SEMI-ANNUAL
FIRST QUARTER 2003 MONITORING REPORT

HARD CHROME ENGINEERING

OAKLAND, CALIFORNIA

Prepared for:

McLemore Trust

April 23, 2003

Prepared by:

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

Project No.: 792775.00005000

Shaw™
Shaw Environmental & Infrastructure, Inc.
1326 N. Market Boulevard
Sacramento, California 95834-1943
PHONE: 916/928-3300
FAX: 916/565-4356

TRANSMITTAL

TO: Ms. Jeanne M. Zolezzi
Herum, Crabtree, Dyer, Zolezzi & Terpstra, LLP
2291 West March Lane, Suite B100
Stockton, California 95207

DATE: APRIL 23, 2003
PROJECT NO.: 792775.0005

FROM: David W. Herzog

RE: Submittal of First Quarter 2003 Monitoring Report, McLemore Trust/Hard Chrome Engineering

QUANTITY:	DESCRIPTION:
1	First Quarter 2003 Monitoring Report, McLemore Trust/Hard Chrome Engineering

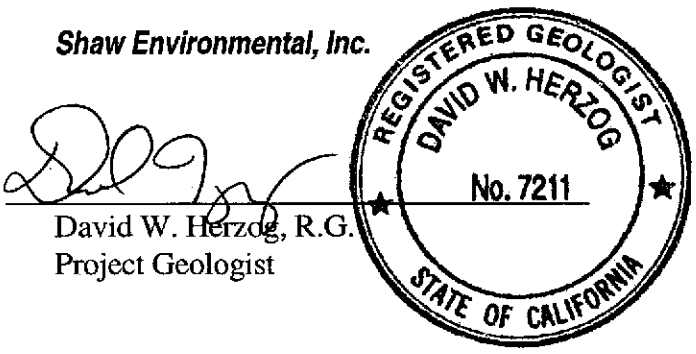
FOR YOUR:		SENT BY:	
X	USE	X	REGULAR MAIL
☐	APPROVAL	☐	OVERNIGHT
☐	REVIEW/COMMENTS	☐	UPS
☐	INFORMATION	☐	COURIER
☐	OTHER	☐	OTHER

cc: Ms. Cheryl McLemore
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)

Semi-Annual
First Quarter 2003 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 Geologist

SAC:\N:\sacDP\2003\Prj\79\792775.3aa.doc-01\i:1
(00005000)

CONTENTS

TABLES AND ILLUSTRATIONS

Tables

Figures

INTRODUCTION

The following report documents the semi-annual first quarter 2003 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), formerly the IT Corporation, 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 June 26 and 27, 1997, were not field filtered. Groundwater samples collected on March 26, 2003 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 (USEPA) Series Methods 6000/7000, for dissolved hexavalent chromium using USEPA Method 7196, and for dissolved mercury by USEPA Method 7470. See Appendix B for certified analytical results and chain-of-custody reports.

RESULTS

Groundwater Flow and Gradient

Groundwater during the first quarter 2003 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 2003 monitoring event, groundwater flowed to the west with a gradient of approximately 0.0003 foot per foot. These flow conditions are generally similar to those reported by the previous consultant 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 USEPA–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.
- 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 0.092 and 1.2 milligrams per liter (mg/L), respectively. Barium was reported in all of the wells ranging from 0.056 to 0.22 mg/L. Chromium was reported in wells MW-1B, MW-2, MW-3, MW-4, MW-5, and MW-6 at concentrations of 35, 530, 0.14, 0.064, 6.0 and 0.066 mg/L, respectively. Hexavalent chromium was reported in wells MW-1B, MW-2, MW-3, MW-4, MW-5, and MW-6 at concentrations of 37, 530, 0.039, 0.049, 6.1, and 0.13 mg/L, respectively. Copper was reported in well MW-2 at a concentration of 6.7 mg/L. Nickel was reported in wells MW-1 and MW-4 at concentrations of 0.95 and 0.02 mg/L, respectively. Mercury was reported in wells MW-1 through MW-4 at concentrations of 0.0002, 0.00095, 0.0002, 0.00095, 0.00022, and 0.0002 mg/L, respectively. Zinc was reported in well MW-2 at a concentration 0.94 mg/L. Lead was reported in well MW-6 at a concentration of 0.0082 mg/L. Table 2 summarizes the groundwater analytical results.

SUMMARY AND CONCLUSIONS

Based on analytical results collected from wells MW-1 through MW-6 on March 26, 2003, metals reported include antimony, barium, chromium, hexavalent chromium, copper, lead, mercury, vanadium 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 decreased in well MW-2 and wells MW-5 and MW-1B. Vertically, the extent of impacted groundwater has not been defined.

During the March 2002 monitoring event, the monitoring well exhibiting the greatest chromium impact was well MW-2, located hydraulically downgradient from the sump. Monitoring wells MW-3 and MW-5 also showed some chromium impact.

Concentrations of total chromium in on-site well MW-1B through MW-6, 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 contained 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 Elevation Data
Hard Chrome Engineering
March 26, 2003

Sample Designation	Top of Casing (feet/SSR)	Depth to Water (feet)	Groundwater Elevation (feet/SSR)
MW-1	100.23	16.18	84.05
MW-1B	99.01	15.35	83.66
MW-2	100.38	16.58	83.80
MW-3	100.37	16.45	83.92
MW-4	100.30	16.36	83.94
MW-5	99.29	15.59	83.70
MW-6	100.48	16.64	83.84

feet/SSR = feet with respect to the site specific benchmark
NM = Not Measured. Near or under parked camper.

