Preliminary Environmental Characterization
Property Leased by Hard Chrome Engineering, Inc.
750 - 107th Avenue
Oakland, California





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September 29, 1992

BSK Job No. P92124.3

Ms. Cheryl Plato McLemore, Trustee Dee M. McLemore Trust 145 Riverhaven Place Reno, Nevada 89509

Subject:

Preliminary Environmental Characterization

Property Leased by Hard Chrome Engineering, Inc.

750 - 107th Avenue Oakland, California

Dear Ms. McLemore:

At your request, BSK & Associates Inc. (BSK) is pleased to submit this report for Preliminary Environmental Characterization at the subject property. These services were completed in general accordance to our Proposal No. PR91258.3, dated April 13, 1992.

Based on analyses of soil samples collected during groundwater monitoring wells installation, arsenic, beryllium, cadmium, lead, nickel and selenium were detected at levels above the Soluble Threshold Limit Concentrations. Beryllium was detected in a soil sample at a level above the Total Threshold Limit Concentration.

Based on analyses of groundwater samples collected from the three monitoring wells and one on-site water well, chromium VI (Cr⁺⁶), arsenic and selenium were detected in MW-2 over the Maximum Contaminant Levels (MCL) established for drinking water.

Also, based on analyses of groundwater samples collected, volatile halocarbon (tetrachloroethane) was detected in each of the three monitoring wells sampled. Samples collected from two of the groundwater monitoring wells had tetrachloroethane detected at levels at or above MCL.

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A copy of this Report should be submitted to the agency with appropriate jurisdiction over the site.

BSK & Associates appreciates this opportunity to be of service to you. If there are questions or concerns regarding this report, please contact the undersigned.

Respectfully submitted, BSK & ASSOCIATES, INC.

Muty Chi

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(RPTS\ENV.M03)

Enclosure

Distribution: Ms. Cheryl Plato McLemore (3 copies)

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PRELIMINARY ENVIRONMENTAL CHARACTERIZATION REPORT 750 - 107TH AVENUE OAKLAND, CALIFORNIA BSK Job No. P92124.3

1.0 INTRODUCTION

BSK & Associates, Inc. (BSK) has prepared this Preliminary Environmental Characterization Report (PEC Report) for the Dee M. McLemore Trust property at 750 - 107th Avenue in Oakland, California. The location of the property within the southern Oakland area is shown on Figure 1, Vicinity Map.

The services and work performed for the PEC Report were in general accordance with the BSK Proposal PR91258.3 dated April 13, 1992 which was accepted and signed by Ms. Cheryl Plato McLemore, Trustee for Dee M. McLemore Trust, on May 12, 1992.

Due to unanticipated site conditions, first groundwater encountered at a shallower depth and higher chemical concentrations than expected, the scope of services was modified to incorporate shallower monitoring wells and to conduct a more detailed chemical analysis program.

2.0 PURPOSE AND SCOPE

The purpose of this preliminary environmental characterization is to further evaluate the previously detected chromium reported by Simon-EEI, Inc. (Reference No. 2) and to assess the potential for volatile halocarbons and aromatic compounds to be present in soil and/or groundwater at the site.

The scope of services performed to complete the preliminary characterization included the following:

- Site visit and personal interview of the current tenant on May 21, 1992;
- Drilling Permit Application submittal to Zone 7 of the Alameda County Flood Control and Water Conservation District;
- Notification to Underground Service Alert for underground utility clearances;



- Drilling and sampling three exploration bores, which in turn, were converted to groundwater monitoring wells;
- Development, purging and sampling the three installed monitoring wells;
- Purging and sampling an on-site water well;
- Performing a vertical control survey of each monitoring and water well casing;
- Performing analyses of chemical and physical properties on select soil samples from the bore holes and water samples from each well; and,
- Preparing this report which summarizes the work performed, analytical methods used, findings, and presents recommendations for further action.

3.0 BACKGROUND INFORMATION

The background information pertaining to the site is based on information extracted from Simon EEI (Reference No. 2) and a personal interview with Mr. Ron V. Teffs of Hard Chrome Engineering conducted on May 21, 1992.

3.1 Simon-EEI Report

Simon-EEI drilled and sampled five soil borings on the subject property on August 19 and 26, 1991. The locations of the borings (SB-1 through SB-5) are shown on Figure 2. In addition, groundwater samples were collected using a HydropunchTM from borings SB-2 through SB-5. Laboratory analysis for priority pollutant metals, cyanide and pH were performed on a soil sample from SB-5 and the four groundwater samples. Several metals were identified in the soil sample analyzed; however, none of the metals were at concentrations considered hazardous as defined in Title 22 of the California Code of Regulations (CCR). The results of laboratory analysis of the groundwater samples indicated total chromium at 180.3 milligrams per liter (mg/l) at location SB-5 and cyanide concentrations ranging from 0.039 to 0.103 mg/l in the four water samples. The conduct of the investigation by Simon-EEI, boring logs and chemical data reports are presented in Reference No. 2. The Simon Report concluded that elevated chromium levels were present in soil and groundwater samples collected from the subsurface area adjacent to the secondary containment sump at the site.



3.2 Teffs Interview

On May 21, 1992, BSK representatives visited the site. During BSK's interview with Mr. Teffs, he indicated that Hard Chrome Engineering (HCE) has operated a chrome plating operation at the site since 1972. Details of the specific process operations, such as process flow diagrams, were unavailable. The operations observed to be present include parts cleaning baths, mechanical stripping by sandblasting and grinding, and plating baths which utilize chromic acid and sulfuric acid. The process equipment also includes an air ventilating hood located over the chrome plating baths and sandbar system. Chemical stripping of parts using muriatic acid done infrequently. Process equipment is positioned adjacent to or over a collection sump. Mr. Teffs stated that prior to Mr. Dee McLemore's purchase of the property in 1972, other tenants occupied the existing building. Also, Mr. Teffs stated that Mr. Dee McLemore hired the contractor who installed the interior concrete-lined sump and that the McLemore's have the original Sump Plans.

According to Mr. Teffs, the sump area is approximately 30 feet by 30 feet in plan dimension. The northern half of the sump is 7 feet deep as measured from the top of the existing finish floor slab to the top of the sump slab. The southern half of the sump is 1-1/2 feet deep. There is no sewer access within the sump area. Mr. Teffs' statement regarding sump construction was consistent with BSK's observation on May 21, 1992.

According to Mr. Teffs, for approximately the last four or five years, HCE, has resealed the sump on a bi-yearly basis and for the same period of time, has maintained the liquid depth in the sump at less than one-inch. Mr. Teffs report that the sump was used to catch "drag" or "drip" liquids from the chrome plating operation.

Mr. Teffs also reported that HCE installed a water well (location shown on Figure 2, Site Plan) for process usage. Mr. Teffs could not recall specific details on the well driller, well depth or screened interval. Mr. Teffs stated the water well has not been used for approximately ten years and the pump is "frozen." Also, Mr. Teffs thought that initial tests on the groundwater samples were high in iron and cadmium.

In regards to HCE's process operations, Mr. Teffs stated the following:

- Chromic acid, sulfuric acid and water are used for plating and cleaning;
- Petroleum naphtha fluid (paint thinner) is used for machining operation (55 gallons maximum quantity);



- No caustic cleaners are used;
- HCE is under zero Waste Discharge Order (East Bay Municipal Utility District);
- HCE is required to have an Air Quality Permit (HCE is currently working on their 5th Risk Assessment revision);
- HCE never used cyanide at this property; and,
- Majority of stripping is performed by a mechanical process and only occasionally is muriatic acid used (approximately 25 to 30 gallons of muriatic acid is stored on site).

3.3 Other Information

The site inspection conducted on May 21, 1992 by representatives from BSK confirmed evidence of floor staining, staining of the sump walls and floor, and surficial disintegration of the sump wall concrete as reported by Simon-EEI (Reference No. 2). In addition, we confirmed site information reported by Simon EEI (Reference No. 2) in the vicinity of the water well and neighborhood land usage.

BSK contacted Ms. Cheryl Plato McLemore on June 4, 1992 to obtain a copy of the Sump Plan for the subject property. Upon review of her records and files, Ms. McLemore was unable to find the original or a copy of the Sump Plan.

4.0 FIELD WORK METHODOLOGY

4.1 Drilling and Sampling

Three exploration borings, MW-1 to MW-3, were advanced with either a Mobile B-50 or B-53 truck-mounted drill rig utilizing 8-inch hollow stem auger. The locations of the borings are shown on Figure 2, Site Plan. Soil samples were collected at five-foot intervals or less, starting approximately five feet below the finished floor slab grade, by driving a modified California split-barrel sampler containing two-inch I.D. stainless steel liners. The sampler was driven a total of 18 inches with a 140-pound hammer falling 30 inches. Blow counts for each six-inch increment were recorded on a field log. The blow count for the final 12 inches is presented on the Boring Logs in Appendix A.



The first boring (MW-1) was drilled to approximately 20 feet where groundwater was encountered. The groundwater level was allowed to stabilize inside the hollow stem auger after collecting the soil sample at the 20-foot interval. Continuous sampling with the modified California sampler from 24 to 28.5 feet was conducted to explore for a deeper aquifer. The sampling revealed a sand stratum at 27.5 feet in MW-1. To prevent connection between the potential aquifer at 27.5 feet and first groundwater at 20 feet, the bore hole was sealed with activated bentonite pellets from 24 to 28.5 feet. Bores MW-2 and MW-3 were advanced and sampled to a depth of only 24 feet.

The stainless steel liners containing the soil samples were covered with TeflonTM film and plastic end caps. The joint between each plastic cap and liner was sealed with waterproof tape and labeled with the following information:

- Sample Number
- Sample Depth Interval
- Project Number
- Sample Date
- Sample Time

Each sample was then placed into an ice chest with frozen "blue ice."

During drilling, an Organic Vapor Meter (OVM) was used to monitor worker breathing zones. A Thermo Environmental Model 580A photoionization detector with a 10.0 ev lamp was utilized at the site. The OVM was calibrated daily with a 100 ppm isobutylene standard. The soil collected during sampling was tested for organic vapors by placing it into a plastic bag and allowing the vapors to diffuse into the headspace of the bag. The tip of the OVM was placed into the bag and the organic vapor concentration was recorded. OVM readings are recorded on boring logs (refer to Figures A-2 through A-4, Appendix A).

At the end of each day of drilling, soil samples designated for metal analysis were delivered by BSK to Chromalab, Inc. under Chain-of-Custody documentation (Appendix B). The samples designated for volatile halocarbons and aromatics analysis were placed in a sample refrigerator at the BSK Pleasanton office overnight and shipped via Greyhound in an ice chest with frozen "blue ice" the next day to the BSK Analytical Laboratories in Fresno under Chain-of-Custody documentation.



4.2 Equipment Decontamination

Prior to arrival at the site, auger and sample equipment were cleaned with a hot water (180°F - 190°F) high-pressure washer. Prior to and between each sampling intervals, the modified California samplers were washed with a Liquinox[™] solution and double-rinsed with potable water. Between each test boring, augers were cleaned in a containment pit with a hot water high-pressure washer.

4.3 Well Construction and Survey

The three test borings (MW-1 through MW-3) were converted into groundwater monitoring wells under drilling permit 92303 with the Zone 7 Water Agency (refer to Appendix A).

The three monitoring wells are constructed with two-inch Schedule 40 PVC flush-joint casing. The wells are screened from 17 to 24 feet (0.02 inch slot) and well-packed with #2/12 sand from 16 to 24 feet. The annulus seal is provided by one-foot of activated bentonite and neat cement. The tops of the well casing are protected with watertight traffic-rated vault boxes. The well casings tops are sealed with locking plugs. Well construction details are illustrated in Appendix A, Figures A-2 through A-4.

On July 23, 1992 a vertical control survey of the tops of the monitoring well casings and the existing water well concrete base was performed by HMH, Incorporated of San Jose. The bench mark information and elevation data is presented in the HMH Report dated August 4, 1992 (refer to Appendix A). This information was used to determine the elevation of the groundwater surface at each monitoring point.

4.4 Well Development, Purging and Sampling

The three monitoring wells were developed using a bladder pump on July 8, 1992. Development continued until the recovered water was free of sediment and turbidity. On July 14, 1992 the three monitoring wells were purged and sampled with a bladder pump.

The well information, observation of immiscible layers, well purging data, and sample collection data are presented on the Well Field Logs, Figures A-5 through A-7 in Appendix A. The water well was purged with a four-inch submersible pump and sampled with a TeflonTM point source bailer on July 16, 1992. Well information data is presented on the Well Field Log, Figure A-8 in Appendix A. Because of a QA/QC problem at the analytical laboratory, Monitoring Well MW-2 was resampled with a bladder pump on July 27, 1992. Well data for the resampling of MW-2 is presented on Figure A-9.



Upon collection of the groundwater samples, the sample containers were labeled with project identification information and placed in an ice chest cooled with "blue ice." Water samples designated for metals analysis were delivered by BSK personnel to Chromalab. As previously described, water samples designated for volatile halocarbons, aromatics, cyanide, general minerals, and oxidation reduction potential were shipped in an ice chest with "blue ice" to the BSK Analytical Laboratories. One set of the water samples from the resampling event was delivered by BSK personnel to Chromalab on the same day of collection and the other set of samples was shipped in an ice chest with "blue ice" via Federal Express to Lockheed's Analytical Laboratory in Las Vegas, Nevada.

4.5 Storage Drill Spoils, Rinsate and Purge Water

Drill cutting spoils, rinsate from auger and sample equipment washing and purge water from development, purging and sampling of the wells were placed into DOT 17H drums and sealed. The drums were labeled using a paint pen with the following information:

- Boring/Well Number
- Depth for Drill Spoils
- Date Filled
- Type of Material (Soil or Water)
- McLemore Trust

The filled drums were placed within the fenced area near the water well pending results of the analytical testing program.

5.0 ANALYTICAL TESTING PROGRAM

5.1 Soil Samples

Soil samples from MW-1 at ten feet, MW-2 at ten feet and MW-2 at 16 feet were analyzed for Volatile Halocarbons by EPA test method 8010, Volatile Aromatics by EPA test method 8020, 13 priority pollutant metals, chromium VI, cyanide, pH, and redox potential. In addition, the samples from MW-2 were tested for total organic carbon. The priority pollutant metals analyses were performed using EPA test methods 300, 6010 (ICP) and 7000 series (AA for mercury). Hexavalent chromium (Cr⁺⁶) analysis was performed using EPA test method 7196.



5.2 Water Samples

Groundwater samples from MW-1 through MW-3 and the water well were analyzed for Volatile Halocarbons by EPA test method 601 and Volatile Aromatics by EPA test method 602, and the 13 priority pollutant metals (dissolved metals), chromium VI, cyanide, pH, and redox potential. In addition, samples from MW-1, MW-2 and the water well were analyzed for general minerals, and the sample from MW-2 was analyzed for vanadium, barium, molybdenum and cobalt. Also, non-filtered groundwater samples from MW-1 and MW-2 were analyzed for priority pollutant metals and chromium VI. Finally, values of total dissolved solids (TDS) were determined for the water samples from MW-1, MW-2, and the water well.

6.0 GEOLOGY AND GROUNDWATER

The upper subsurface deposits consisted of coarse-to-fine-grained alluvium of Holocene age. These soils are unconsolidated moderately sorted permeable sand, silt and silty clay with a few thin beds of coarse sand and gravel (Reference No. 1). The site is approximately 1-3/4 miles west of the Hayward Fault; therefore, this area would be subject to violent intensity due to ground shaking from the Hayward Fault (Reference No. 1).

Based on the exploration work performed by BSK, the natural soil consists of primarily silty clay deposits with lenses of sandy clay and thin beds of silty sand grading to sand. Additional description of the soils encountered during our June 1992 investigation are presented on Figures A-2 through A-4 in Appendix A.

First groundwater was encountered in the BSK well bores during drilling at approximately 18 to 20 feet below existing finished floor grade. The depth to groundwater measured during the initial sampling event on July 14, 1992 varied from 18.33 to 18.66 feet below the top of the well casing.

7.0 FINDINGS OF PRELIMINARY CHARACTERIZATION

7.1 Soil Analytical Results

The results of volatile halocarbons and aromatics analyses performed on soil samples from MW-1 at 10 feet, MW-2 at 10 feet and MW-2 at 16 feet indicate that compounds analyzed under these two scans were below the laboratory detection limits. The



constituents analyzed, analytical results and detection limits are presented in Table 1 and the BSK Analytical Laboratories Reports in Appendix B.

In Table 2, the analytical results for analyses of priority pollutant metals and other compounds/elements performed on the three previously described soil samples are reported. Also, the laboratory detection limits for these analyses are presented in Table 2. Based on this data, the three soil samples tested for priority pollutant metals and cyanide are below the laboratory detection limit, Total Threshold Limit Concentration (TTLC) or five times the Soluble Threshold Limit Concentration (STLC), except for the beryllium (Be) detected over the TTLC in sample MW-1 at 10 feet and selenium (Se) detected over five times the STLC in the sample MW-2 at 16 feet. The concentration of Be (Sample MW-1, 10 feet) was reported at 130 milligrams per kilogram (mg/kg) and the concentration of Se (Sample MW-2, 16 feet) was reported at 45 mg/kg. In addition to being reported in Table 2, the results of metal and other analyses are reported on the analytical laboratory reports in Appendix B, prepared by Chromalab, Inc., GeoAnalytical Laboratories, Inc., and BSK Analytical Laboratories.

