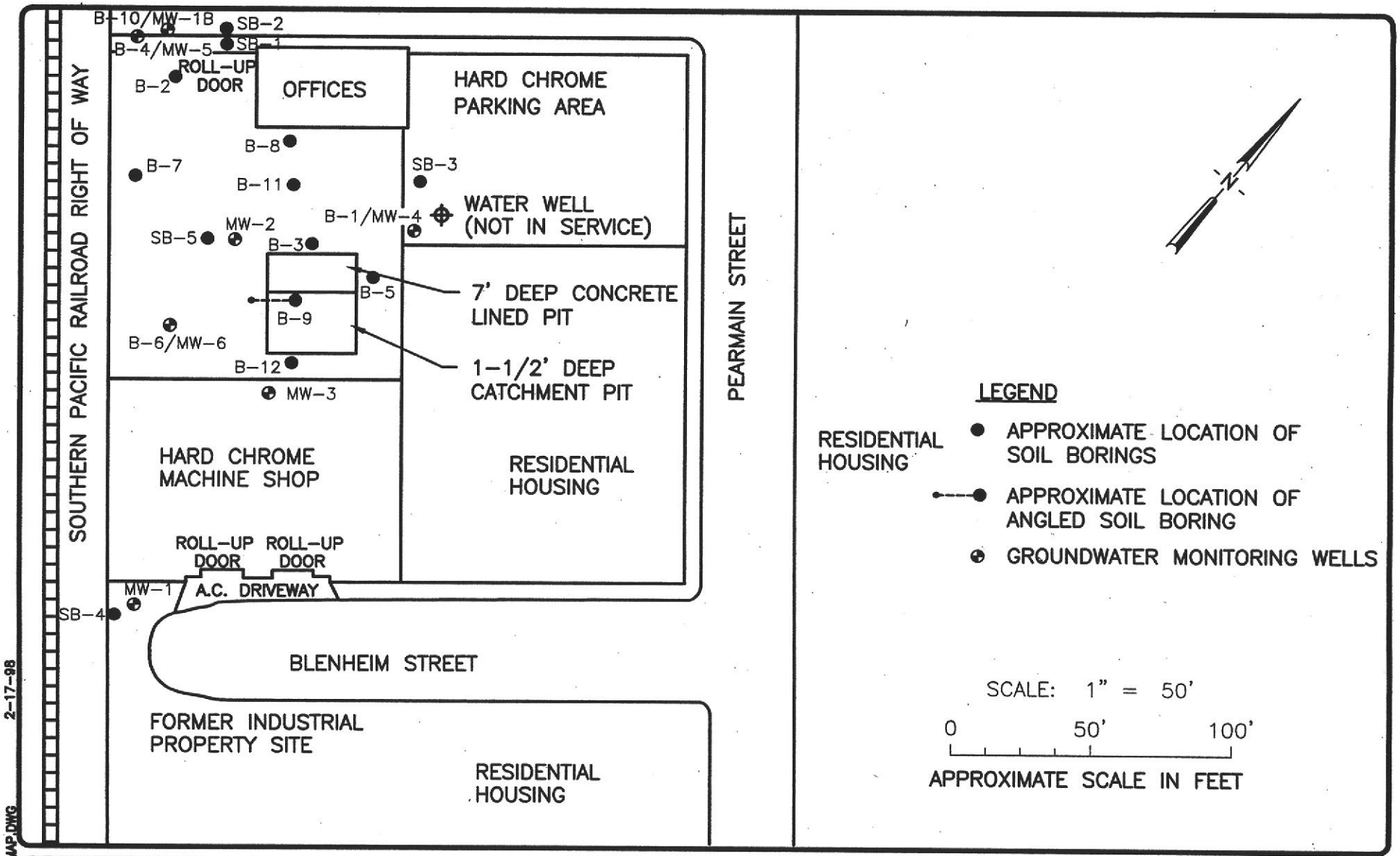


Shaw™ Shaw Environmental, Inc.

McLEMORE TRUST
HARD CHROME ENG. INC.,
750 107th AVENUE, OAKLAND, CALIFORNIA

SITE LOCATION MAP

FIGURE
1



2-17-98

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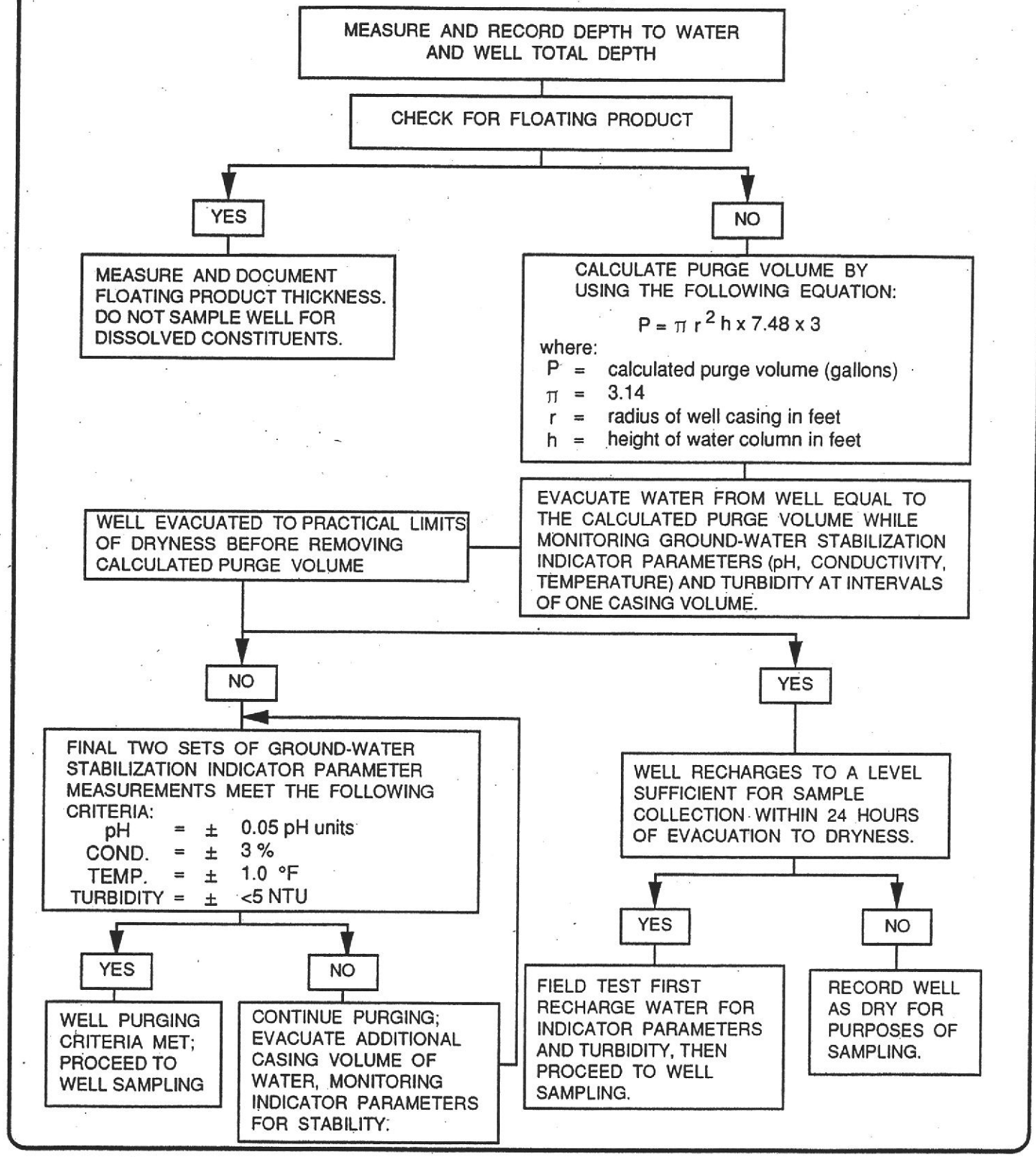
Shaw™ Shaw Environmental, Inc.