Table 2
Groundwater Analytical Results
Hard Chrome Engineering
(Units: mg/L, unless noted)

Sample Designation	Sampling Date	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	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
MW-1	08/11/97	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.46
MW-1	09/29/97	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
MW-1	12/30/97	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
MW-1	04/23/98	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1	03/13/00	<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
MW-1	09/20/00	<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
MW-1	03/20/01	<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
MW-1	09/13/01	<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
MW-1	03/12/02	<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
MW-1	09/23/02	<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
MW-1	03/26/03	<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
MW-1B	06/27/97	NA	<0.05	NA	0.011	NA	430	360	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	6.57
MW-1B	08/11/97	NA	NA	NA	NA	NA	340	330	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.48
MW-1B	09/29/97	NA	<0.5	NA	<0.05	NA	280	260	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	7.59
MW-1B	12/30/97	NA	<0.05	NA	<0.025	NA	200	160	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	6.91
MW-1B	04/23/98	NA	NA	NA	NA	NA	580	520	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.47
MW-1B	03/13/00	<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
MW-1B	09/20/00	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
MW-1B	03/20/01	<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
MW-1B	09/13/01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1B	03/12/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-1B	09/23/02	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
MW-1B	03/26/03	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

Table 2
Groundwater Analytical Results
Hard Chrome Engineering
(Units: mg/L, unless noted)

Sample Designation	Sampling Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	pH (units)
MW-2	06/27/97	NA	0.21	NA	0.032	NA	3000	3000	NA	NA	NA	NA	NA	NA	0.14	NA	NA	NA	NA	4.65
MW-2	08/11/97 *	NA	NA	NA	NA	NA	2600	2600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.66
MW-2	09/29/97	NA	<0.5	NA	<0.05	NA	1500	1400	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	4.82
MW-2	12/30/97	NA	<0.05	NA	<0.025	NA	86	83	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	6.42
MW-2	04/23/98	NA	NA	NA	NA	NA	150	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.31
MW-2	03/13/00	<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
MW-2	09/20/00	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
MW-2	03/20/01	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
MW-2	09/13/01	<10	<10	<10	<1	<1	1000	55	<4	14	<10	0.00088	<4	<4	<10	<1	<10	<4	2.3	5.19
MW-2	03/12/02	<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
MW-2	09/23/02	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
MW-2	03/26/03	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
MW-3	06/26/97	NA	<0.05	NA	0.011	NA	1	<0.01	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	6.86
MW-3	08/11/97	NA	NA	NA	NA	NA	<0.01	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.84
MW-3	09/29/97	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
MW-3	12/30/97	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
MW-3	04/23/98	NA	NA	NA	NA	NA	0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.94
MW-3	03/13/00	<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
MW-3	09/20/00	<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
MW-3	03/20/01	<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
MW-3	09/13/01	<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
MW-3	03/12/02	<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
MW-3	09/23/02	<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
MW-3	03/26/03	<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

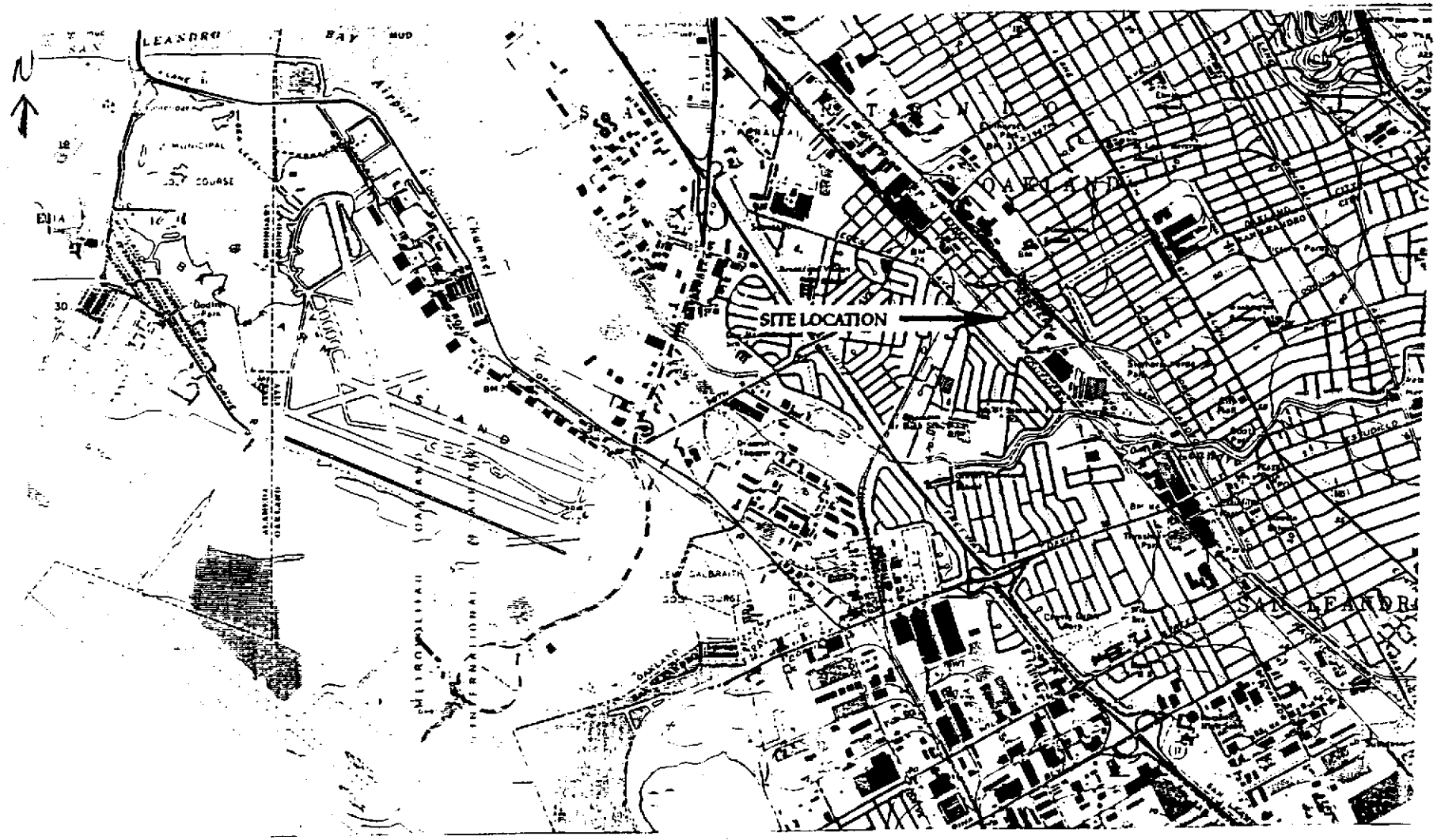
Table 2
Groundwater Analytical Results
Hard Chrome Engineering
(Units: mg/L, unless noted)

