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Woodward-Clyde Consultants

September 20, 1977

Project: 13895B

Electro-Coatings, Inc.
1605 School Street
Moraga, California 94556

Attention: Mr. Al J. Hartjen

Gentlemen:

REPORT OF FINDINGS
MONITORING WELL INSTALLATIONS
ELECTRO-COATINGS, INC.
Emeryville, California

As requested by Mr. John Kelly, previously with your firm, we are pleased to present the results of our observations of the monitoring well installations at the site of the Electro-Coatings Plant in Emeryville, California.

The purpose of our work is to observe the installation of the monitoring wells and to identify the existing soil and groundwater conditions at the well locations. The scope of our work includes detailed logging of the shallow and deep wells, on-site field inspection of the well installations, interpretation of field and water quality laboratory data collected by others, and preparation of this letter report which contains the results and conclusions of our work.

INTRODUCTION

Electro-Coatings, Inc. was charged with having discharged chromium-rich wastewater into a shallow well located beneath a leaking storage pit by the California Regional Water Quality Control Board Cleanup and Abatement Order No. 77-011. This action was precipitated when chromium-rich groundwater was detected in a construction pit well dewatering operation about 215 feet southwest of the chromium waste storage pit.

The Cleanup and Abatement Order requires that in addition to other items, a proposed groundwater monitoring plan be submitted for the Board's review and approval. According to the Board, such a plan should include a sufficient number of

exploratory shallow and deep wells to evaluate the extent of the heavy metal contamination to both shallow and deep groundwater aquifers. These wells should be constructed to permit both sampling and pumpout operations.

Monthly groundwater monitoring was ordered according to the Cleanup and Abatement Order beginning in August, 1977. Water samples were tested for concentration of heavy metals such as those used in the plating operation and for conductivity. Groundwater monitoring will continue as long as specified by the Regional Water Quality Control Board.

WORK BY OTHERS

Work performed by Electro-Coatings, Inc. includes the following items:

1. Conduct of the well canvass.
2. Selection of monitoring well locations.
3. Selection of size of the monitoring wells and their components.
4. Setting up of the water quality sampling program.
5. Recovering of groundwater samples from selected existing wells and from wells drilled for this study.
6. Assignment of testing of the groundwater samples.

The actual analyses of the water quality samples were performed by Engineering-Science, Inc., of Berkeley, California.

WELL INSTALLATIONS

Seven monitoring wells were drilled at the approximate locations shown on the Site Plan, Figure 1. The wells were drilled on August 15 and 16, 1977, by Pitcher Drilling Co., using a Failing 750 drill rig, and on August 18, 1977, by AAA Drilling Service, using a 6-inch continuous flight auger rig. All wells with the exception of the deep well, Number 3A, were drilled with a 6-inch diameter auger; Well 3A was drilled by rotary methods with a 4-7/8-inch fishtail bit. The shallow holes were logged in detail by returning the cuttings to the ground surface every 1 to 2 feet of drilling for soil identification. The rotary wash soil cuttings were identified as they were returned to the ground surface by the drilling fluid. The Logs of the Wells are presented as Figures 2 through 9.

After drilling of a well was completed, a 1-1/2-inch I. D. plastic casing, of which a selected portion was perforated, was inserted into the bore hole. Next, number 3 sand was placed around the slotted casing to act as a filter to protect the well from "silting in." The sand was generally placed from the bottom of the hole to a minimum of one foot above the top slot. The top of the sand was then covered with a minimum of 6 inches of bentonite to act as a seal between the sand and the cement ground which was placed in the remaining open portion of the hole.

The cement grout was generally poured into the shallow wells from the ground surface. Wells 3A and 4 were grouted from the bottom using a grout pipe. All holes were topped off with grout after the initial grout set to maintain the grout level near the ground surface. Caps were placed both on the bottom and on the top of the casing to protect the casing during and after installation. The details of the individual well installations are shown on the well logs, Figures 2 through 9.

SITE AND SOIL CONDITIONS

The Electro-Coatings site is located at the southwest corner of the intersection of Holden Street and Park Avenue in Emeryville, California. The site of the existing facilities is essentially level, with the ground surface elevations on the order of 15± feet, based on the contours shown on the USGS, Oakland West Quadrangle Sheet, revised 1968. Datum used is mean sea level.

The detailed soil conditions as revealed in the Logs of Wells are presented as Figures 2 through 9; idealized soil profiles, shown as Section A-A and B-B on the Site Plan, Figure 1, are presented as Figures 10 and 11. A detailed written description is included in the following paragraphs.

The well borings indicate that generally from about zero to 4 feet of stiff brown and gray silty clay fill was found beneath the existing asphalt pavement and subbase. Wells drilled on the western portion of the site indicated that that area was free of fill, and wells drilled on the eastern portion of the site exhibited a quite uniform 4 feet of fill. The first natural soil underlying the fill that was encountered in the wells was a stiff, black silty clay. This clay layer was found in all the well borings and varied in thickness from about 3 to 5 feet. With depth, the black silty clay graded into stiff, gray-blue or tan silty clay with traces of sand and gravel. These lighter colored silty clays ranged from about 3 to 7 feet in thickness.

Generally beneath these lighter colored clays grayish-brown, very stiff silty clay was encountered. This grayish-brown silty clay was noted to have traces to some sand or gravel, and groundwater entered the open well hole from this layer in Wells 2, 3B, 3C and 4. Groundwater was not noted entering the hole at this level in Wells 1, 3A and 5. Wells 2, 3B and 5 were terminated in this layer to monitor the various pervious strata encountered within the clay layer. The clay layer varied in thickness from 6 to 8 feet in those wells which extended through this brown clay; for those that did not, the layer is at least 5 to 12 feet thick. Borings 2 and 5 found thin clayey gravel layers or lenses contained within the brown clay layer. Well number 4 was stopped in a brown, medium dense, clayey silt layer underlying the brown clay.

Sand and gravel were encountered in Wells 3A and 3C at a depth of about 17 feet below the ground surface. The sand and gravel layer was shown to be 12 feet thick in Well 3A; Well 3C was terminated within this layer. The sand and gravel found was dense, brown in color, and contained a trace of clay.

Wells 1 and 3A indicate that underlying the sand and gravel in Boring 3A or the brown silty clay in Boring 1, medium stiff and stiff, blue silty clay was encountered and extended to the bottom of Well 1 at a depth of 30 feet. Well 3A, which extended through the blue clay, shows that the layer at this location is 15 feet thick. At various locations within this layer, thin sand, clayey sand or gravel lenses were found. Well 1 was terminated shortly after encountering one of these clayey sand and gravel layers at a depth of about 28 feet below the ground surface.

Fourteen feet of stiff, gray and brown, silty clay were found beneath the blue clay in Well 3A. It is possible that thin sand layers up to 4 inches thick may be found in the upper seven feet of this clay layer.

Beginning at a depth of 58 feet below the ground surface, a 3-foot thick dense, reddish-brown silty sand and gravel layer or lense was encountered. Well 3A was terminated shortly after penetrating this deepest monitored water-bearing layer.

Beneath the silty sand and gravel lense or layer, beginning at a depth of 61 feet in Well 3A, stiff, reddish-brown, silty clay was encountered and extended to the bottom of the monitoring well.

GROUNDWATER CONDITIONS

Groundwater was found in all of the wells drilled for the monitoring program. Static water levels measured September 9, 1977, more than 20 days after drilling, show that the water levels are between about 6-1/2 feet to 8 feet below the existing ground surface. These slight differences between water levels could possibly be accounted for by small changes in surface topography or by minor differences in driving head in the various monitored layers.

Wells 3B, 3C and 4 all exhibited rapid water inflow during drilling when the pervious water-bearing layer was encountered. In addition, the groundwater level measured at the end of drilling was as much as 3-1/2 feet above the static water level measured over 20 days after drilling. The rapid water inflow implies that the pervious water bearing layers are effectively confined by the impervious clay layers.

A discussion of the quality of the monitoring well water collected and tested by others is presented in the following section.

DISCUSSION OF FINDINGS

Soil Conditions

The soil conditions as indicated by the Logs of the Wells show the site is underlain primarily by clays within the depth of the wells. However, water bearing layers or lenses of sand and gravel or clayey gravel were encountered.

The geology of the Electro-Coatings, Inc. site has been discussed in detail in the previous report entitled "Report of Findings Data Study Regarding Subsurface Soil and Groundwater Conditions," by Woodward-Clyde Consultants, dated July 22, 1977.

Idealized soil profiles drawn by interpolation between wells (see Figures 10 and 11) indicate the rather lenticular nature of the natural alluvial and possibly marine soil deposits. However, the surface natural black clay layer does appear continuous across the site.

Groundwater Quality

Approximately three samples of the groundwater from wells located in the are surrounding the Electro-Coatings plant site have been collected and tested by others as discussed previously.

Eight samples have been collected and tested by others from the monitoring wells drilled during this study.

It is our understanding that the samples were collected from wells drilled for this study by first pumping the wells down to the bottom of the casing. Then the pump was turned off, allowing the well to recover. Finally the pump was restarted and the sample collected. It is not known by WCC how the samples were recovered from the existing wells A, F and I. The results of all tests to date are summarized in Table I.

Existing wells A and I (see Figure 12) which are upslope (east) and approximately 0.3 and 0.7 miles from the Electro-Coatings plant site, appear to be the best presently available sources of "base line" water quality in the general site area. However, it is not known to us at the present time from what depth the water is extracted. It is suggested that the depth and construction details of all the existing sampled wells be obtained, if possible, so that more meaningful comparisons of the water quality can be accomplished. The tests of the groundwater sampled in Wells A and I indicate that the water did not exceed mandatory levels as outlined by the Title 17, California Administrative Code, "Limiting Concentrations for Mineral Constituents in Drinking Water" for those particular tests performed for this study.

The test data for the abandoned but existing Well F, which is west of the subject site at Judson Steel Company, indicates that the water contains 0.07 mg/l of hexavalent chromium, which is slightly above the limiting 0.05 mg/l drinking water standards. In addition, quantities in excess of drinking water standards of both lead and cadmium were found. According to Electro-Coatings, Inc., neither lead nor cadmium are used in the plant operations.

Well 3A was found to have a concentration of 0.05 mg/l of hexavalent chromium, and, in addition, also met the drinking water standards for the other items tested. Wells 1, 2 and 3 were not tested for hexavalent chromium; however, the total chromium was evaluated. Total chromium concentrations of 0.2, 0.06 and 0.06 were found, respectively. Other metals were below limiting concentrations with the exception of Well 3B which indicates a concentration of 0.013 mg/l of cadmium.

Test data for Wells 3C, 4 and 5 indicate excessive concentrations of Hexavalent Chromium. Well 3C, on August 8, 1977, tested

at 12 mg/l; Well 4 tested at 67 mg/l; and Well 5 tested at 295 mg/l hexavalent chromium. Well 3C was sampled again on August 24, 1977, and showed a drop from 12 mg/l to 6.7 mg/l in Hexavalent Chromium.

CONCLUSIONS AND RECOMMENDATIONS

Based on the soil and groundwater conditions as revealed in the well logs and upon the available water quality data, it appears evident that the contaminated chromium-rich groundwater occurs at shallow depths, and that impervious clay layers have been successful in preventing contamination of deeper aquifers. Specifically, this is evident in Wells 3A and 3C; Well 3C is 20 feet in depth and monitors the thick sand and gravel layer; Well 3A is 65 feet deep and samples the groundwater in a sand and gravel layer between 58 and 61 feet. Test data indicate that the shallower well (3C) had a total chromium concentration of 18 mg/l, while Well 3A showed a total chromium concentration of 0.05 mg/l.

The water quality test data, when plotted geographically as shown on Figures 1 and 12, indicates a general trend of the highest concentration west of the plant site with decreasing concentration both in the north and south directions. These indications would suggest a westward movement of the groundwater and a dilution or attenuation of the chromium waste as it moves away from the source. In addition to these indications, the measured static groundwater levels between approximately Elevations 6 to 7.5 would indicate a hydraulic gradient, with mean sea level being Elevation 0, toward the Bay and probable westward groundwater movement. To further verify this conclusion, it is recommended that an accurate survey be conducted to establish the elevation of the top of the casing for the recently drilled wells. This will permit Electro-Coatings to establish an accurate elevation of the groundwater surface.

If it is assumed that the quantity of groundwater is directly proportional to the thickness of the pervious water bearing layer, (i.e., all pervious water bearing layers have the same aerial extent) it could be concluded that the quantity of highly contaminated chromium-rich groundwater is relatively small as indicated by the thin pervious lenses such as were found at Well 5.

However, the amount of contaminated groundwater, such as found in Well 3C (6.7 mg/l Hexavalent Chromium) may be sizable since the sand and gravel layer monitored by Well 3C is 12 feet thick

as indicated by Well 3A. It is interesting to note that over a period of six days the concentrations of the heavy metals first measured in Well 3C, on August 18, 1977, were reduced by about 1/2 or more when they were sampled and tested again on August 24, 1977. We would not anticipate that the thinner, less pervious layers would show such a rapid reduction in heavy metal concentrations. Continuing monitoring and water quality analyses may resolve this question.

Should it be necessary to further define the limits of the chromium-rich groundwater, it is recommended that efforts be concentrated west of the waste storage pit.

It is recommended that periodic monitoring be continued to establish both the seasonal variations in base line data and to evaluate the changes in concentration of the chromium waste in the monitoring wells. In addition, it is recommended that a series of water levels be taken periodically, say, every hour, in the wells drilled for this study over a period of one day to evaluate if tidal effects influence the water level readings.

It is recommended that care be taken during sampling to avoid contamination between wells. It is suggested that sampling proceed from the wells with the lowest heavy metal concentration in order of increasing concentrations, and that following the sampling the pipe and hoses be thoroughly cleaned before reuse. Placing the return pipe or hoses on the potentially contaminated ground surface should be avoided.

A well canvass has been conducted by Electro-Coatings, Inc. to establish the potential groundwater users in the general site area. The results of their work as presented in their letters to the California Regional Water Quality Control Board of July 14, and August 15, 1977, indicate that the only well which exists between the Bay and the Electro-Coatings site is the Judson Steel well which has been abandoned and was reactivated for this monitoring program.

It is understood that the appropriate agencies and individuals will be informed of the results of this study by the California Regional Water Quality Control Board.

LIMITATIONS

The findings and recommendations presented in this report are based on the assumption that soil and groundwater conditions

do not deviate appreciably from those disclosed in the borings. Our findings and conclusions are also based on the presently available water quality analyses. If additional data is inconsistent or contradictory with the present data, we should be notified so that additional findings and recommendations can be made, if necessary.

It has been a pleasure to provide this information for you. We would be pleased to provide additional geotechnical or groundwater services should the need arise. If you have any questions concerning this report, please contact the undersigned.

Sincerely yours,

Ted Splitter

Ted Splitter
Senior Staff Engineer

Carl Basore

Carl Basore
Senior Project Engineer

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Enclosures

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FIGURES

APPENDICES

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INTRODUCTION

American Environmental Management Corporation (AEMC) is pleased to present this groundwater monitoring report to Electro-Coatings, Inc. (ECI), to comply with the 10 July 1991 requirements of the California Regional Water Quality Control Board (CRWQCB) as authorized by ECI on 17 September 1991. This report discusses the refurbishment of the existing groundwater monitoring wells located at ECI's Emeryville site (Figure 1), the redevelopment and sampling of the wells, the well location survey, the results of past and present groundwater analyses, a summary of the findings and recommendations for future monitoring.

BACKGROUND

As explained in the Data Survey Report, Kleinfelder, Inc., 25 April 1991, the 1.0 acre Electro-Coatings, Inc. facility (Figure 2) consists of two parcels of property. Four buildings are located on the premises. The facility began operation in 1952 under the ownership of Industrial Hard Chrome Plating Corporation. In 1962, the business was purchased by ECI. One of the parcels is owned by ECI and one is leased.

From 1952 to August 1990, a hard chrome plating operation was conducted at the site. The operation included inside diameter honing, metal stripping and inside diameter chrome plating. Chromic acid waste was held in a storage tank located behind the building in a concrete lined pit. In 1974, the bottom seal of a sump in the pit was found to be leaking. The sump was subsequently reinforced with a double concrete liner, and a steel tank was placed into the pit to hold chromic acid wastes. The chromium waste storage area is identified on Figure 2.