MCLEMORE TRUST
HARD CHROME ENG. INC.,
750 107TH AVENUE
OAKLAND, CALIFORNIA
SITE MAP

FIGURE
2
PROJECT NO.
792775

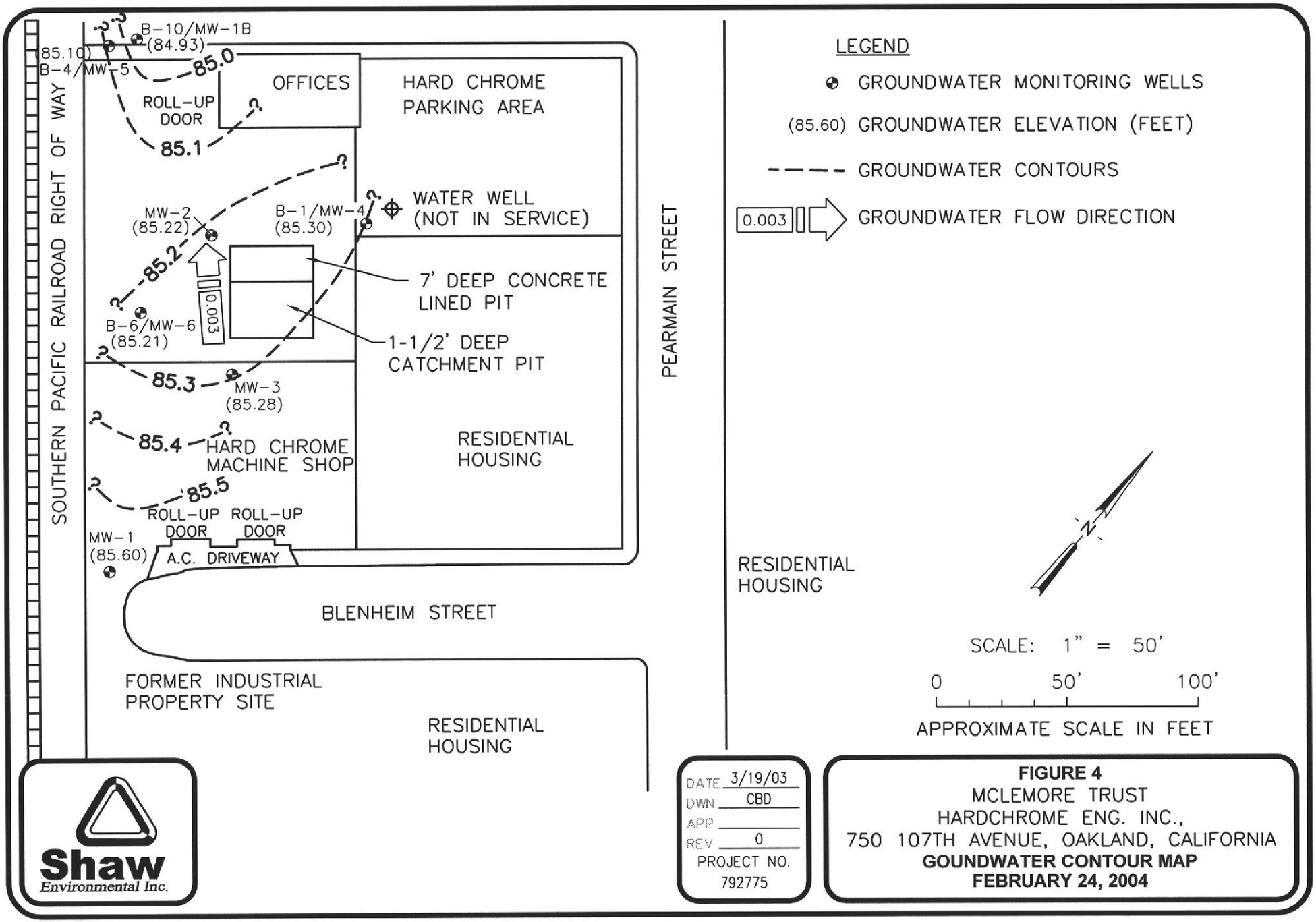
MONITORING WELL PURGING PROTOCOL



Shaw™
Shaw Environmental, Inc.

MONITORING WELL PURGING PROTOCOL

FIGURE
3



Shaw Environmental Inc.

DATE 3/19/03
DWN CBD
APP
REV 0
PROJECT NO.
792775

FIGURE 4
MCLEMORE TRUST
HARDCHROME ENG. INC.,
750 107TH AVENUE, OAKLAND, CALIFORNIA
GOUNDWATER CONTOUR MAP
FEBRUARY 24, 2004

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APPENDIX A

FIELD REPORT AND FIELD DATA SHEETS

FIELD REPORT
WATER LEVEL / FLOATING PRODUCT SURVEY

Shaw Environmental & Infrastructure, Inc.
1326 North Market Boulevard
Sacramento, California 95834
(916) 928-3300

PROJECT NO : 792775 / 00002000 **LOCATION : 750 107th Avenue, Oakland** **DATE:** 2.24.04

CLIENT : Hard Chrome Engineering **SAMPLER : Paul Weinhardt**

WELL ID	CASING ELEVATION (Feet, MSL)	TOTAL DEPTH (Feet)	PREVIOUS DEPTH TO WATER 9/24/2003	DEPTH TO WATER (Feet)	FLOATING PRODUCT THICKNESS (Feet)	COMMENTS
MW-1		24.40	17.32	14.63	—	
MW-2		23.90	17.67	15.16	—	
MW-3		23.50	17.55	15.09	—	
MW-4		22.90	17.64	15.00	—	
MW-5		23.20	16.72	14.19	—	
MW-6		22.70	17.78	15.27	—	
MW-1B		30.00	16.52	14.08	—	

Comments :