Sample Designation	Sampling Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	pH (units)
MW-4	06/26/97	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
MW-4	08/11/97	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.72
MW-4	09/29/97	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
MW-4	12/30/97	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
MW-4	04/23/98	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	03/13/00	<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
MW-4	09/20/00	<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
MW-4	03/20/01	<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
MW-4	09/13/01	<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
MW-4	03/12/02	<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
MW-4	09/23/02	<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
MW-4	03/26/03	<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
MW-5	06/27/97	NA	<0.05	NA	0.005	NA	110	90	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	6.70
MW-5	08/11/97	NA	NA	NA	NA	NA	120	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.67
MW-5	09/29/97	NA	<0.5	NA	<0.05	NA	130	100	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	7.13
MW-5	12/30/97	NA	<0.05	NA	<0.025	NA	110	98	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA	7.13
MW-5	04/23/98	NA	NA	NA	NA	NA	70	58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.67
MW-5	03/13/00	<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
MW-5	09/20/00	<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
MW-5	03/20/01	<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
MW-5	09/13/01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-5	03/12/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-5	09/23/02	<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
MW-5	03/26/03	<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

Table 2
Groundwater Analytical Results
Hard Chrome Engineering
(Units: mg/L, unless noted)

Sample Designation	Sampling Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	pH (units)
MW-6	06/26/97	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
MW-6	08/11/97	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.84
MW-6	09/29/97	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
MW-6	12/30/97	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
MW-6	04/23/98	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-6	03/13/00	<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
MW-6	09/20/00	<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
MW-6	03/20/01	<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
MW-6	09/13/01	<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
MW-6	03/12/02	<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
MW-6	09/23/02	<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
MW-6	03/26/03	<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
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 **	---

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.
mg/L = Milligrams per liter
NA = Not Analyzed.
* 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.

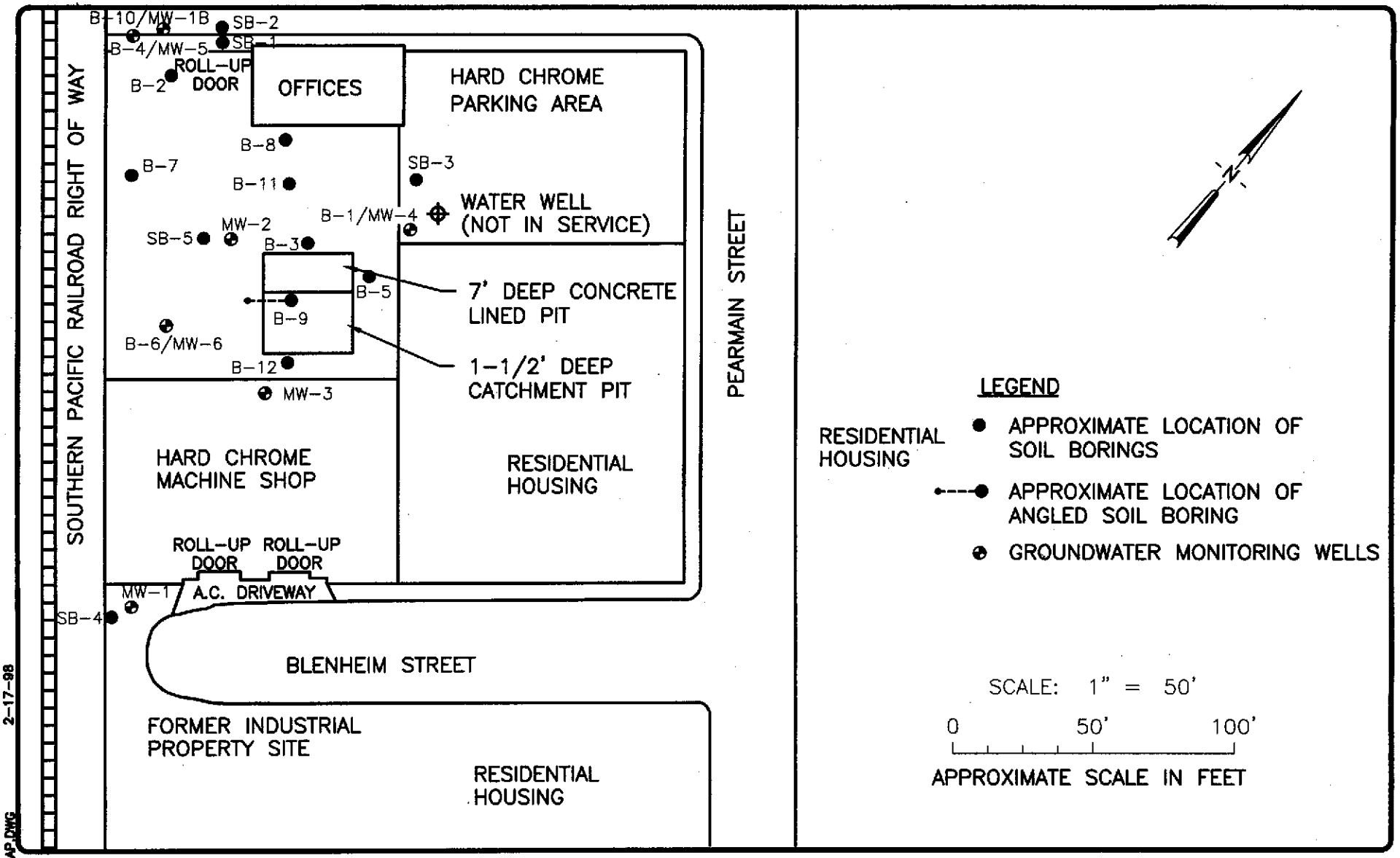


EMCON

McLEMORE TRUST
HARD CHROME ENG. INC.,
750 1107th AVENUE, OAKLAND, CALIFORNIA

SITE LOCATION MAP

FIGURE
1
PROJECT NO.
22619-100.001



2-17-98

I:\DWGS\2819\SITEMAP.DWG

EMCON

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

SITE MAP

FIGURE
2

PROJECT NO.
792775

MONITORING WELL PURGING PROTOCOL

EMCON

MEASURE AND RECORD DEPTH TO WATER AND WELL TOTAL DEPTH

CHECK FOR FLOATING PRODUCT

YES

MEASURE AND DOCUMENT FLOATING PRODUCT THICKNESS. DO NOT SAMPLE WELL FOR DISSOLVED CONSTITUENTS.