7.2 Groundwater Analytical Results

The results of analyses performed for Volatile Halocarbons and Aromatics on groundwater samples collected from the three BSK-installed monitoring wells plus the existing on-site water well are presented in Table 3. The constituents analyzed, results, detection limits and Maximum Contaminant Level (MCL) are presented in Table 3. The chemical testing for Volatile Halocarbons and Aromatics indicates the groundwater samples are below laboratory detection limits for analyzed compounds except for tetrachloroethane. Tetrachloroethane was detected at 8.8 micrograms per liter (ug/l) in the sample from MW-1, at 3.0 ug/l in the sample from MW-2 and at 5.0 ug/l in the sample from MW-3. Tetrachloroethane was not detected at or above the 0.5 ug/l laboratory detection limit in the sample from the water well.

Results of priority pollutant metals analyses performed on water samples from the four previously described wells are presented in Table 4. Dissolved metals analyses (field filter samples) detected the following metals:

• Zinc (Zn) in the four water samples ranging from 0.01 milligrams per liter (mg/l) in the water sample from the water well to 0.07 mg/l in the sample from MW-2.



- Mercury (Hg) in the water samples from the water well and MW-2 at a reported concentration of 0.001 mg/l.
- Antimony (Sb) at 0.03 mg/l, arsenic (As) at 0.30 mg/l, total chromium (Cr) at 650 mg/l, copper (Cu) at 0.36 mg/l and selenium (Se) at 0.17 mg/l in the water sample from MW-2.

Total metals analyses (non-filtered samples from MW-1 and MW-2) detected Zn in both samples and As, Be, Cu, lead (Pb), nickel (Ni), Se and silver (Ag) in the water sample from MW-2.

The Cr and Cr⁺⁶ results of the water samples collected on July 27, 1992 from MW-2 are reported in Table 5. The data indicated for dissolved analyses Total Cr is between 670 and 700 mg/l based on testing performed by Chromalab and Lockheed Analytical, respectively. Tests performed by both Chromalab and Lockheed detected Cr⁺⁶ at 680 mg/l in the second water sample from MW-2. Total metal analyses performed by Chromalab detected Total Cr at 690 mg/l and Cr⁺⁶ at 640 mg/l.

The detected concentrations for As, Cr⁺⁶ and Se from the water samples collected from MW-2 are above the MCL for drinking water standards (Title 22, Chapter 15 CCR).

Presented in Table 6 are the results of general mineral chemistry and other tests performed on water samples collected on July 14, 1992. This data was used to develop the Stiff Diagrams of groundwater samples from MW-1, MW-2, and the water well (Figure 4). As illustrated in Figure 4, the Stiff Diagrams for MW-1 and the water well are very similar, possibly indicating that these two samples are from the same aquifer. The Stiff Diagram for MW-2 indicates a significant increase of cations.

The chemical results for the analyses performed by Chromalab, BSK Analytical and Lockheed Analytical on water samples are presented on individual reports in Appendix B.

7.3 Groundwater Flow Direction and Gradient

The groundwater elevations measured during the initial sampling event on July 14, 1992 varied between 14.34 and 14.52 feet Mean Sea Level (MSL). Based on the elevation data presented on Figure 3, the direction of flow is north, 58° west at a 0.2 percent gradient.



8.0 CONCLUSIONS

Based on the results and findings of this preliminary environmental characterization, the following conclusions are drawn:

- 1. Chromium VI (Cr⁺⁶) was detected in the water sample from MW-2 at 680 mg/l which significantly exceeds the MCL of 0.05 mg/l for drinking water.
- 2. Based on current site information, it is likely that the chrome plating operations are the source of the elevated chromium VI (Cr⁺⁶) detected in the water from MW-2, which inturn, may be the cause of the increase of cations.
- 3. Arsenic (As) was detected at a level of six times the MCL in the water sample collected from MW-2.
- 4. Selenium (Se) was detected at a level of 17 times the MCL in the water sample collected from MW-2.
- 5. Beryllium (Be) was detected at a level approximately twice the TTLC in the soil sample collected from MW-1 at a depth of 10 feet.
- 6. Selenium (Se) was detected at 45 percent of the TTLC and 45 times the STLC in the soil sample collected from MW-2 at a depth of 16 feet.
- 7. Tetrachloroethane was detected in the groundwater samples collected from the three monitoring wells. The detectable levels reported for water samples from MW-1 and MW-3 were at or exceeded the MCL of 5 μg/l for drinking water.
- 8. The Stiff Diagrams (Figure 4) indicates that the water encountered in the monitoring wells and the water in the water well may be from the same aquifer.
- 9. Based on information and results to date, the potential source of the beryllium (Be) and selenium (Se) in the site soil and arsenic (As), selenium



(Se) and tetrachloroethane in first groundwater cannot be identified. The source of these metals and organic compound could be from (1) current site operations, (2) off-site operations or (3) previous tenants or operations.

9.0 RECOMMENDATIONS FOR FURTHER ACTION

The following recommendations for further action are made and presented for consideration:

- Submit a copy of this Preliminary Environmental Characterization Report to the appropriate agency with jurisdiction over the site.
- Perform additional Environmental Site Assessment work, such as review of historical aerial photographs, land use maps, regulatory lists, and regulatory agency files, to assess past site activities and the potential for contamination from off-site sources.
- 3. Obtain additional subsoil information to a depth of approximately 60 feet by performing three cone penetrometer test soundings (CPT) to continuously profile the subsurface deposits. The proposed locations for the CPTs would be on the north and south side of the building exterior and immediately east of the existing on-site water well. This profile data would be used to estimate the depth of a two-stage monitoring well.
- 4. Install an additional first groundwater monitoring well near the northwest exterior corner of the building. This monitoring well would be drilled and sampled utilizing the same methodology used to install the first three wells. The well construction details would be the same as the previously installed monitoring wells. The purpose of this well would be to further assess the lateral extent of chromium VI impact to soil and first groundwater water.
- Install a two-stage groundwater monitoring well downgradient of MW-2 if CR⁺⁶ is not detected in the additional well proposed (recommendation number 4) or downgradient of proposed well if Cr⁺⁶ is detected. The two-stage well would have a conductor casing installed and grouted-in at approximately 25 feet. The purpose of this well would be to assess the impact of Cr⁺⁶ in the lower aquifer.



- 6. Perform chemical analyses for priority pollutant metals and chromium VI on a minimum of two soil samples collected from the recommended first groundwater well (recommendation number 4).
- Perform chemical analyses for priority pollutant metals, chromium VI and Volatile Halocarbons on the water samples collected from three existing monitoring wells, the proposed monitoring well, the two-stage well and water well.
- 8. Perform slug tests on the four shallow monitoring wells to approximate hydraulic conductivity and transmissivity of the upper aquifer zone. Perform a step-drawndown test on the two-stage monitoring well to evaluate if the upper and lower aquifers are connected.
- 9. Overdrill the former test boring SB-5 (boring by Simon-EEI) to approximately 25 feet and then grout the bore with portland cement with up to four percent bentonite using tremie methods. This is recommended since the backfill and concrete surface plug has exhibited settlement problems.

10.0 LIMITATIONS

The findings and conclusions presented in this report are based on field data and observations, and from the limited analytical and physical testing programs described in this report. This report has been prepared in accordance with generally accepted methodologies and standards of practice in the area. No other warranty, expressed or implied, is made as to the findings, conclusions and recommendations included in the report.

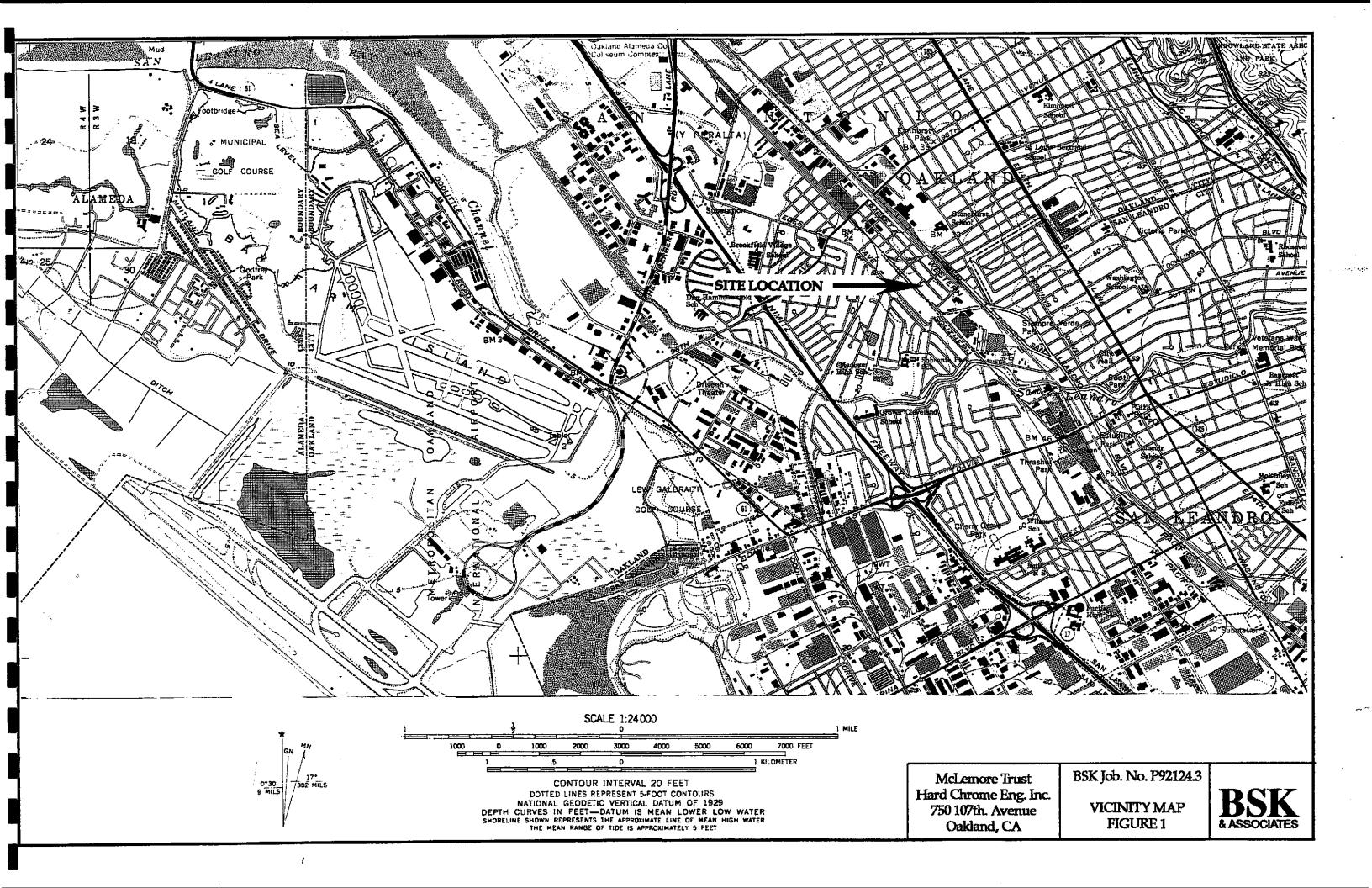
The findings of this report are valid as of the present. The passage of time, natural processes or human intervention on the property or an adjacent property may cause changed conditions which can invalidate the findings and conclusions presented in this report.