Paul Weinhardt
Signature

Drum Inventory Record

792775 / 00002000
Project No

750 107th Ave., Oakland
Location

2.24.04
Date

Hard Chrome Engineering
Client

Paul Weinhardt
Sampler

DRUM NUMBER OR ID	WELL OR SOURCE ID(s)	TYPE OF MATERIAL	AMOUNT OF MATERIAL IN DRUM	DATE ACCUMULATED OR GENERATED
Drummed on Site	Monitoring Wells	Water	33gal	2.24.04

~~Sketch locations of drums, include drum ID's~~

5 DRUMS ON SITE
ALL ARE FULL

* NEED A DRUM FOR NEXT EVENT

COMMENTS:

Number of Drums From This Event

Total Number of Drums At Site: 5

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

Shaw Environmental & Infrastructure, Inc.
1326 North Market Boulevard, Sacramento, CA 95834

Purchase Order: 209797
Lab: CLS Lab

Project Name: **Hard Chrome Engineering**
Project Number: **792775 / 00002000**
Project Manager: **David Herzog**
Company: **Shaw Environmental & Infrastructure, Inc.**
Address: **1326 North Market Boulevard**
Sacramento, CA 95834
Dir Phone: **(916) 565-4377** / FAX: **(916) 565-4356**
Sampler's Signature: Paul Weinhardt

Analysis Requested

Sample I.D.	Date	Time	LAB I.D.	Sample Matrix	Number of Containers	Cam 17 Metals (Field Filtered)	Hexavalent Chromium by EPA Method 7196 (24-Hr Hold) (Field Filtered)	REMARKS
					3	3		Container Types
					HNO3	NP		Preservations
MW-1	2.24	928		water	2	1	1	
MW-2	↓	1101		water	2	1	1	
MW-3		1143		water	2	1	1	
MW-4		958		water	2	1	1	
MW-5		1031		water	2	1	1	
MW-6		1121		water	2	1	1	
MW-1B	↓	1210		water	2	1	1	

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Paul Weinhardt	Signature	Signature	Signature
Printed Name: Paul Weinhardt	Printed Name	Printed Name	Printed Name
Firm: Shaw E+I	Firm	Firm	Firm
Date/Time: 2.24.04	Date/Time	Date/Time	Date/Time

TURN AROUND TIME

___ 24 hr ___ 48 hr ___ 5 day
X Standard (~10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX Preliminary Results
Requested Report Date: _____

REPORT REQUIREMENTS

X I. Routine Report
___ II. Report (includes DUP, MS MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ RWQCB (MDLs/PQLs/TRACE#)

RELINQUISHED BY	RECEIVED BY
Signature	Signature
Printed Name	Printed Name: Gabe Nafzo
Firm	Firm: CLS
Date/Time	Date/Time: 2-24-4 1325

Special Instructions/Comments:

Chrom VI has a 24 hour hold time.
All samples need to be field filtered.

CLS
3249 Fitzgerald Road
Rancho Cordova, Calif 95742
916-638-7301 / Fx: 638-4510
Ray Oslowski

Container Types Key:

40 ml VOA:	1
250 ml LPE:	2
500 ml LPE:	3
1 liter HDPE:	4
500 ml glass:	5
1 liter glass:	6
2x6 s/s ring:	7
glass jar:	8

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO : 792775 / 00002000 — SAMPLE ID : MW1

PURGED BY : Paul Weinhardt — CLIENT NAME : Hard Chrome Engineering

SAMPLED BY : Paul Weinhardt — LOCATION : 750 107th Avenue, Oakland

TYPE: Groundwater X — Surface Water ____ — Leachate ____ — Other ____

CASING DIAMETER (inches): 2 X — 3 ____ — 4 ____ — 4.5 ____ — 6 ____ — Other ____

CASING ELEVATION (feet/MSL) : ____ — VOLUME IN CASING (gal.) : 1.59

DEPTH OF WELL (feet) : 24.40 — CALCULATED PURGE (gal.) : 4.77

DEPTH TO WATER (feet) : 14.63 — ACTUAL PURGE VOL. (gal.) : 4.50

DATE PURGED : 2.24.04 — END PURGE : 920

DATE SAMPLED : 2.24.04 — SAMPLING TIME : 928

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
912	1.5	6.57	441	16.1°	Cloudy	MOD
916	3.0	6.67	438	16.5°	Cloudy	MOD
920	4.5	6.71	441	16.9°	Cloudy	MOD

OTHER: ____ — ODOR: ____

(COBALT 0-100) — (NTU 0-200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1) : ____

PURGING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)

____ Centrifugal Pump — ____ Bailer (PVC)

____ Submersible Pump — ____ Bailer (Stainless Steel)

X Disposal Bailer — ____ Dedicated

Other: ____

SAMPLING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)

____ Bomb Sampler — ____ Bailer (Stainless Steel)

____ Dipper — ____ Submersible Pump

Y Disposal Bailer — ____ Dedicated

Other: ____

WELL INTEGRITY: Good — LOCK: 0464

REMARKS: ____

pH, E.C., Temp. Meter Calibration: Date: ____ Time: ____ Meter Serial No.: ____

E.C. 1000 ____ / ____ pH 7 ____ / ____ pH 10 ____ / ____ pH 4 ____ / ____

Temperature °C ____

SIGNATURE: Paul Weinhardt — REVIEWED BY: ____ — PAGE 1 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO : 792775 / 00002000 — SAMPLE ID : MW2

PURGED BY : Paul Weinhardt — CLIENT NAME : Hard Chrome Engineering

SAMPLED BY : Paul Weinhardt — LOCATION : 750 107th Avenue, Oakland

TYPE: Groundwater X — Surface Water ____ — Leachate ____ — Other ____

CASING DIAMETER (inches): 2 X — 3 ____ — 4 ____ — 4.5 ____ — 6 ____ — Other ____

CASING ELEVATION (feet/MSL) : ____ — VOLUME IN CASING (gal.) : 1.42

DEPTH OF WELL (feet) : 23.90 — CALCULATED PURGE (gal.) : 4.27

DEPTH TO WATER (feet) : 15.16 — ACTUAL PURGE VOL. (gal.) : 4.50

DATE PURGED : 2.24.04 — END PURGE : 1054

DATE SAMPLED : 2.24.04 — SAMPLING TIME : 1101

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
1046	1.5	5.94	776	17.6°	cloudy	MOD
1050	3.0	5.85	831	17.5°	cloudy	MOD
1054	4.5	5.84	841	17.6°	cloudy	MOD

OTHER: ____ — ODOR: ____ — (COBALT 0-100) — (NTU 0-200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1) : ____

PURGING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)

____ Centrifugal Pump — ____ Bailer (PVC)

____ Submersible Pump — ____ Bailer (Stainless Steel)

X Disposal Bailer — ____ Dedicated

Other: ____

SAMPLING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)