NO

CALCULATE PURGE VOLUME BY USING THE FOLLOWING EQUATION:

$$P = \pi r^2 h \times 7.48 \times 3$$

where:

- P = calculated purge volume (gallons)
- π = 3.14
- r = radius of well casing in feet
- h = height of water column in feet

EVACUATE WATER FROM WELL EQUAL TO THE CALCULATED PURGE VOLUME WHILE MONITORING GROUND-WATER STABILIZATION INDICATOR PARAMETERS (pH, CONDUCTIVITY, TEMPERATURE) AND TURBIDITY AT INTERVALS OF ONE CASING VOLUME.

WELL EVACUATED TO PRACTICAL LIMITS OF DRYNESS BEFORE REMOVING CALCULATED PURGE VOLUME

NO

FINAL TWO SETS OF GROUND-WATER STABILIZATION INDICATOR PARAMETER MEASUREMENTS MEET THE FOLLOWING CRITERIA:

pH	= ±	0.05 pH units
COND.	= ±	3 %
TEMP.	= ±	1.0 °F
TURBIDITY	= ±	<5 NTU

YES

WELL PURGING CRITERIA MET; PROCEED TO WELL SAMPLING

NO

CONTINUE PURGING; EVACUATE ADDITIONAL CASING VOLUME OF WATER, MONITORING INDICATOR PARAMETERS FOR STABILITY.

YES

WELL RECHARGES TO A LEVEL SUFFICIENT FOR SAMPLE COLLECTION WITHIN 24 HOURS OF EVACUATION TO DRYNESS.

YES

FIELD TEST FIRST RECHARGE WATER FOR INDICATOR PARAMETERS AND TURBIDITY, THEN PROCEED TO WELL SAMPLING.

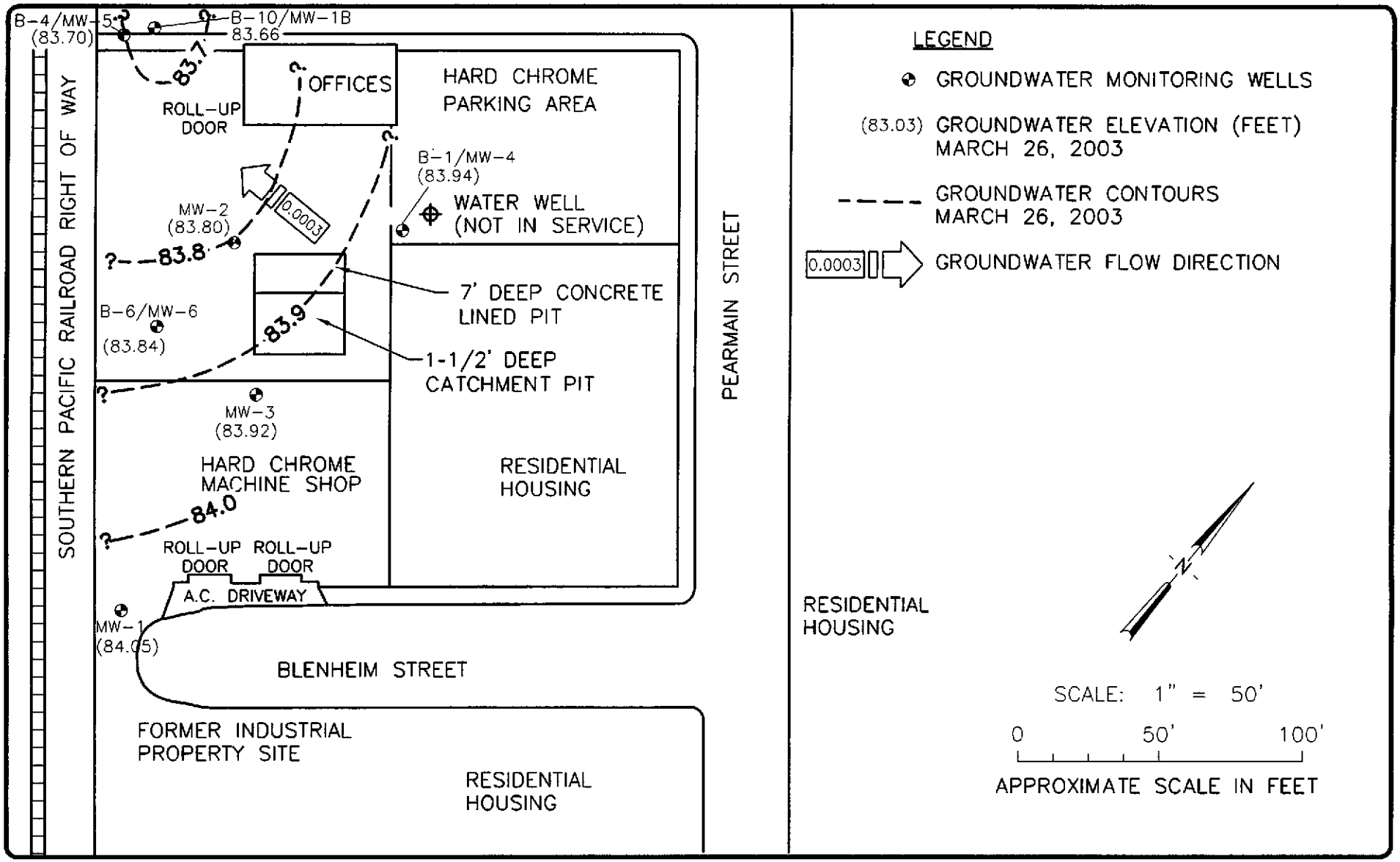
NO

RECORD WELL AS DRY FOR PURPOSES OF SAMPLING.