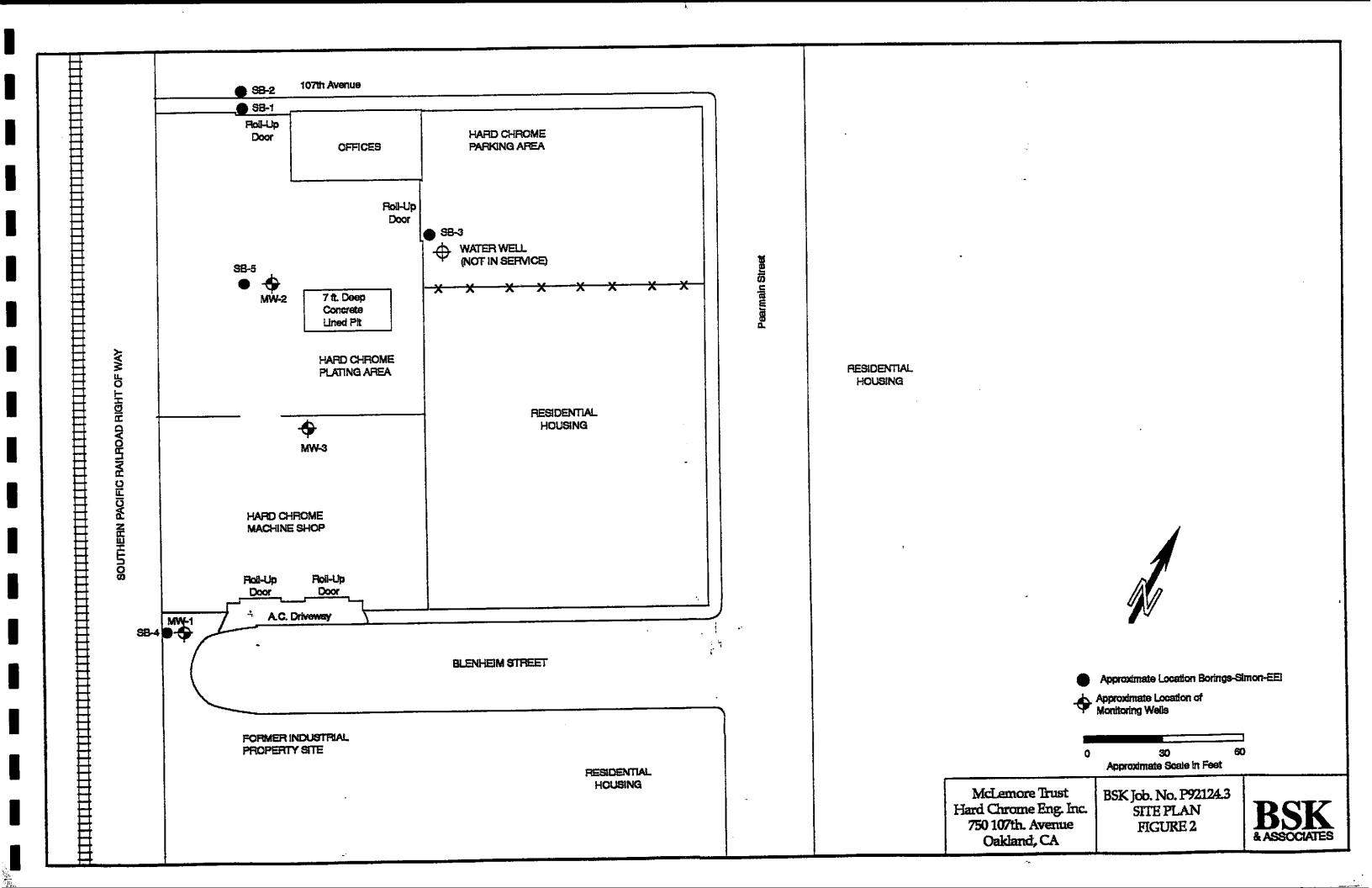


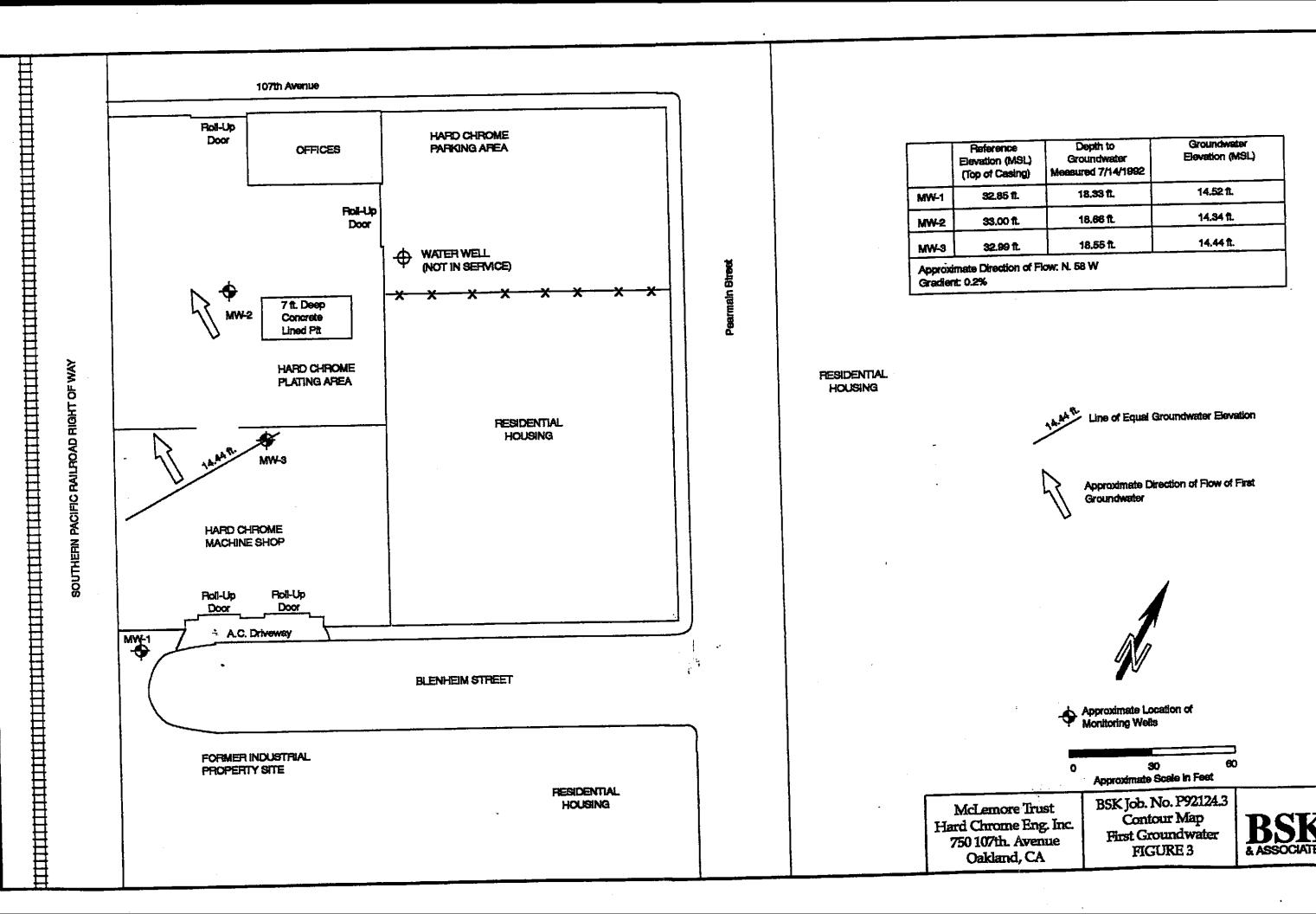
11.0 REFERENCES

- 1. Helley, E. J. and Lajoie, K. R., "Flatland Deposits of the San Francisco Bay Region, California -- their Geology and Engineering Properties and their Importance to Comprehensive Planning," Geological Survey Professional Paper 943, USGPO, Washington, 1979.
- 2. Simon EEI, Inc., "Phase II Environmental Site Assessment, Hard Chrome Engineering, Inc., 750 -- 107th Avenue, Oakland, California," September 23, 1991.

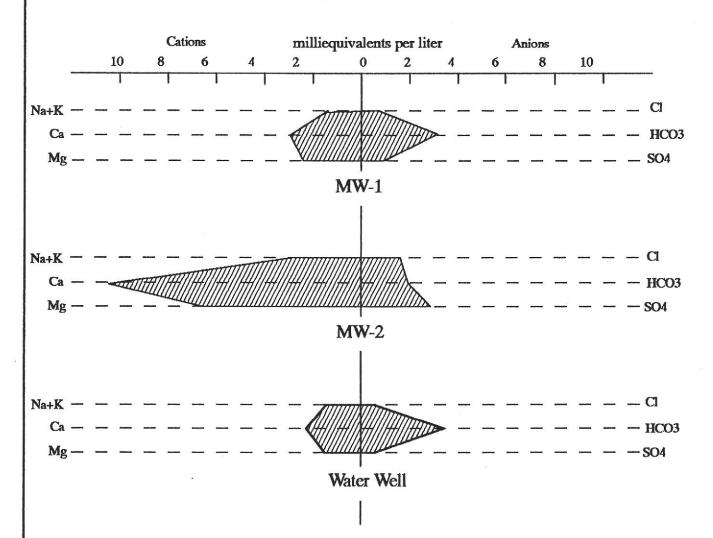








STIFF DIAGRAM OF GROUNDWATER SAMPLES FROM MW-1, MW-2 AND WATER WELL



BSK Job No. P92124

FIGURE 4



ANALYTICAL RESULTS SOIL SAMPLES VOLATILE HALOCARBONS, VOLATILE AROMATICS

VOLATIL		#3 at 10 ft.	MW-2#2 at 10	
VOLATE DUAL OCADDONG	_	d 06/25/92	Sampled 06/29/	
VOLATILE HALOCARBONS Chloromethane	Results ND	Det. Lim. 0.01	Results Det. Lim	ND 0.01
See an an industrial substantial and an industrial and an industri	ND			ND 0.02
Vinyl Chloride	-00-00-00-00-00-00-00-00-00-00-00-00-00	0.02		
Bromomethane	ND	0.02		ND 0.02
Chloroethane	ND	0.01	ND 0.01	ND 0.01
Trichlorofluoromethane	ND	0.01	ND 0.01	ND 0.01
1,1-Dichloroethene	ND	0.01	ND 0.01	ND 0.01
Methylene Chloride	ND	0.01	ND 0.01	ND 0.01
Trans-1,2-Dichloroethene	ND	0.01	ND 0.01	ND 0.01
1,1-Dichloroethane	ND	0.01	ND 0.01	ND 0.01
Chloroform	ND	0.01	ND 0.01	ND 0.01
1,1,1-Trichloroethane	ND	0.01	ND 0.01	ND 0.01
Carbon Tetrachloride	ND	0.01	ND 0.01	ND 0.01
1,2-Dichloroethane	ND	0.01	ND 0.01	ND 0.01
Trichloroethene	ND	0.01	ND 0.01	ND 0.01
1,2-Dichloropropane	ND	0.01	ND 0.01	ND 0.01
Bromodichloromethane	ND	0.01	ND 0.01	ND 0.01
2-Chloroethylvinyl Ether	ND	0.01	ND 0.01	ND 0.01
Trans 1,3-Dichloropropene	ND	0.01	ND 0.01	ND 0.01
Cis 1,3-Dichloropropene	ND	0.01	ND 0.01	ND 0.01
1,1,2-Trichloroethane	ND	0.01	ND 0.01	ND 0.01
Tetrachloroethene	ND	0.01	ND 0.01	ND 0.01
Dibromochloromethane	ND	0.01	ND 0.01	ND 0.01
Chlorobenzene	ND	0.01	ND 0.01	ND 0.01
Bromoform	ND	0.01	ND 0.01	ND 0.01
1,1,2,2-Tetrachloroethane	ND	0.01	ND 0.01	ND 0.01
1,3-Dichlorobenzene	ND	0.01	ND 0.01	ND 0.01
1,4-Dichlorobenzene	ND	0.01	ND 0.01	ND 0.01
1,2-Dichlorobenzene	ND	0.01	ND 0.01	ND 0.01
1,2-Dichloropropane	ND	0.01	ND 0.01	ND 0.01
Dichlorodifluoromethane	ND	0.04	ND 0.04	ND 0.04
Demorantano	1,2	0.04	0.04	1.2
VOLATILE AROMATICS				
Benzene	ND	0.02	ND 0.02	ND 0.02
Toluene	ND	0.02	ND 0.02	ND 0.02
Ethyl Benzene	ND	0.02	ND 0.02	ND 0.02
Chlorobenzene	ND	0.05	ND 0.05	ND 0.05
Total Xylenes	ND	0.02	ND 0.02	ND 0.02
1,3-Dichlorobenzene	ND	0.05	ND 0.05	ND 0.05
1,4-Dichlorobenzene	ND	0.05	ND 0.05	ND 0.05
1,2-Dichlorobenzene	ND	0.05	ND 0.05	ND 0.05
	<u> </u>			

Results in Milligrams per Kilogram mg/Kg
ND Indicates that compound is not detected at the specified limit

BSK Job No. P92124



ANALYTICAL RESULTS SOIL SAMPLES PRIORITY POLITITANT METALS, OTHER COMPOUNDS/ELEMENTS

PRIVALITY	<u>ULLU</u>	IANT	VILLA	10, UI	THER COMPOUNDS/ELEMENTS					
	MV	V-1#3	MV	V-2#1	MV	V-2#3	Soluble Threshold	Total Threshold		
	at 1	10 ft.	at!	10 ft.	at	16 ft.		Limit Concentration		
METALS	Results	Det. Lim.	Results	Det. Lim.	Results	Det. Lim.	(STLC) mg/l	(TTLC) mg/Kg		
Antimony (Sb)	ND	1.00	ND	1.00	ND	1.00	15	500		
Arsenic (As)	ND	0.25	13	0.25	17	0.25	5.0	500		
Beryllium (Be)	130	0.05	0.21	0.05	0.29	0.05	0.75	75		
Cadmium (Cd)	3.7	0.05	2.7	0.05	3.2	0.05	1.0	100		
Chromium (Total Cr)	35	0.50	21	0.50	35	0.50	560	2500		
Chromium VI (CrVI)	ND	0.5	ND	5.0	ND	0.5	5	500		
Copper (Cu)	19	0.25	16	0.25	19	0.25	25	2500		
Lead (Pb)	13	0.50	11	0.50	13	0.50	5.0	1000		
Mercury (Hg)	0.12	0.05	0.15	0.05	0.20	0.05	0.2	20		
Nickel (Ni)	51	0.50	32	0.50	32	0.50	20	2000		
Selenium (Se)	2.8	0.25	4.3	0.25	45.0	0.25	1.0	100		
Silver (Ag)	ND	0.25	ND	0.25	ND	0.25	5	500		
Thallium (Tl)	ND	2.00	ND	2.00	ND	2.00	7.0	700		
Zinc (Zn)	49	0.25	30	0.25	39	0.25	250	5000		
OTHER CHEMICAL ANALYSIS										
Cyanide	ND	0.25	ND	0.25	ND	0.25				
pH (Std. Units)	7.1	NA	7.4	NA	7.4	NA				
Redox Potential										
Saturated Paste (millivolts)	520	NA	750	NA	500	NA				
Total Organic Carbon		5	3700	5	1200	5				

Results in Miligrams per Kilogram mg/Kg

ND Indicates that compound is not detected at the specified limit

NA Indicates not available

-- Indicates not analyzed

Soluble Threshold Limit Concentrations and Total Threshold Limit

Concentrations from Title 22, Chapter 30 California Code of Regulations,

Environmental Health

BSK Job No. P92124



ANALYTICAL RESULTS GROUNDWATER SAMPLES VOLATILE HALOCARBONS, VOLATILE AROMATICS

VOLATII	VOLATILE HALOCARBONS, VOLATILE AROMATICS										
	MV	V-1	1 1000000000000000000000000000000000000	W-2	10000000	W-3	Wate	r Well	Maximum		
1	Sampled			d 07/14/92	Sample	107/14/92	Sample	1 07/16/92	Contaminant		
VOLATILE HALOCARBONS		Det, Lim.	Results	Det, Lim. 0.5	Results	Det. Lim.		Market and the second s	Level (MCL)		
Chloromethane	ND	0.5	ND		ND	0.5	ND	0.5	NA		
Vinyl Chloride	ND	1.0	ND	1.0	ND	1.0	ND	1.0	0.5		
Bromomethane	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NA		
Chloroethane	ND	0.5	ND	0.5	ND	0.5	ND	0.5	NA		
Trichlorofluoromethane	ND	0.5	ND	0.5	ND	0.5	ND	0.5	150		
1,1-Dichloroethene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	6		
Methylene Chloride	ND	0.5	ND	0.5	ND	0.5	ND	0.5	NA		
Trans-1,2-Dichloroethene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	10		
1,1-Dichloroethane	ND	0.5	ND	0.5	ND	0.5	ND	0.5	0.5		
Chloroform	ND	0.5	ND	0.5	ND	0.5	ND	0.5	100		
1,1,1-Trichloroethane	ND	0.5	ND	0.5	ND	0.5	ND	0.5	200		
Carbon Tetrachloride	ND	0.5	ND	0.5	ND	0.5	ND	0.5	0.5		
1,2-Dichloroethane	ND	0.5	ND	0.5	ND	0.5	ND	0.5	0.5		
Trichloroethene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	5		
1,2-Dichloropropane	ND	0.5	ND	0.5	ND	0.5	ND	0.5	5		
Bromodichloromethane	ND	0.5	ND	0.5	ND	0.5	ND	0.5	100		
2-Chloroethylvinyl Ether	ND	0.5	ND	0.5	ND	0.5	ND	0.5	NA		
Trans 1,3-Dichloropropene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	0.5		
Cis 1,3-Dichloropropene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	0.5		
1,1,2-Trichloroethane	ND	0.5	ND	0.5	ND	0.5	ND	0.5	32		
'Retrachloroethene	8.8	0.5	3	0.5	5	0.5	ND	0.5	5		
Dibromochloromethane	ND	0.5	ND	0.5	ND	0.5	ND	0.5	100		
Chlorobenzene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	30		
Bromoform	ND	0.5	ND	0.5	ND	0.5	ND	0.5	100		
1,1,2,2-Tetrachloroethane	ND	0.5	ND	0.5	ND	0.5	ND	0.5	1		
1,3-Dichlorobenzene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	NA		
1,4-Dichlorobenzene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	5		
1,2-Dichlorobenzene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	NA		
1,2-Dichloropropane	ND	0.5	ND	0.5	ND	0.5	ND	0.5	5		
Dichlorodifluoromethane	ND	2.0	ND	2.0	ND	2.0	300	2.0	NA.		
	V				W. Sould T. Woodeloo						
1											
VOLATILE AROMATICS											
Benzene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	1		
Toluene	ND	0.5	0.7	0.5	ND	0.5	ND	0.5	NA		
Ethyl Benzene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	680		
Chlorobenzene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	30		
Total Xylenes	ND	0.5	ND	0.5	ND	0.5	ND	0.5	1750		
1,3-Dichlorobenzene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	NA		
1,4-Dichlorobenzene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	5		
1,2-Dichlorobenzene	ND	0.5	ND	0.5	ND	0.5	ND	0.5	NA		
-,											

Results in Micrograms per Liter ug/L

ND Indicates that compound is not detected at the specified limit

NA Indicates not available

Maximum Contaminant Level from Title 22, Chapter 15 California

Code of Regulations, Environmental Health

BSK Job No. P92124



ANALYTICAL RESULTS GROUNDWATER SAMPLES PRIORITY POLLUTANT METALS

-	TRIORITI OLLUTANI METALS											
		M	W-1	M	W-2	M	W-3	Wate	er Well	Maximum		
1	(4)	Sample	1 07/14/92	Sampled	07/14/92	Sample	1 07/14/92	Sample	d 07/16/92	Contaminant		
1	DISSOLVED METALS	Results	Det. Lim.		Det. Lim.		Det. Lim.	Results	Det. Lim.	Level (MCL)(6		
	Antimony (Sb)	ND	0.02	0.03	0.02	ND	0.02	ND	0.02	NA		
1	Arsenic (As)	ND	0.005	0.30	0.005	ND	0.005	ND	0.005	0.05		
	Beryllium (Be)	ND	0.001	ND	0.001	ND	0.001	ND	0.001	NA		
	Cadmium (Cd)	ND	0.001	ND	0.001	ND	0.001	ND	0.001	0.01		
-	Chromium (Total Cr)(1)	ND	0.01	*	0.01	ND	0.01	ND	0.01	0.05		
	Chromium (Total Cr)(2)		0.01							0.05		
-	Chromium (Total Cr)(3)			650	0.5					0.05		
	Chromium VI (CrVI)(1)	ND	0.01	*	0.01	ND	0.01	ND	0.01	NA		
	Chromium VI (CrVI)(2)									NA		
-	Chromium VI (CrVI)(3)		-							NA		
	Copper (Cu)	ND	0.005	0.36	0.005	ND	0.005	ND	0.005	1.0**		
1	Lead (Pb)	ND	0.01	ND	0.01	ND	0.01	ND	0.01	0.05		
	Mercury (Hg)	ND	0.001	0.001	0.001	ND	0.001	0.001	0.001	0.02		
	Nickel (Ni)	ND	0.02	ND	0.02	ND	0.02	ND	0.02	NA		
1	Selenium (Se)	ND	0.005	0.17	0.005	ND	0.005	ND	0.005	0.01		
	Silver (Ag)	ND	0.005	ND	0.005	ND	0.005	ND	0.005	0.05		
1	Thallium (Tl)	ND	0.04	ND	0.04	ND	0.04	ND	0.04	NA		
1	Zinc (Zn)	0.02	0.005	0.07	0.005	0.02	0.005	0.01	0.005	5.0**		
1	(5)									<u> </u>		
	TOTAL METALS											
	Antimony (Sb)	ND	0.02	4.8	0.02							
- [.	Arsenic (As)	ND	0.005	0.32	0.005	1						
	Beryllium (Be)	ND	0.001	0.003	0.001							
	Cadmium (Cd)	ND	0.001	ND	0.001							
1	(1)Chromium (Total Cr)	ND	0.01	*	0.01							
-	(1)Chromium VI (CrVI)	ND	0.01	*	0.01							
	Copper (Cu)	ND	0.005	0.28	0.005							
1	Lead (Pb)	ND	0.01	0.04	0.01							
	Mercury (Hg)	ND	0.001	ND	0.001							
	Nickel (Ni)	ND	0.02	0.83	0.02							
	Selenium (Se)	ND	0.005	0.68	0.005							
	Silver (Ag)	ND	0.005	0.13	0.005	1						
	Thallium (Tl)	ND	0.04	ND	0.04							
	Zinc (Zn)	0.02	0.005	0.16	0.005							