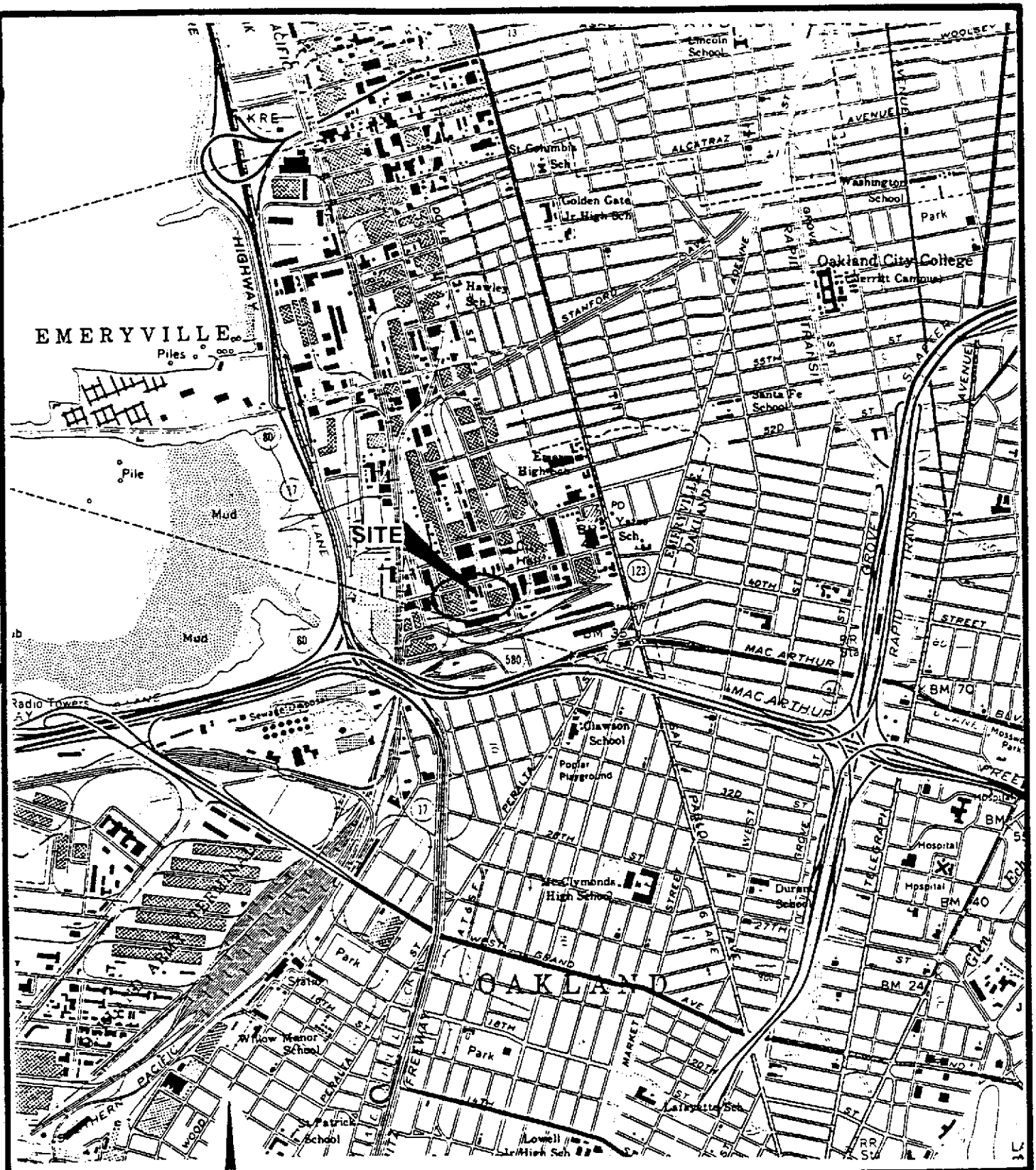

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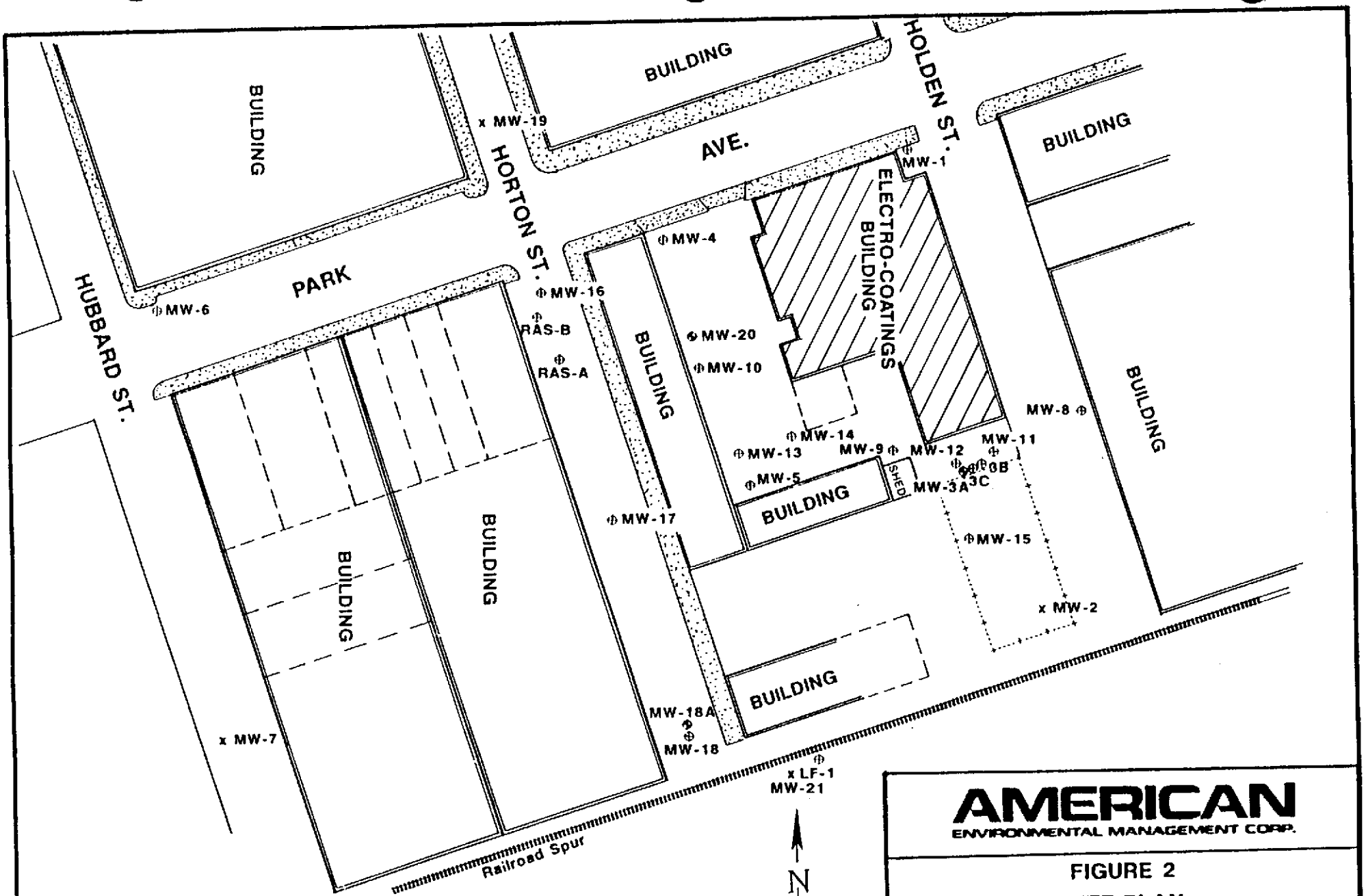
FIGURE 1
SITE LOCATION MAP

ELECTRO-COATINGS - Emeryville, Ca.

DRAWN BY:	DATE:	PROJECT NO.
GPM	12/17/91	83210



MONITORING WELL LOCATION & NUMBER

⊕ MW-3A	DEEP WELL LOCATION	⊕ RAS-A	WELL INSTALLATION UNKNOWN
x MW-2	WELL NOT LOCATED BY A.E.M.C. ON NOV. 5, 1991.	⊕ LF-1	LEVINE FRICKE WELL INSTALLATION
		⊕ MW-1	KLIENFELDER WELL INSTALLATION

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FIGURE 2
SITE PLAN

ELECTRO-COATING - Emeryville, CA.

DRAWN BY:	DATE:	PROJECT NO.
GPM	12/17/91	83210

Sometime in the late 1950s, an electroless nickel plating operation was installed and currently operates in the building located at 1421 Park Avenue. The operation consists of two electroless nickel baths, one in a 1,500-gallon tank and one in a 3,000-gallon tank, a nitric strip bath and a hydrochloric acid pickling bath. A vapor degreasing tank has been used as part of the nickel plating operation. At first, Trichloroethene (TCE) and later 1-1-1 Trichloroethane (TCA) were used to degrease metals prior to nickel plating. The use of the vapor degreaser has been discontinued. The current waste production of the nickel plating operation is nickel hydroxide which is hauled offsite to a recycler.

In 1977, the CRWQCB issued a Cleanup and Abatement Order (No. 77-011) which required ECI to cease onsite disposal of chromium-containing wastewater and to investigate groundwater pollution at and emanating from the site. ECI conducted a well canvass and retained Woodward-Clyde Consultants (WCC) in 1977, initially to observe and report on the installation and sampling of the first seven monitoring wells (wells MW-1, MW-2, MW-3A, MW-3B, MW-3C, MW-4, and MW-5) and later to install additional wells (wells MW-6 through MW-13) and to perform groundwater pump tests. In 1982, ECI retained Kleinfelder to continue the site investigation. Kleinfelder installed seven monitoring wells (wells MW-14 through MW-18) in 1982. In 1983, Kleinfelder installed four additional wells (wells MW-18A, MW-19, MW-20, and MW-21). In 1991, Kleinfelder took water level measurements in the accessible wells and prepared their data summary report dated 25 April 1991. In September 1991, AEMC was retained to conduct the work described hereafter in this report.

GROUNDWATER MONITORING WELL RESTORATION

WELL REPAIR SURVEY

On 7 October 1991, AEMC personnel conducted a well repair survey of each monitoring well. This survey identified the problems associated with each well. At the time of the survey, twenty wells were located and three wells were not found.

WELL REPAIR

The groundwater monitoring well repair began on 21 October 1991 with a general cleanup performed at each well location. This involved wire brushing the well covers, removal of accumulated soil, trash and water. All 4-inch diameter or larger wells required a new locking well cap; the smaller diameter wells have slip-on PVC caps. Three of the wells required repair to the casing. These wells had threaded ends which would not allow for locking caps to seal correctly; therefore, they were altered, and one casing had to be extended by 6 inches for ease of use. Ten monitoring wells required new watertight traffic rated well covers. In general, installation of these well covers involved jackhammering around the well and removal of the asphalt and soil, then installing the new well covers. These well covers were concreted into position and asphalt cold-patch was compacted at the surface flush to grade. A summary of the repairs and other well information is presented in Table 1 (page 7).

MONITORING WELL REDEVELOPMENT

Redevelopment of the monitoring wells started 28 October 1991. A surge block was used on all 4-inch or larger diameter wells to clean the well casing screens and to disturb the accumulated sediment in the well. A minimum of three volumes of water was then removed from each well. A 1-inch diameter by 4-foot long Voss Technologies polyethylene bailer was used on the 1.5-inch wells and the 4-inch or larger wells were redeveloped by

either a submersible pump or a 3-inch polyethylene bailer. The removed water was properly stored in labeled 55-gallon drums onsite until chemical analysis was completed and proper disposal could be evaluated. During this process, sampling tubing used by previous consultants was found in three wells.

WELL ELEVATION SURVEY

On 29 October 1991, Ron Archer Civil Engineer Inc., of Pleasanton, California, performed a monitoring well elevation and location survey. The survey was conducted to an accuracy of 0.01-feet (relative to Mean Sea Level). This firm is properly licensed to perform this type of work. Results of the survey are found in Appendix A.

TABLE 1

REPAIR STATUS OF MONITORING WELLS
AS OF 5 NOVEMBER 1991

Well No.	Inside Diameter	Original Depth (ft)	Current Depth (ft)	Depth to Water	REMARKS
1	4	29	29.85	6.40	New locking well cap, removed tubing from the well
2	NA	NA	NA	NA	Could not locate
3a	1.5	65	61	7.75	7" well cover installed
3b	1.5	18	17.37	7.10	7" well cover installed
3c	1.5	15	12.8	6.825	7" well cover installed
4	1.5	20.5	20.5	6.60	7" well cover installed
5	1.5	15	14.8	7.55	7" well cover installed
6	1.5	18	16.35	3.675	7" well cover installed, found tubing in well
7	NA	NA	NA	NA	Could not locate
8	1.5	22	20.90	6.575	7" well cover installed, extend casing, found tubing in the well
9	4	24.5	24.25	7.10	12" well cover installed, new locking well cap
10	4	24.5	23.8	7.15	12" well cover installed, new locking well cap
11	6	29	28	6.70	New locking well cap
12	4	28.5	26.3	6.85	New locking well cap
13	6	15.5	15	7.125	12" well cover installed, new locking well cap
14	4	25	23.6	7.075	New locking well cap
15	4	25	24.82	8.35	New locking well cap
16	4	22	25.1	4.80	New locking well cap
17	4	25	24.6	5.075	New locking well cap
18	4	25	25.6	5.375	New locking well cap, new well cover lid
18a	4	51.5	40.65	6.50	Repair casing, new locking well cap
19	NA	NA	NA	NA	Could not locate
20	4	53	46.6	3.55	Repair casing, new locking cap, grout inside casing
21	NA	NA	NA	NA	Could not locate

GROUNDWATER MONITORING WELL SAMPLING

Groundwater quality monitoring wells were sampled starting 29 October 1991 and ending 19 November 1991. Sampling consisted of determining the groundwater surface elevation, purging groundwater from the well and collecting a sample of groundwater after equilibration of the groundwater following purging.

WATER LEVEL MEASUREMENTS

Before sampling the groundwater, the depth to water in the well was measured to the nearest 0.01-foot and recorded. Depth-to-water measurements were obtained relative to a marked reference point on the top of the well casing using an electric Solinist water sounding device. The measuring equipment was thoroughly decontaminated before use in each well by washing it in a solution of Liqui-Nox or Alconox detergent and tap water, rinsing with tap water, and then rinsing with deionized water.

WELL PURGING

After development of the wells, they were purged and sampled. The volume of water contained in each well was calculated using the depth to water and the known depth to the bottom of the well. The groundwater wells were purged of groundwater before sample collection using various methods: a 1-inch diameter by 4-foot long Voss Technologies polyethylene bailer was used on the 1.5-inch wells; and, the combined use of a 3-inch polyethylene bailer or a submersible pump was used on the 4-inch or larger diameter wells. The above-described decontamination procedure was followed. The equivalent of at least three volumes of standing water was removed from the well before sampling. During purging, color and clarity were observed and the conductivity, pH, and temperature of the groundwater in the well were monitored using a calibrated Hydac meter. Groundwater was purged from the wells until conductivity, pH and temperature readings of the

groundwater in the well stabilized. The purged water was properly stored in labeled 55-gallon drums onsite until chemical analysis was completed and proper disposal could be evaluated. Table 2 (page 10) lists the parameters measured during the field monitoring event.

TABLE 2

GROUNDWATER SAMPLING FIELD DATA

WELL NO.	DATE	TIME	PURGE VOLUME (GALLONS)	TEMP °C	COND UMHO/CM	pH	OBSERVED CONDITIONS
1	11/15/91	10:50 am	44.76	61.1	818	6.89	SLIGHT YELLOW
				62.2	815	7.31	CLEAR
				64.0	816	7.12	CLEAR
3a	10/29/91	1:30 pm	14.52	76.5	534	7.37	CLEAR
				68.5	489	7.40	CLEAR
				64.5	649	7.26	CLEAR
3b	10/29/91	2:35 pm	2.90	69.4	1392	6.66	YELLOW
				68.7	1432	6.52	YELLOW
				68.5	1469	6.92	YELLOW
3c	10/29/91	1:45 pm	1.59	69.9	2345	7.15	TURBID GRAY
				69.4	2250	7.19	TURBID GRAY
				68.1	2215	7.25	TURBID GRAY
4	11/4/91	10:35 am	3.63	68.0	1247	6.72	LIGHT YELLOW
				68.2	1292	6.82	LIGHT YELLOW
				67.4	1310	6.95	LIGHT YELLOW
5	11/4/91	10:45 am	1.92	67.7	1430	6.12	YELLOW
				66.9	1468	6.48	YELLOW
				66.8	1444	6.32	YELLOW
6	11/4/91	12:35 pm	3.5	77.7	2199	7.10	YELLOW
				78.4	2330	7.40	YELLOW
				77.2	2369	7.20	YELLOW
8	11/4/91	12:45 pm	3.95	79.1	892	7.20	SLIGHTLY TURBID GRAY
				80.9	864	7.18	SLIGHTLY TURBID GRAY
				81.1	874	7.19	SLIGHTLY TURBID GRAY
9	10/30/91	1:58 pm	38.0	67.2	1092	6.52	TURBID YELLOW GRAY
				67.0	1036	6.04	TURBID YELLOW GRAY
				66.4	1104	6.31	TURBID YELLOW GRAY
10	11/7/91	12:00 pm	32.5	79.5	1890	6.39	YELLOW
				72.7	1980	6.27	YELLOW
				80.0	1800	6.29	YELLOW
11	11/15/91	11:30 am	94	73.5	842	6.71	SLIGHT YELLOW
				70.5	837	6.69	SLIGHT YELLOW
				69.1	833	6.64	SLIGHT YELLOW
12	11/11/91	11:15 am	37.7	69.2	1336	5.82	YELLOW
				72.6	1254	5.61	TURBID YELLOW
				70.9	1223	5.79	TURBID YELLOW

TABLE 2

GROUNDWATER SAMPLING FIELD DATA

WELL NO.	DATE	TIME	PURGE VOLUME (GALLONS)	TEMP °C	COND UMHO/CM	pH	OBSERVED CONDITIONS
14	11/11/91	1:45 pm	25.6	66.2	1595	6.67	YELLOW
				68.4	1684	6.82	YELLOW
				70.2	1632	6.75	YELLOW
15	11/12/91	1:30 pm	31.2	73.2	1522	6.11	TURBID SLIGHTLY YELLOW
				72.0	1315	6.25	TURBID SLIGHTLY YELLOW
				72.0	1283	6.36	TURBID SLIGHTLY YELLOW
16	11/19/91	1:35 pm	39.5	64.1	1819	6.36	TURBID YELLOW
				62.0	1822	6.39	TURBID YELLOW
				62.3	1783	6.51	TURBID YELLOW
17	11/19/91	1:30 pm	37.2	62.1	1937	6.46	YELLOW
				61.0	1917	6.51	YELLOW
				61.4	1924	6.49	YELLOW
18	11/19/91	10:15 am	39.6	63.5	1692	3.49	YELLOW
				63.2	1638	3.47	YELLOW
				63.6	1689	3.48	YELLOW
18a	11/19/91	10:15 am	66.1	64.7	593	7.64	SLIGHTLY TURBID GRAY
				62.2	559	7.46	CLEAR
				65.2	587	7.43	CLEAR
20	11/15/91	1:30pm	84.6	68.6	653	7.25	TURBID BROWN
				71.0	634	7.31	TURBID BROWN
				66.6	603	7.06	TURBID BROWN

GROUNDWATER SAMPLING PROTOCOL

Following purging of the groundwater, the water was allowed to recover to at least 80 percent of the original volume. The samples were collected by means of a new disposable bailer and new bailer line. The collected samples were transferred from the bailer to a laboratory-supplied container via a polyethylene sample spout at the base of the bailer. Two volatile organic analysis (VOA) vials were completely filled to allow no headspace in at least one, 1,000-milliliter polyethylene bottle.