EMCON

MONITORING WELL PURGING PROTOCOL

FIGURE 3



emcon

MCLEMORE TRUST
HARD CHROME ENG. INC.,
750 107TH AVENUE
OAKLAND, CALIFORNIA
GROUNDWATER CONTOUR MAP
MARCH 26, 2003

FIGURE
4
PROJECT NO.
792775

N:\Consulting\CAD\DWG\792775\ChromGW1Q03.dwg, 04/23/2003 04:59:24 PM

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: 3-26-03

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

WELL ID	CASING ELEVATION (Feet, MSL)	TOTAL DEPTH (Feet)	PREVIOUS DEPTH TO WATER 9/23/02	DEPTH TO WATER (Feet)	FLOATING PRODUCT THICKNESS (Feet)	COMMENTS
MW-1		24.40	17.20	16.18	—	
MW-2		23.90	17.56	16.58	—	
MW-3		23.50	17.43	16.45	—	
MW-4		22.90	17.34	16.36	—	
MW-5		23.20	16.60	15.59		
MW-6		22.70	17.66	16.64	—	
MW-1B		30.00	16.38	15.35		

Comments :

Paul Weinhardt
Signature

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.) : 1.39

DEPTH OF WELL (feet) : 29.90 CALCULATED PURGE (gal.) : 4.19

DEPTH TO WATER (feet) : 16.18 ACTUAL PURGE VOL. (gal.) : 4.50

DATE PURGED : 3-26-03 END PURGE : 842

DATE SAMPLED : 3-26-03 SAMPLING TIME : 849

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
834	1.5	7.33	326	18.1°	Cloudy	MOD
838	3.0	7.16	307	17.9°	Cloudy	MOD
842	4.5	7.11	296	17.8°	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 1 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.) : 2.49

DEPTH OF WELL (feet) : 30.00 | CALCULATED PURGE (gal.) : 7.47

DEPTH TO WATER (feet) : 15.35 | ACTUAL PURGE VOL. (gal.) : 7.50

DATE PURGED : 3.26.03 | END PURGE : 1126

DATE SAMPLED : 3.26.03 | SAMPLING TIME : 1134

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
1118	2.5	7.12	738	18.8°	Cloudy	MOD
1122	5.0	6.97	694	19.00	Yellow	MOD
1126	7.5	6.91	686	18.9°	Yellow	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: JK PAGE 2 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO : 792775 / 00002000 | SAMPLE ID : MW 2

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.) : 1.24

DEPTH OF WELL (feet) : 23.90 | CALCULATED PURGE (gal.) : 3.73

DEPTH TO WATER (feet) : 16.58 | ACTUAL PURGE VOL. (gal.) : 3.75

DATE PURGED : 3-26-03 | END PURGE : 1015

DATE SAMPLED : 3-26-03 | SAMPLING TIME : 1024

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
1009	1.25	6.09	1180	20.1°	Cloudy	MOD
1012	2.50	5.96	1210	19.9°	Cloudy	MOD
1015	3.75	5.91	1236	19.9°	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 3 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.) : 1.19

DEPTH OF WELL (feet) : 23.5 | CALCULATED PURGE (gal.) : 3.59

DEPTH TO WATER (feet) : 16.45 | ACTUAL PURGE VOL. (gal.) : 3.75

DATE PURGED : 3-26-03 | END PURGE : 1049

DATE SAMPLED : 3-26-03 | SAMPLING TIME : 1058

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
1041	1.25	6.56	352	19.90	cloudy	MOD
1045	2.50	6.41	331	19.90	cloudy	MOD
1049	3.75	6.36	309	19.80	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 : 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) : ____ VOLUME IN CASING (gal.) : 1.1

DEPTH OF WELL (feet) : 22.90 CALCULATED PURGE (gal.) : 3.33

DEPTH TO WATER (feet) : 16.36 ACTUAL PURGE VOL. (gal.) : 3.00

DATE PURGED : 3-26-03 END PURGE : 918

DATE SAMPLED : 3-26-03 SAMPLING TIME : 927

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
910	1.0	6.90	402	19.4°	cloudy	MOD
914	2.0	6.81	369	19.6°	cloudy	MOD
918	3.0	6.74	357	19.5°	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		SAMPLING EQUIPMENT	
____ 2" Bladder Pump	____ Bailer (Teflon)	____ 2" Bladder Pump	____ Bailer (Teflon)
____ Centrifugal Pump	____ Bailer (PVC)	____ Bomb Sampler	____ Bailer (Stainless Steel)
____ Submersible Pump	____ Bailer (Stainless Steel)	____ Dipper	____ Submersible Pump
X Disposal Bailer	____ Dedicated	X Disposal Bailer	____ Dedicated
Other: ____		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 5 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO : 792775 / 00002000 | SAMPLE ID : MW #5

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.) :	1.29
DEPTH OF WELL (feet) :	23.20	CALCULATED PURGE (gal.) :	3.88
DEPTH TO WATER (feet) :	15.59	ACTUAL PURGE VOL. (gal.) :	3.75

DATE PURGED : 3-26-03 | END PURGE : 1157

DATE SAMPLED : 3-26-03 | SAMPLING TIME : 1206

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
1151	1.25	6.91	379	18.90	Cloudy	MOD
1154	2.50	6.74	341	19.1°	Cloudy	MOD
1157	3.75	6.69	331	19.2°	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		SAMPLING EQUIPMENT	
____ 2" Bladder Pump	____ Bailer (Teflon)	____ 2" Bladder Pump	____ Bailer (Teflon)
____ Centrifugal Pump	____ Bailer (PVC)	____ Bomb Sampler	____ Bailer (Stainless Steel)
____ Submersible Pump	____ Bailer (Stainless Steel)	____ Dipper	____ Submersible Pump
X Disposal Bailer	____ Dedicated	X Disposal Bailer	____ Dedicated
Other: ____		Other: ____	

WELL INTEGRITY: G7000 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 : 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.) : 1.03

DEPTH OF WELL (feet) : 22.70 CALCULATED PURGE (gal.) : 3.09

DEPTH TO WATER (feet) : 16.64 ACTUAL PURGE VOL. (gal.) : 3.00

DATE PURGED : 3.26.03 END PURGE : 947

DATE SAMPLED : 3.26.03 SAMPLING TIME : 955

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
941	1.0	7.22	426	20.1°	Cloudy	MOD
944	2.0	7.12	403	19.9°	Cloudy	MOD
947	3.0	7.03	396	19.9°	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

