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TO: Ms. Jeanne M. Zolezzi

DATE: APRIL 12, 2001

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PROJECT No.: 792775

FROM: *Janice Arnesen*
Charles S. Metzinger

APR 18 2001

RE: Submittal of First Quarter 2001 Monitoring Report, McLemore Trust/Hard Chrome Engineering

QUANTITY:

DESCRIPTION:

| | |
|---|--|
| 1 | First Quarter 2001 Monitoring Report, McLemore Trust/Hard Chrome Engineering |
|---|--|

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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)

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**SEMI-ANNUAL
FIRST QUARTER 2001 MONITORING REPORT
HARD CHROME ENGINEERING
OAKLAND, CALIFORNIA**

Prepared for
McLemore Trust
April 12, 2001

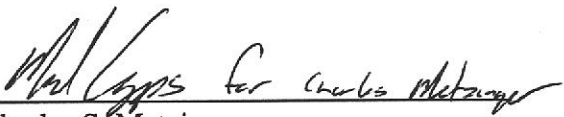
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Project 792775

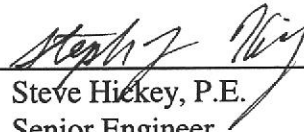
**Semi-Annual
First Quarter 2001 Monitoring Report
Hard Chrome Engineering
Oakland, California**

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

IT/EMCON



Charles S. Metzinger
Project Manager

 4/13/01

Steve Hickey, P.E.
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INTRODUCTION

The following report documents the semi-annual first quarter 2001 monitoring event conducted at the Hard Chrome Engineering facility, located 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, and 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).

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SAMPLING AND ANALYSIS PROGRAM

IT/EMCON 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 and MW-1B 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 20, 2001 were filtered in the field.

Groundwater samples collected from wells MW-1 through MW-6 and MW-1B were submitted to Sequoia Analytical (a state-certified laboratory) and analyzed for the CAM 17 listed dissolved metals using U. S. Environmental Protection Agency (USEPA) Series Methods 6000/7000 and 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.

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RESULTS

Groundwater Flow and Gradient

Groundwater during the first quarter 2001 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 2001 monitoring event, groundwater flowed to the west with a gradient of approximately 0.003 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.

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Groundwater Analytical Results

A concentration of antimony was detected in MW-2 at 2.24 milligrams per liter (mg/L). A concentration of barium was detected in MW-4 at 0.118 mg/L. Chromium was detected in all the wells ranging from 0.028 mg/L to 752 mg/L. Hexavalent chromium was detected in MW-1 through MW-4, MW-6, and MW-1B ranging from 0.017 mg/L to 757 mg/L. Zinc was detected in MW-2 and MW-3 ranging from 0.0135 mg/L to 1.88 mg/L. Copper, mercury, and nickel were detected in MW-2 at concentrations of 17.2 mg/L, 0.00122 mg/L, and 1.69 mg/L, respectively. Table 2 summarizes the groundwater analytical results.

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SUMMARY AND CONCLUSIONS

Based on analytical results collected from wells MW-1B and MW-1 through MW-6 on March 20, 2001 groundwater beneath the site is impacted with total and hexavalent chromium. Additional metals detected include antimony, barium, copper, 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 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 2001 monitoring event, the monitoring well exhibiting the greatest chromium impact was well MW-2, located hydraulically downgradient from the sump. Monitoring wells MW-1, MW-1B, MW-4, and MW-5 also showed some chromium impact.

Although, concentrations of total chromium in on-site wells MW-1, MW-1B, MW-2, and MW-5 currently exceed the maximum contaminant level (MCL) for this compound (.05 mg/L), they have significantly decreased from historical levels. Historical analytical results are contained in Table 2.

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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 20, 2001**

| Sample Designation | Top of Casing (feet/SSR) | Depth to Water (feet) | Groundwater Elevation (feet/SSR) |
|--------------------|-----------------------------|--------------------------|-------------------------------------|
| MW-1 | 100.23 | 15.77 | 84.46 |
| MW-1B | 99.01 | 15.08 | 83.93 |
| MW-2 | 100.38 | 16.21 | 84.17 |
| MW-3 | 100.37 | 16.06 | 84.31 |
| MW-4 | 100.30 | 15.99 | 84.31 |
| MW-5 | 99.29 | 15.27 | 84.02 |
| MW-6 | 100.48 | 16.29 | 84.19 |

feet/SSR = feet with respect to the site specific benchmark

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 | 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 | 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 | 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 | 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 | 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-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 | 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 | 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 | 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 | 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 | 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-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 | 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 | 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 | 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 | 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 | 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-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 | 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 | 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 | 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 | 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 | 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 | |

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-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-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 |
| 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

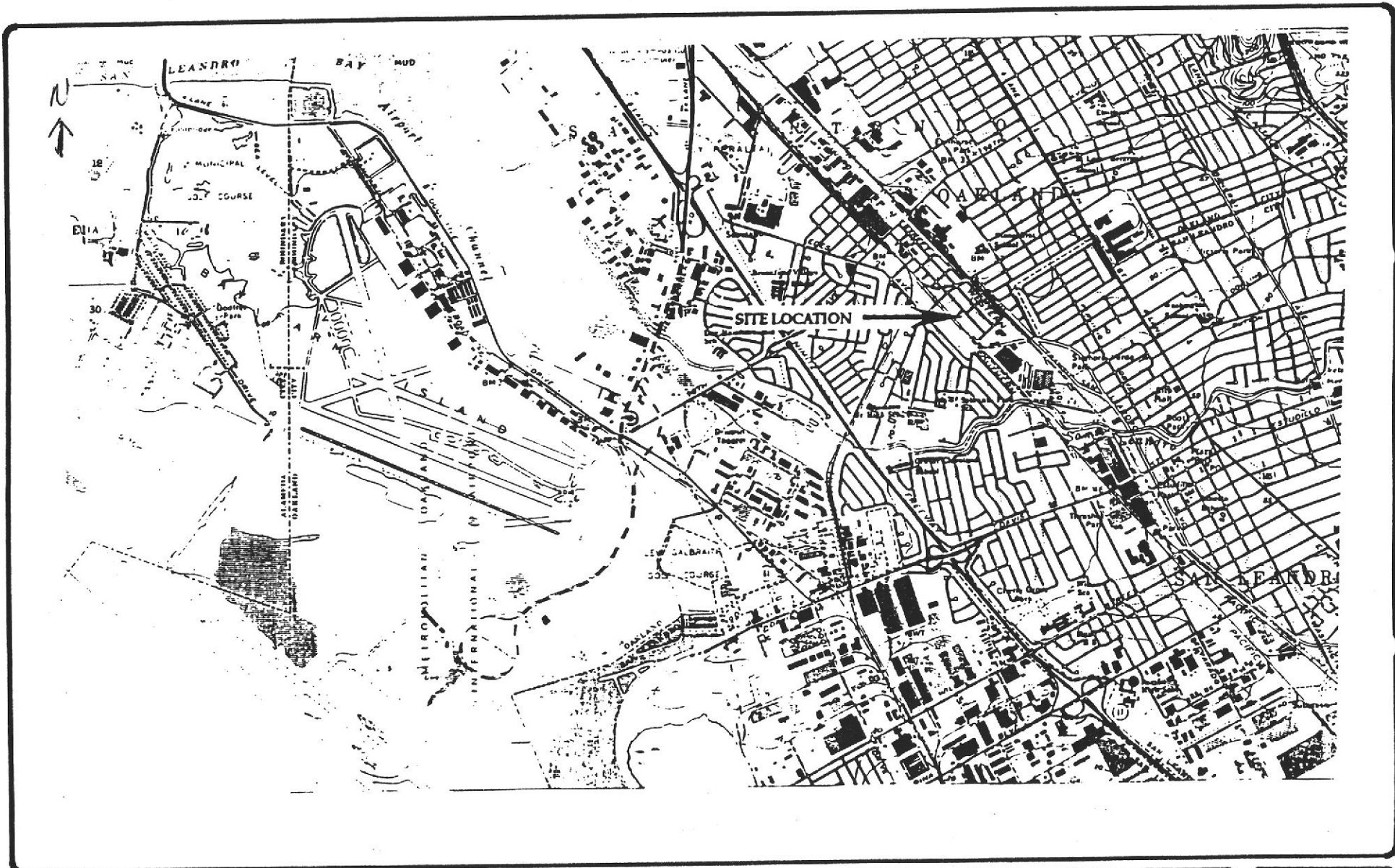
NA = Not Analyzed.