Following transference, the sample containers were labeled, logged on a chain-of-custody form and placed in an ice chest to keep the samples cooled to 4° Centigrade during transport to a State of California Certified Analytical Laboratory for analysis.

ANALYTICAL RESULTS

GROUNDWATER SAMPLE ANALYSIS

The collected samples were analyzed for Purgeable Halocarbons using EPA Method 601, Total Chromium by EPA Method 6010, and Hexavalent Chromium. Duplicate samples were collected at three wells at the request of the Regional Water Quality Control Board. These samples were not filtered by the laboratory as all others were prior to analysis. The analyses were conducted by American Environmental Laboratories Corporation (State Certification No. 1233). Tables 3, 4, 5, 6, and 7 summarize the analytical results. Table 8 presents an explanation of abbreviations used. The laboratory analytical reports are presented in Appendix B.

TABLE 3

SUMMARY OF ANALYTICAL RESULTS - METALS
SHALLOW WELLS

Well No.	Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)	Analytical Lab (a*)
1	8/24/77	200	--	unknown
	9/15/81	<1	--	B&C
	10/11/81	1	--	B&C
	11/24/81	2.5	--	B&C
	12/21/81	32	--	B&C
	2/26/85	<20	<20	Anlab
	11/15/91	<50	50	AELC
2	8/24/77	60	--	unknown
	9/15/81	<1	--	B&C
	10/11/81	4	--	B&C
	11/24/81	1.1	--	B&C
	12/21/81	2	--	B&C
3B	8/24/77	60	--	unknown
	9/15/81	<1	--	B&C
	10/11/81	480	--	B&C
	11/24/81	2,000	--	B&C
	12/21/81	190	--	B&C
	10/29/91	110,000	100,000	AELC
3C	8/18/77	18,000	12,000	unknown
	8/24/77	7,100	6,700	unknown
	9/15/81	30,000	--	B&C
	10/11/81	28,000	--	B&C
	11/24/81	22,000	--	B&C
	12/21/81	17,000	--	B&C
	2/26/85	7,250	6,300	Anlab
	10/29/91	2,300	1,600	AELC
4	8/18/77	90,000	67,000	unknown
	9/15/81	57,000	--	B&C
	10/11/81	61,000	--	B&C
	11/24/81	56,000	--	B&C
	12/21/81	55,000	--	B&C
	2/26/85	59,000	59,000	Anlab
	11/4/91	22,000	22,000	AELC
5	8/24/77	360,000	295,000	unknown
	7/21/81	--	--	B&C
	10/11/81	880,000	2,240	B&C
	11/24/81	610,000	--	B&C
	12/21/81	280,000	--	B&C
	2/26/85	480,000	480,000	Anlab
	11/4/91	260,000	250,000	AELC

* See Table 8 for explanation

TABLE 3

SUMMARY OF ANALYTICAL RESULTS - METALS
SHALLOW WELLS

Well No.	Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)	Analytical Lab (a*)
6	9/15/81	630	--	B&C
	10/11/81	80	--	B&C
	11/24/81	790	--	B&C
	12/21/81	630	--	B&C
	2/19/85	3,330	3,300	Anlab
	11/5/91	31,000	25,000	AELC
7	9/15/81	<1	--	B&C
	10/11/81	<1	--	B&C
	12/21/81	3	--	B&C
8	9/15/81	<1	--	B&C
	10/11/81	2	--	B&C
	11/24/81	2.5	--	B&C
	12/21/81	70	--	B&C
	2/19/85	<20	<20	Anlab
	11/5/91	<50	<10	AELC
9	1/15/81	258,000	185,000	Ultrachem
	2/26/85	892,000	877,000	Anlab
	10/30/91	140,000	130,000	AELC
10	1/15/81	17,000	14,000	Ultrachem
	2/14/85	746,000	740,000	Anlab
	11/7/91	490,000	450,000	AELC
11 (d)	1/14/81	98,000	90,000	Ultrachem
(d)	1/14/81	127,000	98,000	Ultrachem
(d)	1/14/81	137,000	120,000	Ultrachem
(d)	1/14/81	145,000	124,000	Ultrachem
(d)	1/14/81	116,000	101,000	Ultrachem
(d)	1/14/81	122,000	122,000	Ultrachem
(d)	1/14/81	154,000	135,000	Ultrachem
(d)	1/14/81	134,000	134,000	Ultrachem
	7/21/81	340	34	B&C
	2/26/85	2,440	2,410	Anlab
	11/15/91	470	410	AELC
12	1/15/81	32,000	12,000	Ultrachem
	2/26/85	240,000	240,000	Anlab
	11/11/91	44,000	39,000	AELC
13	1/15/81	381,000	325,000	Ultrachem
	2/14/85	676,000	676,000	Anlab
	11/8/91	510,000	430,000	AELC

* See Table 8 for explanation

TABLE 3

SUMMARY OF ANALYTICAL RESULTS - METALS
SHALLOW WELLS

Well No.	Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)	Analytical Lab (a*)
14	2/26/85	654,000	632,000	Anlab
	11/11/91	320,000	310,000	AELC
15	2/19/85	<20	<20	Anlab
	11/12/91	<50	<10	AELC
16	2/14/85	460,000	460,000	Anlab
	11/19/91	240,000	290,000	AELC
17	2/14/85	90,000	38,200	Anlab
	11/19/91	250,000	300,000	AELC
18	2/19/85	60,500	55,000	Anlab
	11/19/91	31,000	24,000	AELC
19	6/22/83	<20	<20	Anlab
	2/19/85	20	20	Anlab
21	6/22/83	20	<20	Anlab
	2/19/85	40	<20	Anlab

* See Table 8 for explanation

TABLE 4

SUMMARY OF ANALYTICAL RESULTS - METALS
DEEP WELLS

Well No.	Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)	Analytical Lab (a*)
3A	8/18/77	50	--	unknown
	9/15/81	<1	--	B&C
	10/11/81	<1	--	B&C
	11/24/81	230	--	B&C
	12/21/81	14	--	B&C
	2/14/85	770	80	Anlab
	10/29/91	130	<500	AELC
18A	6/22/83	20	<20	Anlab
	2/26/85	<20	<20	Anlab
	11/19/91	<50	<10	AELC
20	6/21/83	1,300	1,200	B&C
	6/22/83	1,300	530	Anlab
	8/11/83	90	40	Anlab
	2/26/85	<20	<20	Anlab
	11/15/91	<50	14	AELC

See Table 8 for explanation

TABLE 5

SUMMARY OF ANALYTICAL RESULTS - METALS
SHALLOW WELLS

SAMPLES NOT FILTERED

Well No.	Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)	Analytical Lab (a*)
4	11/4/91	22,000	22,000	AELC
12	11/11/91	45,000	45,000	AELC
13	11/11/91	--	430,000	AELC

See Table 8 for explanation

TABLE 6

SUMMARY OF ANALYTICAL RESULTS - PURGEABLE HALOCARBONS
SHALLOW WELLS

Well No.	Date	Depth	1,1-DCE* (ug/l)	1,2-DCE (ug/l)	1,1-DCA (ug/l)	TCE (ug/l)	TCA (ug/l)	PCE (ug/l)	Methylene Chloride (ug/l)	Vinyl Chloride (ug/l)	Lab (a)
1	3/21/85	NA	<0.5	<0.5	<0.5	33	<0.5	21	<0.5	<0.5	B&C
	11/15/91	29.55	0.5	4.8	1.6	11	<0.5	0.6	<0.5	<1.0	AELC
3B	10/29/91	17.37	13	45	1.2	650	<0.5	6.8	<0.5	6.4	AELC
3C	6/11/85	NA	<0.5	23	<0.5	150	2.4	1.7	<0.5	<0.5	B&C
	10/29/91	12.8	61	46	5.4	180	34	1.7	<0.5	18	AELC
4	11/4/91	20.5	<5.0	260	<5.0	2,100	<5.0	31	<5.0	10	AELC
5	11/4/91	14.8	4.2	120	42	410	1.3	8.9	<0.5	54	AELC
6	6/11/85	NA	<5	54	<5	220	3.9	<5	<5	<5	B&C
	11/5/91	16.35	29	78	<0.5	420	6.4	5.9	<0.5	19	AELC
8	6/10/85	NA	<1	19	1	46	<1	18	<1	3	B&C
	6/11/85	NA	1	32	1	93	<0.5	35	<5	--	CT
	11/5/91	20.90	0.8	23	1.8	38	<0.5	35	<0.5	4.9	AELC
9	6/13/85	NA	<5	31	<5	700	<5	26	20	<5	B&C
	10/30/91	24.25	<0.5	13	1.3	200	<0.5	11	<0.5	<1.0	AELC
10	6/12/85	NA	<50	<50	<50	5,100	<50	81	<50	<50	B&C
(b)	6/12/85	NA	<50	600	<50	12,000	<50	<50	<500	--	CT
	11/7/91	23.8	3,800	640	<50	14,000	6,500	<50	<50	<100	AELC
11	6/12/85	NA	<0.5	3.4	<0.5	19	1.3	5.3	7.6	<0.5	B&C
	11/15/91	28.0	<0.5	3.1	<0.5	10	<0.5	1.5	<0.5	<1.0	AELC
12	11/11/91	26.3	3.3	9.0	1.3	130	4.6	10	<1.0	<2.0	AELC

* See Table 8 for explanation

TABLE 6

SUMMARY OF ANALYTICAL RESULTS - PURGEABLE HALOCARBONS
SHALLOW WELLS

Well No.	Date	Depth	1,1-DCE* (ug/l)	1,2-DCE (ug/l)	1,1-DCA (ug/l)	TCE (ug/l)	TCA (ug/l)	PCE (ug/l)	Methylene Chloride (ug/l)	Vinyl Chloride (ug/l)	Lab (a)
13	11/8/91	15.0	6.8	89	15	630	<5.0	8.9	<5.0	20	AELC
14	3/21/85	NA	<0.5	<0.5	<0.5	580	<0.5	26	<0.5	<0.5	B&C
	11/11/91	23.6	13	150	19	4,300	17	13	<5.0	30	AELC
15	6/13/85	NA	<50	410	<50	1,200	<50	<50	<50	<50	B&C
	11/12/91	24.82	<5.0	220	<5.0	650	<5.0	<5.0	<5.0	<10	AELC
16	3/21/85	NA	<0.5	<0.5	<0.5	360	<0.5	42	<0.5	<0.5	B&C
	11/19/91	25.10	1,200	2,200	<5.0	19,000	1,300	<5.0	<5.0	420	AELC
17	6/13/85	NA	46	23	<5	200	22	18	<5	<5	B&C
	11/19/91	24.6	54	54	7.8	460	30	8.9	<5.0	420	AELC
18	6/12/85	NA	<0.5	140	<0.5	430	52	32	<0.5	<0.5	B&C
(c)	6/12/85	NA	<50	<50	<50	340	66	<50	<500	--	CT
	11/19/91	25.6	<5.0	160	<5.0	560	23	11	<5.0	30	AELC
19	3/21/85	NA	<0.5	<0.5	<0.5	91	<0.5	23	<0.5	<0.5	B&C
21	6/13/85	NA	<50	800	<50	2,200	110	<50	380	<50	B&C

* See Table 8 for explanation

TABLE 7

SUMMARY OF ANALYTICAL RESULTS - PURGEABLE HALOCARBONS
DEEP WELLS

Well No.	Date	Depth	1,1-DCE* (ug/l)	1,2-DCE (ug/l)	1,1-DCA (ug/l)	TCE (ug/l)	TCA (ug/l)	PCE (ug/l)	Methylene Chloride (ug/l)	Vinyl Chloride (ug/l)	Lab (a)
3A	10/29/91	61.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	AELC
18A	6/13/85	NA	<0.5	<0.5	<0.5	10	<0.5	<0.5	2.4	<0.5	B&C
	11/19/91	40.65	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	AELC
20	11/15/91	46.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	AELC

* See Table 8 for explanation

TABLE 8

EXPLANATION OF TERMS

NOTES
Chemical abbreviations:

DCE	Dichloroethene
DCA	Dichloroethane
TCE	Trichloroethene
TCA	Trichloroethane (1,1,1 isomer)
PCE	Tetrachloroethene
--	No data, Not analyzed
NA	Not available
ug/l	microgams per liter (equal to parts per billion)
<10	Not detected at or above the indicated laboratory detection limit

a Analytical laboratories:

Anlab	Anlab; Data from Kleinfelder files B-1132-3, B-1132-4, and B-1132-5.
AELC	American Environmental Laboratories Corporation (State Certification No. 1233)
B&C	Brown and Caldwell. Data from Kleinfelder files B-1132-3, B-1132-4 and B-1132-5.
CT	Curtis and Tompkins. Data from Kleinfelder files B-1132-3, B-1132-4 and B-1132-5.
Ultrachem	Ultrachem Laboratories; Data reported by Woodward Clyde Consultants. Reported in their Report on Phase I Groundwater Investigation, E-C Industries, Emeryville, California 30 March 1981.

b Chloroform reported at a concentration of 88 ug/l

c Chloroform reported at a concentration of 84 ug/l

d Data from sequential samples collected during a pumping test conducted by Woodward Clyde Consultants. Samples collected hourly from 10:30 am to 4:30 pm and at 5:00 pm. Reported in Woodward Clyde Consultants, Report of Findings, Monitoring Well Installations, Electro-Coatings, Inc., Emeryville, California, 20 September 1977.

CONCLUSIONS AND RECOMMENDATIONS

DISCUSSION

Four of the twenty-four existing groundwater monitoring wells could not be located. As listed in Table 1 and shown in Figure 2, they are the offsite wells, numbers MW-2, MW-7, MW-19 and MW-21. In general, the found monitoring wells were in good condition. The major repair consisted of installing watertight well covers and locking well caps. A few feet of silt had accumulated in the wells which was removed to the extent possible. Table 1 lists the original and current well depths. The deep wells (MW-3A, MW-18A and MW-20) have from 4 to 11 feet of silt remaining which will require jetting techniques to remove. The amount of silt remaining, however, appears to have little effect on the magnitude of the laboratory analytical results.

Shallow groundwater surface contours determined from measurements taken on 5 November 1991 are shown on Figure 3. The groundwater surface slopes downward to the west-northwest at a gradient of approximately 0.58 percent. This also indicates the groundwater flow direction. These contours are similar to the previous contours shown on Plates 6, 7 and 8, Appendix C, prepared by Kleinfelder, Inc., for the years 1981, 1983, 1985 and 1991, respectively.

Figure 3 also shows the location of the deep wells (MW-3A, 18A and MW-20) and the corresponding groundwater elevation. The elevation difference between the deeper MW-3A and the nearby shallower MW-3B, the deeper MW-18A and the shallower MW-18, suggests a downward gradient at these locations. The elevation difference between the deeper MW-20 and the shallower MW-10 suggest an upward gradient.