1 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

Drum Inventory Record

792775 / 00002000
Project No

750 107th Ave., Oakland
Location

3-26-03
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
	29gal Drummed			
4 DRUMS TOTAL				
★ NEED A DRUM FOR NEXT EVENT				★

Sketch locations of drums, include drum ID's

COMMENTS:

Number of Drums From This Event: 1

Total Number of Drums At Site: 4

APPENDIX B

CERTIFIED ANALYTICAL RESULTS AND CHAIN-OF-CUSTODY REPORTS

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

April 04, 2003

CLS Work Order #: CMC0550
COC #: 209797

Charles Metzinger
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 03/26/03 13:20. 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

04/04/03 10:08

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

Project: Hard Chrome Engineering
Project Number: 792775/00002000
Project Manager: Charles Metzinger

CLS Work Order #: CMC0550

COC #: 209797

CAM 17 Metals

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (CMC0550-01) Water Sampled: 03/26/03 08:49 Received: 03/26/03 13:20									
Arsenic	ND	5.0	µg/L	1	CC32711	03/27/03	03/28/03	EPA 6020	
Lead	ND	5.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	10	"	"	"	"	"	"	
Antimony	ND	50	"	"	CC32712	03/27/03	03/28/03	EPA 6010B	
Barium	**98**	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	"	"	"	"	"	"	
Mercury	**0.20**	0.20	"	"	CC32709	03/27/03	03/27/03	EPA 7470	
MW-2 (CMC0550-02) Water Sampled: 03/26/03 10:24 Received: 03/26/03 13:20									
Arsenic	ND	50	µg/L	10	CC32711	03/27/03	03/28/03	EPA 6020	
Lead	ND	50	"	"	"	"	"	"	
Selenium	ND	50	"	"	"	"	"	"	
Thallium	ND	100	"	"	"	"	"	"	
Antimony	**1200**	100	"	2	CC32712	03/27/03	03/28/03	EPA 6010B	
Barium	**220**	40	"	"	"	"	"	"	
Beryllium	ND	10	"	"	"	"	"	"	
Cadmium	ND	20	"	"	"	"	"	"	
Cobalt	ND	40	"	"	"	"	"	"	
Chromium	**530000**	100	"	5	"	"	"	"	
Copper	**6700**	40	"	2	"	"	"	"	
Molybdenum	ND	40	"	"	"	"	"	"	
Nickel	**950**	40	"	"	"	"	"	"	
Silver	ND	20	"	"	"	"	"	"	
Vanadium	ND	40	"	"	"	"	"	"	
Zinc	**940**	40	"	"	"	"	"	"	
Mercury	**0.95**	0.20	"	1	CC32709	03/27/03	03/27/03	EPA 7470	
MW-3 (CMC0550-03) Water Sampled: 03/26/03 10:58 Received: 03/26/03 13:20									
Arsenic	ND	5.0	µg/L	1	CC32711	03/27/03	03/28/03	EPA 6020	
Lead	ND	5.0	"	"	"	"	"	"	

CALIFORNIA LABORATORY SERVICES

04/04/03 10:08

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

Project: Hard Chrome Engineering
Project Number: 792775/00002000
Project Manager: Charles Metzinger

CLS Work Order #: CMC0550

COC #: 209797

CAM 17 Metals

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (CMC0550-03) Water Sampled: 03/26/03 10:58 Received: 03/26/03 13:20									
Selenium	ND	5.0	µg/L	1	CC32711	03/27/03	03/28/03	EPA 6020	
Thallium	ND	10	"	"	"	"	"	"	
Antimony	ND	50	"	"	CC32712	03/27/03	03/28/03	EPA 6010B	
Barium	**59**	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	**0.22**	0.20	"	"	CC32709	03/27/03	03/27/03	EPA 7470	
MW-4 (CMC0550-04) Water Sampled: 03/26/03 09:27 Received: 03/26/03 13:20									
Arsenic	ND	5.0	µg/L	1	CC32711	03/27/03	03/28/03	EPA 6020	
Lead	ND	5.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	10	"	"	"	"	"	"	
Antimony	ND	50	"	"	CC32712	03/27/03	03/28/03	EPA 6010B	
Barium	**80**	20	"	"	"	"	"	"	
Beryllium	ND	5.0	"	"	"	"	"	"	
Cadmium	ND	10	"	"	"	"	"	"	
Cobalt	ND	20	"	"	"	"	"	"	
Chromium	**64**	20	"	"	"	"	"	"	
Copper	ND	20	"	"	"	"	"	"	
Molybdenum	ND	20	"	"	"	"	"	"	
Nickel	**20**	20	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
Mercury	**0.20**	0.20	"	"	CC32709	03/27/03	03/27/03	EPA 7470	
MW-5 (CMC0550-05) Water Sampled: 03/26/03 12:06 Received: 03/26/03 13:20									
Arsenic	ND	5.0	µg/L	1	CC32711	03/27/03	03/28/03	EPA 6020	
Lead	ND	5.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	10	"	"	"	"	"	"	

CALIFORNIA LABORATORY SERVICES

04/04/03 10:08

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

Project: Hard Chrome Engineering
Project Number: 792775/00002000
Project Manager: Charles Metzinger