* 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

--- = MCL not established.



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

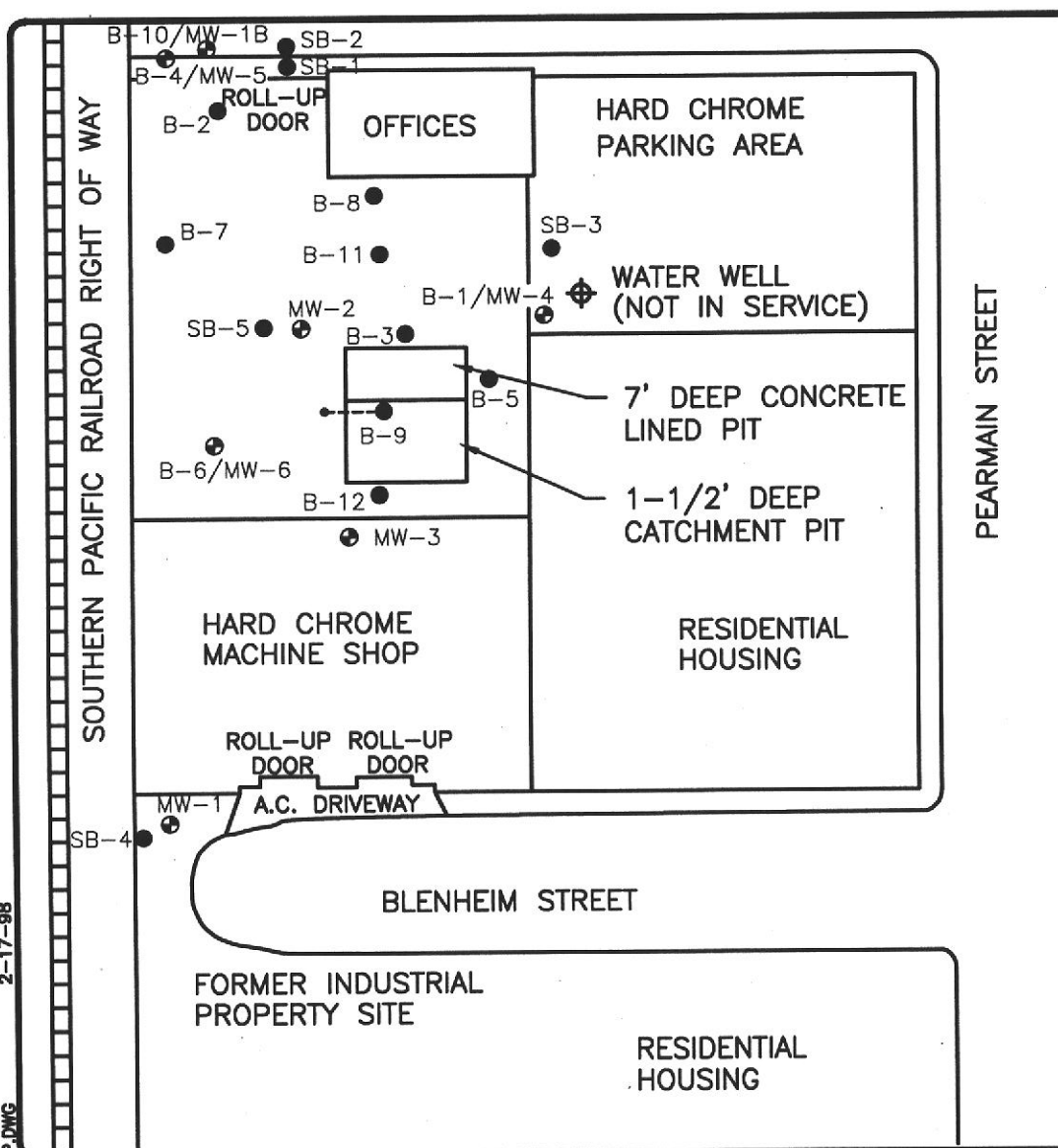
SITE LOCATION MAP

FIGURE

1

PROJECT NO.
22619-100.001

2-17-98
I:\DWG\2619\SIEMAP.DWG



- LEGEND**
- APPROXIMATE LOCATION OF SOIL BORINGS
 - APPROXIMATE LOCATION OF ANGLED SOIL BORING
 - ⊗ GROUNDWATER MONITORING WELLS

SCALE: 1" = 50'

0 50' 100'

APPROXIMATE SCALE IN FEET



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

FIGURE
 2
 PROJECT NO.
 792775



EMCON

MONITORING WELL PURGING PROTOCOL

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 = \pm 0.05 pH units
- COND. = \pm 3 %
- TEMP. = \pm 1.0 °F
- TURBIDITY = \pm <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.