Total Chromium isocons in shallow groundwater are shown in Figure 4 for the current sampling. When compared with the isocons from previous years, Plates 10, 11 and 12, for

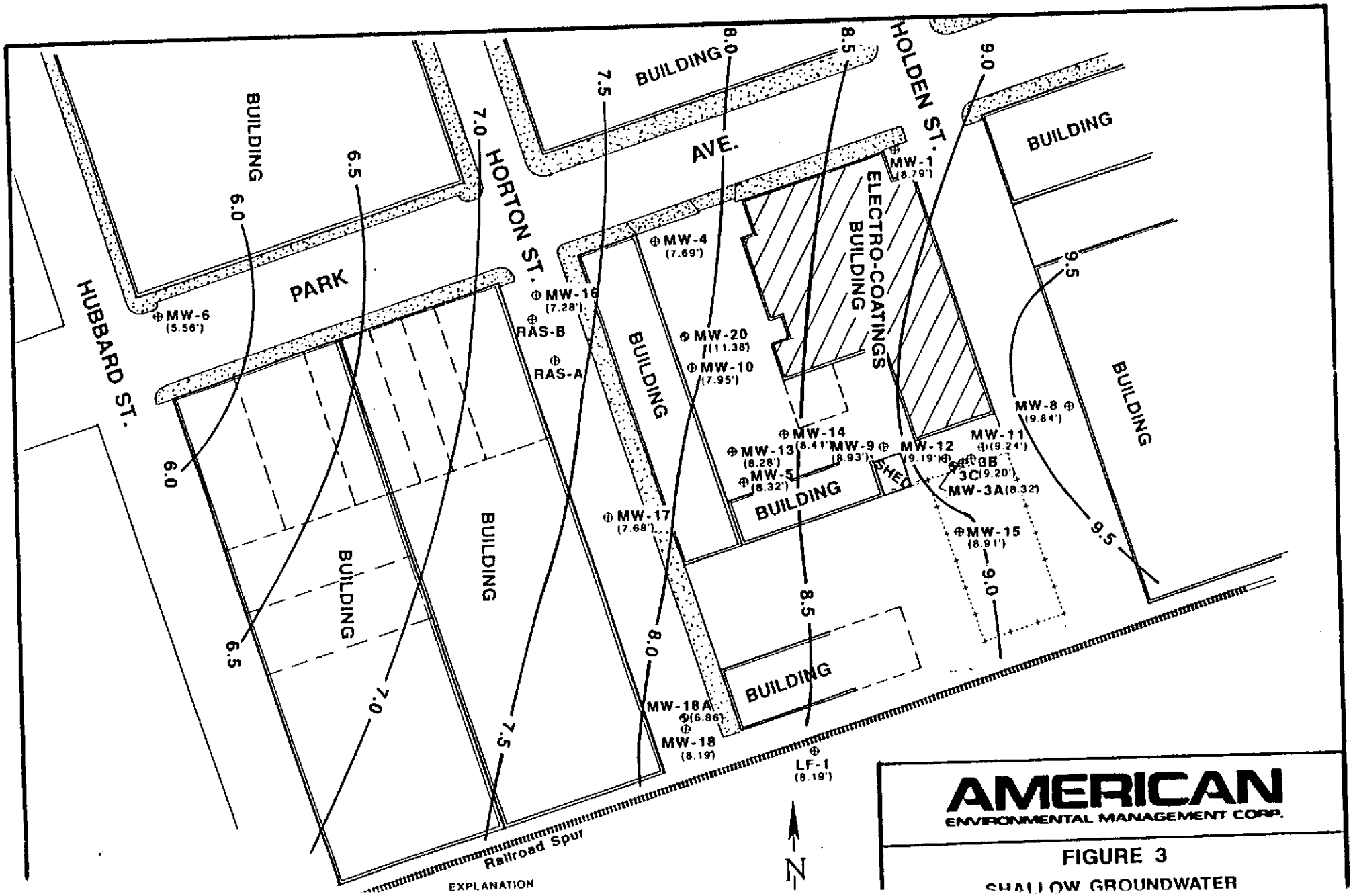

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FIGURE 3

SHALLOW GROUNDWATER

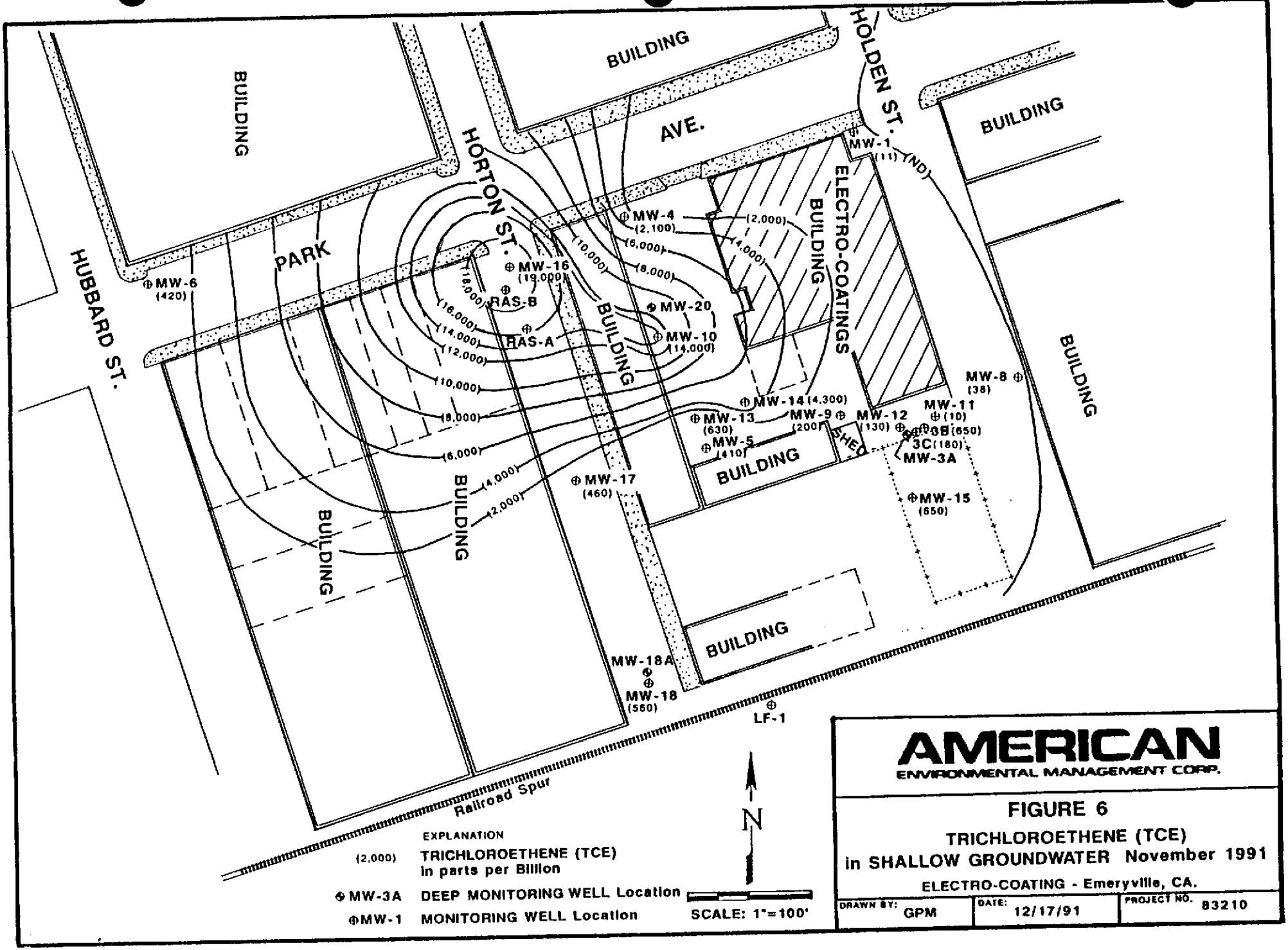

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FIGURE 6

TRICHLOROETHENE (TCE) in SHALLOW GROUNDWATER November 1991

ELECTRO-COATING - Emeryville, CA.

DRAWN BY:	DATE:	PROJECT NO.
GPM	12/17/91	83210

RECOMMENDATIONS

- AEMC recommends that monitoring wells MW-7, MW-19 and MW-21 (Figure 2) be located and included in the next sampling period. Special locating devices such as a magnetometer or ground-penetrating radar will be needed. The wells, if found, will have to be repaired, redeveloped and surveyed for location and elevation. If MW-21 cannot be found, well LF-1 should be used. Preliminary discussion with the Levine-Frickie project geologist for the owner of the well indicates that permission can be obtained for AEMC to sample well LF-1.

- AEMC recommends that selected wells be sampled on a semi-annual basis. The selected wells are:

SHALLOW	DEEP
MW-1	MW-3A
MW-8	MW-18A
MW-21/LF-1	MW-20
MW-18	
MW-12	
MW-14	
MW-10	
MW-4	
MW-19	
MW-16	
MW17	
MW-6	
MW-7	

The remaining wells should be maintained for future use as applicable. Monitoring of the selected wells will provide groundwater quality information for both the shallow and deep aquifers; and, the distribution of the wells will provide for aerial coverage of the groundwater plume.

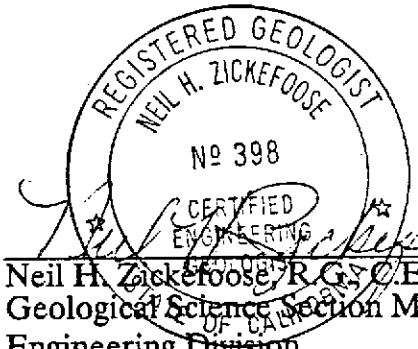
- The groundwater analyses should include Total Chromium (EPA Method 6010) and Purgeable Halocarbons (EPA Method 601).

- An annual groundwater monitoring report summarizing the past and current results should be prepared including drawings showing the groundwater elevation contours, isocons for Total Chromium and Trichloroethene (TCE) and further recommendations relating to the plume definition as applicable.

STANDARD OF CARE

This report has been prepared for Electro-Coatings Inc., Emeryville, California to summarize the Groundwater Monitoring Program at Emeryville, California. The work performed by American Environmental Management Corporation was based on currently available information and was developed in accordance with currently acceptable engineering practices at that time and location. Other than this, no warranty is implied or extended. This report was prepared under the direction of a California Registered Geologist.

AMERICAN ENVIRONMENTAL MANAGEMENT CORPORATION



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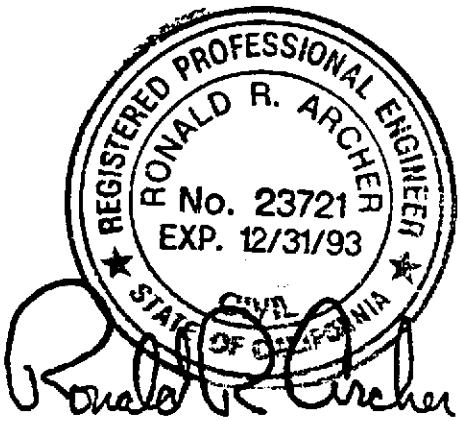


OCTOBER 29, 1991 JOB NO. 1856

ELEVATIONS OF EXISTING MONITOR WELLS AT AND IN THE VICINITY OF THE ELECTRO-COATINGS FACILTY, PLANT NO.22, LOCATED AT 1421 PARK AVENUE, AT HOLDEN STREET, CITY OF EMERYVILE, ALAMEDA COUNTY, CALIFORNIA.

FOR: AMERICAN ENVIRONMENTAL MANAGEMENT CORP.
PROJECT NO. 10-2200-01

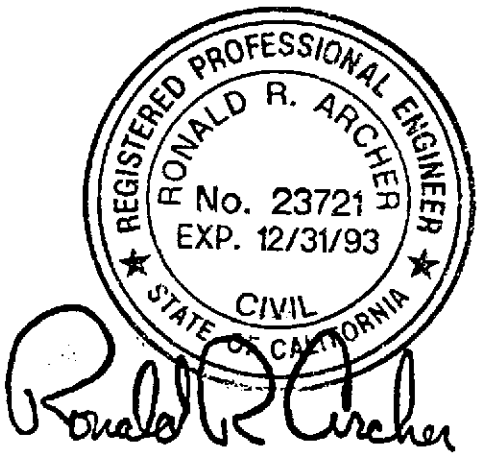
BENCHMARK: #H-130 (1932)
A FOUND U.S.G.S. DISC STAMPED H-130 SET APPROXIMATELY 3 FT. ABOVE GROUND ON THE NORTH FACE OF THE TOWN HALL BUILDING LOCATED AT 1333 PARK AVENUE AT HOLLIS STREET AT THE NORTHEAST CORNER OF BUILDING. ELEVATION TAKEN AS 24.514 M.S.L. 1974 ADJUSTMENT.

MONITOR WELL DATA TABLE

WELL NO.	ELEVATION	DESCRIPTION
MW1	15.19	TOP OF PVC CASING
	15.16	TOP OF CONCRETE
MW-3A	16.10	TOP OF PVC CASING
	16.50	TOP OF PK NAIL
MW-3B	16.30	TOP OF PVC CASING
	16.54	TOP OF PK NAIL
MW-3C	16.21	TOP OF PVC CASING
	16.55	TOP OF PK NAIL
MW4	14.29	TOP OF PVC CASING
	15.50	TOP OF PK NAIL
MW5	15.87	TOP OF PVC CASING
	15.95	TOP OF PK NAIL

MONITOR WELL DATA TABLE

WELL NO.	ELEVATION	DESCRIPTION
MW6	9.24	TOP OF PVC CASING
	9.53	TOP OF PK NAIL
MW8	16.42	TOP OF PVC CASING
	16.63	TOP OF PK NAIL
MW9	16.03	TOP OF PVC CASING
	16.43	TOP OF PK NAIL
MW10	15.10	TOP OF PVC CASING
	15.33	TOP OF PK NAIL
MW11	15.94	TOP OF PVC CASING
	16.38	TOP OF PK NAIL
MW12	16.04	TOP OF PVC CASING
	16.47	TOP OF PK NAIL
MW13	15.37	TOP OF PVC CASING
	15.79	TOP OF PK NAIL
MW14	15.49	TOP OF PVC CASING
	15.76	TOP OF PK NAIL



MONITOR WELL DATA TABLE

WELL NO.	ELEVATION	DESCRIPTION
MW15	17.26	TOP OF PVC CASING
	17.69	TOP OF PK NAIL
MW16	12.08	TOP OF PVC CASING
	12.28	TOP OF PK NAIL
MW17	12.76	TOP OF PVC CASING
	12.92	TOP OF PK NAIL
MW18	13.57	TOP OF PVC CASING
	13.71	TOP OF PK NAIL
MW-18A	13.36	TOP OF PVC CASING
	13.70	TOP OF PK NAIL
MW20	14.93	TOP OF PVC CASING
	15.17	TOP OF PK NAIL
RAS-A	12.13	TOP OF PVC CASING
	12.43	TOP OF BOX
LF-1	14.30	TOP OF IRON CASING
	13.26	"NORTH" GROUND

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

11/25/91

Attn : MARK REISIG

Re: *Project :* ELECTRO COATINGS - EMERYVILLE
Project No. : 83210
*Chain of Custody number :*30363
Date Samples Received : 11/11/91 *Job No.:* 83210
No. Samples Received : 3 *AELC Lab No. :* L7703

These samples were received by American Environmental Laboratories in a chilled, intact state, and accompanied by valid chain of custody documentation.

The following analyses were performed on the above referenced project:

No. of Samples	*Analysis*
3	Chromium by EPA Method 6010
3	TTLC Acid Digestion
3	Chrome VI Analysis
2	Halogenated Volatiles by EPA Method 601

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

Sincerely,

George Hampton

Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ELECTRO COATINGS - EMERYVILLE

Date Sampled: 11/11/91
Date Received: 11/11/91
Date Digested: 11/12/91
Date Analyzed: 11/12/91
Date Reported: 11/25/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 364-8872

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 30363
AELC ID No.: L7703
Batch No.: 53186
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Cr (Chromium) CAS No. 7440-47-3 (mg/L)
MW-12	1C	45
MW-12 filtered	2B	44
MW-14	3C	320
Rep. Limit		0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ELECTRO COATINGS - EMERYVILLE

Date Analyzed: 11/12/91
Date Reported: 11/25/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 364-8872

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 30363
AELC ID No.: L7703
Batch No.: 53186
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Cr (Chromium)	7440-47-3	ND	0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ELECTRO COATINGS - EMERYVILLE

Date Digested: 11/12/91
Date Analyzed: 11/12/91
Date Reported: 11/25/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 364-8872

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 30363
AELC ID No.: L7703
Batch No.: 53186
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	109

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	107

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Cr (Chromium)	7440-47-3	2

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ELECTRO COATINGS - EMERYVILLE

Date Reported: 11/25/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 364-8872

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 30363
AELC ID No.: L7703
Batch No.: 53186
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	102

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium Analysis, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ELECTRO COATINGS - EMERYVILLE

Date Sampled: 11/11/91
Date Received: 11/11/91
Date Prepared: N/A
Date Analyzed: 11/11/91
Date Reported: 11/25/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 364-8872

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 30363
AELC ID No.: L7703
Batch No.: 53183
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Hexavalent Chromium (mg/L)
MW-12	1B	45
MW-12 filtered	2A	39
MW-14	3B	310
Rep. Limit		0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium Analysis, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ELECTRO COATINGS - EMERYVILLE

Date Analyzed: 11/11/91
Date Reported: 11/25/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 364-8872

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 30363
AELC ID No.: L7703
Batch No.: 53183
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Hexavalent Chromium	N/A	ND	0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium Analysis, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ELECTRO COATINGS - EMERYVILLE

Date Prepared: N/A
Date Analyzed: 11/11/91
Date Reported: 11/25/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 364-8872

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 30363
AELC ID No.: L7703
Batch No.: 53183
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Hexavalent Chromium	N/A	0.20	100

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Hexavalent Chromium	N/A	0.20	100

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Hexavalent Chromium	N/A	0

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium Analysis, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ELECTRO COATINGS - EMERYVILLE

Date Reported: 11/25/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 364-8872