____ Bomb Sampler — ____ Bailer (Stainless Steel)

____ Dipper — ____ Submersible Pump

X Disposal Bailer — ____ Dedicated

Other: ____

WELL INTEGRITY: Good — LOCK: 0464

REMARKS: ____

pH, E.C., Temp. Meter Calibration: Date: ____ Time: ____ Meter Serial No.: ____

E.C. 1000 ____ / ____ — pH 7 ____ / ____ — pH 10 ____ / ____ — pH 4 ____ / ____

Temperature °C ____

SIGNATURE: Paul Weinhardt — REVIEWED BY: ____ — PAGE 2 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO : 792775 / 00002000 — SAMPLE ID : MW3
PURGED BY : Paul Weinhardt — CLIENT NAME : Hard Chrome Engineering
SAMPLED BY : Paul Weinhardt — LOCATION : 750 107th Avenue, Oakland

TYPE: Groundwater X — Surface Water ____ — Leachate ____ — Other ____
CASING DIAMETER (inches): 2 X — 3 ____ — 4 ____ — 4.5 ____ — 6 ____ — Other ____

CASING ELEVATION (feet/MSL) : ____ — VOLUME IN CASING (gal.) : 1.37
DEPTH OF WELL (feet) : 23.50 — CALCULATED PURGE (gal.) : 4.11
DEPTH TO WATER (feet) : 15.09 — ACTUAL PURGE VOL. (gal.) : 4.50

DATE PURGED : 2.24.04 — END PURGE : 1138
DATE SAMPLED : 2.24.04 — SAMPLING TIME : 1143

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
1132	1.5	7.09	428	17.30	cloudy	mod
1135	3.0	6.99	424	18.00	cloudy	mod
1138	4.5	7.01	422	17.90	cloudy	mod

OTHER: ____ — ODOR: ____ — (COBALT 0-100) — (NTU 0-200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1) : ____

PURGING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)
____ Centrifugal Pump — ____ Bailer (PVC)
____ Submersible Pump — ____ Bailer (Stainless Steel)
X Disposal Bailer — ____ Dedicated
Other: ____

SAMPLING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)
____ Bomb Sampler — ____ Bailer (Stainless Steel)
____ Dipper — ____ Submersible Pump
X Disposal Bailer — ____ Dedicated
Other: ____

WELL INTEGRITY: GOOD — LOCK: 0464

REMARKS: ____

pH, E.C., Temp. Meter Calibration: Date: ____ Time: ____ Meter Serial No.: ____
E.C. 1000 ____ / ____ pH 7 ____ / ____ pH 10 ____ / ____ pH 4 ____ / ____
Temperature °C ____

SIGNATURE: Paul Weinhardt — REVIEWED BY: ____ — PAGE 3 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO : 792775 / 00002000 — SAMPLE ID : MW4
PURGED BY : Paul Weinhardt — CLIENT NAME : Hard Chrome Engineering
SAMPLED BY : Paul Weinhardt — LOCATION : 750 107th Avenue, Oakland

TYPE: Groundwater X — Surface Water ____ — Leachate ____ — Other ____
CASING DIAMETER (inches): 2 X — 3 ____ — 4 ____ — 4.5 ____ — 6 ____ — Other ____

CASING ELEVATION (feet/MSL) : ____
DEPTH OF WELL (feet) : 22.90
DEPTH TO WATER (feet) : 15.00
VOLUME IN CASING (gal.) : 1.28
CALCULATED PURGE (gal.) : 3.86
ACTUAL PURGE VOL. (gal.) : 3.75

DATE PURGED : 2.24.04 — END PURGE : 951
DATE SAMPLED : 2.24.04 — SAMPLING TIME : 958

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
943	1.25	6.96	401	17.0°	Cloudy	Mod
947	2.50	6.94	412	17.5°	Cloudy	Mod
951	3.75	6.98	422	17.6°	Cloudy	Mod

OTHER: ____ ODOR: ____ (COBALT 0-100) (NTU 0-200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1) : ____

PURGING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)
____ Centrifugal Pump — ____ Bailer (PVC)
____ Submersible Pump — ____ Bailer (Stainless Steel)
X Disposal Bailer — ____ Dedicated
Other: ____

SAMPLING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)
____ Bomb Sampler — ____ Bailer (Stainless Steel)
____ Dipper — ____ Submersible Pump
X Disposal Bailer — ____ Dedicated
Other: ____

WELL INTEGRITY: Good — LOCK: 0464

REMARKS: ____

pH, E.C., Temp. Meter Calibration: Date: ____ Time: ____ Meter Serial No.: ____
E.C. 1000 ____ / ____ pH 7 ____ / ____ pH 10 ____ / ____ pH 4 ____ / ____
Temperature °C ____

SIGNATURE: Paul Weinhardt REVIEWED BY: ____ PAGE 4 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO : 792775 / 00002000 — SAMPLE ID : MW5

PURGED BY : Paul Weinhardt — CLIENT NAME : Hard Chrome Engineering

SAMPLED BY : Paul Weinhardt — LOCATION : 750 107th Avenue, Oakland

TYPE: Groundwater X — Surface Water ____ — Leachate ____ — Other ____

CASING DIAMETER (inches): 2 X — 3 ____ — 4 ____ — 4.5 ____ — 6 ____ — Other ____

CASING ELEVATION (feet/MSL) :		VOLUME IN CASING (gal.) :	1.46
DEPTH OF WELL (feet) :	23.20	CALCULATED PURGE (gal.) :	4.40
DEPTH TO WATER (feet) :	14.9	ACTUAL PURGE VOL. (gal.) :	4.50

DATE PURGED : 2.24.04 — END PURGE : 1024

DATE SAMPLED : 2.24.04 — SAMPLING TIME : 1031

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
1016	1.5	7.08	350	16.3°	cloudy	MOD
1020	3.0	7.03	354	16.5°	cloudy	MOD
1024	4.5	7.05	361	16.5°	cloudy	MOD

OTHER: ____ ODOR: ____ (COBALT 0-100) (NTU 0-200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1) : ____

PURGING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)
____ Centrifugal Pump — ____ Bailer (PVC)
____ Submersible Pump — ____ Bailer (Stainless Steel)
X Disposal Bailer — ____ Dedicated
Other: ____

SAMPLING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)
____ Bomb Sampler — ____ Bailer (Stainless Steel)
____ Dipper — ____ Submersible Pump
X Disposal Bailer — ____ Dedicated
Other: ____

WELL INTEGRITY: Good — LOCK: 0464

REMARKS: ____

pH, E.C., Temp. Meter Calibration: Date: ____ Time: ____ Meter Serial No.: ____

E.C. 1000 ____ / ____ pH 7 ____ / ____ pH 10 ____ / ____ pH 4 ____ / ____

Temperature °C ____

SIGNATURE: Paul Weinhardt REVIEWED BY: XX PAGE 5 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO : 792775 / 00002000 — SAMPLE ID : MW6
PURGED BY : Paul Weinhardt — CLIENT NAME : Hard Chrome Engineering
SAMPLED BY : Paul Weinhardt — LOCATION : 750 107th Avenue, Oakland

TYPE: Groundwater X — Surface Water ____ — Leachate ____ — Other ____
CASING DIAMETER (inches): 2 X — 3 ____ — 4 ____ — 4.5 ____ — 6 ____ — Other ____