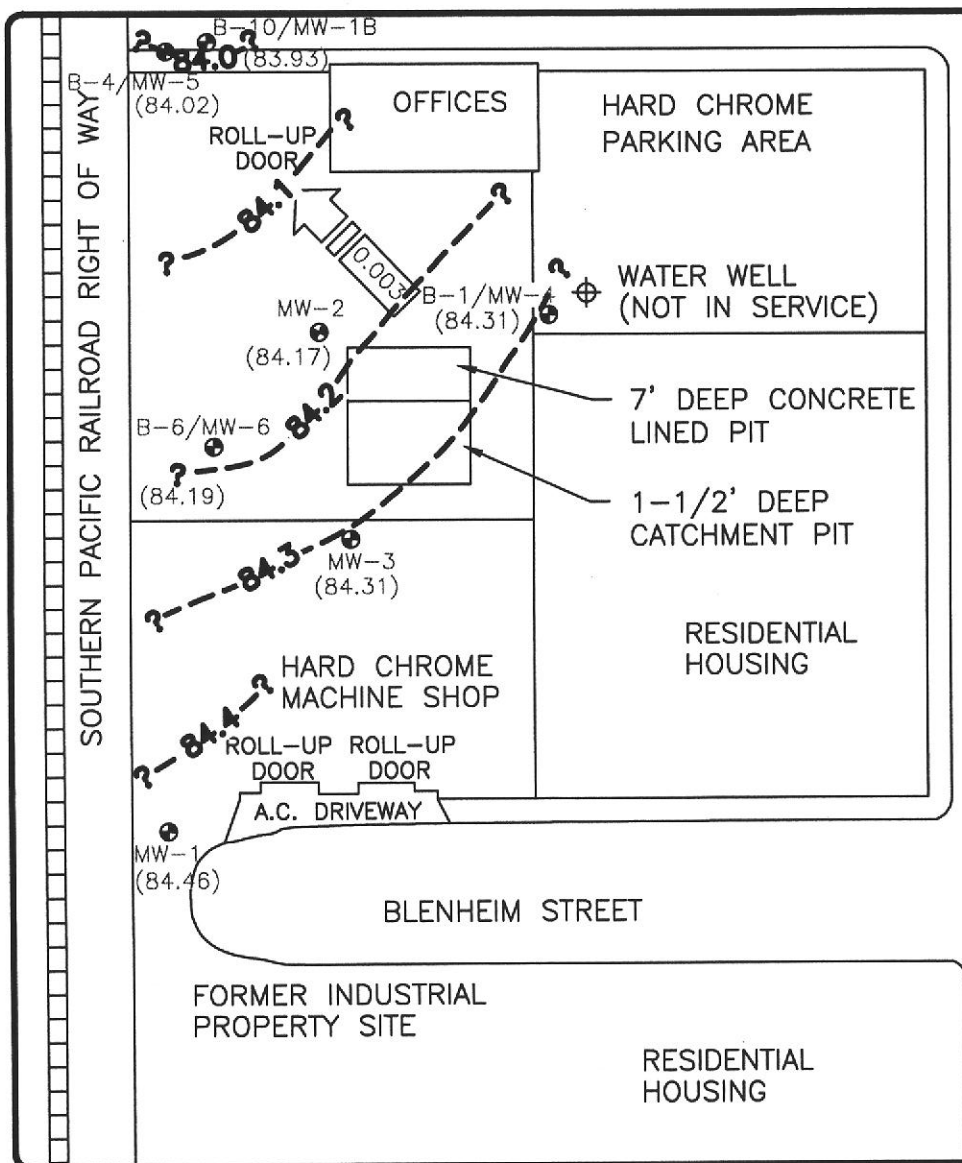


EMCON

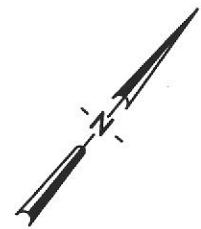
MONITORING WELL PURGING PROTOCOL

FIGURE

3



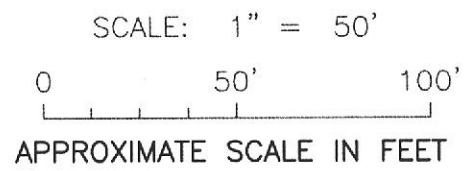
PEARMAIN STREET



LEGEND

- GROUNDWATER MONITORING WELLS
- (84.46) GROUNDWATER ELEVATION (FEET) MARCH 20, 2001
- GROUNDWATER CONTOURS MARCH 20, 2001
- 0.003 → GROUNDWATER FLOW DIRECTION

RESIDENTIAL HOUSING



MCLEMORE TRUST
 HARD CHROME ENG. INC.,
 750 107TH AVENUE
 OAKLAND, CALIFORNIA
 GROUNDWATER CONTOUR MAP
 MARCH 20, 2001

FIGURE
 4
 PROJECT NO.
 792775

APPENDIX A

FIELD REPORT AND FIELD DATA SHEETS

**FIELD REPORT
WATER LEVEL / FLOATING PRODUCT
SURVEY**

IT / EMCON
1433 North Market Boulevard
Sacramento, California 95834
(916) 928-3300

PROJECT NO : 792775

LOCATION : 750 107th Avenue, Oakland

DATE: 3/20/01

CLIENT : Hard Chrome Engineering

SAMPLER : RCM

DAY OF WEEK: Tues.

| WELL ID | CASING ELEVATION (Feet, MSL) | TOTAL DEPTH (Feet) | DEPTH TO WATER (Feet) | DEPTH TO FLOATING PRODUCT (Feet) | FLOATING-PRODUCT THICKNESS (Feet) | COMMENTS |
|---------|------------------------------|--------------------|-----------------------|----------------------------------|-----------------------------------|----------|
| MW-1 | | 24.40 | 15.77 | — | — | |
| MW-2 | | 23.90 | 16.21 | | | |
| MW-3 | | 23.50 | 16.06 | | | |
| MW-4 | | 22.90 | 15.99 | | | |
| MW-5 | | 23.20 | 15.27 | | | |
| MW-6 | | 22.70 | 16.29 | | | |
| MW-1B | | 30.00 | 15.08 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments :

R. Moran
Signature

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO : 792775 / 00020000
 PURGED BY : Bob Morgan
 SAMPLED BY : Bob Morgan

SAMPLE ID : MW-1
 CLIENT NAME : Hard Chrome Engineering
 LOCATION : 750 107th Avenue, Oakland

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

CASING ELEVATION (feet/MSL) : _____ VOLUME IN CASING (gal.) : 1.40
 DEPTH OF WELL (feet) : 24.40 CALCULATED PURGE (gal.) : 4.22
 DEPTH TO WATER (feet) : 15.77 ACTUAL PURGE VOL. (gal.) : 4.25

DATE PURGED : 3/20/01 END PURGE : 1247
 DATE SAMPLED : 3/20/01 SAMPLING TIME : 1305

| TIME (2400 HR) | VOLUME (gal.) | pH (units) | E.C. (µmhos/cm@25°C) | TEMPERATURE (°F) | COLOR (visual) | TURBIDITY (visual) |
|-------------------|------------------|---------------|-------------------------|---------------------|-------------------|-----------------------|
| <u>1239</u> | <u>1.5</u> | <u>6.90</u> | <u>472.5</u> | <u>69.4</u> | <u>lt green</u> | <u>low</u> |
| <u>1243</u> | <u>3.0</u> | <u>6.86</u> | <u>476.8</u> | <u>68.0</u> | <u>↓</u> | <u>↓</u> |
| <u>1247</u> | <u>4.25</u> | <u>6.88</u> | <u>475.0</u> | <u>68.7</u> | <u>↓</u> | <u>↓</u> |
| | | | | | | |
| | | | | | | |

OTHER: _____ ODOR: NO
 (COBALT 0-100) (NTU 0-200)

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

PURGING EQUIPMENT

SAMPLING EQUIPMENT

| | | | |
|---|---|---|---|
| <input type="checkbox"/> 2" Bladder Pump | <input type="checkbox"/> Bailer (Teflon) | <input type="checkbox"/> 2" Bladder Pump | <input type="checkbox"/> Bailer (Teflon) |
| <input type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Bailer (PVC) | <input type="checkbox"/> Bomb Sampler | <input type="checkbox"/> Bailer (Stainless Steel) |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Bailer (Stainless Steel) | <input type="checkbox"/> Dipper | <input type="checkbox"/> Submersible Pump |
| <input checked="" type="checkbox"/> Disposal Bailer | <input type="checkbox"/> Dedicated | <input checked="" type="checkbox"/> Disposal Bailer | <input type="checkbox"/> Dedicated |