Results in Miligrams per Liter (mg/L)

ND Indicates that compound is not detected at the specified limit

-- Indicates not analyzed

NA Indicates not available

- --* Indicates analysis did not meet QA/QC requirements
- (1) Analysis performed by Chromalab, Inc.
- (2) Analysis performed by Lockheed Analytical Laboratory
- (3) Analysis performed by BSK Analytical Laboratory
- (4) Samples field filtered with 0.45 micron filter
- (5) Analysis performed on non-filtered sample
- (6) Maximum Contaminant Level from Title 22, Chapter 15 California Code of Regulations, Environmental Health
- ** Consumer Acceptance Limits

BSK Job No. P92124



ANALYTICAL RESULTS GROUNDWATER SAMPLES PRIORITY POLLUTANT METALS

P-00		INI VINI	
- Od Cal	M	W-2	MAXIMUM
Field Files (4)	Sampled	1 07/27/92	CONTAMINENT
DISSOLVED METALS	Results	Det. Lim.	LEVEL (MCL)(6)
Antimony (Sb)			NA
Arsenic (As)			0.05
Beryllium (Be)			NA
Cadmium (Cd)			0.01
Chromium (Total Cr)(1)	700	0.01	0.05
Chromium (Total Cr)(2)	670	0.01	0.05
Chromium (Total Cr)(3)	Titous		0.05
Chromium VI (CrVI)(1)	680	0.01	NA
Chromium VI (CrVI)(2)	680	20	NA
Chromium VI (CrVI)(3)			NA
Copper (Cu)			1.0**
Lead (Pb)			0.05
Mercury (Hg)			0.02
Nickel (Ni)			NA
Selenium (Se)			0.01
Silver (Ag)			0.05
Thallium (Tl)	~~		NA
Zinc (Zn)			5.0**
(5)			
TOTAL METALS			
Antimony (Sb) Won-The			
Arsenic (As)			
Beryllium (Be)			
Cadmium (Cd)			
Chromium (Total Cr)(1)	690	0.05	
Chromium VI (CrVI)(1)	640	0.01	
Copper (Cu)		-	
Lead (Pb)			
Mercury (Hg)			
Nickel (Ni)			
Selenium (Se)			
Silver (Ag)			
Thallium (II)			
Zinc (Zn)			

Results in Miligrams per Liter (mg/L)

ND Indicates that compound is not detected at the specified limit

- -- Indicates not analysis
- --* Indicates analysis did not meet QA/QC requirements
- (1) Analysis performed by Chromalab, Inc.
- (2) Analysis performed by Lockheed Analytical Laboratory
- (3) Analysis performed by BSK Analytical Laboratory
- (4) Samples field filtered with 0.45 micron filter
- (5) Analysis performed on non-filtered sample
- (6) Maximum Contaminant Level from Title 22, Chapter 15 California Code of Regulations, Environmental Health
- ** Consumer Acceptance Limits

BSK Job No. P92124



ANALYTICAL RESULTS GROUNDWATER SAMPLES GENERAL MINERAL, OTHER COMPOUNDS/ELEMENTS

O.A. VA.	T	MW-1 MW-2				W-3	1	r Well	MAXIMUM
		d 07/14/92		d 07/14/92	Sample	d 07/14/92	•	d 07/16/92	CONTAMINENT
CONSTITUENT		Det. Lim.		Det. Lim.		Det. Lim.	Results	Det. Lim.	LEVEL (MCL)
Calicum (Ca)	68	0.1	210	0.1			45	0.1	NA
Magnesium (Mg)	27	0.1	80	0.1			18	0.1	NA
Sodium (Na)	32	1	55	1		-	33	1	NA
Potassium (K)	ND	1	ND	10			ND	10	NA
Alkalinity (as CaCO3)	170	10	95	10			170	10	NA
Hydroxide (OH)	ND	1	ND	1			ND	1	NA
Carbonate (CO3)	ND	1	ND	1			ND	1	NA
Bicarbonate (HCO3)	210	12	120	12			210	12	NA
Chloride (CI)	29	1	58	1			20	1	250-500
Sulfate (SO4)	51	1	140	1			26	1	250-500
Copper (Cu)	ND	0.05	ND	0.5			ND	0.5	1.0
Iron (Fe)	ND	0.05	ND	0.5			ND	0.5	300
Manganese (Mn)	0.01	0.01	1.9	0.1			0.03	0.1	50
Zinc (Zn)	ND	0.05	ND	0.5			ND	0.5	5.0
Foaming Agents (MBAS)	ND	0.05	ND	0.05			ND	0.05	0.5
pH (Std. Units)	7.3	NA	5.7	NA	7.7	NA	7.5	NA	NA
Electrical Conductance									
(umho/cm)	670	20	1700	20		20	490	20	900-1600
Redox Potential (millivolts)	410	NA	590	NA	364	NA	520	NA	NA
OTHER COMPOUNDS									
/ELEMENTS									=
Cyanide (CN)	ND	0.02	ND	0.02	ND	0.02	ND	0.02	NA
Vanadium (V)			0.2	0.1					NA
Barium (Ba)			ND	0.5					1.0
Molybdenum (Mo)			ND	0.5					NA
Cobalt (Co)	-		ND	0.5					NA
CALCULATED VALUES									
Dissolved Solids (TDS)	420	10	1100	10			310	10	500-1000
	1								

Results in Miligrams per Liter mg/L except were indicated

ND Indicates that compund is not detected at the specified limit

NA Indicates not available

-- Indicates not analyzed

Maximum Contaminent Level from Title 22, Chapter 15

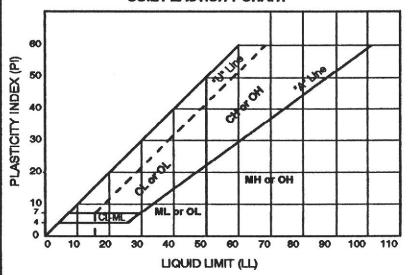
California Code of Regulations, Environmental Health



UNIFIED SOIL CLASSIFICATION CHART

			_		-		
SYMBOL	LETTER	DESCRIPTION	M	IAJOR DIVIS	IONS	•	
•	GW	WELL-GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	CLEAN GRAVELS	P 8 4	¥ BE		
	GP	POORLY-GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	(LITTLE OR NO FINES)	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO.4 SIEVE SIZE	CLASSIFICATION, THE 1/4" SIZE MAY BE EQUIVALENT TO THE NO.4 SIEVE SIZE	양일	
	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	GRAVELS WITH FINES	GRAVELS TE THAN HAL RISE FRACTI RISE THAN I	E 1/4" 8	COARSE-GRAINED SOILS WORE THAN HALF OF MATERAL IS LARGER THAN NO 200 SIEVE SIZE	
	GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES	(APPRECIABLE AMOUNT OF FINES)	283	F.F.O	AINE	
*******	sw	WELL-GRADED SAND OR GRAVELLY SANDS, LITTLE OR NO FINES	CLEAN SANDS	P S S	ENT T	E GR	뿚
	SP	POORLY-GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES	(LITTLE OR NO FINES)	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO.4 SIEVE SIZE	CLASS	DARS RETH	THE NO.200 U.S. STANDARD SIEVE IS ABOUT THE SMALLEST PARTICLE VISIBLE TO THE NAVED EYE
	SM	SILTY SANDS, SAND-SILT MIXTURES	SANDS WITH FINES	SA PREF PAIER WLER	FOR VISUAL CLASSIFICATION, THE 1/4" SIZE I USED AS EQUIVALENT TO THE NO.4 SIEVE	8 § 3	NE 18/
	SC	CLAYEY SANDS, SAND-CLAY MIXTURES	(APPRECIABLE AMOUNT OF FINES)	888	RD.		SO SE THE T
	ML	INORGANIC SILTS, VERY FINE SANDS, ROCK FLOUR. SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY				L18	TAND SE VIB
	CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	SILTS & LIQUID LIMIT LI			SOILS ATERA SIEVE S	PARTIC
	OL	ORGANIC SILTS AND ORGANIC SILT-CLAYS OF LOW PLASTICITY		NED S	NO.20		
	МН	ORGANIC SILTS AND ORGANIC SILT-CLAYS OF LOW PLASTICITY				FINE-GRAINED SOILS MORE THAN HALF OF MATERAL IS BMALLER THAN NO 200 SIEVE SIZE	# 88 # 88
	СН	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	7,1-11,1-1	& CLAYS REATER THAN 50	,	FINE.	
	ОН	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS				S W	
	PT	PEAT AND OTHER HIGHLY ORGANIC SOILS	High	ILY ORGANIC	SOIL	S	





TYPES OF SAMPLERS

SPT-Standard Penetration 1.4" ID Split Spoon Sampler

CS-2" ID Split Spoon Sampler

MC--2.4" ID California Sampler

SH-3.0" ID Thin-Wall (Shelby Tube)

CC--2.7" ID Double Tube Continuous Coring Sampler

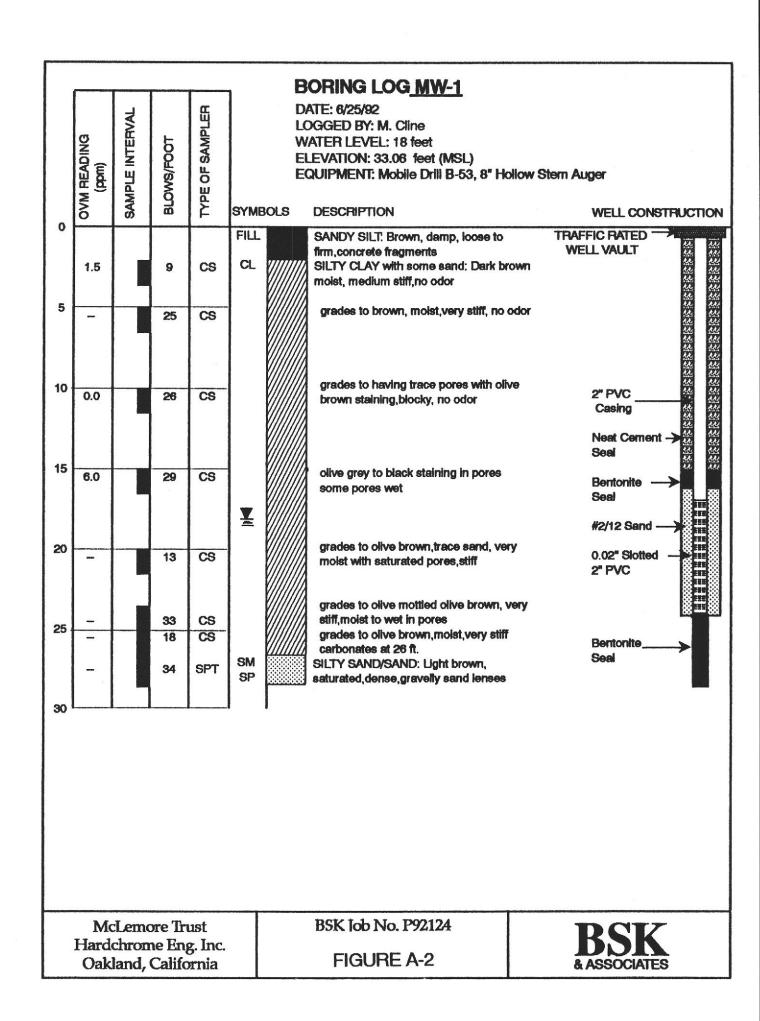
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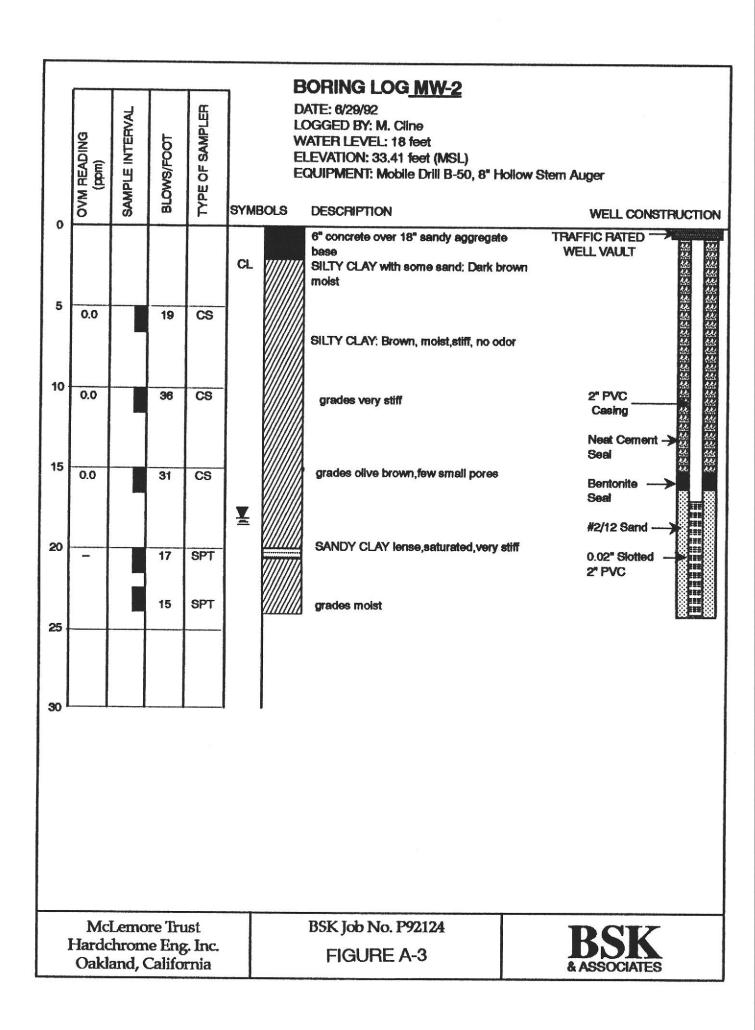
ND Denotes concentration below the test detection limits

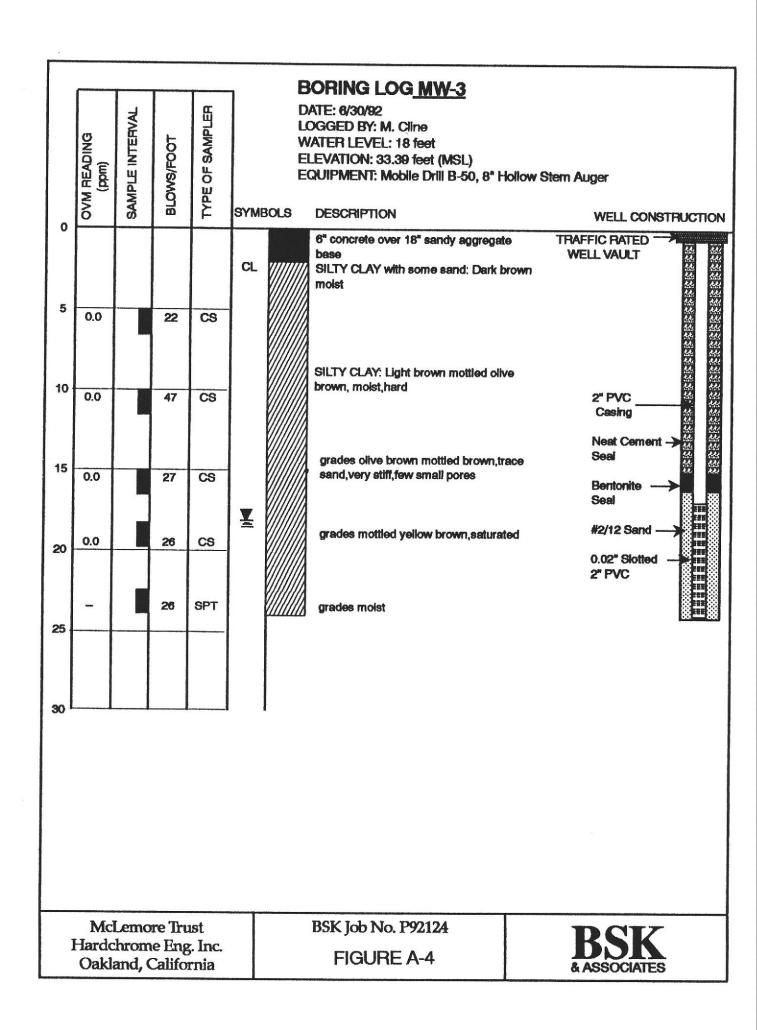
- Denotes not analysed

PID-Photoionization Detector

McLemore Trust Hard Chrome Eng. Inc. Oakland, CA BSK Job. No. P92124 FIGURE A-1 **BSK**ASSOCIATES







WELL FIELD LOG

PROJECT NAME	AND LOCAT	TON- McI omore	Truct (Hard	Chrome Fing In	1 20
LUMBO! INVINE	ANU LUCAI	ION. MICLEINOR	Trust (Ligara	CHOME CHE. II	(L.)