CASING ELEVATION (feet/MSL) : ____ — VOLUME IN CASING (gal.) : 1.21
DEPTH OF WELL (feet) : 22.70 — CALCULATED PURGE (gal.) : 3.63
DEPTH TO WATER (feet) : 15.27 — ACTUAL PURGE VOL. (gal.) : 3.75

DATE PURGED : 2.24.04 — END PURGE : 1116
DATE SAMPLED : 2.24.04 — SAMPLING TIME : 1121

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
1110	1.25	6.97	498	17.4°	Cloudy	MOD
1113	2.50	6.83	457	17.7°	Cloudy	MOD
1116	3.75	6.87	448	17.9°	Cloudy	MOD

OTHER: ____ — ODOR: ____ — (COBALT 0-100) — (NTU 0-200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1) : ____

PURGING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)
____ Centrifugal Pump — ____ Bailer (PVC)
____ Submersible Pump — ____ Bailer (Stainless Steel)
X Disposal Bailer — ____ Dedicated
Other: ____

SAMPLING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)
____ Bomb Sampler — ____ Bailer (Stainless Steel)
____ Dipper — ____ Submersible Pump
X Disposal Bailer — ____ Dedicated
Other: ____

WELL INTEGRITY: Good — LOCK: 0464

REMARKS: ____

pH, E.C., Temp. Meter Calibration: Date: ____ Time: ____ Meter Serial No.: ____
E.C. 1000 ____ / ____ — pH 7 ____ / ____ — pH 10 ____ / ____ — pH 4 ____ / ____
Temperature °C ____

SIGNATURE: Paul Weinhardt — REVIEWED BY: ____ — PAGE 6 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO : 792775 / 00002000 | SAMPLE ID : MW 1B

PURGED BY : Paul Weinhardt | CLIENT NAME : Hard Chrome Engineering

SAMPLED BY : Paul Weinhardt | LOCATION : 750 107th Avenue, Oakland

TYPE: Groundwater X | Surface Water ____ | Leachate ____ | Other ____

CASING DIAMETER (inches): 2 X | 3 ____ | 4 ____ | 4.5 ____ | 6 ____ | Other ____

CASING ELEVATION (feet/MSL) : ____ | VOLUME IN CASING (gal.) : 259

DEPTH OF WELL (feet) : 30.00 | CALCULATED PURGE (gal.) : 778

DEPTH TO WATER (feet) : 14.08 | ACTUAL PURGE VOL. (gal.) : 750

DATE PURGED : 2.24.04 | END PURGE : 1204

DATE SAMPLED : 2.24.04 | SAMPLING TIME : 1210

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
1156	2.5	730	735	17.1°	cloudy	mod
1200	5.0	7.07	749	17.4°	cloudy	mod
1204	7.5	708	751	17.2°	cloudy	mod

OTHER: ____ | ODOR: ____ | (COBALT 0-100) | (NTU 0-200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1) : ____

PURGING EQUIPMENT

____ 2" Bladder Pump | ____ Bailer (Teflon)

____ Centrifugal Pump | ____ Bailer (PVC)

____ Submersible Pump | ____ Bailer (Stainless Steel)

X Disposal Bailer | ____ Dedicated

Other: ____

SAMPLING EQUIPMENT

____ 2" Bladder Pump | ____ Bailer (Teflon)

____ Bomb Sampler | ____ Bailer (Stainless Steel)

____ Dipper | ____ Submersible Pump

X Disposal Bailer | ____ Dedicated

Other: ____

WELL INTEGRITY: GOOD | LOCK: 0464

REMARKS: ____

pH, E.C., Temp. Meter Calibration: Date: ____ Time: ____ Meter Serial No.: ____

E.C. 1000 ____ / ____ pH 7 ____ / ____ pH 10 ____ / ____ pH 4 ____ / ____

Temperature °C ____

SIGNATURE: Paul Weinhardt | REVIEWED BY: ____ | PAGE 7 OF 7

APPENDIX B

CERTIFIED ANALYTICAL RESULTS AND CHAIN-OF-CUSTODY REPORTS

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

March 02, 2004

CLS Work Order #: CNB0790
COC #:

David Herzog
SHAW, E & I Inc. (Sacramento)
1326 North Market Blvd.
Sacramento, CA 95834

Project Name: Hard Chrome Engineering

Enclosed are the results of analyses for samples received by the laboratory on 02/24/04 13:25. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

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

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

03/02/04 16:23

SHAW, E & I Inc. (Sacramento)
1326 North Market Blvd.
Sacramento CA, 95834

Project: Hard Chrome Engineering
Project Number: 792775/00002000
Project Manager: David Herzog

CLS Work Order #: CNB0790
COC #:

CAM 17 Metals

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (CNB0790-01) Water Sampled: 02/24/04 09:28 Received: 02/24/04 13:25									
Arsenic	ND	5.0	µg/L	1	CN01538	02/25/04	02/26/04	EPA 200.8	
Lead	ND	5.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	10	"	"	"	"	"	"	
Antimony	ND	50	"	"	CN01539	02/25/04	02/25/04	EPA 200.7	
Barium	**95**	20	"	"	"	"	"	"	
Beryllium	ND	5.0	"	"	"	"	"	"	
Cadmium	ND	10	"	"	"	"	"	"	
Cobalt	ND	20	"	"	"	"	"	"	
Chromium	**26**	20	"	"	"	"	"	"	
Copper	ND	20	"	"	"	"	"	"	
Molybdenum	ND	20	"	"	"	"	"	"	
Nickel	**24**	20	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
Mercury	ND	0.20	"	"	CN01537	02/25/04	02/25/04	EPA 245.1	
MW-2 (CNB0790-02) Water Sampled: 02/24/04 11:01 Received: 02/24/04 13:25									
Arsenic	ND	5.0	µg/L	1	CN01538	02/25/04	02/26/04	EPA 200.8	
Lead	ND	5.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	10	"	"	"	"	"	"	
Antimony	**640**	50	"	"	CN01539	02/25/04	02/25/04	EPA 200.7	
Barium	**110**	20	"	"	"	"	"	"	
Beryllium	ND	5.0	"	"	"	"	"	"	
Cadmium	ND	10	"	"	"	"	"	"	
Cobalt	ND	20	"	"	"	"	"	"	
Chromium	**250000**	200	"	10	"	"	"	"	
Copper	**2800**	20	"	1	"	"	"	"	
Molybdenum	ND	20	"	"	"	"	"	"	
Nickel	**450**	20	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	**410**	20	"	"	"	"	"	"	
Mercury	**0.61**	0.20	"	"	CN01537	02/25/04	02/25/04	EPA 245.1	
MW-3 (CNB0790-03) Water Sampled: 02/24/04 11:43 Received: 02/24/04 13:25									
Arsenic	ND	5.0	µg/L	1	CN01538	02/25/04	02/26/04	EPA 200.8	
Lead	**5.1**	5.0	"	"	"	"	"	"	