Other: A Other: _____

WELL INTEGRITY: _____ OK LOCK: OK

REMARKS: _____

pH, E.C., Temp. Meter Calibration: Date: 3/20/01 Time: _____ Meter Serial No.: _____
 E.C. 1000 / _____ pH 7 / _____ pH 10 / _____ pH 4 / _____

Temperature °F _____
 SIGNATURE: Bob Morgan See MW-1B REVIEWED BY: [Signature] PAGE 1 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO: 792775 / 00020000
 PURGED BY: Bob Morgan
 SAMPLED BY: Bob Morgan

SAMPLE ID: MW-1B
 CLIENT NAME: Hard Chrome Engineering
 LOCATION: 750 107th Avenue, Oakland

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

CASING ELEVATION (feet/MSL): _____ VOLUME IN CASING (gal.): 2.43
 DEPTH OF WELL (feet): 30.00 CALCULATED PURGE (gal.): 7.30
 DEPTH TO WATER (feet): 15.08 ACTUAL PURGE VOL. (gal.): 7.50

DATE PURGED: 3/29/01 END PURGE: 1034
 DATE SAMPLED: 3/29/01 SAMPLING TIME: 1040

| TIME (2400 HR) | VOLUME (gal) | pH (units) | E.C. (µmhos/cm@25°C) | TEMPERATURE (°F) | COLOR (visual) | TURBIDITY (visual) |
|-------------------|-----------------|---------------|-------------------------|---------------------|-------------------|-----------------------|
| <u>1021</u> | <u>2.50</u> | <u>6.91</u> | <u>913.9</u> | <u>69.9</u> | <u>Yellow</u> | <u>low</u> |
| <u>1028</u> | <u>5.00</u> | <u>6.95</u> | <u>911.9</u> | <u>68.4</u> | ↓ | ↓ |
| <u>1034</u> | <u>7.50</u> | <u>6.95</u> | <u>921.0</u> | <u>67.6</u> | ↓ | ↓ |
| | | | | | | |
| | | | | | | |

OTHER: _____ ODOR: none
 (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)
 _____ Centrifugal Pump _____ Bailer (PVC)
 _____ Submersible Pump _____ Bailer (Stainless Steel)
 Disposal Bailer _____ Dedicated
 Other: _____

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

WELL INTEGRITY: OK LOCK: OK

REMARKS: _____

pH, E.C., Temp. Meter Calibration: Date: 3/29/01 Time: 1005 Meter Serial No.: 600595
 E.C. 1000 1387 1413 pH 7 7.15 7 pH 10 9.94 10 pH 4 3.96 4
 Temperature °F _____
 SIGNATURE: Bob Morgan REVIEWED BY: [Signature] PAGE 2 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/98

PROJECT NO: 792775 / 00020000
 PURGED BY: Bob Morgan
 SAMPLED BY: Bob Morgan

SAMPLE ID: MW-2
 CLIENT NAME: Hard Chrome Engineering
 LOCATION: 750 107th Avenue, Oakland

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

CASING ELEVATION (feet/MSL): _____ VOLUME IN CASING (gal.): 1.25
 DEPTH OF WELL (feet): 23.90 CALCULATED PURGE (gal.): 3.76
 DEPTH TO WATER (feet): 16.21 ACTUAL PURGE VOL. (gal.): 3.75

DATE PURGED: 3/20/01 END PURGE: 1141
 DATE SAMPLED: ✓ SAMPLING TIME: 1650

| TIME (2400 HR) | VOLUME (gal.) | pH (units) | E.C. (µmhos/cm@25°C) | TEMPERATURE (°F) | COLOR (visual) | TURBIDITY (visual) |
|-------------------|------------------|---------------|-------------------------|---------------------|-------------------|-----------------------|
| <u>1133</u> | <u>1.25</u> | <u>6.70</u> | <u>910.6</u> | <u>68.1</u> | <u>Yellow</u> | <u>med</u> |
| <u>1137</u> | <u>2.50</u> | <u>6.55</u> | <u>1319</u> | <u>66.8</u> | <u>↓</u> | <u>↓</u> |
| <u>1141</u> | <u>3.75</u> | <u>6.37</u> | <u>1526</u> | <u>66.2</u> | <u>↓</u> | <u>↓</u> |
| | | | | | | |
| | | | | | | |

OTHER: _____ ODOR: None _____
(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)
 _____ Centrifugal Pump _____ Bailer (PVC)
 _____ Submersible Pump _____ Bailer (Stainless Steel)
 Disposal Bailer _____ Dedicated

_____ 2" Bladder Pump _____ Bailer (Teflon)
 _____ Bomb Sampler _____ Bailer (Stainless Steel)
 _____ Dipper _____ Submersible Pump
 Disposal Bailer _____ Dedicated

Other: _____

Other: _____

WELL INTEGRITY: _____ OK LOCK: OK

REMARKS: _____

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

Temperature °F _____
 SIGNATURE: R Morgan See MW-1B REVIEWED BY: OK PAGE 3 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO: 792775 / 00020000
 PURGED BY: Bob Morgan
 SAMPLED BY: Bob Morgan

SAMPLE ID: MW-3
 CLIENT NAME: Hard Chrome Engineering
 LOCATION: 750 107th Avenue, Oakland

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

CASING ELEVATION (feet/MSL): _____ VOLUME IN CASING (gal.): 1.21
 DEPTH OF WELL (feet): 23.50 CALCULATED PURGE (gal.): 3.63
 DEPTH TO WATER (feet): 16.06 ACTUAL PURGE VOL. (gal.): 3.75

DATE PURGED: 3/20/01 END PURGE: 1323
 DATE SAMPLED: 3/20/01 SAMPLING TIME: 1330

| TIME (2400 HR) | VOLUME (gal.) | pH (units) | E.C. (µmhos/cm@25°C) | TEMPERATURE (°F) | COLOR (visual) | TURBIDITY (visual) |
|-------------------|------------------|---------------|-------------------------|---------------------|--------------------|-----------------------|
| <u>1316</u> | <u>1.25</u> | <u>7.12</u> | <u>430.9</u> | <u>70.1</u> | <u>light green</u> | <u>med</u> |
| <u>1319</u> | <u>2.50</u> | <u>7.04</u> | <u>436.5</u> | <u>67.8</u> | <u>↓</u> | <u>↓</u> |
| <u>1323</u> | <u>3.75</u> | <u>7.00</u> | <u>438.0</u> | <u>67.2</u> | <u>↓</u> | <u>↓</u> |
| | | | | | | |

OTHER: _____ ODOR: none _____
(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)
 _____ Centrifugal Pump _____ Bailer (PVC)
 _____ Submersible Pump _____ Bailer (Stainless Steel)
 Disposal Bailer _____ Dedicated

_____ 2" Bladder Pump _____ Bailer (Teflon)
 _____ Bomb Sampler _____ Bailer (Stainless Steel)
 _____ Dipper _____ Submersible Pump
 Disposal Bailer _____ Dedicated

Other: _____

Other: _____

WELL INTEGRITY: _____ OK LOCK: OK

REMARKS: _____

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

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

Temperature °F _____

SIGNATURE: Bob Morgan *See MW-1B* REVIEWED BY: [Signature] PAGE 4 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO : 792775 / 00020000
 PURGED BY : Bob Morgan
 SAMPLED BY : Bob Morgan