CLS Work Order #: CMC0550

COC #: 209797

CAM 17 Metals

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (CMC0550-05) Water Sampled: 03/26/03 12:06 Received: 03/26/03 13:20									
Antimony	ND	50	µg/L	1	CC32712	03/27/03	03/28/03	EPA 6010B	
Barium	**67**	20	"	"	"	"	"	"	
Beryllium	ND	5.0	"	"	"	"	"	"	
Cadmium	ND	10	"	"	"	"	"	"	
Cobalt	ND	20	"	"	"	"	"	"	
Chromium	**6000**	20	"	"	"	"	"	"	
Copper	ND	20	"	"	"	"	"	"	
Molybdenum	ND	20	"	"	"	"	"	"	
Nickel	ND	20	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
Mercury	ND	0.20	"	"	CC32709	03/27/03	03/27/03	EPA 7470	
MW-6 (CMC0550-06) Water Sampled: 03/26/03 09:55 Received: 03/26/03 13:20									
Arsenic	ND	5.0	µg/L	1	CC32711	03/27/03	03/28/03	EPA 6020	
Lead	**8.2**	5.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	10	"	"	"	"	"	"	
Antimony	ND	50	"	"	CC32712	03/27/03	03/28/03	EPA 6010B	
Barium	**74**	20	"	"	"	"	"	"	
Beryllium	ND	5.0	"	"	"	"	"	"	
Cadmium	ND	10	"	"	"	"	"	"	
Cobalt	ND	20	"	"	"	"	"	"	
Chromium	**66**	20	"	"	"	"	"	"	
Copper	ND	20	"	"	"	"	"	"	
Molybdenum	ND	20	"	"	"	"	"	"	
Nickel	ND	20	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
Mercury	ND	0.20	"	"	CC32709	03/27/03	03/27/03	EPA 7470	
MW-1B (CMC0550-07) Water Sampled: 03/26/03 11:34 Received: 03/26/03 13:20									
Arsenic	ND	5.0	µg/L	1	CC32711	03/27/03	03/28/03	EPA 6020	
Lead	ND	5.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	10	"	"	"	"	"	"	
Antimony	**92**	50	"	"	CC32712	03/27/03	03/28/03	EPA 6010B	
Barium	**56**	20	"	"	"	"	"	"	

CALIFORNIA LABORATORY SERVICES

04/04/03 10:08

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

Project: Hard Chrome Engineering
Project Number: 792775/00002000
Project Manager: Charles Metzinger

CLS Work Order #: CMC0550

COC #: 209797

CAM 17 Metals

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1B (CMC0550-07) Water Sampled: 03/26/03 11:34 Received: 03/26/03 13:20									
Beryllium	ND	5.0	µg/L	1	CC32712	03/27/03	03/28/03	EPA 6010B	
Cadmium	ND	10	"	"	"	"	"	"	
Cobalt	ND	20	"	"	"	"	"	"	
Chromium	**35000**	20	"	"	"	"	"	"	
Copper	ND	20	"	"	"	"	"	"	
Molybdenum	ND	20	"	"	"	"	"	"	
Nickel	ND	20	"	"	"	"	"	"	
Silver	ND	10	"	"	"	"	"	"	
Vanadium	ND	20	"	"	"	"	"	"	
Zinc	ND	20	"	"	"	"	"	"	
Mercury	ND	0.20	"	"	CC32709	03/27/03	03/27/03	EPA 7470	

CALIFORNIA LABORATORY SERVICES

04/04/03 10:08

SHAW, E & I Inc. (Sacramento)	Project: Hard Chrome Engineering	***CLS Work Order #: CMC0550***
1326 North Market Blvd.	Project Number: 792775/00002000	
Sacramento CA, 95834	Project Manager: Charles Metzinger	COC #: 209797

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (CMC0550-01) Water	**Sampled: 03/26/03 08:49**	**Received: 03/26/03 13:20**							
Hexavalent Chromium	ND	10	µg/L	1	CC32717	03/27/03	03/27/03	EPA 7196A	
MW-2 (CMC0550-02) Water	**Sampled: 03/26/03 10:24**	**Received: 03/26/03 13:20**							
Hexavalent Chromium	**530000**	100000	µg/L	10000	CC32717	03/27/03	03/27/03	EPA 7196A	
MW-3 (CMC0550-03) Water	**Sampled: 03/26/03 10:58**	**Received: 03/26/03 13:20**							
Hexavalent Chromium	**39**	10	µg/L	1	CC32717	03/27/03	03/27/03	EPA 7196A	
MW-4 (CMC0550-04) Water	**Sampled: 03/26/03 09:27**	**Received: 03/26/03 13:20**							
Hexavalent Chromium	**49**	10	µg/L	1	CC32717	03/27/03	03/27/03	EPA 7196A	
MW-5 (CMC0550-05) Water	**Sampled: 03/26/03 12:06**	**Received: 03/26/03 13:20**							
Hexavalent Chromium	**6100**	1000	µg/L	100	CC32717	03/27/03	03/27/03	EPA 7196A	
MW-6 (CMC0550-06) Water	**Sampled: 03/26/03 09:55**	**Received: 03/26/03 13:20**							
Hexavalent Chromium	**130**	10	µg/L	1	CC32717	03/27/03	03/27/03	EPA 7196A	
MW-1B (CMC0550-07) Water	**Sampled: 03/26/03 11:34**	**Received: 03/26/03 13:20**							
Hexavalent Chromium	**37000**	1000	µg/L	100	CC32717	03/27/03	03/27/03	EPA 7196A	

CALIFORNIA LABORATORY SERVICES

04/04/03 10:08

SHAW, E & I Inc. (Sacramento)	Project: Hard Chrome Engineering	***CLS Work Order #: CMC0550***
1326 North Market Blvd.	Project Number: 792775/00002000	
Sacramento CA, 95834	Project Manager: Charles Metzinger	COC #: 209797

CAM 17 Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CC32709 - EPA 7470A										
Blank (CC32709-BLK1)				Prepared & Analyzed: 03/27/03						
Mercury	ND	0.20	µg/L							
LCS (CC32709-BS1)				Prepared & Analyzed: 03/27/03						
Mercury	5.09	0.20	µg/L	5.00		102	75-125			
LCS Dup (CC32709-BSD1)				Prepared & Analyzed: 03/27/03						
Mercury	5.03	0.20	µg/L	5.00		101	75-125	1.19	25	
Matrix Spike (CC32709-MS1)		**Source: CMC0467-01**		Prepared & Analyzed: 03/27/03						
Mercury	5.06	0.20	µg/L	5.00	0.21	97.0	75-125			
Matrix Spike Dup (CC32709-MSD1)		**Source: CMC0467-01**		Prepared & Analyzed: 03/27/03						
Mercury	5.08	0.20	µg/L	5.00	0.21	97.4	75-125	0.394	25	
Batch CC32711 - EPA 3020A										
Blank (CC32711-BLK1)				Prepared: 03/27/03 Analyzed: 03/28/03						
Arsenic	ND	5.0	µg/L							
Lead	ND	5.0	"							
Selenium	ND	5.0	"							
Thallium	ND	10	"							
LCS (CC32711-BS1)				Prepared: 03/27/03 Analyzed: 03/28/03						
Arsenic	92.2	5.0	µg/L	100		92.2	75-125			
Lead	99.2	5.0	"	100		99.2	75-125			
Selenium	93.0	5.0	"	100		93.0	75-125			
Thallium	104	10	"	100		104	75-125			