Oakland, CA.

PERSONNEL: M. Cline WEATHER: Clear, Warm

WELL INFORMATION:

Well No.: <u>MW-1</u>

Depth to Water: 18.33 feet
Water Volume: 0.9 gallons

Reference Elevation: 32.85 feet MSL

Groundwater Elevation: 14.52 feet MSL

Measurement Technique: Electric Well Sounder

IMMISCIBLE LAYERS:

Top: None Observed, No Odor

Detection Method: Visual, Olfactory
Collection Method: Clear Acrylic Bailer

Bottom:None Observed, No Odor

Date Purged: 7/14/92

Purge Rate: 0.3 gpm

Purge Method: Bladder Pump

WELL DEVELOPMENT/PURGE DATA:

	Volume	Electrical			
	Removed	Conductivity		Temperature	
TIME	(gallons)	(uS/cm)	pН	(degrees F)	Remarks
12:25				•••	
12:29	1.0	577	6.2	79	
12:34	2.0	544	6.1	74	
12:37	3.0	535	6.1	72	
12:40	4.0	524	6.1	71	
	 				

SAMPLE COLLECTION DATA

Sampling Equipment: Bladder Pump

TIME	ANALYSIS	CONTAINER USED	NOTES
12:40	EPA 601/602	2-40 ml vials with HCL	Sample unfiltered
	Chromium VI	2-16 oz. poly untreated	1-filtered,1-unfiltered
	Pri. Pol. Metals	2-16 oz. poly w/HNO3	1-filtered,1-unfiltered
	Cyanide	1-16 oz. poly w/NaOH	Sample filtered
	Gen. Min./ORP	1-32 oz. untreated	Sample filtered

McLemore Trust Hard Chrome Eng. Inc. 750 107 th. Avenue Oakland, CA

BSK Job No. P92124

FIGURE A-5



WELL FIELD LOG

PRO	IFCT	NAME	AND	LOCATIO	N. McI	emore	Truet	(Haml	Chrome	Fno	Inc)	
Γ Π \Box		INMAKE	MAIN	LUCATIO	A. IAICI	Panone	Irusi	Iriaru	Chrome	CIL.	HIC.	Ł

Oakland, CA.

PERSONNEL: M. Cline WEATHER: Clear, Warm

WELL INFORMATION:

Well No.: MW-2

Depth to Water: 18.66 feet

Water Volume: 0.9 gallons
Reference Elevation: 33.00 feet MSL

Groundwater Elevation: 14.34 feet MSL

Measurement Technique: Electric Well Sounder

Date Purged: 7/14/92

Purge Method: Bladder Pump

Purge Rate: 0.2 gpm

IMMISCIBLE LAYERS:

Top: Water Yellow, transparent, No Odor

Bottom: Water orange yellow, trace brown clay, No Odor

Detection Method: Visual, Olfactory

Collection Method: Clear Acrylic Bailer

WELL DEVELOPMENT/PURGE DATA:

	Volume	Electrical			
	Removed	Conductivity		Temperature	
TIME	(gallons)	(uS/cm)	pН	(degrees F)	Remarks
14:25					
14:30	1.0	1518	7.2	73	
14:33	2.0	1400	6.9	70	
14:37	3.0	1350	6.6	69	
14:42	4.0	1324	6.5	69	

SAMPLE COLLECTION DATA

Sampling Equipment: Bladder Pump

TIME	ANALYSIS	CONTAINER USED	NOTES
14:50	EPA 601/602	2-40 ml vials with HCL	Sample unfiltered
	Chromium VI	2-16 oz. poly untreated	1-filered,1-unfiltered
	Pri. Pol. Metals	2-16 oz. poly w/HNO3	1-filered,1-unfiltered
	Cyanide	1-16 oz. poly w/NaOH	Sample filtered
	Gen. Min./ORP	1-32 oz. untreated	Sample filtered

McLemore Trust Hard Chrome Eng. Inc. 750 107 th. Avenue Oakland, CA

BSK Job No. P92124

FIGURE A-6

BSK & ASSOCIATES

WELL FIELD LOG

Oakland, CA.	
PERSONNEL: M. Cline	
WEATHER: Clear, Warm	
WELL INFORMATION;	
Well No.: <u>MW-3</u>	Date Purged: 7/14/92
Depth to Water: 18.55 feet	Purge Method: Bladder Pump
Water Volume: 0.9 gallons	Purge Rate: 0.2 gpm
Reference Elevation: 32.99 feet MSL	- digo i dio. dia april
Groundwater Elevation: 14.44 feet MSL	
Measurement Technique: Electric Well Sounder	
IMMISCIBLE LAYERS:	
Top: None Observed, No Odor	Bottom: Trace brown clay, No Odor
Detection Method: Visual, Olfactory	

WELL DEVELOPMENT/PURGE DATA:

Collection Method: Clear Acrylic Bailer

Volume Removed	Electrical Conductivity		Temperature	
(gallons)	(uS/cm)	Hq	(degrees F)	Remarks
	- 1			
1.0	620	7.0	79	
2.0	397	6.8	74	
3.0	371	6.5	72	
4.0	360	6.6	71	
 -				
	Removed (gallons) 1.0 2.0 3.0	Removed (gallons) (uS/cm)	Removed (gallons) Conductivity (uS/cm) pH 1.0 620 7.0 2.0 397 6.8 3.0 371 6.5	Removed (gallons) Conductivity (uS/cm) pH Temperature (degrees F) 1.0 620 7.0 79 2.0 397 6.8 74 3.0 371 6.5 72

SAMPLE COLLECTION DATA

Sampling Equipment: Bladder Pump

TIME	ANALYSIS	CONTAINER USED	NOTES	
13:50	EPA 601/602	2-40 ml vials with HCL	Sample unfiltered	
	Chromium VI	1-16 oz. poly untreated	Sample filtered	
	Pri. Pol. Metals	1-16 oz. poly w/HNO3	Sample filtered	
	Cyanide	1-16 oz. poly w/NaOH	Sample filtered	

McLemore Trust Hard Chrome Eng. Inc. 750 107 th. Avenue Oakland, CA

BSK Job No. P92124 FIGURE A-7



WELL FIELD LOG

PROJECT NAME A	ND LOCATION: McLemore	Trust (Hard	Chrome Eng. Inc	. 1
PROJECT NAME A	AD FOCKHOUS: WCT6WOL6	irusi (Haru	Chrome eng. inc)

Oakland, CA.

PERSONNEL; M. Cline WEATHER: Clear, Warm

WELL INFORMATION:

Well No.: Water Well

Depth to Water: 19.18 feet

Water Volume: 89 gallons

Reference Elevation: 33.62 feet (MSL)

Groundwater Elevation: 14.44 feet (MSL)

Measurement Technique: Electric Well Sounder

IMMISCIBLE LAYERS:

Top: Slight rust color, No Odor

Detection Method: Visual, Olfactory
Collection Method: Clear Acrylic Bailer

Date Purged: 7/16/92
Purge Method: 4-inch S

Purge Method: <u>4-inch Submersible</u> Purge Rate: <u>7.1 gpm</u>

Bottom: None Observed, No Odor

WELL DEVELOPMENT/PURGE DATA:

TIME	Volume Removed (gallons)	Electrical Conductivity (uS/cm)	рН	Temperature (degrees F)	Remarks
13:26					
13:41	90	513	7.3	77	
13:52	180	469	6.7	73	
14:01	240	470	6.7	71	
14:05	275	469	6.6	70	
14:30		436	6.5	75	Sampled with bailer

SAMPLE COLLECTION DATA

Sampling Equipment: Teflon Point Source Bailer

TIME	ANALYSIS	CONTAINER USED	NOTES
14:30	EPA 601/602	2-40 ml vials with HCL	Sample unfiltered
	Chromium VI	1-16 oz. poly untreated	Sample filtered
	Pri. Pol. Metals	1-16 oz. poly w/HNO3	Sample filtered
	Cyanide	1-16 oz. poly w/NaOH	Sample filtered
	Gen. Min./ORP	1-32 oz. poly untreated	Sample filtered

McLemore Trust Hard Chrome Eng. Inc. 750 107 th. Avenue Oakland, CA

BSK Job No. P92124

FIGURE A-8

BSK & ASSOCIATES

WELL FIELD LOG

Oakland, CA.	
PERSONNEL: M. Cline WEATHER: Clear, Warm	
WELL INFORMATION: Well No.: <u>MW-2 (resample)</u>	Date Purged: 7/27/92
Depth to Water: 18.78 feet	Purge Method: Bladder Pump
Water Volume: 0.8 gallons	Purge Rate: 0.3 gpm
Reference Elevation: 33.00 feet MSL	<u> </u>
Groundwater Elevation: 14.22 feet MSL	

IMMISCIBLE LAYERS:

Top: Water Yellow,transparent, No Odor

Bottom: Water orange yellow,trace brown clay, No Odor

Detection Method: Visual, Olfactory
Collection Method: Clear Acrylic Bailer

WELL DEVELOPMENT/PURGE DATA:

TIME	Volume Removed (gallons)	Electrical Conductivity (uS/cm)	На	Temperature (degrees F)	Remarks
13:14					
13:20	1.0	1560	7.1	79	
13:23	2.0	1490	6.4	74	
13:26	3.0	1406	6.1	73	
13:29	4.0	1389	5.8	72	
13:33	5.0	1485	5.6	71	
13:36	6.0	1335	6.1	71	
13:40	7.0	1321	6.2	71	

SAMPLE COLLECTION DATA

Sampling Equipment: Bladder Pump

TIME	ANALYSIS	CONTAINER USED	NOTES
13:43	Chromium VI	1-16 oz. poly untreated	Sample unfiltered
13:44	Total Chromium	1-16 oz. poly w/HNO3	Sample unfiltered
13:45	Chromium VI	1-16 oz. poly untreated	Sample filtered
13:46	Chromium VI	1-16 oz. poly untreated	Sample filtered
13:47	Total Chromium	1-16 oz. poly w/HNO3	Sample filtered
13:48	Total Chromium	1-16 oz. poly w/HNO3	Sample filtered

McLemore Trust Hard Chrome Eng. Inc. 750 107 th. Avenue Oakland, CA

BSK Job No. P92124

FIGURE A-9

BSK & ASSOCIATES



APPLICANT'S

IGNATURE Mart Cln Date 4/15/92

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600 FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE	FOR OFFICE USE
OCATION OF PROJECT Hard Chrome Eng. Inc. 750 107th Ave.	PERMIT NUMBER 92303 LOCATION NUMBER
Cakland, (A 94566 LIENT Name Dee M. Mc Lemore Trust Address 145 Riverhaven Pl. Phone (702) 746-210; ity Reno, Nevada Zip 89509 APPLICANT	Circled Permit Requirements Apply
Address // &/ Quarry Ln. Phone (5/C) 4(2-4000 City Pleasanton Zip 94566 TYPE OF PROJECT Well Construction General Contamination Water Supply Contamination Well Destruction	A. GENERAL 1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date. 2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects. 3. Permit is void if project not begun within 90 days of approval date. B. WATER WELLS, INCLUDING PIEZOMETERS
ROPOSED WATER SUPPLY WELL USE Domestic Industrial Other Municipal Irrigation RILLING METHOD: Mud Rotary Air Rotary Auger X able Other DRILLER'S LICENSE NO. C 57 490942 VELL PROJECTS Drill Hole Diameter 8 in. Maximum Casing Diameter 2 in. Depth 40 ft. Surface Seal Depth 20 ft. Number 3	 Minimum surface seal thickness is two inches of cement grout placed by tremie. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings. CATHODIC. Fill hole above anode zone with concrete placed by tremie. WELL DESTRUCTION. See attached.
Number of Borings Maximum Hole Diameter in. Depth ft. STIMATED STARTING DATE STIMATED COMPLETION DATE Tune 16,1992 STIMATED COMPLETION DATE Tune 26,1992 I hereby agree to comply with all requirements of this permit and Alameda ounty Ordinance No. 73-68.	Approved Wyman Hong Date 15 Jun 9



Kenneth H. Hankins, R.C.E. Edwin J. Miller, R.C.E. James T. Harper John E. Eastus, R.C.E. William J. Wagner, R.C.E.

August 4, 1992 Job No. 2144-00-00 Sheet 1 of 1 Sheet

WELL ELEVATIONS

Hard Chrome Engineering, Inc. 750 107th Avenue Oakland, California

WELL DESIGNATION	ELEVATIONS	<u>REMARKS</u>
MW-1	33.06	CHRISTY RIM
	32.85	P.V.C. CASING
MW-2	33.41	RIM (FLOOR)
	33.00	P.V.C. CASING
MW-3	33.39	RIM (FLOOR)
·	32.99	P.V.C. CASING
WATER	33.62	TOP OF CONC. BASE

BENCH MARK:

0.05 Mile Southeast along the Southern Pacific Company Railroad from the crossing of 98th Avenue at Oakland. 47.1 feet Southwest of the Southwest rail of the main track. 96.45 feet West-Southwest and across the track from R.M. 3.78.25 feet Northwest of R.M. 4. 95.3 feet West-Southwest and across the track from the West corner of a concrete loading dock of the Southern Pacific Company freight building. 0.6 foot Northeast of a cyclone fence. 5.5 feet Southeast of a fence post. 1.8 feet West of a witness post. About 1 foot lower than the track. And set in the top of a concrete post projecting 0.3 foot above the ground. (SAN LEANDRO SE BASE RESET)

ELEVATION: 6.959 METERS / 22.83 FEET

NOTE:

Well elevations obtained by field survey dated July 23, 1992.

|--|

Received by

Received by

Relinquished by

1414 Stanislaus Street Fresno, California 93706 Telephone (209) 485-8310 • Fax (209) 485-7427 KEY: Type: AQ-Aqueous SL-Sludge SO-Soil PE-Petroleum OT-Other Seals: P-Present A-Absent B-Broken

DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR

Note:

Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



Environmental Services

BSK-Pleasanton McLemore Trust Date Sampled : 06/25/92

Time Sampled : 1040

Date Received : 06/26/92 Date of Analysis: 06/26/92

Report Issue Date: 07/14/92

Case Number

: Ch921704

Lab ID Number

: 1704

Project Number : P92124.3

Sample Description: MW-1 #3 at 10ft

Sample Type: SOLID

Analyses for Volatile Halocarbons by EPA Methods 8010 and 8020

Results Reported in Milligrams per Kilogram (mg/Kg)

Compound	Results	DLR	Compound	Results	DLR
EPA Method 8010					
Bromodichloromethane	ND	0.01	trans-1,2-Dichloroethene	ND	0.01
Bromoform	ND	0.01	1,2-Dichloropropane	ND	0.01
Bromomethane	ND	0.02	cis-1,3-Dichloropropene	ND	0.01
Carbon tetrachloride	ND	0.01	trans-1,3-Dichloropropene .	ND	0.01
Chloroethane	ND	0.01	Methylene chloride	ND	0.01
Chloroform	ND	0.01	1,1,2,2-tetrachloroethane .	ND	0.01
Chloromethane	ND	0.01	Tetrachloroethene	ND	0.01
Dibromochloromethane	ND	0.01	1,1,1-Trichloroethane	ND	0.01
Dichlorodifluoromethane	ND	0.04	1,1,2-Trichloroethane	ND	0.01
1,1-Dichloroethane	ND	0.01	Trichloroethene	ND	0.01
1,2-Dichloroethane	ND	0.01	Trichlorofluoromethane	ND	0.01
1,1-Dichloroethene	ND	0.01	Vinyl chloride	ND	0.02
EPA Method 8020					
Benzene	ND	0.02	1,4-Dichlorobenzene	ND	0.05
Chlorobenzene	ND	0.05	Ethylbenzene	ND	0.02
1,2-Dichlorobenzene	ND	0.05	Toluene	ND	0.02
1,3-Dichlorobenzene	ND	0.05	Xylenes (Total)	ND	0.02

Sample DLR = DLR x DLR Multiplier,

DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting. Exceptional sample conditions or matrix interferences may result in higher detection limits.

ND: None Detected . Not Analyzed

Cynthia Pigman / QA/QC Supervisor

915 801020.T

Jeffrey Creager, Organics Manager



Environmental Services

BSK-Pleasanton McLemore Trust Date Sampled : 06/25/92

Time Sampled : 1040

Date Received : 06/26/92 Report Issue Date: 07/14/92

Case Number

: Ch921704

Lab ID Number

: 1704

Sample Type: SOLID

Project Number

: P92124.3

Sample Description: MW-1 #3 at 10ft

General Chemical Analyses

Analyte	Units	Results	DLR
Redox Potential (Eh) Iron(Fe) Chromium(Cr)	mV mg/L mg/L	520 0.06 0.02	0.05 0.005

ND: None Detected

mg/Kg: Milligrams per Kilogram

--: Not Analyzed μg/Kg: Micrograms per Kilogram

DLR: Detection Limit for the Purposes of Reporting.