SAMPLE ID : MW-4
 CLIENT NAME : Hard Chrome Engineering
 LOCATION : 750 107th Avenue, Oakland

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

CASING ELEVATION (feet/MSL) : _____ VOLUME IN CASING (gal.) : 1.12
 DEPTH OF WELL (feet) : 22.90 CALCULATED PURGE (gal.) : 3.37
 DEPTH TO WATER (feet) : 15.99 ACTUAL PURGE VOL. (gal.) : 3.50

DATE PURGED : 3/20/01 END PURGE : 1210
 DATE SAMPLED : ↓ SAMPLING TIME : 1220

| TIME (2400 HR) | VOLUME (gal.) | pH (units) | E.C. (µmhos/cm@25°C) | TEMPERATURE (°F) | COLOR (visual) | TURBIDITY (visual) |
|-------------------|------------------|---------------|-------------------------|---------------------|-------------------|-----------------------|
| <u>1203</u> | <u>1.00</u> | <u>6.63</u> | <u>688.8</u> | <u>66.6</u> | <u>lt green</u> | <u>med</u> |
| <u>1207</u> | <u>2.25</u> | <u>6.65</u> | <u>688.1</u> | <u>65.9</u> | <u>↓</u> | <u>↓</u> |
| <u>1210</u> | <u>3.50</u> | <u>6.64</u> | <u>689.1</u> | <u>65.4</u> | <u>↓</u> | <u>↓</u> |
| | | | | | | |
| | | | | | | |

OTHER: _____ ODOR: none
(COBALT 0-100) (NTU 0-200)

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

| PURGING EQUIPMENT | SAMPLING EQUIPMENT |
|---|---|
| <input type="checkbox"/> 2" Bladder Pump | <input type="checkbox"/> 2" Bladder Pump |
| <input type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Bomb Sampler |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Dipper |
| <input checked="" type="checkbox"/> Disposal Bailer | <input checked="" type="checkbox"/> Disposal Bailer |
| Other: _____ | Other: _____ |

WELL INTEGRITY: _____ OK LOCK: OK

REMARKS: _____

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

Temperature °F _____
 SIGNATURE: B. Morgan See MW-1B REVIEWED BY: [Signature] PAGE 5 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO: 792775 / 00020000
 PURGED BY: Bob Morgan
 SAMPLED BY: Bob Morgan

SAMPLE ID: MW-5
 CLIENT NAME: Hard Chrome Engineering
 LOCATION: 750 107th Avenue, Oakland

TYPE: Groundwater Surface Water _____ Leachate _____ Other _____
 CASING DIAMETER (inches): 2 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.): 3.87
 DEPTH TO WATER (feet): 15.27 ACTUAL PURGE VOL. (gal.): 4

DATE PURGED: 3/20/01 END PURGE: 1100
 DATE SAMPLED: 3/20/01 SAMPLING TIME: 1110

| TIME (2400 HR) | VOLUME (gal) | pH (units) | E.C. (µmhos/cm@25°C) | TEMPERATURE (°F) | COLOR (visual) | TURBIDITY (visual) |
|-------------------|-----------------|---------------|-------------------------|---------------------|-------------------|-----------------------|
| <u>1053</u> | <u>1.5</u> | <u>6.95</u> | <u>557.8</u> | <u>68.0</u> | <u>lt green</u> | <u>med</u> |
| <u>1057</u> | <u>3</u> | <u>6.95</u> | <u>556.9</u> | <u>65.9</u> | <u>↓</u> | <u>↓</u> |
| <u>1100</u> | <u>4</u> | <u>6.94</u> | <u>568.2</u> | <u>65.7</u> | <u>↓</u> | <u>↓</u> |
| | | | | | | |

OTHER: _____ ODOR: Yes slight _____
(COBALT 0-100) (NTU 0-200)

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

| PURGING EQUIPMENT | | SAMPLING EQUIPMENT | |
|---|---|---|---|
| <input type="checkbox"/> 2" Bladder Pump | <input type="checkbox"/> Bailer (Teflon) | <input type="checkbox"/> 2" Bladder Pump | <input type="checkbox"/> Bailer (Teflon) |
| <input type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Bailer (PVC) | <input type="checkbox"/> Bomb Sampler | <input type="checkbox"/> Bailer (Stainless Steel) |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Bailer (Stainless Steel) | <input type="checkbox"/> Dipper | <input type="checkbox"/> Submersible Pump |
| <input checked="" type="checkbox"/> Disposal Bailer | <input type="checkbox"/> Dedicated | <input checked="" type="checkbox"/> Disposal Bailer | <input type="checkbox"/> Dedicated |
| Other: _____ | | Other: _____ | |

WELL INTEGRITY: OK LOCK: OK

REMARKS: _____

pH, E.C., Temp. Meter Calibration: Date: _____ Time: _____ Meter Serial No.: _____
 E.C. 1000 / _____ pH 7 / _____ pH 10 / _____ pH 4 / _____
 Temperature °F _____
 SIGNATURE: Bob Morgan REVIEWED BY: [Signature] PAGE 6 OF 7

WATER SAMPLE FIELD DATA SHEET

Rev. 1/97

PROJECT NO: 792775 / 00020000
 PURGED BY: Bob Morgan
 SAMPLED BY: Bob Morgan

SAMPLE ID: MW-6
 CLIENT NAME: Hard Chrome Engineering
 LOCATION: 750 107th Avenue, Oakland

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

CASING ELEVATION (feet/MSL): _____ VOLUME IN CASING (gal.): 1.04
 DEPTH OF WELL (feet): 22.70 CALCULATED PURGE (gal.): 3.13
 DEPTH TO WATER (feet): 16.29 ACTUAL PURGE VOL. (gal.): 3.25

DATE PURGED: 3/28/01 END PURGE: 1352
 DATE SAMPLED: ↓ SAMPLING TIME: 1400

| TIME (2400 HR) | VOLUME (gal.) | pH (units) | E.C. (µmhos/cm@25°C) | TEMPERATURE (°F) | COLOR (visual) | TURBIDITY (visual) |
|-------------------|------------------|---------------|-------------------------|---------------------|--------------------|-----------------------|
| <u>1345</u> | <u>1</u> | <u>6.90</u> | <u>462.3</u> | <u>67.3</u> | <u>light green</u> | <u>med</u> |
| <u>1347</u> | <u>2</u> | <u>6.86</u> | <u>467.0</u> | <u>66.4</u> | <u>↓</u> | <u>↓</u> |
| <u>1352</u> | <u>3.25</u> | <u>6.83</u> | <u>468.7</u> | <u>66.3</u> | <u>↓</u> | <u>↓</u> |
| | | | | | | |
| | | | | | | |

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)
 Disposal Bailer Dedicated
 Other: _____

SAMPLING EQUIPMENT

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

WELL INTEGRITY: OK LOCK: OK

REMARKS: _____

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

Temperature °F _____
 SIGNATURE: Bob Morgan *See MW-1B* REVIEWED BY: [Signature] PAGE 7 OF 7