CALIFORNIA LABORATORY SERVICES

04/04/03 10:08

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

Project: Hard Chrome Engineering
Project Number: 792775/00002000
Project Manager: Charles Metzinger

CLS Work Order #: CMC0550

COC #: 209797

CAM 17 Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CC32711 - EPA 3020A										
LCS Dup (CC32711-BSD1)				Prepared: 03/27/03 Analyzed: 03/28/03						
Arsenic	94.9	5.0	µg/L	100		94.9	75-125	2.89	25	
Lead	100	5.0	"	100		100	75-125	0.803	25	
Selenium	96.2	5.0	"	100		96.2	75-125	3.38	25	
Thallium	101	10	"	100		101	75-125	2.93	25	
Matrix Spike (CC32711-MS1)		**Source: CMC0552-01**		Prepared: 03/27/03 Analyzed: 03/28/03						
Arsenic	95.6	5.0	µg/L	100	0.77	94.8	75-125			
Lead	105	5.0	"	100	0.0	105	75-125			
Selenium	96.8	5.0	"	100	1.8	95.0	75-125			
Thallium	103	10	"	100	0.0	103	75-125			
Matrix Spike Dup (CC32711-MSD1)		**Source: CMC0552-01**		Prepared: 03/27/03 Analyzed: 03/28/03						
Arsenic	97.9	5.0	µg/L	100	0.77	97.1	75-125	2.38	25	
Lead	104	5.0	"	100	0.0	104	75-125	0.957	25	
Selenium	97.5	5.0	"	100	1.8	95.7	75-125	0.721	25	
Thallium	102	10	"	100	0.0	102	75-125	0.976	25	
Batch CC32712 - EPA 3010A										
Blank (CC32712-BLK1)				Prepared & Analyzed: 03/27/03						
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

04/04/03 10:08

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

Project: Hard Chrome Engineering
Project Number: 792775/00002000
Project Manager: Charles Metzinger

CLS Work Order #: CMC0550

COC #: 209797

CAM 17 Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CC32712 - EPA 3010A										
LCS (CC32712-BS1)				Prepared & Analyzed: 03/27/03						
Antimony	480	50	µg/L	500		96.0	80-120			
Barium	1980	20	"	2000		99.0	80-120			
Beryllium	51.0	5.0	"	50.0		102	80-120			
Cadmium	45.5	10	"	50.0		91.0	80-120			
Cobalt	514	20	"	500		103	80-120			
Chromium	214	20	"	200		107	80-120			
Copper	251	20	"	250		100	80-120			
Molybdenum	514	20	"	500		103	80-120			
Nickel	508	20	"	500		102	80-120			
Silver	41.7	10	"	50.0		83.4	80-120			
Vanadium	505	20	"	500		101	80-120			
Zinc	507	20	"	500		101	80-120			
LCS Dup (CC32712-BSD1)				Prepared & Analyzed: 03/27/03						
Antimony	465	50	µg/L	500		93.0	80-120	3.17	25	
Barium	1950	20	"	2000		97.5	80-120	1.53	25	
Beryllium	49.8	5.0	"	50.0		99.6	80-120	2.38	25	
Cadmium	41.6	10	"	50.0		83.2	80-120	8.96	25	
Cobalt	502	20	"	500		100	80-120	2.36	25	
Chromium	203	20	"	200		102	80-120	5.28	25	
Copper	245	20	"	250		98.0	80-120	2.42	25	
Molybdenum	500	20	"	500		100	80-120	2.76	25	
Nickel	496	20	"	500		99.2	80-120	2.39	25	
Silver	41.8	10	"	50.0		83.6	80-120	0.240	25	
Vanadium	491	20	"	500		98.2	80-120	2.81	25	
Zinc	497	20	"	500		99.4	80-120	1.99	25	

CALIFORNIA LABORATORY SERVICES

04/04/03 10:08

SHAW, E & I Inc. (Sacramento)	Project: Hard Chrome Engineering	*CLS Work Order #: CMC0550*
1326 North Market Blvd.	Project Number: 792775/00002000	
Sacramento CA, 95834	Project Manager: Charles Metzinger	COC #: 209797

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 CC32717 - General Preparation										
Blank (CC32717-BLK1)				Prepared & Analyzed: 03/27/03						
Hexavalent Chromium	ND	10	µg/L							
LCS (CC32717-BS1)				Prepared & Analyzed: 03/27/03						
Hexavalent Chromium	261	10	µg/L	250		104	85-115			
LCS Dup (CC32717-BSD1)				Prepared & Analyzed: 03/27/03						
Hexavalent Chromium	255	10	µg/L	250		102	85-115	2.33	20	
Matrix Spike (CC32717-MS1)		**Source: CMC0550-01**		Prepared & Analyzed: 03/27/03						
Hexavalent Chromium	263	10	µg/L	250	7.2	102	85-115			
Matrix Spike Dup (CC32717-MSD1)		**Source: CMC0550-01**		Prepared & Analyzed: 03/27/03						
Hexavalent Chromium	264	10	µg/L	250	7.2	103	85-115	0.380	20	

CALIFORNIA LABORATORY SERVICES

04/04/03 10:08

SHAW, E & I Inc. (Sacramento)	Project: Hard Chrome Engineering	***CLS Work Order #: CMC0550***
1326 North Market Blvd.	Project Number: 792775/00002000	
Sacramento CA, 95834	Project Manager: Charles Metzinger	COC #: 209797

Notes and Definitions

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

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: **Charles Metzinger**
Company: **Shaw Environmental & Infrastructure, Inc.**
Address: **1326 North Market Boulevard**
Sacramento, CA 95834
Dir Phone: **(916) 565-4358** / 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	3-26	849		water	2	1	1	
MW-2		1024		water	2	1	1	
MW-3		1058		water	2	1	1	
MW-4		927		water	2	1	1	
MW-5		1206		water	2	1	1	
MW-6		955		water	2	1	1	
MW-1B		1134		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: 3-26-03	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
Firm	Firm CLS
Date/Time	Date/Time 3 26 03 1320

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