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 30363
AELC ID No.: L7703
Batch No.: 53183
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Hexavalent Chromium	N/A	0.20	99

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ELECTRO COATINGS - EMERYVILLE

Date Sampled: 11/11/91
Date Received: 11/11/91
Date Extracted: 11/19/91
Date Analyzed: 11/19/91
Date Reported: 11/22/91
Client ID No.: MW-12

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 364-8872

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 30363
AELC ID No.: L7703-1A
Batch No.: 8338
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	110

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	1.0
Bromoform	75-25-2	ND	2.0
Bromomethane	74-83-9	ND	2.0
Carbon tetrachloride	56-23-5	ND	1.0
Chlorobenzene	108-90-7	ND	1.0
Chloroethane	75-00-3	ND	2.0
2-Chloroethyl vinyl ether	110-75-8	ND	2.0
Chloroform	67-66-3	ND	1.0
Chloromethane	74-87-3	ND	5.0
Dibromochloromethane	124-48-1	ND	1.0
Dibromomethane	74-95-3	ND	1.0
1,2-Dichlorobenzene	95-50-1	ND	1.0
1,3-Dichlorobenzene	541-73-1	ND	1.0
1,4-Dichlorobenzene	106-46-7	ND	1.0
Dichlorodifluoromethane	75-71-8	ND	2.0
1,1-Dichloroethane	75-34-3	1.3	1.0
1,2-Dichloroethane	107-06-2	2.6	1.0
1,1-Dichloroethene	75-35-4	3.3	1.0
1,2-Dichloroethene, total	540-59-0	9.0	1.0
1,2-Dichloropropane	78-87-5	ND	1.0
cis-1,3-Dichloropropene	10061-01-5	ND	1.0
trans-1,3-Dichloropropene	10061-02-6	ND	1.0
Methylene chloride	75-09-2	ND	1.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.0
Tetrachloroethene	127-18-4	10	1.0
1,1,1-Trichloroethane	71-55-6	4.6	1.0
1,1,2-Trichloroethane	79-00-5	ND	1.0
Trichloroethene	79-01-6	130	1.0
Trichlorofluoromethane	75-69-4	ND	1.0
1,1,2-Trichlorotrifluorethane	76-13-1	ND	1.0
Vinyl chloride	75-01-4	ND	2.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ELECTRO COATINGS - EMERYVILLE

Date Sampled: 11/11/91
Date Received: 11/11/91
Date Extracted: 11/19/91
Date Analyzed: 11/19/91
Date Reported: 11/22/91
Client ID No.: MW-14

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 364-8872

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 30363
AELC ID No.: L7703-3A
Batch No.: 8338
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	99

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	5.0
Bromoform	75-25-2	ND	10
Bromomethane	74-83-9	ND	10
Carbon tetrachloride	56-23-5	ND	5.0
Chlorobenzene	108-90-7	ND	5.0
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	10
Chloroform	67-66-3	ND	5.0
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5.0
Dibromomethane	74-95-3	ND	5.0
1,2-Dichlorobenzene	95-50-1	ND	5.0
1,3-Dichlorobenzene	541-73-1	ND	5.0
1,4-Dichlorobenzene	106-46-7	ND	5.0
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	19	5.0
1,2-Dichloroethane	107-06-2	ND	5.0
1,1-Dichloroethene	75-35-4	13	5.0
1,2-Dichloroethene, total	540-59-0	150	5.0
1,2-Dichloropropane	78-87-5	ND	5.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0
Methylene chloride	75-09-2	ND	5.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0
Tetrachloroethene	127-18-4	13	5.0
1,1,1-Trichloroethane	71-55-6	17	5.0
1,1,2-Trichloroethane	79-00-5	ND	5.0
Trichloroethene	79-01-6	4300	5.0
Trichlorofluoromethane	75-69-4	ND	5.0
1,1,2-Trichlorotrifluorethane	76-13-1	ND	5.0
Vinyl chloride	75-01-4	30	10

ND = Not detected at or above indicated Reporting Limit
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Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ELECTRO COATINGS - EMERYVILLE

Date Analyzed: 11/19/91
Date Reported: 11/22/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 364-8872

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 30363
AELC ID No.: L7703
Batch No.: 8338
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	96

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ELECTRO COATINGS - EMERYVILLE

Date Analyzed: 11/19/91
Date Reported: 11/22/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 364-8872

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 30363
AELC ID No.: L7703
Batch No.: 8338
Matrix: WATER

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	105

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Chlorobenzene	108-90-7	20	87
1,1-Dichloroethene	75-35-4	20	79
Trichloroethene	79-01-6	20	92

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	103

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Chlorobenzene	108-90-7	20	91
1,1-Dichloroethene	75-35-4	20	78
Trichloroethene	79-01-6	20	97

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Chlorobenzene	108-90-7	4
1,1-Dichloroethene	75-35-4	1
Trichloroethene	79-01-6	5

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ELECTRO COATINGS - EMERYVILLE

Date Reported: 11/22/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 364-8872

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 30363
AELC ID No.: L7703
Batch No.: 8338
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Chlorobenzene	108-90-7	20	94
1,1-Dichloroethene	75-35-4	20	96
Trichloroethene	79-01-6	20	98

AMERICAN ENVIRONMENTAL LABORATORIES CORP.

CHAIN OF CUSTODY

LOG NO. 30363

CLIENT NAME: Electro Coating
ADDRESS: Emeryville (EC-E)
PROJECT NAME: Electro Coatings - Emeryville
PROJECT MANAGER: Mark Reisig PHONE #
SAMPLED BY: Mark Reisig
JOB DESCRIPTION: Water Sampling
SITE LOCATION: Emeryville

CLIENT JOB NUMBER: 8321C

DESTINATION LABORATORY
- ☐ AELC 3249 FITZGERALD RD. RANCHO CORDOVA, CA. 95742
- ☐ OTHER

FIELD CONDITIONS:

COMPOSITE:

SPECIAL INSTRUCTIONS:

DATE	TIME	SAMPLE IDENTIFICATION	SAMPLE DEPTH	SAMPLE METHOD	SAMPLE TYPE	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Total Chrome	Hex Chrome	EPA Method 601	TURN AROUND TIME 24 HOURS	48 HOURS	1 WEEK	2 WEEKS	NOTE / FIELD READINGS
11/1/91	-	MW-12	-	-	water	3	2 VOA 1 poly	3	✓	✓	✓				✓	Filter and preserve
11/1/91	-	MW-12	-	-	water	1	1 poly	3	✓	✓	✓				✓	Preserve
11/1/91	-	MW-14	-	-	water	3	2 VOA 1 poly	3	✓	✓	✓				✓	Preserve

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4)

RELINQUISHED BY (SIGN)	PRINT NAME/COMPANY	DATE/TIME	REC'D BY (SIGN)	PRINT NAME/COMPANY
Mark R. Reisig	AEMC	11/1/91 5:30pm		NATHAN PHILLIPS / AELC

REC'D AT LAB BY: DATE/TIME: CONDITIONS/COMMENTS:

SHIPPED: ☐ FED X ☐ UPS ☒ OTHER CLIENT AIRBILL #

LAB

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

11/22/91

AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Attn : Mark Reisig

Re: *Project* : ECI-Emeryville
Project No. : 83210
Chain of Custody number :20668
Date Samples Received : 11/08/91 *Job No.*: 83210
No. Samples Received : 2 *AELC Lab No.* : L7696

These samples were received by American Environmental Laboratories in a chilled, intact state, and accompanied by valid chain of custody documentation.

The following analyses were performed on the above referenced project:

No. of Samples	*Analysis*
1	Chromium by EPA Method 6010
2	Chrome VI Analysis
1	Halogenated Volatiles by EPA Method 601

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

Sincerely,

George Hampton

Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ECI-Emeryville

Date Sampled: 11/08/91
Date Received: 11/08/91
Date Digested: 11/13/91
Date Analyzed: 11/13/91
Date Reported: 11/21/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20668
AELC ID No.: L7696
Batch No.: 53191
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Cr (Chromium) CAS No. 7440-47-3 (mg/L)
MW-13	1C	510
Rep. Limit		0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ECI-Emeryville

Date Analyzed: 11/13/91
Date Reported: 11/21/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20668
AELC ID No.: L7696
Batch No.: 53191
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Cr (Chromium)	7440-47-3	ND	0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ECI-Emeryville

Date Digested: 11/13/91
Date Analyzed: 11/13/91
Date Reported: 11/21/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20668
AELC ID No.: L7696
Batch No.: 53191
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	108

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	99

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Cr (Chromium)	7440-47-3	9

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ECI-Emeryville

Date Reported: 11/21/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20668
AELC ID No.: L7696
Batch No.: 53191
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	105

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ECI-Emeryville

Date Sampled: 11/08/91
Date Received: 11/08/91
Date Prepared: N/A
Date Analyzed: 11/08/91
Date Reported: 11/21/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20668
AELC ID No.: L7696
Batch No.: 53171
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Hexavalent Chromium (mg/L)
MW-13	1B	430
MW-13 filtered	2A	430
Rep. Limit		0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ECI-Emeryville

Date Analyzed: 11/08/91
Date Reported: 11/21/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20668
AELC ID No.: L7696
Batch No.: 53171
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Hexavalent Chromium	N/A	ND	0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ECI-Emeryville

Date Prepared: N/A
Date Analyzed: 11/08/91
Date Reported: 11/21/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20668
AELC ID No.: L7696
Batch No.: 53171
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Hexavalent Chromium	N/A	0.20	100

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Hexavalent Chromium	N/A	0.20	100

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Hexavalent Chromium	N/A	0

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ECI-Emeryville

Date Reported: 11/21/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20668
AELC ID No.: L7696
Batch No.: 53171
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Hexavalent Chromium	N/A	0.20	100

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

Project: ECI-Emeryville

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20668
AELC ID No.: L7696-1A
Batch No.: 8313
Matrix: WATER

Date Sampled: 11/08/91
Date Received: 11/08/91
Date Extracted: 11/14/91
Date Analyzed: 11/14/91
Date Reported: 11/20/91
Client ID No.: MW-13

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	97

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	5.0
Bromoform	75-25-2	ND	10
Bromomethane	74-83-9	ND	10
Carbon tetrachloride	56-23-5	ND	5.0
Chlorobenzene	108-90-7	ND	5.0
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	10
Chloroform	67-66-3	ND	5.0
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5.0
Dibromomethane	74-95-3	ND	5.0
1,2-Dichlorobenzene	95-50-1	ND	5.0
1,3-Dichlorobenzene	541-73-1	ND	5.0
1,4-Dichlorobenzene	106-46-7	ND	5.0
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	15	5.0
1,2-Dichloroethane	107-06-2	ND	5.0
1,1-Dichloroethene	75-35-4	6.8	5.0
1,2-Dichloroethene, total	540-59-0	89	5.0
1,2-Dichloropropane	78-87-5	ND	5.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0
Methylene chloride	75-09-2	ND	5.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0
Tetrachloroethene	127-18-4	8.9	5.0
1,1,1-Trichloroethane	71-55-6	ND	5.0
1,1,2-Trichloroethane	79-00-5	ND	5.0
Trichloroethene	79-01-6	630	5.0
Trichlorofluoromethane	75-69-4	ND	5.0
1,1,2-Trichlorotrifluorethane	76-13-1	ND	5.0
Vinyl chloride	75-01-4	20	10

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ECI-Emeryville

Date Analyzed: 11/14/91
Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20668
AELC ID No.: L7696
Batch No.: 8313
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	106

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ECI-Emeryville

Date Analyzed: 11/14/91
Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20668
AELC ID No.: L7696
Batch No.: 8313
Matrix: WATER

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	106

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Chlorobenzene	108-90-7	20	98
1,1-Dichloroethene	75-35-4	20	91
Trichloroethene	79-01-6	20	97

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	106

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Chlorobenzene	108-90-7	20	94
1,1-Dichloroethene	75-35-4	20	89
Trichloroethene	79-01-6	20	97

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Chlorobenzene	108-90-7	4
1,1-Dichloroethene	75-35-4	2
Trichloroethene	79-01-6	0

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: ECI-Emeryville

Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20668
AELC ID No.: L7696
Batch No.: 8313
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Chlorobenzene	108-90-7	20	94
1,1-Dichloroethene	75-35-4	20	96
Trichloroethene	79-01-6	20	98

AMERICAN ENVIRONMENTAL MANAGEMENT CORP.

CHAIN OF CUSTODY

L 1010
LOG NO. 20668

CLIENT NAME: ECI Emeryville
ADDRESS:

PROJECT NAME: ECI - Emeryville
PROJECT MANAGER: Mark Riesig
PHONE #:
SAMPLED BY: SDT & MR
JOB DESCRIPTION:

SITE LOCATION:

CLIENT JOB NUMBER: 83210

DESTINATION LABORATORY:
☒ AETC
3249 FITZGERALD RD.
RANCHO CORDOVA, CA.
95670

☐ OTHER

FIELD CONDITIONS:

COMPOSITE: C

SPECIAL INSTRUCTIONS:
Filter & preserve 2 VOA's & 1 Poly
Preserve 1 Poly (Do NOT Filter)

	DATE	TIME	SAMPLE IDENTIFICATION	SAMPLE DEPTH	SAMPLE METHOD	SAMPLE TYPE	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Cr	Hex Cr	6010
1	11/8/91	—	MW-13	—	—	H_2O	2	VOA's	3	/	/	/
							1	Poly				
2	11/8/91	—	MW-13	—	—	H_2O	1	Poly	3	/	/	/

TURN AROUND TIME: 24 HOURS | 48 HOURS | 1 WEEK | 2 WEEKS

NOTE / FIELD READINGS

SUSPECTED CONSTITUENTS: Cr

SAMPLE RETENTION TIME:

RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME	REMARKS
John D.	11/8/91-1657	Dean Chavez	11/8/91 1657	
		Dean Chavez		

PRESERVATIVES:
(1) HCL
(2) HNO_3
(3) COLD
(4)

LAB TO SEND RESULTS TO:
Mark Riesig
ORIGINAL
COPY

SHIPPED:
☐ FED X ☐ UPS ☐ OTHER
AIRBILL #

LAB

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

11/22/91

Attn : Mark Reisig

Re: *Project :* Electro Coatings Inc, Emeryville
Project No. : 83210
*Chain of Custody number :*20667
Date Samples Received : 11/08/91 *Job No.:* 83210
No. Samples Received : 1 *AELC Lab No. :* L7689

These samples were received by American Environmental Laboratories in a chilled, intact state, and accompanied by valid chain of custody documentation.

The following analyses were performed on the above referenced project:

No. of Samples	*Analysis*
1	Chromium by EPA Method 6010
1	Chrome VI Analysis
1	Halogenated Volatiles by EPA Method 601

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

Sincerely,

George Hampton

Laboratory Director

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc,
Emeryville

Date Sampled: 11/07/91
Date Received: 11/08/91
Date Digested: 11/08/91
Date Analyzed: 11/11/91
Date Reported: 11/22/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No : 20667
AELC ID No.: L7689
Batch No.: 53168
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Cr (Chromium) CAS No. 7440-47-3 (mg/L)
MW-10 filtered	2B	490
Rep. Limit		0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc,
Emeryville

Date Analyzed: 11/11/91
Date Reported: 11/22/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20667
AELC ID No.: L7689
Batch No.: 53168
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Cr (Chromium)	7440-47-3	ND	0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc,
Emeryville

Date Digested: 11/08/91
Date Analyzed: 11/11/91
Date Reported: 11/22/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20667
AELC ID No.: L7689
Batch No.: 53168
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	107

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	110

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Cr (Chromium)	7440-47-3	3

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc,
Emeryville

Date Reported: 11/22/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20667
AELC ID No.: L7689
Batch No.: 53168
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	110

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc,
Emeryville

Date Sampled: 11/07/91
Date Received: 11/08/91
Date Prepared: N/A
Date Analyzed: 11/13/91
Date Reported: 11/22/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20667
AELC ID No.: L7689
Batch No.: 53194
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Hexavalent Chromium (mg/L)
MW-10 filtered	2A	450
Rep. Limit		0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc,
Emeryville

Date Analyzed: 11/13/91
Date Reported: 11/22/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20667
AELC ID No.: L7689
Batch No.: 53194
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Hexavalent Chromium	N/A	ND	0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc,
Emeryville

Date Prepared: N/A
Date Analyzed: 11/13/91
Date Reported: 11/22/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20667
AELC ID No.: L7689
Batch No.: 53194
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Hexavalent Chromium	N/A	0.20	101

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Hexavalent Chromium	N/A	0.20	101

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Hexavalent Chromium	N/A	0

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc,
Emeryville

Date Reported: 11/22/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20667
AELC ID No.: L7689
Batch No.: 53194
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Hexavalent Chromium	N/A	0.20	102

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc,
Emeryville

Date Sampled: 11/07/91
Date Received: 11/08/91
Date Extracted: 11/14/91
Date Analyzed: 11/14/91
Date Reported: 11/20/91
Client ID No.: MW-10

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20667
AELC ID No.: L7689-1A
Batch No.: 8313
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	1000	102

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	50
Bromoform	75-25-2	ND	100
Bromomethane	74-83-9	ND	100
Carbon tetrachloride	56-23-5	ND	50
Chlorobenzene	108-90-7	ND	50
Chloroethane	75-00-3	ND	100
2-Chloroethyl vinyl ether	110-75-8	ND	100
Chloroform	67-66-3	ND	50
Chloromethane	74-87-3	ND	100
Dibromochloromethane	124-48-1	ND	50
Dibromomethane	74-95-3	ND	50
1,2-Dichlorobenzene	95-50-1	ND	50
1,3-Dichlorobenzene	541-73-1	ND	50
1,4-Dichlorobenzene	106-46-7	ND	50
Dichlorodifluoromethane	75-71-8	ND	100
1,1-Dichloroethane	75-34-3	ND	50
1,2-Dichloroethane	107-06-2	ND	50
1,1-Dichloroethene	75-35-4	3800	50
1,2-Dichloroethene, total	540-59-0	640	50
1,2-Dichloropropane	78-87-5	ND	50
cis-1,3-Dichloropropene	10061-01-5	ND	50
trans-1,3-Dichloropropene	10061-02-6	ND	50
Methylene chloride	75-09-2	ND	50
1,1,2,2-Tetrachloroethane	79-34-5	ND	50
Tetrachloroethene	127-18-4	ND	50
1,1,1-Trichloroethane	71-55-6	6500	50
1,1,2-Trichloroethane	79-00-5	ND	50
Trichloroethene	79-01-6	14000	50
Trichlorofluoromethane	75-69-4	ND	50
1,1,2-Trichlorotrifluorethane	76-13-1	ND	50
Vinyl chloride	75-01-4	ND	100

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc,
Emeryville

Date Analyzed: 11/14/91
Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20667
AELC ID No.: L7689
Batch No.: 8313
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	106

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc,
Emeryville

Date Extracted: 11/14/91
Date Analyzed: 11/14/91
Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20667
AELC ID No.: L7689
Batch No.: 8313
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Chlorobenzene	108-90-7	20	98
1,1-Dichloroethene	75-35-4	20	91
Trichloroethene	79-01-6	20	97

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	106

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Chlorobenzene	108-90-7	20	94
1,1-Dichloroethene	75-35-4	20	89
Trichloroethene	79-01-6	20	97

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Chlorobenzene	108-90-7	4
1,1-Dichloroethene	75-35-4	2
Trichloroethene	79-01-6	0

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc,
Emeryville

Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 20667
AELC ID No.: L7689
Batch No.: 8313
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Chlorobenzene	108-90-7	20	94
1,1-Dichloroethene	75-35-4	20	96
Trichloroethene	79-01-6	20	98

AMERICAN ENVIRONMENTAL MANAGEMENT CORP.