CALIFORNIA LABORATORY SERVICES

03/02/04 16:23

SHAW, E & I Inc. (Sacramento)
1326 North Market Blvd.
Sacramento CA, 95834

Project: Hard Chrome Engineering
Project Number: 792775/00002000
Project Manager: David Herzog

CLS Work Order #: CNB0790

COC #:

CAM 17 Metals

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (CNB0790-03) Water Sampled: 02/24/04 11:43 Received: 02/24/04 13:25									
Selenium	ND	5.0	µg/L	1	CN01538	02/25/04	02/26/04	EPA 200.8	
Thallium	ND	10	"	"	"	"	"	"	
Antimony	ND	50	"	"	CN01539	02/25/04	02/25/04	EPA 200.7	
Barium	**82**	20	"	"	"	"	"	"	
Beryllium	ND	5.0	"	"	"	"	"	"	
Cadmium	ND	10	"	"	"	"	"	"	
Cobalt	ND	20	"	"	"	"	"	"	
Chromium	**140**	20	"	"	"	"	"	"	
Copper	ND	20	"	"	"	"	"	"	
Molybdenum	ND	20	"	"	"	"	"	"	
Nickel	ND	20	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
Mercury	ND	0.20	"	"	CN01537	02/25/04	02/25/04	EPA 245.1	
MW-4 (CNB0790-04) Water Sampled: 02/24/04 09:58 Received: 02/24/04 13:25									
Arsenic	ND	5.0	µg/L	1	CN01538	02/25/04	02/26/04	EPA 200.8	
Lead	ND	5.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	10	"	"	"	"	"	"	
Antimony	ND	50	"	"	CN01539	02/25/04	02/25/04	EPA 200.7	
Barium	**66**	20	"	"	"	"	"	"	
Beryllium	ND	5.0	"	"	"	"	"	"	
Cadmium	ND	10	"	"	"	"	"	"	
Cobalt	ND	20	"	"	"	"	"	"	
Chromium	**150**	20	"	"	"	"	"	"	
Copper	ND	20	"	"	"	"	"	"	
Molybdenum	ND	20	"	"	"	"	"	"	
Nickel	ND	20	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
Mercury	ND	0.20	"	"	CN01537	02/25/04	02/25/04	EPA 245.1	
MW-5 (CNB0790-05) Water Sampled: 02/24/04 10:31 Received: 02/24/04 13:25									
Arsenic	ND	5.0	µg/L	1	CN01538	02/25/04	02/26/04	EPA 200.8	
Lead	ND	5.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	10	"	"	"	"	"	"	

CALIFORNIA LABORATORY SERVICES

03/02/04 16:23

SHAW, E & I Inc. (Sacramento)
1326 North Market Blvd.
Sacramento CA, 95834

Project: Hard Chrome Engineering
Project Number: 792775/00002000
Project Manager: David Herzog

CLS Work Order #: CNB0790

COC #:

CAM 17 Metals

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (CNB0790-05) Water Sampled: 02/24/04 10:31 Received: 02/24/04 13:25									
Antimony	ND	50	µg/L	1	CN01539	02/25/04	02/25/04	EPA 200.7	
Barium	**55**	20	"	"	"	"	"	"	
Beryllium	ND	5.0	"	"	"	"	"	"	
Cadmium	ND	10	"	"	"	"	"	"	
Cobalt	ND	20	"	"	"	"	"	"	
Chromium	**8000**	20	"	"	"	"	"	"	
Copper	ND	20	"	"	"	"	"	"	
Molybdenum	ND	20	"	"	"	"	"	"	
Nickel	ND	20	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	**20**	20	"	"	"	"	"	"	
Mercury	ND	0.20	"	"	CN01537	02/25/04	02/25/04	EPA 245.1	
MW-6 (CNB0790-06) Water Sampled: 02/24/04 11:21 Received: 02/24/04 13:25									
Arsenic	ND	5.0	µg/L	1	CN01538	02/25/04	02/26/04	EPA 200.8	
Lead	**11**	5.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	10	"	"	"	"	"	"	
Antimony	ND	50	"	"	CN01539	02/25/04	02/25/04	EPA 200.7	
Barium	**71**	20	"	"	"	"	"	"	
Beryllium	ND	5.0	"	"	"	"	"	"	
Cadmium	ND	10	"	"	"	"	"	"	
Cobalt	ND	20	"	"	"	"	"	"	
Chromium	**71**	20	"	"	"	"	"	"	
Copper	ND	20	"	"	"	"	"	"	
Molybdenum	ND	20	"	"	"	"	"	"	
Nickel	ND	20	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
Mercury	ND	0.20	"	"	CN01537	02/25/04	02/25/04	EPA 245.1	
MW-1B (CNB0790-07) Water Sampled: 02/24/04 12:10 Received: 02/24/04 13:25									
Arsenic	ND	5.0	µg/L	1	CN01538	02/25/04	02/26/04	EPA 200.8	
Lead	ND	5.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	10	"	"	"	"	"	"	
Antimony	**74**	50	"	"	CN01539	02/25/04	02/25/04	EPA 200.7	
Barium	**66**	20	"	"	"	"	"	"	

CALIFORNIA LABORATORY SERVICES

03/02/04 16:23

SHAW, E & I Inc. (Sacramento) 1326 North Market Blvd. Sacramento CA, 95834	Project: Hard Chrome Engineering Project Number: 792775/00002000 Project Manager: David Herzog	**CLS Work Order #: CNB0790** COC #:

CAM 17 Metals

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1B (CNB0790-07) Water	**Sampled: 02/24/04 12:10**	**Received: 02/24/04 13:25**							
Beryllium	ND	5.0	µg/L	1	CN01539	02/25/04	02/25/04	EPA 200.7	
Cadmium	ND	10	"	"	"	"	"	"	
Cobalt	ND	20	"	"	"	"	"	"	
Chromium	**24000**	20	"	"	"	"	"	"	
Copper	ND	20	"	"	"	"	"	"	
Molybdenum	ND	20	"	"	"	"	"	"	
Nickel	ND	20	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
Mercury	ND	0.20	"	"	CN01537	02/25/04	02/25/04	EPA 245.1	

CALIFORNIA LABORATORY SERVICES

03/02/04 16:23

SHAW, E & I Inc. (Sacramento)
1326 North Market Blvd.
Sacramento CA, 95834

Project: Hard Chrome Engineering
Project Number: 792775/00002000
Project Manager: David Herzog

CLS Work Order #: CNB0790

COC #:

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (CNB0790-01) Water	**Sampled: 02/24/04 09:28**	**Received: 02/24/04 13:25**							
Hexavalent Chromium	**21**	10	µg/L	1	CN01542	02/25/04	02/25/04	EPA 7196A	
MW-2 (CNB0790-02) Water	**Sampled: 02/24/04 11:01**	**Received: 02/24/04 13:25**							
Hexavalent Chromium	**250000**	20000	µg/L	2000	CN01542	02/25/04	02/25/04	EPA 7196A	
MW-3 (CNB0790-03) Water	**Sampled: 02/24/04 11:43**	**Received: 02/24/04 13:25**							
Hexavalent Chromium	**32**	10	µg/L	1	CN01542	02/25/04	02/25/04	EPA 7196A	
MW-4 (CNB0790-04) Water	**Sampled: 02/24/04 09:58**	**Received: 02/24/04 13:25**							
Hexavalent Chromium	**120**	10	µg/L	1	CN01542	02/25/04	02/25/04	EPA 7196A	
MW-5 (CNB0790-05) Water	**Sampled: 02/24/04 10:31**	**Received: 02/24/04 13:25**							
Hexavalent Chromium	**8800**	1000	µg/L	100	CN01542	02/25/04	02/25/04	EPA 7196A	
MW-6 (CNB0790-06) Water	**Sampled: 02/24/04 11:21**	**Received: 02/24/04 13:25**							
Hexavalent Chromium	**21**	10	µg/L	1	CN01542	02/25/04	02/25/04	EPA 7196A	
MW-1B (CNB0790-07) Water	**Sampled: 02/24/04 12:10**	**Received: 02/24/04 13:25**							
Hexavalent Chromium	**27000**	1000	µg/L	100	CN01542	02/25/04	02/25/04	EPA 7196A	

CALIFORNIA LABORATORY SERVICES

03/02/04 16:23

SHAW, E & I Inc. (Sacramento)
1326 North Market Blvd.
Sacramento CA, 95834

Project: Hard Chrome Engineering
Project Number: 792775/00002000
Project Manager: David Herzog

CLS Work Order #: CNB0790

COC #:

CAM 17 Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CN01537 - EPA 7470A										
Blank (CN01537-BLK1)				Prepared & Analyzed: 02/25/04						
Mercury	ND	0.20	µg/L							
LCS (CN01537-BS1)				Prepared & Analyzed: 02/25/04						
Mercury	4.93	0.20	µg/L	5.00		98.6	75-125			
LCS Dup (CN01537-BSD1)				Prepared & Analyzed: 02/25/04						
Mercury	4.14	0.20	µg/L	5.00		82.8	75-125	17.4	25	
Matrix Spike (CN01537-MS1)		Source: CNB0790-01		Prepared & Analyzed: 02/25/04						
Mercury	4.49	0.20	µg/L	5.00	0.0	89.8	75-125			
Matrix Spike Dup (CN01537-MSD1)		Source: CNB0790-01		Prepared & Analyzed: 02/25/04						
Mercury	5.10	0.20	µg/L	5.00	0.0	102	75-125	12.7	25	
Batch CN01538 - EPA 3020A										
Blank (CN01538-BLK1)				Prepared: 02/25/04 Analyzed: 02/26/04						
Arsenic	ND	5.0	µg/L							
Lead	ND	5.0	"							
Selenium	ND	5.0	"							
Thallium	ND	10	"							
LCS (CN01538-BS1)				Prepared: 02/25/04 Analyzed: 02/26/04						
Arsenic	112	5.0	µg/L	100		112	75-125			
Lead	108	5.0	"	100		108	75-125			
Selenium	104	5.0	"	100		104	75-125			
Thallium	113	10	"	100		113	75-125			

CALIFORNIA LABORATORY SERVICES

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SHAW, E & I Inc. (Sacramento) 1326 North Market Blvd. Sacramento CA, 95834	Project: Hard Chrome Engineering Project Number: 792775/00002000 Project Manager: David Herzog	**CLS Work Order #: CNB0790** COC #:

CAM 17 Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CN01538 - EPA 3020A										
LCS Dup (CN01538-BSD1)				Prepared: 02/25/04 Analyzed: 02/26/04						
Arsenic	114	5.0	µg/L	100		114	75-125	1.77	25	
Lead	110	5.0	"	100		110	75-125	1.83	25	
Selenium	111	5.0	"	100		111	75-125	6.51	25	
Thallium	115	10	"	100		115	75-125	1.75	25	
Matrix Spike (CN01538-MS1)		Source: CNB0790-01		Prepared: 02/25/04 Analyzed: 02/26/04						
Arsenic	125	5.0	µg/L	100	ND	125	75-125			
Lead	112	5.0	"	100	ND	112	75-125			
Selenium	116	5.0	"	100	ND	116	75-125			
Thallium	120	10	"	100	ND	120	75-125			
Matrix Spike Dup (CN01538-MSD1)		Source: CNB0790-01		Prepared: 02/25/04 Analyzed: 02/26/04						
Arsenic	122	5.0	µg/L	100	ND	122	75-125	2.43	25	
Lead	114	5.0	"	100	ND	114	75-125	1.77	25	
Selenium	115	5.0	"	100	ND	115	75-125	0.866	25	
Thallium	121	10	"	100	ND	121	75-125	0.830	25	
Batch CN01539 - EPA 3010A										
Blank (CN01539-BLK1)				Prepared & Analyzed: 02/25/04						
Antimony	ND	50	µg/L							
Barium	ND	20	"							
Beryllium	ND	5.0	"							
Cadmium	ND	10	"							
Cobalt	ND	20	"							
Chromium	ND	20	"							
Copper	ND	20	"							
Molybdenum	ND	20	"							
Nickel	ND	20	"							
Silver	ND	10	"							
Vanadium	ND	20	"							
Zinc	ND	20	"							

CALIFORNIA LABORATORY SERVICES

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SHAW, E & I Inc. (Sacramento)
1326 North Market Blvd.
Sacramento CA, 95834

Project: Hard Chrome Engineering
Project Number: 792775/00002000
Project Manager: David Herzog

CLS Work Order #: CNB0790
COC #:

CAM 17 Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CN01539 - EPA 3010A										
LCS (CN01539-BS1)				Prepared & Analyzed: 02/25/04						
Antimony	524	50	µg/L	500		105	80-120			
Barium	2090	20	"	2000		104	80-120			
Beryllium	52.0	5.0	"	50.0		104	80-120			
Cadmium	61.7	10	"	50.0		123	80-120			QM-08
Cobalt	516	20	"	500		103	80-120			
Chromium	216	20	"	200		108	80-120			
Copper	260	20	"	250		104	80-120			
Molybdenum	529	20	"	500		106	80-120			
Nickel	525	20	"	500		105	80-120			
Silver	63.4	10	"	50.0		127	80-120			QM-08
Vanadium	520	20	"	500		104	80-120			
Zinc	511	20	"	500		102	80-120			
LCS Dup (CN01539-BSD1)				Prepared & Analyzed: 02/25/04						
Antimony	532	50	µg/L	500		106	80-120	1.52	25	
Barium	2120	20	"	2000		106	80-120	1.43	25	
Beryllium	52.5	5.0	"	50.0		105	80-120	0.957	25	
Cadmium	59.8	10	"	50.0		120	80-120	3.13	25	
Cobalt	521	20	"	500		104	80-120	0.964	25	
Chromium	219	20	"	200		110	80-120	1.38	25	
Copper	263	20	"	250		105	80-120	1.15	25	
Molybdenum	534	20	"	500		107	80-120	0.941	25	
Nickel	529	20	"	500		106	80-120	0.759	25	
Silver	57.7	10	"	50.0		115	80-120	9.41	25	
Vanadium	526	20	"	500		105	80-120	1.15	25	
Zinc	514	20	"	500		103	80-120	0.585	25	
Matrix Spike (CN01539-MS1)	**Source: CNB0790-01**			Prepared & Analyzed: 02/25/04						
Antimony	515	50	µg/L	500	9.8	101	75-125			
Barium	2130	20	"	2000	95	102	75-125			
Beryllium	51.4	5.0	"	50.0	0.090	103	75-125			
Cadmium	55.8	10	"	50.0	1.3	109	75-125			
Cobalt	494	20	"	500	1.3	98.5	75-125			
Chromium	217	20	"	200	26	95.5	75-125			
Copper	256	20	"	250	1.0	102	75-125			
Molybdenum	518	20	"	500	6.4	102	75-125			