Exceptional sample conditions or matrix interferences

may result in higher detection limits.

mV: millivolt relative to Hydrogen

mg/L: milligram per liter in saturated paste extract
Redox Potential performed on saturated paste extract.

Cynthia Pigman, QA/QC Supervisor

10626 GCS

Doug Deasy, Inorganics Supervisor

RSK	Log	Number	

ANALYSIS REQUEST/CHAIN OF CUSTODY RECORD

1000-7456

Client Nar	ne /		·			Project o	r PO#							·					 ,	
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Date sampled	Time sampled	Type (See key	M.	Clir	1e		Number of	Lab Sample	Sample Seals		\ 80°	Jot		^		/		2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7-13	3-92-
Sampled	sampled	below)		Sample d			containers	number	(See key below)	<u>/ </u>	1 6	<u> </u>	0				\x ⁹ 63	8 /	Rem	arks
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te 11	12:00	50	MW-3	#3	16ft		1	2		*	X	X							1	
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				IMPORT	ANT NOTICE: N	o samples	will be ar	nalyzed	without a	n auth	orized	signatı	ure in ti	nis sec	tion.					
these pr		enerally o	formal Chain-of-Custod consistent with those of	utlined in th	e U.S. E.P.A. SW 84			me	se procedu	ires are	genera	Jiv cons	istent wi	th those	outline :	ed in U.S	S. EPA C	Contract Lah	oles. I under oratory Prog a bottle, whi	ram State
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Chemical Laboratories

1414 Stanislaus Street Fresno, California 93706 Telephone (209) 485-8310 • Fax (209) 485-7427 KEY: Type: AQ-Aqueous SL-Sludge SO-Soil PE-Petroleum OT-Other

Seals: P-Present A-Absent B-Broken

DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR

Samples are discarded 14 days after results are reported unless other arrangements are made.

Hazardous samples will be returned to client or disposed of at client expense.



Environmental Services

BSK-Pleasanton McLemore Trust

Date Sampled : 06/29/92

: 1145 Time Sampled

Date Received : 07/01/92 Date of Analysis: 07/08/92 Report Issue Date: 07/14/92

Case Number : Ch921742

: 1742-1 Sample Type: SOLID Lab ID Number

Project Number : P92124.3

Sample Description: MW-2 #2 at 10ft

Analyses for Volatile Halocarbons by EPA Methods 8010 and 8020

Results Reported in Milligrams per Kilogram (mg/Kg)

Compound	Results	DLR	Compound	Results	DLR
EPA Method 8010					
Bromodichloromethane	ND	0.01	trans-1,2-Dichloroethene	ND	0.01
Bromoform	ND	0.01	1,2-Dichloropropane	ND	0.01
Bromomethane	ND	0.02	cis-1,3-Dichloropropene	ND	0.01
Carbon tetrachloride	ND	0.01	trans-1,3-Dichloropropene .	ND	0.01
Chloroethane	ND	0.01	Methylene chloride	ND	0.01
Chloroform	ND	0.01	1,1,2,2-tetrachloroethane .	ND	0.01
Chloromethane	ND	0.01	Tetrachloroethene	ND	0.01
Dibromochloromethane	ND	0.01	1,1,1-Trichloroethane	ND	0.01
Dichlorodifluoromethane	ND	0.04	1,1,2-Trichloroethane	מא	0.01
1,1-Dichloroethane	ND	0.01	Trichloroethene	ND	0.01
1,2-Dichloroethane	ND	0.01	Trichlorofluoromethane	ND	0.01
1,1-Dichloroethene	ND	0.01	Vinyl chloride	ND	0.02
EPA Method 8020					
Benzene	ND	0.02	1,4-Dichlorobenzene	ND	0.05
Chlorobenzene	ND	0.05	Ethylbenzene	ND	0.02
1,2-Dichlorobenzene	ND	0.05	Toluene	ND	0.02
1,3-Dichlorobenzene	ND	0.05	Xylenes (Total)	ND	0.02

Sample DLR = DLR x DLR Multiplier,

DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting. Exceptional sample conditions or matrix interferences may result in higher detection limits.

ND: None Detected

--: Not Analyzed

Cynthia Figman, QA/QC Supervisor

Jeffrey Creager, Organics Manager

0915 801020.T



Environmental Services

BSK-Pleasanton McLemore Trust Date Sampled : 06/29/92

Time Sampled : 1145

Sample Type: SOLID

Date Received : 07/01/92 Report Issue Date: 07/14/92

Case Number

: Ch921742

Lab ID Number

: 1742-1

Project Number

: P92124.3

Sample Description: MW-2 #2 at 10ft

General Chemical Analyses

Analyte	Units	Results	DLR
Redox Potential (Eh)	mV mg/L mg/Kg mg/L,	750 5.3 3700 ND 87	 0.05 5 0.05

ND: None Detected

mV: millivolt relative to Hydrogen

%: Percent by Weight

DLR: Detection Limit for the Purposes of Reporting.

--: Not Analyzed

 $\mu g/Kg$: Micrograms per Kilogram

Exceptional sample conditions or matrix interferences

may result in higher detection limits.

mg/L: milligram per liter in saturated paste extract

Redox Potential performed on saturated paste extract.

mg/Kg: Milligrams per Kilogram as Received

Cynthia Pigman, QA/QC Supervisor

10626 GCS



Environmental Services

BSK-Pleasanton McLemore Trust

Date Sampled : 06/29/92

Time Sampled : 1200

Date Received: 07/01/92 Date of Analysis: 07/09/92

Report Issue Date: 07/14/92

Case Number

: Ch921742

Lab ID Number

: 1742-2

Project Number : P92124.3

Sample Description: MW-2 #3 at 16ft

Sample Type: SOLID

Analyses for Volatile Halocarbons by EPA Methods 8010 and 8020

Results Reported in Milligrams per Kilogram (mg/Kg)

Compound	Results	DLR	Compound	Results	DLR
EPA Method 8010					
Bromodichloromethane	αи	0.01	trans-1,2-Dichloroethene	ND	0.01
Bromoform	ND	0.01	1,2-Dichloropropane	ND	0.01
Bromomethane	ND	0.02	cis-1,3-Dichloropropene	ND	0.01
Carbon tetrachloride	ND	0.01	trans-1,3-Dichloropropene .	ND	0.01
Chloroethane	ND	0.01	Methylene chloride	ND	0.01
Chloroform	ND	0.01	1,1,2,2-tetrachloroethane .	ND	0.01
Chloromethane	ND	0.01	Tetrachloroethene	ND	0.01
Dibromochloromethane	ND	0.01	1,1,1-Trichloroethane	ND	0.01
Dichlorodifluoromethane	ND	0.04	1,1,2-Trichloroethane	ND	0.01
1,1-Dichloroethane	ND	0.01	Trichloroethene	ND	0.01
1,2-Dichloroethane	ND	0.01	Trichlorofluoromethane	ND	0.01
1,1-Dichloroethene	ND	0.01	Vinyl chloride	ND	0.02
EPA Method 8020					
Benzene	ND	0.02	1,4-Dichlorobenzene	ND	0.05
Chlorobenzene	ND	0.05	Ethylbenzene	ND	0.02
1,2-Dichlorobenzene	ND	0.05	Toluene	ND	0.02
1,3-Dichlorobenzene	ND	0.05	Xylenes (Total)	ND	0.02

Sample DLR = DLR x DLR Multiplier,

DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting. Exceptional sample conditions or matrix interferences may result in higher detection limits.

ND: None Detected

--: Not Analyzed

Cynthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager

R910915 801020.T



Environmental Services

BSK-Pleasanton McLemore Trust Date Sampled : 06/29/92

Time Sampled

Date Received : 07/01/92 Report Issue Date: 07/14/92

1200

Case Number

: Ch921742

Lab ID Number

: 1742-2

Project Number : P92124.3

Sample Description: MW-2 #3 at 16ft

Sample Type: SOLID

General Chemical Analyses

Analyte	Units	Results	DLR
Redox Potential (Eh)	mV	500	
Iron(Fe)	mg/L mg/Kg	0.11	0.05
Chromium(Cr)	mg/L	6.9	0.05
Solids	e e	81	

ND: None Detected

mV: millivolt relative to Hydrogen

%: Percent by Weight

--: Not Analyzed μg/Kg: Micrograms per Kilogram DLR: Detection Limit for the Purposes of Reporting.

Exceptional sample conditions or matrix interferences

may result in higher detection limits.

mg/L: milligram per liter in saturated paste extract

Redox Potential performed on saturated paste extract.

mg/Kg: Milligrams per Kilogram as Received

Cynthia Pigman, QA/QC Supervisor

Doug Deasy, Inorganics Supervisor

R910626 GCS

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BSK & Associates Chemical Laboratories

1414 Stanislaus Street Fresno, California 93706

Seals: P-Present A-Absent B-Broken

DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR

Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Environmental Laboratory (1094)

July 6, 1992

ChromaLab File No.: 0692238

5 DAYS TURNAROUND

BSK & ASSOCIATES

Attn: Martin Cline

<u>RE:</u> One soil sample for Priority Pollutants Metals (13) and Chromium Hexavalent (Cr^{6+}) analyses

Project Name: McLEMORE TRUST

Project Location: 1181 Quarry Lane, Pleasanton, CA

Project Number: P92124.3

Date Sampled: June 25, 1992 Date Submitted: June 25, 1992

Date Analyzed: July 2, 1992

RESULTS: Sample I.D.: MW-1 #3 at 10 ft.

Metals	Concentration (mg/Kg)	Detection Limit (mg/Kg)
Antimony (Sb)	N.D.	1.00
Arsenic (As)	N.D.	0.25
Beryllium (Be)	130	0.05
Cadmium (Cd)	3.7	0.05
Chromium (Cr)	35	0.50
Chromium Hexavalent (Cr6+)	N.D.	0.5
Copper (Cu)	19	0.25
Lead (Pb)	13	0.50
Mercury (Hg)	0.12	0.05
Nickel (Ni)	51	0.50
Selenium (Se)	2.8	0.25
Silver (Ag)	N.D.	0.25
Thallium (T1)	N.D.	2.00
Zinc (Zn)	49	0.25

Method of Analysis: 3050/6010/7000

ChromaLab, Inc.

Refaat A. Mankarious Inorganics Supervisor

Eric Tam

5 DAYS TURNAROUND

Environmental Laboratory (1094)

July 6, 1992

ChromaLab File No.: 0692238

BSK & ASSOCIATES

Attn: Martin Cline

RE: One soil sample for pH analysis

Project Name: McLEMORE TRUST Project Number: P92124.3 Date Sampled: June 25, 1992

Date Sampled: June 25, 1992 Date Submitted: June 25, 1992

Date Analyzed: June 26, 1992

RESULTS:

Sample pH I.D.

MW-1 #3 @ 10 ft.

7.1

BLANK METHOD OF ANALYSIS

7.0 9045

ChromaLab, Inc.

Yiu Tam

Analytical Chemist

Eric Tam

GeoAnalytical

Laboratories, Inc

1031 Kansas Ave . Modesto, California 95351

Phone (209) 572-0900 Fax # (209) 572-0916

REPORT

Report# D182-06

Date: 7/1/92

Chromalab 2239 Omega Rd.

Date Received: 6/30/92 Date Started: 7/1/92 Date Completed: 7/1/92

San Ramon, CA. 94583

Project #

Project Name: 692238

Sample ID: MW-1 #3 @ 10'

Lab ÎD: D21455

Method: 9010

Detection Limit mg/kg

Analyte

Amount Found mg/kg

0.25

Cyanide

ND

Ramiro Salgado

Chemist

Donna Allsup

Laboratory Director

Certification # E757

BSK Log N	lumbar		
Dan Luu n	(UITICO)	 	

ANALYSIS REQUEST/CHAIN OF CUSTODY RECORD

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Chemical Laboratories

1414 Stanislaus Street Fresno, California 93706 Telephone (209) 485-8310 • Fax (209) 485-7427 KEY: Type: AQ-Aqueous SL-Siudge SO-Soil PE-Petroleum OT-Other

Seals: P-Present A-Absent B-Broken

DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR

Samples are discarded 14 days after results are reported unless other arrangements are made.

Hazardous samples will be returned to client or disposed of at client expense.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

July 9, 1992

ChromaLab File No.: 0692271 A

BSK & ASSOCIATES

Attn: Marty Cline

RE: One soil sample for Priority Pollutants Metals (13) analysis

Project Name: McLEMORE TRUST

Project Location: 1181 Quarry Ln., Pleasanton

Project Number: P92124.3

Date Sampled: June 29, 1992 Date Submitted: June 20, 1992

Date Analyzed: July 7, 1992

RESULTS: Sample I.D.: MW-2 #1 10 ft.

Metals	Concentration (mg/Kg)	Detection Limit (mg/Kg)
Antimony (Sb)	N.D.	1.00
Arsenic (As)	13	0.25
Beryllium (Be)	0.21	0.05
Cadmium (Cd)	2.7	0.05
Chromium (Cr)	21	0.50
Chromium VI (CrV	I) N.D.	5.0
Copper (Cu)	16	0.25
Lead (Pb)	11	0.50
Mercury (Hg)	0.15	0.05
Nickel (Ni)	32	0.50
Selenium (Se)	4.3	0.25
Silver (Aq)	N.D.	0.25
Thallium (T1)	N.D.	2.00
Zinc (Zn)	30	0.25

Method of Analysis: 3050/6010/7471/7196

ChromaLab, Inc.

Jack Kelly

Analytidal Chemist

Eric Tam

5 DAYS TURNAROUND

Environmental Laboratory (1094)

July 9, 1992

ChromaLab File No.: 0692271 B

BSK & ASSOCIATES

Attn: Marty Cline

RE: One soil sample for Priority Pollutants Metals (13) analysis

Project Name: McLEMORE TRUST

Project Location: 1181 Quarry Ln., Pleasanton

Project Number: P92124.3

Date Sampled: June 29, 1992 Date Submitted: June 20, 1992

Date Analyzed: July 7, 1992

RESULTS: Sample I.D.: MW-2 #3 16 ft.

<u>Metals</u>	Concentration (mg/Kg)	Detection Limit (mg/Kg)
Antimony (Sb)	N.D.	1.00
Arsenic (As)	17	0.25
Beryllium (Be)	0.29	0.05
Cadmium (Cd)	3.2	0.05
Chromium (Cr)	35	0.50
Chromium VI (Cry	VI) N.D.	5.0
Copper (Cu)	19	0.25
Lead (Pb)	13	0.50
Mercury (Hg)	0.20	0.05
Nickel (Ni)	32	0.50
Selenium (Se)	45.0	0.25
Silver (Ag)	N.D.	0.25
Thallium (T1)	N.D.	2.00
Zinc (Zn)	39	0.25

Method of Analysis: 3050/6010/7471/7196

ChromaLab, Inc.

Jack Kelly

Analytical Chemist

Eric Tam

Environmental Laboratory (1094)

5 DAYS TURNAROUND

July 9, 1992

ChromaLab File No.: 0692271

BSK & ASSOCIATES

Attn: Marty Cline

RE: Two soil samples for pH analysis

Project Name: McLEMORE TRUST

Project Location: 1181 Quarry Ln., Pleasanton

Project Number: P92124.3

Date Sampled: June 29, 1992 Date Submitted: June 20, 1992

Date Analyzed: July 1, 1992

RESULTS:

Sample I.D.	Hq
MW-2 #2 10 ft.	7.4
MW-2 #3 16 ft.	7.4
BLANK	N.D.
METHOD OF ANALYSIS	9045

ChromaLab, Inc.