IT CORPORATION - Drum Inventory Record

792775
Project No

750 107th Ave., Oakland
Location

3/20/01
Date

Hard Chrome Engineering
Client

RAM
Sampler

Tues.
Day of Week

| DRUM NUMBER OR ID | WELL OR SOURCE ID(s) | TYPE OF MATERIAL | AMOUNT OF MATERIAL IN DRUM | DATE ACCUMULATED OR GENERATED |
|-------------------|----------------------|--|----------------------------|-------------------------------|
| MW-1,2,3 | MW12&3 | Purge H ₂ O + Soil cuttings | full | 6/25/92 7/14/92 |
| 792775 | All wells | Purge H ₂ O | 25 gal | 3/20/01 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Sketch locations of drums, include drum ID's
See Site Map

COMMENTS: 6 MT drums

Number of Drums From This Event 1

Total Number of Drums At Site 8

APPENDIX B

**CERTIFIED ANALYTICAL RESULTS AND CHAIN-OF-CUSTODY
REPORTS**



Sequoia Analytical

819 Striker Avenue, Suite 8
Sacramento, CA 95834
(916) 921-9600
FAX (916) 921-0100
www.sequoialabs.com

April 03 , 2001

Charles Metzinger
EMCON/IT - Sacramento
1433 N. Market Blvd.
Sacramento, CA 95834
RE: Hard Chrome Engineering / S103357

Enclosed are the results of analyses for samples received by the laboratory on 03/20/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Client Services Representative

CA ELAP Certificate Number 1624





EMCON/IT - Sacramento
1433 N. Market Blvd.
Sacramento CA, 95834

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

Reported:
04/03/01 15:03

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|----------------|----------------|
| MW-1 | S103357-01 | Water | 03/20/01 13:05 | 03/20/01 17:05 |
| MW-2 | S103357-02 | Water | 03/20/01 11:50 | 03/20/01 17:05 |
| MW-3 | S103357-03 | Water | 03/20/01 13:30 | 03/20/01 17:05 |
| MW-4 | S103357-04 | Water | 03/20/01 12:20 | 03/20/01 17:05 |
| MW-5 | S103357-05 | Water | 03/20/01 11:10 | 03/20/01 17:05 |
| MW-6 | S103357-06 | Water | 03/20/01 14:00 | 03/20/01 17:05 |
| MW-1B | S103357-07 | Water | 03/20/01 10:40 | 03/20/01 17:05 |





| | | |
|---|--|-----------------------------|
| EMCON/IT - Sacramento 1433 N. Market Blvd. Sacramento CA, 95834 | Project: Hard Chrome Engineering Project Number: 792775 Project Manager: Charles Metzinger | Reported: 04/03/01 15:03 |
|---|--|-----------------------------|

Dissolved Metals by EPA 6000/7000 Series Methods Sequoia Analytical - Sacramento

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|--------|-------|

MW-1 (S103357-01) Water Sampled: 03/20/01 13:05 Received: 03/20/01 17:05

| | | | | | | | | | |
|---------------------|--------|----------|------|---|---------|----------|----------|-----------|--|
| Hexavalent Chromium | 0.0486 | 0.00500 | mg/l | 1 | 1030304 | 03/20/01 | 03/20/01 | EPA 7196A | |
| Mercury | ND | 0.000200 | " | " | 1030403 | 03/29/01 | 03/29/01 | EPA 7470A | |
| Antimony | ND | 0.100 | " | " | 1040034 | 04/03/01 | 04/03/01 | EPA 6010A | |
| Arsenic | ND | 0.100 | " | " | " | " | " | " | |
| Barium | ND | 0.100 | " | " | " | " | " | " | |
| Beryllium | ND | 0.0100 | " | " | " | " | " | " | |
| Cadmium | ND | 0.0100 | " | " | " | " | " | " | |
| Chromium | 0.0951 | 0.0100 | " | " | " | " | " | " | |
| Cobalt | ND | 0.0400 | " | " | " | " | " | " | |
| Copper | ND | 0.0100 | " | " | " | " | " | " | |
| Lead | ND | 0.100 | " | " | " | " | " | " | |
| Molybdenum | ND | 0.0400 | " | " | " | " | " | " | |
| Nickel | ND | 0.0400 | " | " | " | " | " | " | |
| Selenium | ND | 0.100 | " | " | " | " | " | " | |
| Silver | ND | 0.0100 | " | " | " | " | " | " | |
| Thallium | ND | 0.100 | " | " | " | " | " | " | |
| Vanadium | ND | 0.0400 | " | " | " | " | " | " | |
| Zinc | 0.0236 | 0.0100 | " | " | " | " | " | " | |

MW-2 (S103357-02) Water Sampled: 03/20/01 11:50 Received: 03/20/01 17:05

| | | | | | | | | | |
|---------------------|---------|----------|------|-------|---------|----------|----------|-----------|------|
| Hexavalent Chromium | 757 | 50.0 | mg/l | 10000 | 1030304 | 03/20/01 | 03/20/01 | EPA 7196A | |
| Mercury | 0.00122 | 0.000200 | " | 1 | 1030403 | 03/29/01 | 03/29/01 | EPA 7470A | |
| Antimony | 2.24 | 2.00 | " | 20 | 1040034 | 04/03/01 | 04/03/01 | EPA 6010A | |
| Arsenic | ND | 2.00 | " | " | " | " | " | " | R-01 |
| Barium | ND | 2.00 | " | " | " | " | " | " | R-01 |
| Beryllium | ND | 0.200 | " | " | " | " | " | " | R-01 |
| Cadmium | ND | 0.200 | " | " | " | " | " | " | R-01 |
| Chromium | 752 | 0.200 | " | " | " | " | " | " | |
| Cobalt | ND | 0.800 | " | " | " | " | " | " | R-01 |
| Copper | 17.2 | 0.200 | " | " | " | " | " | " | |
| Lead | ND | 2.00 | " | " | " | " | " | " | R-01 |
| Molybdenum | ND | 0.800 | " | " | " | " | " | " | R-01 |
| Nickel | 1.69 | 0.800 | " | " | " | " | " | " | |
| Selenium | ND | 2.00 | " | " | " | " | " | " | R-01 |
| Silver | ND | 0.200 | " | " | " | " | " | " | R-01 |
| Thallium | ND | 2.00 | " | " | " | " | " | " | R-01 |
| Vanadium | ND | 0.800 | " | " | " | " | " | " | R-01 |
| Zinc | 1.88 | 0.200 | " | " | " | " | " | " | |





EMCON/IT - Sacramento
 1433 N. Market Blvd.
 Sacramento CA, 95834

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

Reported:
 04/03/01 15:03

Dissolved Metals by EPA 6000/7000 Series Methods Sequoia Analytical - Sacramento

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|--------|-----------|--|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| MW-3 (S103357-03) Water Sampled: 03/20/01 13:30 Received: 03/20/01 17:05 | | | | | | | | | | |
| Hexavalent Chromium | 0.0170 | 0.00500 | | mg/l | 1 | 1030304 | 03/20/01 | 03/20/01 | EPA 7196A | |
| Mercury | ND | 0.000200 | | " | " | 1030403 | 03/29/01 | 03/29/01 | EPA 7470A | |
| Antimony | ND | 0.100 | | " | " | 1040034 | 04/03/01 | 04/03/01 | EPA 6010A | |
| Arsenic | ND | 0.100 | | " | " | " | " | " | " | |
| Barium | ND | 0.100 | | " | " | " | " | " | " | |
| Beryllium | ND | 0.0100 | | " | " | " | " | " | " | |
| Cadmium | ND | 0.0100 | | " | " | " | " | " | " | |
| Chromium | 0.0368 | 0.0100 | | " | " | " | " | " | " | |
| Cobalt | ND | 0.0400 | | " | " | " | " | " | " | |
| Copper | ND | 0.0100 | | " | " | " | " | " | " | |
| Lead | ND | 0.100 | | " | " | " | " | " | " | |
| Molybdenum | ND | 0.0400 | | " | " | " | " | " | " | |
| Nickel | ND | 0.0400 | | " | " | " | " | " | " | |
| Selenium | ND | 0.100 | | " | " | " | " | " | " | |
| Silver | ND | 0.0100 | | " | " | " | " | " | " | |
| Thallium | ND | 0.100 | | " | " | " | " | " | " | |
| Vanadium | ND | 0.0400 | | " | " | " | " | " | " | |
| Zinc | 0.0135 | 0.0100 | | " | " | " | " | " | " | |