CHAIN OF CUSTODY

LOG NO. 20667

CLIENT NAME: Electro Coatings Inc. - Emeryville
ADDRESS:

CLIENT JOB NUMBER: 83210

DESTINATION LABORATORY:
☒ AETC
3249 FITZGERALD RD.
RANCHO CORDOVA, CA.
95670

☐ OTHER

PROJECT NAME: ECI
PROJECT MANAGER: Riesig PHONE #: 4056
SAMPLED BY: Riesig / Traylor
JOB DESCRIPTION: MW sampling
SITE LOCATION:

FIELD CONDITIONS:

COMPOSITE:

SPECIAL INSTRUCTIONS: Filter & Preserve Samples Immed.

DATE	TIME	SAMPLE IDENTIFICATION	SAMPLE DEPTH	SAMPLE METHOD	SAMPLE TYPE	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	ANALYSIS REQUESTED: Total Cr	Hex Cr	EPA method 601	TURN AROUND TIME: 24 HOURS	48 HOURS	1 WEEK	2 WEEKS	NOTE / FIELD READINGS
11/7/91	—	MW-10	—	—	H_2O	2	VOA's	3	/	/	/				/	
						1	Poly									

SUSPECTED CONSTITUENTS: Chrome

SAMPLE RETENTION TIME:

RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME	REMARKS
John D. [illegible]	11/8/91 - 0800	Oscar Chavez	11-8-91 0800	
		Oscar Chavez		

PRESERVATIVES:
(1) HCL
(2) HNO_3
(3) = COLD
(4)

LAB TO SEND RESULTS TO:
Riesig ORIGINAL
Riesig COPY

SHIPPED VIA: ☐ FED X ☐ UPS ☐ OTHER _____ AIRBILL #

LAB

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

11/22/91

AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Attn : Mark Reisig

Re: *Project :* Electro Coatings-Emeryville
Project No. : 83210
*Chain of Custody number :*50016
Date Samples Received : 11/04/91 *Job No.:* 83210
No. Samples Received : 2 *AELC Lab No. :* L7663

These samples were received by American Environmental Laboratories in a chilled, intact state, and accompanied by valid chain of custody documentation.

The following analyses were performed on the above referenced project:

No. of Samples	*Analysis*
2	Chromium by EPA Method 6010
2	TTLC Acid Digestion
3	Chrome VI Analysis
2	Halogenated Volatiles by EPA Method 601

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

Sincerely,

George Hampton

Laboratory Director

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings-Emeryville

Date Sampled: 11/04/91
Date Received: 11/04/91
Date Digested: 11/05/91
Date Analyzed: 11/06/91
Date Reported: 11/21/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50016
AELC ID No.: L7663
Batch No.: 53150
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Cr (Chromium) CAS No. 7440-47-3 (mg/L)
MW-4 filtered	2B	22
MW-5	3C	260
Rep. Limit		0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings-Emeryville

Date Analyzed: 11/06/91
Date Reported: 11/21/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50016
AELC ID No.: L7663
Batch No.: 53150
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Cr (Chromium)	7440-47-3	ND	0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings-Emeryville

Date Digested: 11/05/91
Date Analyzed: 11/06/91
Date Reported: 11/21/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50016
AELC ID No.: L7663
Batch No.: 53150
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	97

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	93

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Cr (Chromium)	7440-47-3	4

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings-Emeryville

Date Reported: 11/21/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50016
AELC ID No.: L7663
Batch No.: 53150
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	102

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium Analysis, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings-Emeryville

Date Sampled: 11/04/91
Date Received: 11/04/91
Date Prepared: N/A
Date Analyzed: 11/04/91
Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50016
AELC ID No.: L7663
Batch No.: 53149
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Hexavalent Chromium (mg/L)
MW-4	1B	22
MW-4 filtered	2A	22
MW-5	3B	250
Rep. Limit		0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium Analysis, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings-Emeryville

Date Analyzed: 11/04/91
Date Reported: 11/19/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50016
AELC ID No.: L7663
Batch No.: 53149
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Hexavalent Chromium	N/A	ND	0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium Analysis, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings-Emeryville

Date Prepared: N/A
Date Analyzed: 11/04/91
Date Reported: 11/19/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50016
AELC ID No.: L7663
Batch No.: 53149
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Hexavalent Chromium	N/A	0.20	102

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Hexavalent Chromium	N/A	0.20	102

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Hexavalent Chromium	N/A	0

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium Analysis, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings-Emeryville

Date Reported: 11/19/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50016
AELC ID No.: L7663
Batch No.: 53149
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Hexavalent Chromium	N/A	0.20	102

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings-Emeryville

Date Sampled: 11/04/91
Date Received: 11/05/91
Date Extracted: 11/05/91
Date Analyzed: 11/05/91
Date Reported: 11/15/91
Client ID No.: MW-4

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50016
AELC ID No.: L7663-1A
Batch No.: 8274
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	93

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	5
Bromoform	75-25-2	ND	10
Bromomethane	74-83-9	ND	10
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	10
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	5	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	260	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Methylene chloride	75-09-2	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	31	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	2100	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	5
Vinyl chloride	75-01-4	10	10

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings-Emeryville

Date Sampled: 11/04/91
Date Received: 11/05/91
Date Extracted: 11/05/91
Date Analyzed: 11/05/91
Date Reported: 11/15/91
Client ID No.: MW-5

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50016
AELC ID No.: L7663-3A
Batch No.: 8274
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	94

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	42	0.5
1,2-Dichloroethane	107-06-2	3.4	0.5
1,1-Dichloroethene	75-35-4	4.2	0.5
1,2-Dichloroethene, total	540-59-0	120	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	8.9	0.5
1,1,1-Trichloroethane	71-55-6	1.3	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	4.0	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	54	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings-Emeryville

Date Analyzed: 11/05/91
Date Reported: 11/15/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50016
AELC ID No.: L7663
Batch No.: 8274
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	93

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings-Emeryville

Date Analyzed: 11/05/91
Date Reported: 11/15/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50016
AELC ID No.: L7663
Batch No.: 8274
Matrix: WATER

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	95

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Chlorobenzene	108-90-7	10	85
1,1-Dichloroethene	75-35-4	10	78
Trichloroethene	79-01-6	10	85

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	90

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Chlorobenzene	108-90-7	10	89
1,1-Dichloroethene	75-35-4	10	84
Trichloroethene	79-01-6	10	91

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Chlorobenzene	108-90-7	5
1,1-Dichloroethene	75-35-4	7
Trichloroethene	79-01-6	7

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings-Emeryville

Date Reported: 11/15/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50016
AELC ID No.: L7663
Batch No.: 8274
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Chlorobenzene	108-90-7	20	94
1,1-Dichloroethene	75-35-4	20	96
Trichloroethene	79-01-6	20	98

AMERICAN ENVIRONMENTAL MANAGEMENT CORP.

CHAIN OF CUSTODY

LOG NO. 50016

CLIENT NAME: Electro Coatings - Emeryville
ADDRESS: (EC-E)

PROJECT NAME: Electro Coating Emeryville
PROJECT MANAGER: Reisig PHONE #: 4056
SAMPLED BY: Reisig / Traylor
JOB DESCRIPTION: Water Sampling
SITE LOCATION: Emeryville

CLIENT JOB NUMBER: 5210

DESTINATION LABORATORY:
- [x] AETC, 3249 FITZGERALD RD., RANCHO CORDOVA, CA 95670
- [ ] OTHER

PRESERVATIVES

ANALYSIS REQUESTED: Total Chrome; Hex Chrome; EPA Method 601

FIELD CONDITIONS:

COMPOSITE:

SPECIAL INSTRUCTIONS: MW-4 Filter only 1 (one) of the 1000ml Poly's

TURN AROUND TIME: 24 HOURS; 48 HOURS; 1 WEEK; 2 WEEKS

NOTE / FIELD READINGS

DATE	TIME	SAMPLE IDENTIFICATION	SAMPLE DEPTH	SAMPLE METHOD	SAMPLE TYPE	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	24 HOURS	48 HOURS	1 WEEK	2 WEEKS	NOTE / FIELD READINGS
11/4/91	-	MW-4	-	-	water	4	2x1A 2 poly	3				✓	
11/4/91	-	MW-5	-	-	water	3	2x1A 1 poly	3				✓	

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	REMARKS
John D. [illegible]	11/4/91 - 1234	[illegible]	11/4/91 17:35	Rec'd cold, intact

PRESERVATIVES:
(1) HCL
(2) HNO_3
(3) = COLD
(4)

LAB TO SEND RESULTS TO:
Reisig
ORIGINAL
COPY

SHIPPED VIA: [ ] FED X [ ] UPS [ ] OTHER _____ AIRBILL #

LAB

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

11/20/91

Attn : Mark Reisig

Re: *Project :* Electro Coatings Inc., Emeryville
Project No. : 83210
Chain of Custody number :30354
Date Samples Received : 11/05/91 *Job No.:* 83210
No. Samples Received : 2 *AELC Lab No. :* L7669

These samples were received by American Environmental Laboratories in a chilled, intact state, and accompanied by valid chain of custody documentation.

The following analyses were performed on the above referenced project:

No. of Samples	*Analysis*
2	Chromium by EPA Method 6010
2	TTLC Acid Digestion
2	Chrome VI Analysis
2	Halogenated Volatiles by EPA Method 601

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

Sincerely,

George Hampton

Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc.,
Emeryville

Date Sampled: 11/05/91
Date Received: 11/05/91
Date Digested: 11/08/91
Date Analyzed: 11/11/91
Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 30354
AELC ID No.: L7669
Batch No.: 53168
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Cr (Chromium) CAS No. 7440-47-3 (mg/L)
MW-6 filtered	2B	31
MW-8 filtered	4B	ND
Rep. Limit		0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc.,
Emeryville

Date Analyzed: 11/11/91
Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 30354
AELC ID No.: L7669
Batch No.: 53168
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Cr (Chromium)	7440-47-3	ND	0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc.,
Emeryville

Date Digested: 11/08/91
Date Analyzed: 11/11/91
Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 30354
AELC ID No.: L7669
Batch No.: 53168
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	107

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	110

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Cr (Chromium)	7440-47-3	3

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc.,
Emeryville

Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 30354
AELC ID No.: L7669
Batch No.: 53168
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	110

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc.,
Emeryville

Date Sampled: 11/05/91
Date Received: 11/05/91
Date Prepared: N/A
Date Analyzed: 11/05/91
Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 30354
AELC ID No.: L7669
Batch No.: 53152
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Hexavalent Chromium (mg/L)
MW-6 filtered	2A	25
MW-8 filtered	4A	ND
Rep. Limit		0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc.,
Emeryville

Date Analyzed: 11/05/91
Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 30354
AELC ID No.: L7669
Batch No.: 53152
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Hexavalent Chromium	N/A	ND	0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc.,
Emeryville

Date Prepared: N/A
Date Analyzed: 11/05/91
Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 30354
AELC ID No.: L7669
Batch No.: 53152
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Hexavalent Chromium	N/A	0.20	99

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Hexavalent Chromium	N/A	0.20	97

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Hexavalent Chromium	N/A	2

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc.,
Emeryville

Date Reported: 11/20/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 30354
AELC ID No.: L7669
Batch No.: 53152
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Hexavalent Chromium	N/A	0.20	96

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc.,
Emeryville

Date Sampled: 11/05/91
Date Received: 11/05/91
Date Extracted: 11/14/91
Date Analyzed: 11/14/91
Date Reported: 11/19/91
Client ID No.: MW-6

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 30354
AELC ID No.: L7669-1A
Batch No.: 8313
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	104

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	5.0	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	2.7	0.5
1,1-Dichloroethene	75-35-4	29	0.5
1,2-Dichloroethene, total	540-59-0	78	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	5.9	0.5
1,1,1-Trichloroethane	71-55-6	6.4	0.5
1,1,2-Trichloroethane	79-00-5	0.8	0.5
Trichloroethene	79-01-6	420	0.5
Trichlorofluoromethane	75-69-4	2.0	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	19	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc.,
Emeryville

Date Sampled: 11/05/91
Date Received: 11/05/91
Date Extracted: 11/14/91
Date Analyzed: 11/14/91
Date Reported: 11/19/91
Client ID No.: MW-8

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 30354
AELC ID No.: L7669-3A
Batch No.: 8313
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	106

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	1.8	0.5
1,2-Dichloroethane	107-06-2	5.9	0.5
1,1-Dichloroethene	75-35-4	0.8	0.5
1,2-Dichloroethene, total	540-59-0	23	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	35	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	38	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	4.9	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc.,
Emeryville

Date Analyzed: 11/14/91
Date Reported: 11/19/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 30354
AELC ID No.: L7669
Batch No.: 8313
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	113

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc.,
Emeryville

Date Analyzed: 11/14/91
Date Reported: 11/19/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 30354
AELC ID No.: L7669
Batch No.: 8313
Matrix: WATER

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	106

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Chlorobenzene	108-90-7	20	98
1,1-Dichloroethene	75-35-4	20	91
Trichloroethene	79-01-6	20	97

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	106

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Chlorobenzene	108-90-7	20	94
1,1-Dichloroethene	75-35-4	20	89
Trichloroethene	79-01-6	20	97

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Chlorobenzene	108-90-7	4
1,1-Dichloroethene	75-35-4	2
Trichloroethene	79-01-6	0

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings Inc.,
Emeryville

Date Reported: 11/19/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 30354
AELC ID No.: L7669
Batch No.: 8313
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Chlorobenzene	108-90-7	20	94
1,1-Dichloroethene	75-35-4	20	96
Trichloroethene	79-01-6	20	98

AMERICAN ENVIRONMENTAL LABORATORIES CORP

CHAIN OF CUSTODY

LOG NO. 30354

CLIENT NAME: Electro Coatings Inc. Emeryville
ADDRESS:

PROJECT NAME: ECI
PROJECT MANAGER: Reisig — PHONE #: 4056
SAMPLED BY: Reisig / Traylor
JOB DESCRIPTION:

SITE LOCATION:

CLIENT JOB NUMBER: 83210

DESTINATION LABORATORY

- [X] AELC, 3249 FITZGERALD RD., RANCHO CORDOVA, CA. 95742
- [ ] OTHER

ANALYSIS REQUESTED

PRESERVATIVES | Total Cr | Hex Cr | EPA Method 601

FIELD CONDITIONS:

COMPOSITE:

SPECIAL INSTRUCTIONS: Filter & Preserve all samples

DATE	TIME	SAMPLE IDENTIFICATION	SAMPLE DEPTH	SAMPLE METHOD	SAMPLE TYPE	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Total Cr	Hex Cr	EPA Method 601
11/5/91	—	MW-6	—	—	H_2O	3	2 VOAs 1 Poly	3	/	/	/
11/5/91	—	MW-8	—	—	H_2O	3	Same	3	/	/	/

TURN AROUND TIME: 24 HOURS | 48 HOURS | 1 WEEK | 2 WEEKS (/)

NOTE / FIELD READINGS

SUSPECTED CONSTITUENTS: Cr

SAMPLE RETENTION TIME:

PRESERVATIVES: (1) HCL (2) HNO_3 (3) COLD (4)

RELINQUISHED BY (SIGN)	PRINT NAME/COMPANY	DATE/TIME	REC'D BY (SIGN)	PRINT NAME/COMPANY
John D. [illegible]	John Traylor AEMC	11/5/91 - 1835	Amy E Bowser	Amy E Bowser AELC

REC'D AT LAB BY: | DATE/TIME: | CONDITIONS/COMMENTS:

SHIPPED: [ ] FED X [ ] UPS [ ] OTHER _____ AIRBILL #

LAB

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

12/06/91

AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Attn : Mark Reisig

Re: *Project :* Electro-Coating -- Emeryville
Project No. : 83210
*Chain of Custody number :*30395
Date Samples Received : 11/19/91 *Job No.:* 83210
No. Samples Received : 4 *AELC Lab No. :* L7748

These samples were received by American Environmental Laboratories in a chilled, intact state, and accompanied by valid chain of custody documentation.