Yiu Tam

Analytical Chemist

Eric Tam

GeoAnalytical

Laboratories, Inc

1031 Kansas Ave . Modesto, California 95351 Phone (209) 572-0900 Fax # (209) 572-0916

REPORT

Report# 184-05

Date: 7/8/92

Chromalab, Inc. 2239 Omega Rd. #1 San Ramon, CA. 94583 Date Received: 7/2/92 Date Started: 7/5/92 Date Completed: 7/7/92

Project #

Project Name: 692271

Sample ID: MW-2#2-10'

Lab ID: D21470

Method: 9010

Detection Limit Analyte mg/kg

0.25 Cyanide

ND

Amount Found

mg/kg

Ramiro Salgado Chemist

Donna Allsup
Laboratory Director

Certification # E757

GeoAnalytical

Laboratories, Inc

1031 Kansas Ave . Modesto, California 95351 Phone (209) 572-0900 Fax # (209) 572-0916

REPORT

Report# 184-05

Date: 7/8/92

Chromalab, Inc. 2239 Omega Rd. #1 San Ramon, CA. 94583 Date Received: 7/2/92 Date Started: 7/5/92 Date Completed: 7/7/92

Project #

Project Name: 692271

Sample ID: MW-2#3-16'

Lab ID: D21471

Method: 9010

Detection Limit mg/kg	Analyte	Amount Found mg/kg
0.25	Cvanide	ND

lVIIIII Judylo Ramiro Salgado lo Chemist

Donna Allsup Laboratory Director

Certification # E757

BSK Log I	Number				1	NALYSIS RE	QUEST/	CHAIN	OF CU	STOD	Y RE	CORD		•			1000	J* 1404
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BSK & Associates	Chemical Laboratories
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1414 Stanislaus Street Fresno, California 93706

Telephone (200) 103 6310 - Tax (200) 105 712/

KEY: Type: AQ-Aqueous SL-Sludge SO-Soil PE-Petroleum OT-Other Seals: P-Present A-Absent B-Broken

DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR Note:

Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Environmental Laboratory (1094)

ChromaLab File No.: 0792122

5 DAYS TURNAROUND

BSK & ASSOCIATES

July 23, 1992

Attn: Martin Cline

<u>RE:</u> One water sample for Priority Pollutants Metals (13) and Hexavalent Chromium analyses

Project Name: McLEMORE TRUST

Project Number: P92124

Date Sampled: July 14, 1992 Date Submitted: July 14, 1992

Date Analyzed: July 15, 1992

RESULTS: Sample I.D.: MW-1 #1 (Unfiltered)

Metals	Concentration (mg/L)	Detection Limit (mg/L)
Mecais	(MG/L)	(11147-1177
Antimony (Sb)	N.D.	0.020
Arsenic (As)	N.D.	0.005
Beryllium (Be)	N.D.	0.001
Cadmium (Cd)	N.D.	0.001
Chromium (Cr)	N.D.	0.01
Chromium Hexavalent (Cr6+)	N.D.	0.01
Copper (Cu)	N.D.	0.005
Lead (Pb)	N.D.	0.010
Mercury (Hg)	N.D.	0.001
Nickel (Ni)	N.D.	0.020
Selenium (Se)	N.D.	0.005
Silver (Aq)	N.D.	0.005
Thallium (T1)	N.D.	0.04
Zinc (Zn)	0.02	0.005

Method of Analysis: 3010/6010/7000(Hg)/7196(Cr⁶⁺)

ChromaLab, Inc.

Refat A. Manh

Refaat A.Mankarious Analytical Chemist Eric Tam

5 DAYS TURNAROUND

CHROMALAB, INC.

Environmental Laboratory (1094)

July 23, 1992

ChromaLab File No.: 0792122

BSK & ASSOCIATES

Attn: Martin Cline

<u>RE:</u> One water sample for Priority Pollutants Metals (13) and Hexavalent Chromium analyses

Project Name: McLEMORE TRUST

Project Number: P92124

Date Sampled: July 14, 1992 Date Submitted: July 14, 1992

Date Analyzed: July 15, 1992

RESULTS: Sample I.D.: MW-1 #2 (Filtered)

Metals	Concentration (mg/L)	Detection Limit (mg/L)
Antimony (Sb)	N.D.	0.020
Arsenic (As) Beryllium (Be)	N.D. N.D.	0.005 0.001
Cadmium (Cd)	N.D.	0.001
Chromium (Cr)	N.D.	0.01
Chromium Hexavalent (Cr6+)) N.D.	0.01
Copper (Cu)	N.D.	0.005
Lead (Pb)	N.D.	0.010
Mercury (Hg)	N.D.	0.001
Nickel (Ni)	N.D.	0.020
Selenium (Se)	N.D.	0.005
Silver (Ag)	N.D.	0.005
Thallium (T1)	N.D.	0.04
Zinc (Zn)	0.02	0.005

Method of Analysis: 3010/6010/7000(Hg)/7196(Cr⁶⁺)

ChromaLab, Inc.

Refaat A.Mankarious

Analytical Chemist

Eric Tam

CHROMALAB, INC. **5 DAYS TURNAROUND**

Environmental Laboratory (1094)

July 23, 1992

ChromaLab File No.: 0792122

BSK & ASSOCIATES

Attn: Martin Cline

RE: One water sample for Priority Pollutants Metals (13) and Hexavalent Chromium analyses

Project Name: McLEMORE TRUST

Project Number: P92124

Date Sampled: July 14, 1992

Date Submitted: July 14, 1992

Date Analyzed: July 15, 1992

Sample I.D.: MW-2 #1 (Unfiltered) **RESULTS:**

Metals	Concentration (mg/L)	Detection Limit (mg/L)
		•
Antimony (Sb)	4.8	0.020
Arsenic (As)	0.32	0.005
Beryllium (Be)	0.003	0.001
Cadmium (Cd)	N.D.	0.001
Chromium (Cr)	*	0.01
Chromium Hexavalent (Cr6+)	*	0.01
Copper (Cu)	0.28	0.005
Lead (Pb)	0.04	0.010
Mercury (Hg)	N.D.	0.001
Nickel (Ni)	0.83	0.020
Selenium (Se)	0.68	0.005
Silver (Aq)	0.13	0.005
Thallium (T1)	N.D.	0.04
Zinc (Zn)	0.16	0.005

Method of Analysis: $3010/6010/7000(Hg)/7196(Cr^{6+})$.

*Analysis did not pass QA/QC.

ChromaLab, Inc.

Refart B. Manhon

Refaat A.Mankarious Analytical Chemist

Eric Tam

5 DAYS TURNAROUND

CHROMALAB, INC.

Environmental Laboratory (1094)

July 23, 1992

ChromaLab File No.: 0792122

BSK & ASSOCIATES

Attn: Martin Cline

RE: One water sample for Priority Pollutants Metals (13) and Hexavalent Chromium analyses

Project Name: McLEMORE TRUST

Project Number: P92124

Date Sampled: July 14, 1992

Date Submitted: July 14, 1992

Date Analyzed: July 15, 1992

RESULTS: Sample I.D.: MW-2 #2 (Filtered)

Metals	Concentration (mg/L)	Detection Limit (mg/L)
Antimony (Ch)	0.03	0.020
Antimony (Sb) Arsenic (As)	0.30	0.025
Beryllium (Be)	N.D.	0.001
Cadmium (Cd)	N.D.	0.001
Chromium (Cr)	*	0.01
Chromium Hexavalent (Cr6	+) *	0.01
Copper (Cu)	0.36	0.005
Lead (Pb)	N.D.	0.010
Mercury (Hg)	0.001	0.001
Nickel (Ni)	N.D.	0.020
Selenium (Se)	0.17	0.005
Silver (Ag)	N.D.	0.005
Thallium (T1)	N.D.	0.04
Zinc (Zn)	0.07	0.005

Method of Analysis: 3010/6010/7000(Hg)/7196(Cr⁶⁺)

*Analysis did not pass QA/QC.

ChromaLab, Inc.

Refait D. Moulin

Refaat A.Mankarious Analytical Chemist Eric Tam

5 DAYS TURNAROUND

CHROMALAB, INC.

Environmental Laboratory (1094)

July 23, 1992

ChromaLab File No.: 0792122

BSK & ASSOCIATES

Attn: Martin Cline

RE: One water sample for Priority Pollutants Metals (13) and Hexavalent Chromium analyses

Project Name: McLEMORE TRUST

Project Number: P92124

Date Sampled: July 14, 1992 Da

Date Submitted: July 14, 1992

Date Analyzed: July 15, 1992

RESULTS: Sample I.D.: MW-3

Metals	Concentration (mg/L)	Detection Limit (mg/L)
Antimony (Sb)	N.D.	0.020
Arsenic (As)	N.D.	0.005
Beryllium (Be)	N.D.	0.001
Cadmium (Cd)	N.D.	0.001
Chromium (Cr)	N.D.	0.01
Chromium Hexavalent (Cr6+)	N.D.	0.01
Copper (Cu)	N.D.	0.005
Lead (Pb)	N.D.	0.010
Mercury (Hg)	N.D.	0.001
Nickel (Ni)	N.D.	0.020
Selenium (Se)	N.D.	0.005
Silver (Aq)	N.D.	0.005
Thallium (T1)	N.D.	0.04
Zinc (Zn)	0.02	0.005

Method of Analysis: 3010/6010/7000(Hg)/7196(Cr⁶⁺)

ChromaLab, Inc.

Retait A. Marlin

Refaat A.Mankarious Analytical Chemist Eric Tam

Environmental Laboratory (1094)

July 22, 1992

ChromaLab File No.: 0792122

Date Submitted: July 14, 1992

5 DAYS TURNAROUND

BSK & ASSOCIATES

Attn: Martin Cline

RE: One water sample for pH analysis

Project Name: McLEMORE TRUST

Project Number: P92124

Date Sampled: July 14, 1992

Date Analyzed: July 15, 1992

RESULTS:

Sample I.D. pH

MW-3 7.7

,, ,

BLANK 7.0 METHOD OF ANALYSIS 9040

ChromaLab, Inc.

🗸 Yiu Tam

Analytical Chemist

Eric Tam

Environmental Laboratory (1094)

July 22, 1992

ChromaLab File No.: 0792122

5 DAYS TURNAROUND

BSK & ASSOCIATES

Attn: Martin Cline

RE: One water sample for REDOX Potential analysis

Project Name: McLEMORE TRUST

Project Number: P92124

Date Sampled: July 14, 1992 Date Submitted: July 14, 1992

Date Analyzed: July 15, 1992

Results:

SAMPLE I.D.

REDOX POTENTIAL (mV)

MW-3

364*

*REDOX potential as reference to standard Hydrogen electrode.

ChromaLab, Inc.

Eric Tam

Client Na	Client Name Mc/emore Trust (BSKP) Project or P.O.#			Lahi	Analysis required Lab Use Only														
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BSK & Associates	Chemical Laboratorie
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1414 Stanislaus Street Fresno, California 93706 Telephone (209) 485-8310 • Fax (209) 485-7427 KEY: Type: AQ-Aqueous SL-Sludge SO-Soil PE-Petroleum OT-Other

Seals: P-Present A-Absent B-Broken

DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR

Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



BSK-Pleasanton McLemore Trust Date Sampled : 07/14/92

Time Sampled : 1240

Date Received : 07/15/92 Date of Analysis: 07/17/92

Report Issue Date: 07/30/92

Case Number

: Ch921863

Lab ID Number

: 1863-1

Project Number

: P92124

Sample Description: MW-1

Sample Type : LIQUID

Analyses for Volatile Halocarbons by EPA Methods 601 and 602 Prepared by EPA Method 5030

Results Reported in Micrograms per Liter ($\mu g/L$)

Compound	Results	DLR	Compound	Results	DLR
EPA Method 601			cis-1,2-Dichloroethene	ND	0.5
Bromodichloromethane	ИD	0.5	trans-1,2-Dichloroethene	ND	0.5
Bromoform	ND	0.5	1,2-Dichloropropane	ND	0.5
Bromomethane	ND	1.0	cis-1,3-Dichloropropene	ND	0.5
Carbon tetrachloride	ND	0.5	trans-1,3-Dichloropropene .	ND	0.5
Chloroethane	ND	0.5	Methylene chloride	ND	0.5
Chloroform	ND	0.5	1,1,2,2-tetrachloroethane .	ND	0.5
Chloromethane	ND	0.5	Tetrachloroethene	8.8	0.5
Dibromochloromethane	ND	0.5	1,1,1-Trichloroethane	ND	0.5
Dichlorodifluoromethane	ND	2.0	1,1,2-Trichloroethane	ND	0.5
1,1-Dichloroethane	ND	0.5	Trichloroethene	ND	0.5
1,2-Dichloroethane	ND	0.5	Trichlorofluoromethane	ND	0.5
1,1-Dichloroethene	ND	0.5	Vinyl chloride	ND	1.0
EPA Method 602					
Benzene	ND	0.5	1,4-Dichlorobenzene	ND	0.5
Chlorobenzene	ND	0.5	Ethylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5	Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5	Xylenes (Total)	ND	0.5

Sample DLR = DLR x DLR Multiplier,

DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting. Exceptional sample conditions or matrix interferences may result in higher detection limits.

ND: None Detected

-: Not Analyzed

Cynthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager

909 601602.T



BSK-Pleasanton McLemore Trust Date Sampled : 07/14/92

Time Sampled

: 1240

Date Received

: 07/15/92

Report Issue Date: 07/30/92

Case Number

: Ch921863

Lab ID Number

: 1863-1

Project Number

: P92124

Sample Description: MW-1

Sample Type

: LIQUID

General Chemical Analyses

Analyte	Units	Results	DLR
Cyanide, Total (CN) Barium (Ba) Chromium, Total (Cr) Cobalt (Co) Molybdenum (Mo) Redox Potential (Eh)	mg/L mg/L mg/L mg/L mg/L	ND 410	0.02 0.5 0.5 0.5 0.5
Vanadium (V)	mg/L		0.1

ND: None Detected

mg/L: Milligrams per Liter

--: Not analyzed

μg/L: Micrograms per Liter

mV: Millivolt relative to H

DLR: Detection Limit for the Purposes of Reporting.

Exceptional sample conditions or matrix interferences

may result in higher detection limits.

[{|

Cynthia Pigman, QA/QC Supervisor

Doug Deasy, Inorganics Supervisor

10626 GCI



BSK-Pleasanton McLemore Trust

: 07/14/92 Date Sampled

Time Sampled : 1240

: 07/15/92 Date Received

Report Issue Date: 07/30/92

Case Number

: Ch921863

Lab ID Number

: 1863-1

Project Number

: P92124

Sample Description: MW-1

Sample Type

: LIQUID

California Title 22 General Mineral Analyses

Results reported in Milligrams per Liter (mg/L)

Constituent	Results	DLR	Constituent	Results	DLR
Calcium (Ca)	68 27 32 ND 170 ND ND 210 29	0.1 0.1 1 10 1 12 1	Copper (Cu)	ND CO1 ND ND 7.3	0.05 0.05 0.01 0.05 0.05

Calculated Values

Constituent	Results	DLR	
Dissolved Solide(TDS) Hardness (as CaCO3) Langlier Index	420 280 0.2	10 10 -	
	L	<u></u>	

DLR: Detection Limit For the Purposes of Reporting

ND: None Detected

--: Not Analyzed

TDS: Calculated from EC using the formula EC X 0.625

<: Less Than

umho/cm: Micromhos per contineter at 25°C

Cynthia Pigmán, QA/QC Supervisor

Inorganics Supervisor

911024 GML.t



BSK-Pleasanton McLemore Trust

: 07/14/92 Date Sampled

Time Sampled : 1450

: 07/15/92 Date Received Date of Analysis: 07/24/92

Report Issue Date: 07/30/92

: Ch921863 Case Number

Lab ID Number : 1863-3

Project Number : P92124 Sample Description: MW-2

: LIQUID Sample Type

Analyses for Volatile Halocarbons by EPA Methods 601 and 602 Prepared by EPA Method 5030

Results Reported in Micrograms per Liter ($\mu g/L$)

Compound	Results	DLR	Compound	Results	DLR
EPA Method 601			cis-1,2-Dichloroethene	ND	0.5
Bromodichloromethane	ND	0.5	trans-1,2-Dichloroethene	ND	0.5
Bromoform	ND	0.5	1,2-Dichloropropane	ND	0.5
Bromomethane	ND	1.0	cis-1,3-Dichloropropene	ND	0.5
Carbon tetrachloride	ND	0.5	trans-1,3-Dichloropropene .	ND	0.5
Chloroethane	ND	0.5	Methylene chloride	ND	0.5
Chloroform	ND	0.5	1,1,2,2-tetrachloroethane .	ND	0.5
Chloromethane	ND	0.5	Tetrachloroethene	3	0.5
Dibromochloromethane	ND	0.5	1,1,1-Trichloroethane	ND	0.5
Dichlorodifluoromethane	ND	2.0	1,1,2-Trichloroethane	ND	0.5
	מא	0.5	Trichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5	Trichlorofluoromethane	ND	0.5
1,2-Dichloroethane	ND	0.5	Vinyl chloride	ND	1.0
EPA Method 602					
Benzene	ND	0.5	1,4-Dichlorobenzene	ND	0.5
Chlorobenzene	ND	0.5	Ethylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5	Toluene	0.7	0.5
1,3-Dichlorobenzene	ИD	0.5	Xylenes (Total)	ND	0.5

Sample DLR = DLR x DLR Multiplier,

DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting. Exceptional sample conditions or matrix interferences may result in higher detection limits.

ND: None Detected

--: Not Analyzed

Cynthia Pigmah, QA/QC Supervisor

Jeffrey Creager, Organics Manager

R910909 601602.T



BSK-Pleasanton

Date Sampled

: 07/14/92

McLemore Trust

Time Sampled

Sample Type

: 1450

Date Received

: 07/15/92

Report Issue Date: 07/30/92

: LIQUID

Case Number

: Ch921863

Lab ID Number

: 1863-3

Project Number

: P92124

Sample Description: MW-2

General Chemical Analyses

Analyte	Units	Results	DLR
Cyanide, Total (CN) Barium (Ba) Chromium, Total (Cr) Cobalt (Co) Molybdenum (Mo) Redox Potential (Eh) Vanadium (V)	mg/L mg/L mg/L mg/L mV mg/L	ND ND 650 ND ND 590 0.2	0.02 0.5 0.5 0.5 0.5 -

ND: None Detected

mg/L: Milligrams per Liter

--: Not analyzed

 μ g/L: Micrograms per Liter

mV: Millivolt relative to H

DLR: Detection Limit for the Purposes of Reporting.