CALIFORNIA LABORATORY SERVICES

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SHAW, E & I Inc. (Sacramento) 1326 North Market Blvd. Sacramento CA, 95834	Project: Hard Chrome Engineering Project Number: 792775/00002000 Project Manager: David Herzog	**CLS Work Order #: CNB0790** COC #:

CAM 17 Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CN01539 - EPA 3010A										
Matrix Spike (CN01539-MS1)	**Source: CNB0790-01**			Prepared & Analyzed: 02/25/04						
Nickel	524	20	µg/L	500	24	100	75-125			
Silver	54.9	10	"	50.0	4.8	100	75-125			
Vanadium	509	20	"	500	5.0	101	75-125			
Zinc	496	20	"	500	4.7	98.3	75-125			
Matrix Spike Dup (CN01539-MSD1)	**Source: CNB0790-01**			Prepared & Analyzed: 02/25/04						
Antimony	524	50	µg/L	500	9.8	103	75-125	1.73	25	
Barium	2150	20	"	2000	95	103	75-125	0.935	25	
Beryllium	52.0	5.0	"	50.0	0.090	104	75-125	1.16	25	
Cadmium	55.5	10	"	50.0	1.3	108	75-125	0.539	25	
Cobalt	502	20	"	500	1.3	100	75-125	1.61	25	
Chromium	220	20	"	200	26	97.0	75-125	1.37	25	
Copper	256	20	"	250	1.0	102	75-125	0.00	25	
Molybdenum	520	20	"	500	6.4	103	75-125	0.385	25	
Nickel	527	20	"	500	24	101	75-125	0.571	25	
Silver	55.4	10	"	50.0	4.8	101	75-125	0.907	25	
Vanadium	515	20	"	500	5.0	102	75-125	1.17	25	
Zinc	502	20	"	500	4.7	99.5	75-125	1.20	25	

CALIFORNIA LABORATORY SERVICES

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SHAW, E & I Inc. (Sacramento) 1326 North Market Blvd. Sacramento CA, 95834	Project: Hard Chrome Engineering Project Number: 792775/00002000 Project Manager: David Herzog	**CLS Work Order #: CNB0790** COC #:

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CN01542 - General Preparation										
Blank (CN01542-BLK1)				Prepared & Analyzed: 02/25/04						
Hexavalent Chromium	ND	10	µg/L							
LCS (CN01542-BS1)				Prepared & Analyzed: 02/25/04						
Hexavalent Chromium	262	10	µg/L	250		105	85-115			
LCS Dup (CN01542-BSD1)				Prepared & Analyzed: 02/25/04						
Hexavalent Chromium	268	10	µg/L	250		107	85-115	2.26	20	
Matrix Spike (CN01542-MS1)		Source: CNB0790-01		Prepared & Analyzed: 02/25/04						
Hexavalent Chromium	282	10	µg/L	250	21	104	85-115			
Matrix Spike Dup (CN01542-MSD1)		Source: CNB0790-01		Prepared & Analyzed: 02/25/04						
Hexavalent Chromium	292	10	µg/L	250	21	108	85-115	3.48	20	

CALIFORNIA LABORATORY SERVICES

03/02/04 16:23

SHAW, E & I Inc. (Sacramento) 1326 North Market Blvd. Sacramento CA, 95834	Project: Hard Chrome Engineering Project Number: 792775/00002000 Project Manager: David Herzog	**CLS Work Order #: CNB0790** COC #:

Notes and Definitions

QM-08	The spike recovery was outside acceptance limits for the LCS or LCSD. The batch was accepted based on acceptable MS/MSD recoveries & RPD's.
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

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

CLS # 04B0790

Shaw Environmental & Infrastructure, Inc.
1326 North Market Boulevard, Sacramento, CA 95834

Purchase Order: **209797**
Lab: **CLS Lab**

Project Name: **Hard Chrome Engineering**
Project Number: **792775 / 00002000**
Project Manager: **David Herzog**
Company: **Shaw Environmental & Infrastructure, Inc.**
Address: **1326 North Market Boulevard**
Sacramento, CA 95834
Dir Phone: **(916) 565-4377** / FAX: **(916) 565-4356**
Sampler's Signature: Paul Weinhardt

Analysis Requested

Sample I.D.	Date	Time	LAB I.D.	Sample Matrix	Number of Containers	Cam 17 Metals (Field Filtered)	Hexavalent Chromium by EPA Method 7196 (24-Hr Hold) (Field Filtere	REMARKS
					3	3		Container Types
					HNO3	NP		Preservations
MW-1	2.24	928		water	2	1	1	
MW-2	↓	1101		water	2	1	1	
MW-3		1143		water	2	1	1	
MW-4		958		water	2	1	1	
MW-5		1031		water	2	1	1	
MW-6		1121		water	2	1	1	
MW-1B	↓	1210		water	2	1	1	

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Paul Weinhardt	Signature	Signature	Signature
Printed Name: Paul Weinhardt	Printed Name	Printed Name	Printed Name
Firm: Shaw E+I	Firm	Firm	Firm
Date/Time: 2-24-04	Date/Time	Date/Time	Date/Time

RELINQUISHED BY	RECEIVED BY
Signature	Signature
Printed Name	Printed Name: Gabe Naylor
Firm	Firm: CLS
Date/Time	Date/Time: 2-24-4 1325

TURN AROUND TIME

___ 24 hr ___ 48 hr ___ 5 day
X Standard (~10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX Preliminary Results
___ Requested Report Date:

REPORT REQUIREMENTS

X I. Routine Report
___ II. Report (includes DUP, MS MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ RWQCB (MDLs/PQLs/TRACE#)

Special Instructions/Comments:

Chrom VI has a 24 hour hold time.
All samples need to be field filtered.

CLS
3249 Fitzgerald Road
Rancho Cordova, Calif 95742
916-638-7301 / Fx: 638-4510
Ray Oslowski

Container Types Key:

40 ml VOA:	1
250 ml LPE:	2
500 ml LPE:	3
1 liter HDPE:	4
500 ml glass:	5
1 liter glass:	6
2x6 s/s ring:	7
glass jar:	8