The following analyses were performed on the above referenced project:

No. of Samples	*Analysis*
4	Chromium by EPA Method 6010
4	Chrome VI Analysis
4	Halogenated Volatiles by EPA Method 601

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

Sincerely,

George Hampton

Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Sampled: 11/19/91
Date Received: 11/19/91
Date Digested: 11/20/91
Date Analyzed: 11/20/91
Date Reported: 11/27/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748
Batch No.: 53223
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Cr (Chromium) CAS No. 7440-47-3 (mg/L)
MW-16 filtered	2B	240
MW-17 filtered	4B	250
MW-18 filtered	6B	31
MW-18A filtered	8B	ND
Rep. Limit		0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Analyzed: 11/20/91
Date Reported: 11/27/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748
Batch No.: 53223
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Cr (Chromium)	7440-47-3	ND	0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Digested: 11/20/91
Date Analyzed: 11/20/91
Date Reported: 11/27/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748
Batch No.: 53223
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	93

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	88

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Cr (Chromium)	7440-47-3	6

AMERICAN
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CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Reported: 11/27/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748
Batch No.: 53223
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	99

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium Analysis, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Sampled: 11/19/91
Date Received: 11/19/91
Date Prepared: N/A
Date Analyzed: 12/03/91
Date Reported: 12/05/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748
Batch No.: 53268
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Hexavalent Chromium (mg/L)
MW-16 filtered	2A	290
MW-17 filtered	4A	300
MW-18 filtered	6A	24
MW-18A filtered	8A	ND
Rep. Limit		0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium Analysis, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Analyzed: 12/03/91
Date Reported: 12/05/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748
Batch No.: 53268
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Hexavalent Chromium	N/A	ND	0.010

ND - Not detected at or above indicated Reporting Limit
NR - Not reportable; see cover letter for explanation
Rep. Limit - Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium Analysis, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Prepared: N/A
Date Analyzed: 12/03/91
Date Reported: 12/05/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748
Batch No.: 53268
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Hexavalent Chromium	N/A	0.20	109

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Hexavalent Chromium	N/A	0.20	104

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Hexavalent Chromium	N/A	5

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium Analysis, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Reported: 12/05/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748
Batch No.: 53268
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Hexavalent Chromium	N/A	0.20	106

AMERICAN
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CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Sampled: 11/19/91
Date Received: 11/19/91
Date Extracted: 12/02/91
Date Analyzed: 12/02/91
Date Reported: 12/04/91
Client ID No.: MW-16

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748-1A
Batch No.: 8375
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	98

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	5.0
Bromoform	75-25-2	ND	10
Bromomethane	74-83-9	ND	10
Carbon tetrachloride	56-23-5	ND	5.0
Chlorobenzene	108-90-7	ND	5.0
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	10
Chloroform	67-66-3	ND	5.0
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5.0
Dibromomethane	74-95-3	ND	5.0
1,2-Dichlorobenzene	95-50-1	ND	5.0
1,3-Dichlorobenzene	541-73-1	ND	5.0
1,4-Dichlorobenzene	106-46-7	ND	5.0
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5.0
1,2-Dichloroethane	107-06-2	ND	5.0
1,1-Dichloroethene	75-35-4	1200	5.0
1,2-Dichloroethene, total	540-59-0	2200	5.0
1,2-Dichloropropane	78-87-5	ND	5.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0
Methylene chloride	75-09-2	ND	5.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0
Tetrachloroethene	127-18-4	ND	5.0
1,1,1-Trichloroethane	71-55-6	1300	5.0
1,1,2-Trichloroethane	79-00-5	ND	5.0
Trichloroethene	79-01-6	19000	5.0
Trichlorofluoromethane	75-69-4	ND	5.0
1,1,2-Trichlorotrifluorethane	76-13-1	ND	5.0
Vinyl chloride	75-01-4	420	10

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Sampled: 11/19/91
Date Received: 11/19/91
Date Extracted: 12/02/91
Date Analyzed: 12/02/91
Date Reported: 12/05/91
Client ID No.: MW-17

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748-3A
Batch No.: 8375
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	104

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	5.0
Bromoform	75-25-2	ND	10
Bromomethane	74-83-9	ND	10
Carbon tetrachloride	56-23-5	ND	5.0
Chlorobenzene	108-90-7	34	5.0
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	10
Chloroform	67-66-3	ND	5.0
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5.0
Dibromomethane	74-95-3	ND	5.0
1,2-Dichlorobenzene	95-50-1	33	5.0
1,3-Dichlorobenzene	541-73-1	ND	5.0
1,4-Dichlorobenzene	106-46-7	ND	5.0
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	7.8	5.0
1,2-Dichloroethane	107-06-2	ND	5.0
1,1-Dichloroethene	75-35-4	54	5.0
1,2-Dichloroethene, total	540-59-0	54	5.0
1,2-Dichloropropane	78-87-5	ND	5.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0
Methylene chloride	75-09-2	ND	5.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0
Tetrachloroethene	127-18-4	8.9	5.0
1,1,1-Trichloroethane	71-55-6	30	5.0
1,1,2-Trichloroethane	79-00-5	ND	5.0
Trichloroethene	79-01-6	460	5.0
Trichlorofluoromethane	75-69-4	ND	5.0
1,1,2-Trichlorotrifluorethane	76-13-1	ND	5.0
Vinyl chloride	75-01-4	10	10

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Sampled: 11/19/91
Date Received: 11/19/91
Date Extracted: 12/02/91
Date Analyzed: 12/02/91
Date Reported: 12/04/91
Client ID No.: MW-18

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748-5A
Batch No.: 8375
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	100	100

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	5.0
Bromoform	75-25-2	ND	10
Bromomethane	74-83-9	ND	10
Carbon tetrachloride	56-23-5	ND	5.0
Chlorobenzene	108-90-7	ND	5.0
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	10
Chloroform	67-66-3	ND	5.0
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5.0
Dibromomethane	74-95-3	ND	5.0
1,2-Dichlorobenzene	95-50-1	ND	5.0
1,3-Dichlorobenzene	541-73-1	ND	5.0
1,4-Dichlorobenzene	106-46-7	ND	5.0
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5.0
1,2-Dichloroethane	107-06-2	ND	5.0
1,1-Dichloroethene	75-35-4	ND	5.0
1,2-Dichloroethene, total	540-59-0	160	5.0
1,2-Dichloropropane	78-87-5	ND	5.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0
Methylene chloride	75-09-2	ND	5.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0
Tetrachloroethene	127-18-4	11	5.0
1,1,1-Trichloroethane	71-55-6	23	5.0
1,1,2-Trichloroethane	79-00-5	ND	5.0
Trichloroethene	79-01-6	560	5.0
Trichlorofluoromethane	75-69-4	ND	5.0
1,1,2-Trichlorotrifluorethane	76-13-1	ND	5.0
Vinyl chloride	75-01-4	30	10

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Sampled: 11/19/91
Date Received: 11/19/91
Date Extracted: 12/02/91
Date Analyzed: 12/02/91
Date Reported: 12/04/91
Client ID No.: MW-18A

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748-7A
Batch No.: 8375
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	103

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Analyzed: 12/02/91
Date Reported: 12/04/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748
Batch No.: 8375
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	95

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Analyzed: 12/02/91
Date Reported: 12/04/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748
Batch No.: 8375
Matrix: WATER

MB SPIKE SURROGATE

Analyte	CAS No.	MBS Surr. Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	105

MB SPIKE

Analyte	CAS No.	MBS Conc. (ug/L)	MBS Recovery (percent)
Chlorobenzene	108-90-7	20	97
1,1-Dichloroethene	75-35-4	20	81
Trichloroethene	79-01-6	20	89

MB SPIKE DUPLICATE SURR.

Analyte	CAS No.	MBSD Surr. Conc. (ug/L)	MBSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	96

MB SPIKE DUPLICATE

Analyte	CAS No.	MBSD Conc. (ug/L)	MBSD Recovery (percent)
Chlorobenzene	108-90-7	20	98
1,1-Dichloroethene	75-35-4	20	89
Trichloroethene	79-01-6	20	83

MB SPIKE RPD

Analyte	CAS No.	MBS Relative Percent Difference (percent)
Chlorobenzene	108-90-7	1
1,1-Dichloroethene	75-35-4	9
Trichloroethene	79-01-6	7

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coating -- Emeryville

Date Reported: 12/04/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30395
AELC ID No.: L7748
Batch No.: 8375
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Chlorobenzene	108-90-7	20	94
1,1-Dichloroethene	75-35-4	20	96
Trichloroethene	79-01-6	20	98

AMERICAN ENVIRONMENTAL LABORATORIES CORP.

CHAIN OF CUSTODY

L7748
LOG NO. 30395

CLIENT NAME: Electric Coatings - Emeryville
ADDRESS: (EC-E)
PROJECT NAME: Electro Coating - Emeryville
PROJECT MANAGER: Mark Reising PHONE # 405-6
SAMPLED BY: Mark R Reising
JOB DESCRIPTION: Water Sampling
SITE LOCATION: Emeryville

CLIENT JOB NUMBER: 83210

DESTINATION LABORATORY:
☑ AELC 3249 FITZGERALD RD. RANCHO CORDOVA, CA. 95742
☐ OTHER

FIELD CONDITIONS:
COMPOSITE:
SPECIAL INSTRUCTIONS:

TURN AROUND TIME: 24 HOURS | 48 HOURS | 1 WEEK | 2 WEEKS

NOTE / FIELD READINGS

	DATE	TIME	SAMPLE IDENTIFICATION	SAMPLE DEPTH	SAMPLE METHOD	SAMPLE TYPE	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	ANALYSIS REQUESTED: Ep-601	Total Chrome	Hex Chrome	24 HOURS	48 HOURS	1 WEEK	2 WEEKS	NOTE / FIELD READINGS
1	11/19/91	-	MW-16	-	-	water	2	VOA	3	✓						✓	
2	11/19/91	-	MW-16 Filt	-	-	water	1	poly	3		✓	✓				✓	Filter + Preserve
3	11/19/91	-	MW-17	-	-	water	2	VOA	3	✓						✓	
4	11/19/91	-	MW-17 Filt	-	-	water	1	poly	3		✓	✓				✓	Filter + Preserve
5	11/19/91	-	MW-18	-	-	water	2	VOA	3	✓						✓	
6	11/19/91	-	MW-18 Filt	-	-	water	1	poly	3		✓	✓				✓	Filter + Preserve
7	11/19/91	-	MW-18A	-	-	water	2	VOA	3	✓						✓	
8	11/19/91	-	MW-18A Filt	-	-	water	1	poly	3		✓	✓				✓	Filter + Preserve

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4)

RELINQUISHED BY (SIGN)	PRINT NAME/COMPANY	DATE/TIME	REC'D BY (SIGN)	PRINT NAME/COMPANY
Mark R. Reising	AEMC	11/19/91 350 pm		NATHAN PHILLIPS / AELC

REC'D AT LAB BY: | DATE/TIME: | CONDITIONS/COMMENTS:

SHIPPED ☐ FED X ☐ UPS ☒ OTHER CLIENT AIRBILL #

LAB

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

11/25/91

AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Attn : Mark Reisig

Re: *Project :* Electro Coatings - Emeryville
Project No. : 83210
*Chain of Custody number :*50017
Date Samples Received : 11/12/91 *Job No.:* 83210
No. Samples Received : 1 *AELC Lab No. :* L7707

These samples were received by American Environmental Laboratories in a chilled, intact state, and accompanied by valid chain of custody documentation.

The following analyses were performed on the above referenced project:

No. of Samples	*Analysis*
1	Chromium by EPA Method 6010
1	Chrome VI Analysis
1	Halogenated Volatiles by EPA Method 601

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

Sincerely,

George Hampton

Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings - Emeryville

Date Sampled: 11/12/91
Date Received: 11/12/91
Date Digested: 11/13/91
Date Analyzed: 11/13/91
Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 50017
AELC ID No.: L7707
Batch No.: 53191
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Cr (Chromium) CAS No. 7440-47-3 (mg/L)
MW-15 filtered	2B	ND
Rep. Limit		0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings - Emeryville

Date Analyzed: 11/13/91
Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 50017
AELC ID No.: L7707
Batch No.: 53191
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Cr (Chromium)	7440-47-3	ND	0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings - Emeryville

Date Digested: 11/13/91
Date Analyzed: 11/13/91
Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 50017
AELC ID No.: L7707
Batch No.: 53191
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	108

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	99

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Cr (Chromium)	7440-47-3	9

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings - Emeryville

Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 50017
AELC ID No.: L7707
Batch No.: 53191
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	105

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings - Emeryville

Date Sampled: 11/12/91
Date Received: 11/12/91
Date Prepared: N/A
Date Analyzed: 11/12/91
Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 50017
AELC ID No.: L7707
Batch No.: 53139
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Hexavalent Chromium (mg/L)
MW-15 filtered	2A	ND
Rep. Limit		0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings - Emeryville

Date Analyzed: 11/12/91
Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 50017
AELC ID No.: L7707
Batch No.: 53139
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Hexavalent Chromium	N/A	ND	0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings - Emeryville

Date Prepared: N/A
Date Analyzed: 11/12/91
Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 50017
AELC ID No.: L7707
Batch No.: 53139
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Hexavalent Chromium	N/A	0.20	106

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Hexavalent Chromium	N/A	0.20	104

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Hexavalent Chromium	N/A	2

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings - Emeryville

Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 50017
AELC ID No.: L7707
Batch No.: 53139
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Hexavalent Chromium	N/A	0.20	106

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings - Emeryville

Date Sampled: 11/12/91
Date Received: 11/12/91
Date Extracted: 11/19/91
Date Analyzed: 11/19/91
Date Reported: 11/25/91
Client ID No.: MW-15

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 50017
AELC ID No.: L7707-1A
Batch No.: 8338
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	101

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	5.0
Bromoform	75-25-2	ND	10
Bromomethane	74-83-9	ND	10
Carbon tetrachloride	56-23-5	ND	5.0
Chlorobenzene	108-90-7	ND	5.0
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	10
Chloroform	67-66-3	ND	5.0
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5.0
Dibromomethane	74-95-3	ND	5.0
1,2-Dichlorobenzene	95-50-1	ND	5.0
1,3-Dichlorobenzene	541-73-1	ND	5.0
1,4-Dichlorobenzene	106-46-7	ND	5.0
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5.0
1,2-Dichloroethane	107-06-2	ND	5.0
1,1-Dichloroethene	75-35-4	ND	5.0
1,2-Dichloroethene, total	540-59-0	220	5.0
1,2-Dichloropropane	78-87-5	ND	5.0
cis-1,3-Dichloropropene	10061-01-5	ND	5.0
trans-1,3-Dichloropropene	10061-02-6	ND	5.0
Methylene chloride	75-09-2	ND	5.0
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.0
Tetrachloroethene	127-18-4	ND	5.0
1,1,1-Trichloroethane	71-55-6	ND	5.0
1,1,2-Trichloroethane	79-00-5	ND	5.0
Trichloroethene	79-01-6	650	5.0
Trichlorofluoromethane	75-69-4	ND	5.0
1,1,2-Trichlorotrifluorethane	76-13-1	ND	5.0
Vinyl chloride	75-01-4	ND	10

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings - Emeryville

Date Analyzed: 11/19/91
Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 50017
AELC ID No.: L7707
Batch No.: 8338
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	96

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings - Emeryville

Date Analyzed: 11/19/91
Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 50017
AELC ID No.: L7707
Batch No.: 8338
Matrix: WATER

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	105

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Chlorobenzene	108-90-7	20	87
1,1-Dichloroethene	75-35-4	20	79
Trichloroethene	79-01-6	20	92

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	103

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Chlorobenzene	108-90-7	20	91
1,1-Dichloroethene	75-35-4	20	78
Trichloroethene	79-01-6	20	97

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Chlorobenzene	108-90-7	4
1,1-Dichloroethene	75-35-4	1
Trichloroethene	79-01-6	5

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro Coatings - Emeryville

Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 50017
AELC ID No.: L7707
Batch No.: 8338
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Chlorobenzene	108-90-7	20	94
1,1-Dichloroethene	75-35-4	20	96
Trichloroethene	79-01-6	20	98

AMERICAN ENVIRONMENTAL MANAGEMENT CORP.