| | | | | | | | | | | |
|---|--------|----------|--|------|----|---------|----------|----------|-----------|--|
| MW-4 (S103357-04) Water Sampled: 03/20/01 12:20 Received: 03/20/01 17:05 | | | | | | | | | | |
| Hexavalent Chromium | 0.475 | 0.0500 | | mg/l | 10 | 1030304 | 03/20/01 | 03/20/01 | EPA 7196A | |
| Mercury | ND | 0.000200 | | " | 1 | 1030403 | 03/29/01 | 03/29/01 | EPA 7470A | |
| Antimony | ND | 0.100 | | " | " | 1040034 | 04/03/01 | 04/03/01 | EPA 6010A | |
| Arsenic | ND | 0.100 | | " | " | " | " | " | " | |
| Barium | 0.118 | 0.100 | | " | " | " | " | " | " | |
| Beryllium | ND | 0.0100 | | " | " | " | " | " | " | |
| Cadmium | ND | 0.0100 | | " | " | " | " | " | " | |
| Chromium | 1.03 | 0.0100 | | " | " | " | " | " | " | |
| Cobalt | ND | 0.0400 | | " | " | " | " | " | " | |
| Copper | ND | 0.0100 | | " | " | " | " | " | " | |
| Lead | ND | 0.100 | | " | " | " | " | " | " | |
| Molybdenum | ND | 0.0400 | | " | " | " | " | " | " | |
| Nickel | 0.0590 | 0.0400 | | " | " | " | " | " | " | |
| Selenium | ND | 0.100 | | " | " | " | " | " | " | |
| Silver | ND | 0.0100 | | " | " | " | " | " | " | |
| Thallium | ND | 0.100 | | " | " | " | " | " | " | |
| Vanadium | ND | 0.0400 | | " | " | " | " | " | " | |
| Zinc | ND | 0.0100 | | " | " | " | " | " | " | |





EMCON/IT - Sacramento
1433 N. Market Blvd.
Sacramento CA, 95834

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

Reported:
04/03/01 15:03

**Dissolved Metals by EPA 6000/7000 Series Methods
Sequoia Analytical - Sacramento**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|--------------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| MW-5 (S103357-05) Water Sampled: 03/20/01 11:10 Received: 03/20/01 17:05 | | | | | | | | | |
| Hexavalent Chromium | ND | 0.00500 | mg/l | 1 | 1030304 | 03/20/01 | 03/20/01 | EPA 7196A | |
| Mercury | ND | 0.000200 | " | " | 1030403 | 03/29/01 | 03/29/01 | EPA 7470A | |
| Antimony | ND | 0.100 | " | " | 1040034 | 04/03/01 | 04/03/01 | EPA 6010A | |
| Arsenic | ND | 0.100 | " | " | " | " | " | " | |
| Barium | ND | 0.100 | " | " | " | " | " | " | |
| Beryllium | ND | 0.0100 | " | " | " | " | " | " | |
| Cadmium | ND | 0.0100 | " | " | " | " | " | " | |
| Chromium | 0.448 | 0.0100 | " | " | " | " | " | " | |
| Cobalt | ND | 0.0400 | " | " | " | " | " | " | |
| Copper | ND | 0.0100 | " | " | " | " | " | " | |
| Lead | ND | 0.100 | " | " | " | " | " | " | |
| Molybdenum | ND | 0.0400 | " | " | " | " | " | " | |
| Nickel | ND | 0.0400 | " | " | " | " | " | " | |
| Selenium | ND | 0.100 | " | " | " | " | " | " | |
| Silver | ND | 0.0100 | " | " | " | " | " | " | |
| Thallium | ND | 0.100 | " | " | " | " | " | " | |
| Vanadium | ND | 0.0400 | " | " | " | " | " | " | |
| Zinc | ND | 0.0100 | " | " | " | " | " | " | |

| | | | | | | | | | |
|---|---------------|----------|------|---|---------|----------|----------|-----------|--|
| MW-6 (S103357-06) Water Sampled: 03/20/01 14:00 Received: 03/20/01 17:05 | | | | | | | | | |
| Hexavalent Chromium | 0.0249 | 0.00500 | mg/l | 1 | 1030304 | 03/20/01 | 03/20/01 | EPA 7196A | |
| Mercury | ND | 0.000200 | " | " | 1030403 | 03/29/01 | 03/29/01 | EPA 7470A | |
| Antimony | ND | 0.100 | " | " | 1040034 | 04/03/01 | 04/03/01 | EPA 6010A | |
| Arsenic | ND | 0.100 | " | " | " | " | " | " | |
| Barium | ND | 0.100 | " | " | " | " | " | " | |
| Beryllium | ND | 0.0100 | " | " | " | " | " | " | |
| Cadmium | ND | 0.0100 | " | " | " | " | " | " | |
| Chromium | 0.0280 | 0.0100 | " | " | " | " | " | " | |
| Cobalt | ND | 0.0400 | " | " | " | " | " | " | |
| Copper | ND | 0.0100 | " | " | " | " | " | " | |
| Lead | ND | 0.100 | " | " | " | " | " | " | |
| Molybdenum | ND | 0.0400 | " | " | " | " | " | " | |
| Nickel | ND | 0.0400 | " | " | " | " | " | " | |
| Selenium | ND | 0.100 | " | " | " | " | " | " | |
| Silver | ND | 0.0100 | " | " | " | " | " | " | |
| Thallium | ND | 0.100 | " | " | " | " | " | " | |
| Vanadium | ND | 0.0400 | " | " | " | " | " | " | |
| Zinc | ND | 0.0100 | " | " | " | " | " | " | |