Exceptional sample conditions or matrix interferences

may result in higher detection limits.

Cynthia Pigman, QA/QC Supervisor

Inorganics Supervisor

910626 GCL



BSK-Pleasanton McLemore Trust Date Sampled : 07/14/92

Time Sampled : 1450

Date Received : 07/15/92 Report Issue Date: 07/30/92

Case Number : Chi

: Ch921863

Lab ID Number Project Number

: 1863-3 : P92124

Sample Description: MW-2

Sample Type

: LIQUID

California Title 22 General Mineral Analyses

Results reported in Milligrams per Liter (mg/L)

Constituent	Results	DLR	Constituent	Results	DLR
Calcium (Ca)	210	0.1	Copper (Cu)	ND	0.5
Magnesium (Mg)	80	0.1	Iron (Fe)	ND	0.5
Sodium (Na)	55	1	Manganese (Mn)	1.9	0.1
Potassium (K)	ND	10	Zinc (Zn)	ND	0.5
Alkalinity (as CaCO3)	95	10	Foaming Agents (MBAS)	ND	0.05
Hydroxide (OH)	ND	1	pH (in Std Units)	5.7	ļ –
Carbonate (CO3)	מא	1	Specific Electrical		
Bicarbonate (HCO3)	120	12	Conductance (EC) (µmho/cm)	1700	20
Chloride (Cl)	58	1		•	1
Sulfate (804)	140	1	·	1	

Calculated Values

Constituent	Results	DLR
Dissolved Solids(TDS)	1100	10
Hardness (as CaCO3)	850	10
Langlier Index	-1.2	-
		,

DLR: Detection Limit For the Purposes of Reporting

ND: None Detected --: Not Analyzed

TDS: Calculated from EC using the formula EC X 0.625

<: Less Than

μmho/cm: Micromhos per centimeter at 25°C

Cynthia Pigman, QA/QC Supervisor

Doug Deasy, Inorganics Supervisor

8911024 GML.t



BSK-Pleasanton McLemore Trust Date Sampled : 07/14/92

Time Sampled

: 1350 : 07/15/92

Date Received Date of Analysis: 07/17/92

Report Issue Date: 07/30/92

Case Number

: Ch921863

Lab ID Number

: 1863-2

Project Number

: P92124

Sample Description: MW-3

Sample Type

: LIQUID

Analyses for Volatile Halocarbons by EPA Methods 601 and 602 Prepared by EPA Method 5030

Results Reported in Micrograms per Liter (μ g/L)

Compound	Results	esults DLR Compound		Results	DLR
BPA Method 601			cis-1,2-Dichloroethene	ND	0.5
Bromodichloromethane	ND	0.5	trans-1,2-Dichloroethene	ND	0.5
Bromoform	ND	0.5	1,2-Dichloropropane	ND	0.5
Bromomethane	ND	1.0	cis-1,3-Dichloropropene	ND	0.5
Carbon tetrachloride	ND	0.5	trans-1,3-Dichloropropene .	ND	0.5
Chloroethane	ND	0.5	Methylene chloride	ND	0.5
Chloroform	ИД	0.5	1,1,2,2-tetrachloroethane .	ND	0.5
Chloromethane	ДИ	0.5	Tetrachloroethene	5	0.5
Dibromochloromethane	ND	0.5	1,1,1-Trichloroethane	ND	0.5
Dichlorodifluoromethane	ND	2.0	1,1,2-Trichloroethane	ND	0.5
1,1-Dichloroethane	ND	0.5	Trichloroethene	ND	0.5
1,2-Dichloroethane	ND	0.5	Trichlorofluoromethane	ND	0.5
1,1-Dichloroethene	ND	0.5	Vinyl chloride	ND	1.0
EPA Method 602					
Benzene	ND	0.5	1,4-Dichlorobenzene	ND	0.5
Chlorobenzene	ND	0.5	Ethylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5	Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5	Xylenes (Total)	ND	0.5

Sample DLR = DLR x DLR Multiplier,

DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting. Exceptional sample conditions or matrix interferences may result in higher detection limits.

ND: None Detected

-: Not Analyzed

Cynthia Pigman, QA/QC Supervisor

Creager, Organics Manager

909 601602.T



BSK-Pleasanton McLemore Trust Date Sampled : 07/14/92

Time Sampled : 1350

Date Received : 07/15/92 Report Issue Date: 07/30/92

Case Number

: Ch921863

Lab ID Number

: 1863-2

Project Number

: P92124

Sample Description: MW-3

Sample Type

: LIQUID

General Chemical Analyses

Analyte	Units	Results	DLR
Cyanide, Total (CN)	mg/L	ND	0.02
Barium (Ba)	mg/L		0.5
Chromium, Total (Cr)	mg/L		0.5
Cobalt (Co)	mg/L		0.5
Molybdenum (Mo)	mg/L		0.5
Redox Potential (Eh)	mV		-
Vanadium (V)	mg/L		0.1

ND: None Detected

mg/L: Milligrams per Liter

--: Not analyzed

μg/L: Micrograms per Liter

mV: Millivolt relative to H

DLR: Detection Limit for the Purposes of Reporting.

Exceptional sample conditions or matrix interferences

may result in higher detection limits.

Cynthia Pigman, QA/QC Supervisor

Doug Deasy, Inorganics Supervisor

8910626 GC

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BSK & Associates Chemical Laboratories

1414 Stanislaus Street Fresno, California 93706 Telephone (209) 485-8310 • Fax (209) 485-7427 KEY: Type: AQ-Aqueous SL-Sludge SO-Soil PE-Petroleum OT-Other

Seals: P-Present A-Absent B-Broken

DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR

Note:

Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



BSK-Pleasanton McLemore Trust

: 07/16/92 Date Sampled

Time Sampled : 1430

Date Received : 07/17/92 Date of Analysis: 07/17/92

Report Issue Date: 07/30/92

Case Number

: Ch921884

Lab ID Number

: 1884

Project Number

: P92124

Sample Description: Water well

: LIQUID Sample Type

Analyses for Volatile Halocarbons by EPA Methods 601 and 602 Prepared by EPA Method 5030

Results Reported in Micrograms per Liter $(\mu g/L)$

Compound	Results	DLR	Compound	Results	DLR
EPA Method 601			cis-1,2-Dichloroethene	ND	0.5
Bromodichloromethane	ND	0.5	trans-1,2-Dichloroethene	ND	0.5
Bromoform	ND	0.5	1,2-Dichloropropane	ND	0.5
Bromomethane	ND	1.0	cis-1,3-Dichloropropene	ND	0.5
Carbon tetrachloride	ND	0.5	trans-1,3-Dichloropropene .	ND	0.5
Chloroethane	ND	0.5	Methylene chloride	ND	0.5
Chloroform	ND	0.5	1,1,2,2-tetrachloroethane .	ND	0.5
Chloromethane	ND	0.5	Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5	1,1,1-Trichloroethane	ND	0.5
Dichlorodifluoromethane	300	2.0	1,1,2-Trichloroethane	ND	0.5
1,1-Dichloroethane	ND	0.5	Trichloroethene	ND	0.5
1,2-Dichloroethane	ND	0.5	Trichlorofluoromethane	ND	0.5
1,1-Dichloroethene	ND	0.5	Vinyl chloride	ND	1.0
EPA Method 602					
Benzene	ND	0.5	1,4-Dichlorobenzene	ND	0.5
Chlorobenzene	ND	0.5	Ethylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5	Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5	Xylenes (Total)	ND	0.5

Sample DLR = DLR x DLR Multiplier,

DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting. Exceptional sample conditions or matrix interferences may result in higher detection limits.

ND: None Detected

--: Not Analyzed

Cynthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager

0909 601602.T



BSK-Pleasanton McLemore Trust

: 07/16/92 Date Sampled

Time Sampled

Sample Type

: 1430 Date Received : 07/17/92

Report Issue Date: 07/30/92

: LIQUID

Case Number

: Ch921884

Lab ID Number

: 1884

Project Number

: P92124

Sample Description: Water well

California Title 22 General Mineral Analyses

Results reported in Milligrams per Liter (mg/L)

Constituent	Results	DLR	Constituent	Resulta	DLR
Calcium (Ca)	45 18 33 ND 170	0.1 0.1 1 1 10	Copper (Cu)	ND ND 0.03 ND ND 7.5	0.05 0.05 0.01 0.05 0.05
Carbonate (CO3) Bicarbonate (HCO3) Chloride (C1) Sulfate (SO4)	ND 210 20 26	12 1	Specific Electrical Conductance (EC) (μπho/cm)	490	20

Calculated Values

Constituent	Results	DLR
Dissolved Solids(TDS)	310	10
Hardness (as CaCO3)	190	10
Langlier Index	0.2	-

DLR: Detection Limit For the Purposes of Reporting

ND: None Detected

--: Not Analyzed

TDS: Calculated from EC using the formula EC X 0.625

<: Less Than

μmho/cm: Micromhos per centimeter at 25°C

Cynthia (Pigman, QA/QC Supervisor

Doug Deasy, Inorganics Supervisor



BSK-Pleasanton

Date Sampled

: 07/16/92

McLemore Trust

Time Sampled Date Received

: 1430 : 07/17/92

Report Issue Date: 07/30/92

Case Number

: Ch921884

Lab ID Number

: 1884

Project Number

: P92124

Sample Description: Water well

Sample Type

: LIQUID

General Chemical Analyses

Analyte	Units	Results	DLR
Cyanide, Total (CN)	mg/L mV	ND 520	0.02

ND: None Detected

mg/L: Milligrams per Liter

--: Not analyzed

 $\mu g/L$: Micrograms per Liter

mV: Millivolt relative to H

DLR: Detection Limit for the Purposes of Reporting.

Exceptional sample conditions or matrix interferences

may result in higher detection limits.

Cynthia Pigman, QA/QC Supervisor

Inorganics Supervisor

R910626 GCL

BSK Log N	nuper				ANALYSIS RE	QUEST/	CHAIN	OF CU	STOD	Y REC	CORD	•					100	0-746
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BSK & Ass	sociates	Chemical	Laboratories

Relinquished by

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Received by

1414 Stanislaus Street Fresno, California 93706 Telephone (209) 485-8310 • Fax (209) 485-7427 KEY: Type: AQ-Aqueous SL-Sludge SO-Soil PE-Petroleum OT-Other

Seals: P-Present A-Absent B-Broken

DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR

Note:

Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CHROMALAB, INC.

Environmental Laboratory (1094)

ChromaLab File No.: 0792166

5 DAYS TURNAROUND

BSK & ASSOCIATES

July 27, 1992

Attn: Martin Cline

RE: One water sample for Priority Pollutants Metals (13) and Hexavalent Chromium analyses

Project Name: McLEMORE TRUST

Project Number: P92124

Date Submitted: July 17, 1992 Date Sampled: July 16, 1992

Date Analyzed: July 17, 1992

Sample I.D.: WATER WELL RESULTS:

Metals	Concentration (mg/L)	Detection Limit (mg/L)
Antimony (Sb)	N.D.	0.020
Arsenic (As)	N.D.	0.005
Beryllium (Be)	N.D.	0.001
Cadmium (Cd)	N.D.	0.001
Chromium (Cr)	N.D.	0.01
Chromium Hexavalent (Cr6+)	N.D.	0.01
Copper (Cu)	N.D.	0.005
Lead (Pb)	N.D.	0.010
Mercury (Hg)	.001	0.001
Nickel (Ni)	N.D.	0.020
Selenium (Se)	N.D.	0.005
Silver (Ag)	N.D.	0.005
Thallium (T1)	N.D.	0.04
Zinc (Zn)	0.01	0.005

Method of Analysis: 3010/6010/7000(Hg)/7196(Cr⁶⁺)

ChromaLab, Inc.

Robart A. Manlin

Refaat A.Mankarious Analytical Chemist

Eric Tam

Laboratory Director

BSK Log N	umber			ANALYSIS	REQUEST/	CHAIN	OF CU	STOD	Y RECO	RD			_	1	000	746
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BSK & As	ssociates	Chemical	Laboratories

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1414 Stanislaus Street Fresno, California 93706 Telephone (209) 485-8310 • Fax (209) 485-7427 KEY: Type: AQ-Aqueous SL-Sludge SO-Soil PE-Petroleum OT-Other

Seals: P-Present A-Absent B-Broken

DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR

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CHROMALAB, INC.

received

5 DAYS TURNAROUND

Environmental Laboratory (1094)

July 28, 1992

ChromaLab File No.: 0792242

BSK & ASSOCIATES

Attn: Martin Cline

RE: Two water samples for Hexavalent Chromium and Total Chromium analyses

Project Number: P92124

Date Sampled: July 27, 1992 Date Submitted: July 27, 1992 Date Extracted: July 28, 1992 Date Analyzed: July 28, 1992

RESULTS:

Sample	Hexavalent Chromium	Total Chromium
_I.D.	(mg/L)	(mg/L)
MW-2 #1 unfiltered	640	
MW-2 #2 unfiltered HNO3	with tori City City	690
MW-2 #4 filtered	680	
MW-2 #6 filtered HNO3		700
BLANK	N.D.	N.D.
SPIKED RECOVERY	96%	90%
DUPLICATE SPIKED RECOVERY	98%	92%
DETECTION LIMIT	0.01	0.05
METHOD OF ANALYSIS	7196	3010/7190

ChromaLab, Inc.

Netact D. Manne

Refaat A.Mankarious Analytical Chemist Eric Tam

Laboratory Director

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Seals: P-Present A-Absent B-Broken

DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR

Hazardous samples will be returned to client or disposed of at client expense.

Samples are discarded 14 days after results are reported unless other arrangements are made.

Project or P.O.#

Lab Use Only in this

section

sk Log Numb

Pleasanton

Chemical Laboratories

Fax (510) 462-6283

& Associates

-1414 Stanislavs Street Prison California 93706

Client Name

Address



BSK AND ASSOCIATES

SAMPLE ANALYSIS SUMMARY PACKAGE

FOR

HEXAVALENT CHROMIUM, AND TOTAL CHROMIUM

JOB NAME:	BSK-OR-07282
QUOTATION NUMBER:	0220620
DOCUMENT FILE NUMBER:	0728314





ANALYTICAL LABORATORY 975 Kelly Johnson Drive, Las Vegas, Nevada 89119-3705

August 4, 1992

Mr. Frank Greguras BSK AND ASSOCIATES 1181 Quarry Lane #300 Pleasanton, CA 94566

RE:

Job Name:

BSK-OR-07282

Quotation No.:

Q220620

Document File No.:

0728314

The attached data package contains the results of analyses on samples that were submitted to the Lockheed Analytical Laboratory on July 28, 1992. The samples were received in good condition.

SUMMARY ANALYSIS STATEMENT:

The samples were analyzed within the method-specific holding times. The method blanks were free of contamination.

All Internal Quality Control were within acceptance limits.

If you have any questions concerning the analysis or the data please do not hesitate to contact Linda Cardenas, (702) 361-3955, ext. 273.

Release of this data report has been authorized by the Laboratory Director or the Director's designee as evidenced by the following signature.

Sincerely,

Michael J. Butler, Ph.D. Client Services Manager

MB/jsf

cc:

Client Services

Document Control Department

LAL Data Qualifiers

Quality Assurance Department

- B Any constituent that was also detected in the blank whose concentration was greater than the method detection limit (MDL) and contributed greater than 20 percent to the sample concentration.
- D Constituent detected in the diluted sample.
- E Constituent concentration exceeded the calibration/linear range.
- H Sample analysis performed outside of method-specified maximum holding time requirement.
- J Constituent detected at a level less than the reporting detection limit (RDL) and greater than or equal to the MDL (CLP data packages only).
- P Relative percent difference (RPD) for replicate analysis exceeded acceptance limits.
- R Data obtained from reanalysis.
- S Matrix spike recovery outside of acceptance limits.
- X Constituent confirmed by GC/MS or by second column organic analysis (CLP data packages only).

SAMPLE RESULTS

Client Sample ID: MW-2 #3, MW-2 #5	Date Collected: 7-27-92	Matrix: liquid
	Date Received: 7-28-92	

Constituents	Method	Concentration (mg/L)	Reporting Detection Limit (mg/L)	Data Qualifier(s)	Date Analyzed	LAL Sample ID
Chromium (VI)	7196	680	20	D(1:1000)	7-28-92	A29435
Chromium (total)	6010	670	10	D(1:1000)	7-30-92	A29436

Comments:		

QC DATA SUMMARY

LAL Batch ID(s): 728 bsk

				QC	Sample Analy	ses
						Matrix
	Client Sample	LAL Sample	Date	Reagent Blank	Duplicate Precision	Spike Recovery
Constituent	ÎD	ID .	Analyzed	(mg/L)	(% RPD)	(%)
Chromium (VI)	MW-2 #3	A29435	7-28-92	<0.020	2	103
Chromium (total)	MW-2 #5	A29436	7-30-92	<0.010	0	105

Comments:		
		 <u> </u>