EMCON/IT - Sacramento
1433 N. Market Blvd.
Sacramento CA, 95834

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

Reported:
04/03/01 15:03

**Dissolved Metals by EPA 6000/7000 Series Methods
Sequoia Analytical - Sacramento**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| MW-1B (S103357-07) Water Sampled: 03/20/01 10:40 Received: 03/20/01 17:05 | | | | | | | | | |
| Hexavalent Chromium | 74.6 | 10.0 | mg/l | 2000 | 1030304 | 03/20/01 | 03/20/01 | EPA 7196A | |
| Mercury | ND | 0.000200 | " | 1 | 1030403 | 03/29/01 | 03/29/01 | EPA 7470A | |
| Antimony | ND | 0.500 | " | 5 | 1040034 | 04/03/01 | 04/03/01 | EPA 6010A | R-01 |
| Arsenic | ND | 0.500 | " | " | " | " | " | " | R-01 |
| Barium | ND | 0.500 | " | " | " | " | " | " | R-01 |
| Beryllium | ND | 0.0500 | " | " | " | " | " | " | R-01 |
| Cadmium | ND | 0.0500 | " | " | " | " | " | " | R-01 |
| Chromium | 72.6 | 0.0500 | " | " | " | " | " | " | |
| Cobalt | ND | 0.200 | " | " | " | " | " | " | R-01 |
| Copper | ND | 0.0500 | " | " | " | " | " | " | R-01 |
| Lead | ND | 0.500 | " | " | " | " | " | " | R-01 |
| Molybdenum | ND | 0.200 | " | " | " | " | " | " | R-01 |
| Nickel | ND | 0.200 | " | " | " | " | " | " | R-01 |
| Selenium | ND | 0.500 | " | " | " | " | " | " | R-01 |
| Silver | ND | 0.0500 | " | " | " | " | " | " | R-01 |
| Thallium | ND | 0.500 | " | " | " | " | " | " | R-01 |
| Vanadium | ND | 0.200 | " | " | " | " | " | " | R-01 |
| Zinc | ND | 0.0500 | " | " | " | " | " | " | R-01 |





EMCON/IT - Sacramento
1433 N. Market Blvd.
Sacramento CA, 95834

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

Reported:
04/03/01 15:03

**Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control
Sequoia Analytical - Sacramento**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch 1030304 - General Preparation

Blank (1030304-BLK1) Prepared & Analyzed: 03/20/01

Hexavalent Chromium ND 0.00500 mg/l

LCS (1030304-BS1) Prepared & Analyzed: 03/20/01

Hexavalent Chromium 0.0531 0.00500 mg/l 0.0500 106 80-115

Matrix Spike (1030304-MS1) Source: S103357-01 Prepared & Analyzed: 03/20/01

Hexavalent Chromium 0.0983 0.00500 mg/l 0.0500 0.0486 99.4 85-115

Matrix Spike Dup (1030304-MSD1) Source: S103357-01 Prepared & Analyzed: 03/20/01

Hexavalent Chromium 0.0983 0.00500 mg/l 0.0500 0.0486 99.4 85-115 0 20

Batch 1030403 - EPA 7470A

Blank (1030403-BLK1) Prepared & Analyzed: 03/29/01

Mercury ND 0.000200 mg/l

LCS (1030403-BS1) Prepared & Analyzed: 03/29/01

Mercury 0.00459 0.000200 mg/l 0.00500 91.8 80-120

Matrix Spike (1030403-MS1) Source: S103384-04 Prepared & Analyzed: 03/29/01

Mercury 0.00430 0.000200 mg/l 0.00500 ND 86.0 75-125

Matrix Spike Dup (1030403-MSD1) Source: S103384-04 Prepared & Analyzed: 03/29/01

Mercury 0.00435 0.000200 mg/l 0.00500 ND 87.0 75-125 1.16 20

Batch 1040034 - 6010A/No Digestion

Blank (1040034-BLK1) Prepared & Analyzed: 04/03/01

| | | | | | | | | | | |
|------------|----|--------|------|--|--|--|--|--|--|--|
| Antimony | ND | 0.100 | mg/l | | | | | | | |
| Arsenic | ND | 0.100 | " | | | | | | | |
| Barium | ND | 0.100 | " | | | | | | | |
| Beryllium | ND | 0.0100 | " | | | | | | | |
| Cadmium | ND | 0.0100 | " | | | | | | | |
| Chromium | ND | 0.0100 | " | | | | | | | |
| Cobalt | ND | 0.0400 | " | | | | | | | |
| Copper | ND | 0.0100 | " | | | | | | | |
| Lead | ND | 0.100 | " | | | | | | | |
| Molybdenum | ND | 0.0400 | " | | | | | | | |
| Nickel | ND | 0.0400 | " | | | | | | | |
| Selenium | ND | 0.100 | " | | | | | | | |

Sequoia Analytical - Sacramento

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





EMCON/IT - Sacramento
 1433 N. Market Blvd.
 Sacramento CA, 95834

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

Reported:
 04/03/01 15:03

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Sacramento

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch 1040034 - 6010A/No Digestion

Blank (1040034-BLK1)

Prepared & Analyzed: 04/03/01

| | | | | | | | | | | |
|----------|----|--------|------|--|--|--|--|--|--|--|
| Silver | ND | 0.0100 | mg/l | | | | | | | |
| Thallium | ND | 0.100 | " | | | | | | | |
| Vanadium | ND | 0.0400 | " | | | | | | | |
| Zinc | ND | 0.0100 | " | | | | | | | |

LCS (1040034-BS1)

Prepared & Analyzed: 04/03/01

| | | | | | | | | | | |
|----------|------|--------|------|------|--|------|--------|--|--|--|
| Arsenic | 4.77 | 0.100 | mg/l | 5.00 | | 95.4 | 80-120 | | | |
| Cadmium | 4.83 | 0.0100 | " | 5.00 | | 96.6 | 80-120 | | | |
| Chromium | 4.92 | 0.0100 | " | 5.00 | | 98.4 | 80-120 | | | |
| Nickel | 5.09 | 0.0400 | " | 5.00 | | 102 | 80-120 | | | |
| Zinc | 4.76 | 0.0100 | " | 5.00 | | 95.2 | 80-120 | | | |

Matrix Spike (1040034-MS1)

Source: S103357-01

Prepared & Analyzed: 04/03/01

| | | | | | | | | | | |
|----------|------|--------|------|------|--------|-----|--------|--|--|--|
| Arsenic | 2.16 | 0.100 | mg/l | 2.00 | ND | 108 | 80-120 | | | |
| Cadmium | 2.14 | 0.0100 | " | 2.00 | ND | 107 | 80-120 | | | |
| Chromium | 2.20 | 0.0100 | " | 2.00 | 0.0951 | 105 | 80-120 | | | |
| Nickel | 2.17 | 0.0400 | " | 2.00 | ND | 109 | 80-120 | | | |
| Zinc | 2.14 | 0.0100 | " | 2.00 | 0.0236 | 106 | 80-120 | | | |

Matrix Spike Dup (1040034-MSD1)

Source: S103357-01

Prepared & Analyzed: 04/03/01

| | | | | | | | | | | |
|----------|------|--------|------|------|--------|-----|--------|-------|----|--|
| Arsenic | 2.15 | 0.100 | mg/l | 2.00 | ND | 108 | 80-120 | 0.464 | 20 | |
| Cadmium | 2.13 | 0.0100 | " | 2.00 | ND | 107 | 80-120 | 0.468 | 20 | |
| Chromium | 2.19 | 0.0100 | " | 2.00 | 0.0951 | 105 | 80-120 | 0.456 | 20 | |
| Nickel | 2.16 | 0.0400 | " | 2.00 | ND | 108 | 80-120 | 0.462 | 20 | |
| Zinc | 2.15 | 0.0100 | " | 2.00 | 0.0236 | 106 | 80-120 | 0.466 | 20 | |





EMCON/IT - Sacramento
1433 N. Market Blvd.
Sacramento CA, 95834

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

Reported:
04/03/01 15:03

Notes and Definitions

- R-01 The reporting limit for this analyte has been raised to account for matrix interference.
- 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