CHAIN OF CUSTODY

L1101
LOG NO. 50017

CLIENT NAME: Electro Coatings - Emeryville
ADDRESS:
PROJECT NAME: Electro Coating - Emeryville
PROJECT MANAGER: Mark R Reisig PHONE # 4056
SAMPLED BY: Mark Reisig / Greg Pope
JOB DESCRIPTION: Water Sampling
SITE LOCATION: Emeryville

CLIENT JOB NUMBER: 8210

DESTINATION LABORATORY:
- [x] AETC 3249 FITZGERALD RD. RANCHO CORDOVA, CA 95670
- [ ] OTHER

PRESERVATIVES

ANALYSIS REQUESTED: Total Chrome; Hex Chrome; EPA 601

FIELD CONDITIONS:
COMPOSITE:
SPECIAL INSTRUCTIONS: Filter and preserve

DATE	TIME	SAMPLE IDENTIFICATION	SAMPLE DEPTH	SAMPLE METHOD	SAMPLE TYPE	CONTAINER NO	CONTAINER TYPE	PRESERVATIVES	Total Chrome	Hex Chrome	EPA 601					TURN AROUND TIME 24 HOURS	48 HOURS	1 WEEK	2 WEEKS	NOTE / FIELD READINGS
11/12/91	-	MW-15	-	-	water	3	2 VOA 1 pint	3	✓	✓	✓								✓	

SUSPECTED CONSTITUENTS:
SAMPLE RETENTION TIME:

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	REMARKS
[signature]	11-12-91/7:30PM	[signature]	11-12-91/7:30PM	REC'D COLD, INTACT

PRESERVATIVES:
(1) HCL
(2) HNO_3
(3) = COLD
(4)

LAB TO SEND RESULTS TO:
Reisig
ORIGINAL
COPY

SHIPPED VIA: [ ] FED X [ ] UPS [x] OTHER CLIENT AIRBILL #

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

11/15/91

Attn : Mark Reisig

Re: *Project :* Electro-Coatings
Project No. : 83210
*Chain of Custody number :*50015
Date Samples Received : 10/30/91 *Job No.:* 83210
No. Samples Received : 1 *AELC Lab No. :* L7634

These samples were received by American Environmental Laboratories in a chilled, intact state, and accompanied by valid chain of custody documentation.

The following analyses were performed on the above referenced project:

No. of Samples	*Analysis*
1	Chromium by EPA Method 6010
1	Chrome VI Analysis
1	Halogenated Volatiles by EPA Method 601

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

Sincerely,

George Hampton

Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings

Date Sampled: 10/30/91
Date Received: 10/30/91
Date Digested: 11/05/91
Date Analyzed: 11/06/91
Date Reported: 11/14/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50015
AELC ID No.: L7634
Batch No.: 53131
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Cr (Chromium) CAS No. 7440-47-3 (mg/L)
MW-9	1A	140
Rep. Limit		0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings

Date Analyzed: 11/06/91
Date Reported: 11/14/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50015
AELC ID No.: L7634
Batch No.: 53131
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Cr (Chromium)	7440-47-3	ND	0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings

Date Digested: 11/05/91
Date Analyzed: 11/06/91
Date Reported: 11/14/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50015
AELC ID No.: L7634
Batch No.: 53131
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	97

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	93

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Cr (Chromium)	7440-47-3	4

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings

Date Reported: 11/14/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50015
AELC ID No.: L7634
Batch No.: 53131
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	102

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings

Date Sampled: 10/30/91
Date Received: 10/30/91
Date Prepared: N/A
Date Analyzed: 10/30/91
Date Reported: 11/14/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50015
AELC ID No.: L7634
Batch No.: 53136
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Hexavalent Chromium (mg/L)
MW-9	1A	130
Rep. Limit		0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings

Date Analyzed: 10/30/91
Date Reported: 11/14/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50015
AELC ID No.: L7634
Batch No.: 53136
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Hexavalent Chromium	N/A	ND	0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings

Date Prepared: N/A
Date Analyzed: 10/30/91
Date Reported: 11/14/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50015
AELC ID No.: L7634
Batch No.: 53136
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Hexavalent Chromium	N/A	0.20	101

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Hexavalent Chromium	N/A	0.20	103

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Hexavalent Chromium	N/A	2.0

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/kegistration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings

Date Reported: 11/14/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50015
AELC ID No.: L7634
Batch No.: 53136
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Hexavalent Chromium	N/A	0.20	101

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings

Date Sampled: 10/30/91
Date Received: 10/30/91
Date Extracted: 10/31/91
Date Analyzed: 10/31/91
Date Reported: 11/08/91
Client ID No.: MW-9

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50015
AELC ID No.: L7634-1B
Batch No.: 8254
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	100

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	1.3	0.5
1,2-Dichloroethane	107-06-2	2.4	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	13	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	11	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	200	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings

Date Analyzed: 10/31/91
Date Reported: 11/08/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50015
AELC ID No.: L7634
Batch No.: 8254
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	96

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings

Date Analyzed: 10/31/91
Date Reported: 11/08/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50015
AELC ID No.: L7634
Batch No.: 8254
Matrix: WATER

MB SPIKE SURROGATE

Analyte	CAS No.	MBS Surr. Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	96

MB SPIKE

Analyte	CAS No.	MBS Conc. (ug/L)	MBS Recovery (percent)
Chlorobenzene	108-90-7	20	96
1,1-Dichloroethene	75-35-4	20	80
Trichloroethene	79-01-6	20	93

NR = Not reportable; see cover letter for explanation.

MB SPIKE DUPLICATE SURR.

Analyte	CAS No.	MBSD Surr. Conc. (ug/L)	MBSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	103

MB SPIKE DUPLICATE

Analyte	CAS No.	MBSD Conc. (ug/L)	MBSD Recovery (percent)
Chlorobenzene	108-90-7	20	96
1,1-Dichloroethene	75-35-4	20	85
Trichloroethene	79-01-6	20	97

NR = Not reportable; see cover letter for explanation.

MB SPIKE RPD

Analyte	CAS No.	MBS Relative Percent Difference (percent)

NR = Not reportable; see cover letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings

Date Analyzed: 10/31/91
Date Reported: 11/08/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50015
AELC ID No.: L7634
Batch No.: 8254
Matrix: WATER

MB SPIKE RPD(CONT.)

Analyte	CAS No.	MBS Relative Percent Difference (percent)
Chlorobenzene	108-90-7	0
1,1-Dichloroethene	75-35-4	6
Trichloroethene	79-01-6	4

NR = Not reportable; see cover letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings

Date Reported: 11/08/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: George Hampton
Job No.: 83210
COC Log No.: 50015
AELC ID No.: L7634
Batch No.: 8254
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Chlorobenzene	108-90-7	20	94
1,1-Dichloroethene	75-35-4	20	96
Trichloroethene	79-01-6	20	98

AMERICAN
ENVIRONMENTAL MANAGEMENT CORP.

CHAIN OF CUSTODY

L 7634
LOG NO. 50015

CLIENT NAME: Electro-Coatings
ADDRESS:

PROJECT NAME: S.A.A.
PROJECT MANAGER: M. Reisig PHONE #
SAMPLED BY: Reisig - Godinho
JOB DESCRIPTION:

SITE LOCATION: Emeryville CA

CLIENT JOB NUMBER: 83210

DESTINATION LABORATORY
☒ AETC
3249 FITZGERALD RD.
RANCHO CORDOVA, CA
95670
☐ OTHER

FIELD CONDITIONS: Cool 70°
COMPOSITE:
SPECIAL INSTRUCTIONS: Filter and preserve

ANALYSIS REQUESTED: Total Chrome | Hex Chrome | 601

DATE	TIME	SAMPLE IDENTIFICATION	DEPTH	METHOD	TYPE	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Total Chrome	Hex Chrome	601					24 HOURS	48 HOURS	1 WEEK	2 WEEKS	NOTE / FIELD READINGS
10-30-91		MW-9		Bailer	H_2O	3	2-VOA 1-liter	3	/	/	/								/	

SUSPECTED CONSTITUENTS:
SAMPLE RETENTION TIME:

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	REMARKS
[signature] Mike Godinho	10-30-91 7:14pm	Larry Ruiz [signature]	10-30-91 7:14pm	Cold intact

PRESERVATIVES:
(1) HCL
(2) HNO_3
(3) = COLD
(4)

LAB TO SEND RESULTS TO:
Reisig
ORIGINAL
COPY

SHIPPED VIA: ☐ FED X ☐ UPS ☐ OTHER ______ AIRBILL #

LAB

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

11/27/91

AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Attn : Mark Reisig

Re: *Project :* Electro-Coatings Emeryville
Project No. : 83210
*Chain of Custody number :*30392
Date Samples Received : 11/15/91 *Job No.:* 83210
No. Samples Received : 3 *AELC Lab No. :* L7729

These samples were received by American Environmental Laboratories in a chilled, intact state, and accompanied by valid chain of custody documentation.

The following analyses were performed on the above referenced project:

No. of Samples	*Analysis*
3	Chromium by EPA Method 6010
3	Chrome VI Analysis
3	Halogenated Volatiles by EPA Method 601

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

Sincerely,

George Hampton

Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Sampled: 11/15/91
Date Received: 11/15/91
Date Extracted: 11/19/91
Date Analyzed: 11/19/91
Date Reported: 11/22/91
Client ID No.: MW-1

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729-2A
Batch No.: 8338
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	100

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	0.7	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	1.6	0.5
1,2-Dichloroethane	107-06-2	4.6	0.5
1,1-Dichloroethene	75-35-4	0.5	0.5
1,2-Dichloroethene, total	540-59-0	4.8	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	0.6	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	11	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Sampled: 11/15/91
Date Received: 11/15/91
Date Extracted: 11/19/91
Date Analyzed: 11/19/91
Date Reported: 11/22/91
Client ID No.: MW-11

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729-4A
Batch No.: 8338
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	102

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	3.1	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	1.5	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	10	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Sampled: 11/15/91
Date Received: 11/15/91
Date Extracted: 11/19/91
Date Analyzed: 11/19/91
Date Reported: 11/22/91
Client ID No.: MW-20

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729-6A
Batch No.: 8338
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	105

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Analyzed: 11/19/91
Date Reported: 11/22/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729
Batch No.: 8338
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	96

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Analyzed: 11/19/91
Date Reported: 11/22/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729
Batch No.: 8338
Matrix: WATER

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	105

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Chlorobenzene	108-90-7	20	87
1,1-Dichloroethene	75-35-4	20	79
Trichloroethene	79-01-6	20	92

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	103

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Chlorobenzene	108-90-7	20	91
1,1-Dichloroethene	75-35-4	20	78
Trichloroethene	79-01-6	20	97

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Chlorobenzene	108-90-7	4
1,1-Dichloroethene	75-35-4	1
Trichloroethene	79-01-6	5

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Reported: 11/22/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729
Batch No.: 8338
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Chlorobenzene	108-90-7	20	94
1,1-Dichloroethene	75-35-4	20	96
Trichloroethene	79-01-6	20	98

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Sampled: 11/15/91
Date Received: 11/15/91
Date Digested: 11/19/91
Date Analyzed: 11/19/91
Date Reported: 11/27/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729
Batch No.: 53211
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Cr (Chromium) CAS No. 7440-47-3 (mg/L)
MW-1 filtered	1B	ND
MW-11 filtered	3B	0.47
MW-20 filtered	5B	ND
Rep. Limit		0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
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CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Analyzed: 11/19/91
Date Reported: 11/27/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729
Batch No.: 53211
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Cr (Chromium)	7440-47-3	ND	0.050

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Digested: 11/19/91
Date Analyzed: 11/19/91
Date Reported: 11/27/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729
Batch No.: 53211
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	81

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	86

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Cr (Chromium)	7440-47-3	6

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Reported: 11/27/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729
Batch No.: 53211
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	96

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Sampled: 11/15/91
Date Received: 11/15/91
Date Prepared: N/A
Date Analyzed: 11/15/91
Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729
Batch No.: 53203
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Hexavalent Chromium (mg/L)
MW-1 filtered	1A	0.050
MW-11 filtered	3A	0.41
MW-20 filtered	5A	0.014
Rep. Limit		0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Analyzed: 11/15/91
Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729
Batch No.: 53203
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Hexavalent Chromium	N/A	ND	0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Prepared: N/A
Date Analyzed: 11/15/91
Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729
Batch No.: 53203
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Hexavalent Chromium	N/A	0.20	102

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Hexavalent Chromium	N/A	0.20	103

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Hexavalent Chromium	N/A	1

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC Lincoln Village
9719 Lincoln Village Dr. #501
Sacramento, CA 95827

Project: Electro-Coatings Emeryville

Date Reported: 11/25/91

Project No.: 83210
Contact: Mark Reisig
Phone: (916) 364-8872

AELC Contact: Mike Jaeger
Job No.: 83210
COC Log No.: 30392
AELC ID No.: L7729
Batch No.: 53203
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Hexavalent Chromium	N/A	0.20	102

AMERICAN ENVIRONMENTAL LABORATORIES CORP.

CHAIN OF CUSTODY

LOG NO. 30392

CLIENT NAME: Electro Coatings - Emeryv. (EC-E)

ADDRESS:

PROJECT NAME: Electro - Coatings Emeryv. (EC-E)

PROJECT MANAGER: Mark R. Reising PHONE # 4056

SAMPLED BY: Mark R. Reising

JOB DESCRIPTION:

SITE LOCATION:

CLIENT JOB NUMBER: 83210

DESTINATION LABORATORY

- [x] AELC 3249 FITZGERALD RD. RANCHO CORDOVA, CA. 95742
- [ ] OTHER

PRESERVATIVES

ANALYSIS REQUESTED: Hex Chrome; Total Chrome; EPA 601

FIELD CONDITIONS:

COMPOSITE:

SPECIAL INSTRUCTIONS:

TURN AROUND TIME: 24 HOURS; 48 HOURS; 1 WEEK; 2 WEEKS

NOTE / FIELD READINGS

DATE	TIME	SAMPLE IDENTIFICATION	SAMPLE DEPTH	SAMPLE METHOD	SAMPLE TYPE	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Hex Chrome	Total Chrome	EPA 601	24 HOURS	48 HOURS	1 WEEK	2 WEEKS	NOTE / FIELD READINGS
11/15/91	-	MW-1	-	-	water	1	1-poly	3	✓	✓					✓	Filter & Preserve
11/15/91	-	MW-1	-	-	water	2	VOA	3			✓				✓	
11/15/91	-	MW-11	-	-	water	1	1poly	3	✓	✓					✓	Filter & Preserve
11/15/91	-	MW-11	-	-	water	2	VOA	3			✓				✓	
11/15/91	-	MW-20	-	-	water	1	1poly	3	✓	✓					✓	Filter & preserve
11/15/91	-	MW-20	-	-	water	2	VOA	3			✓					

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES: (1) HCL (2) HNO_3 (4)

RELINQUISHED BY (SIGN)	PRINT NAME/COMPANY	DATE/TIME	REC'D BY (SIGN)	PRINT NAME/COMPANY
Mark R. Reising	AEMC	11/15/91 7:42		NATHAN PHILLIPS / AELL

REC'D AT LAB BY: DATE/TIME: CONDITIONS/COMMENTS:

SHIPPED VIA: [ ] FED X [ ] UPS [x] OTHER CLIENT AIRBILL #

LAB

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

11/11/91

Attn : MARK REISIG

Re: *Project :* ELECTRO-COATING, EMERYVILLE
Project No. : 83210
*Chain of Custody number :*50014
Date Samples Received : 10/29/91 *Job No.:* 83210
No. Samples Received : 3 *AELC Lab No. :* L7620

These samples were received by American Environmental Laboratories in a chilled, intact state, and accompanied by valid chain of custody documentation.

The following analyses were performed on the above referenced project:

No. of Samples	*Analysis*
3	Chromium by EPA Method 6010
3	Chrome VI Analysis
3	Halogenated Volatiles by EPA Method 601

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

Sincerely,

George Hampton

Laboratory Director

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Sampled: 10/29/91
Date Received: 10/29/91
Date Digested: 10/30/91
Date Analyzed: 10/31/91
Date Reported: 11/08/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620
Batch No.: 53131
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Cr (Chromium) CAS No. 7440-47-3 (mg/L)
MW3A	1A	0.13
MW3B	2A	110
MW3C	3A	2.3
Rep. Limit		0.025

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Analyzed: 10/31/91
Date Reported: 11/08/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620
Batch No.: 53131
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Cr (Chromium)	7440-47-3	ND	0.025

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Digested: 10/30/91
Date Analyzed: 10/31/91
Date Reported: 11/08/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620
Batch No.: 53131
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Cr (Chromium)	7440-47-3	2.5	101

NR = Not reportable; see cover letter for explanation.

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Cr (Chromium)	7440-47-3	2.5	109

NR = Not reportable; see cover letter for explanation.

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Cr (Chromium)	7440-47-3	8

NR = Not reportable; see cover letter for explanation

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Chromium, TTLC, EPA Method 6010

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Reported: 11/08/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620
Batch No.: 53131
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Cr (Chromium)	7440-47-3	0.50	101

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Sampled: 10/29/91
Date Received: 10/29/91
Date Prepared: N/A
Date Analyzed: 10/29/91
Date Reported: 11/14/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620
Batch No.: 53124
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Hexavalent Chromium (mg/L)
MW3A	1A	ND
MW3B	2A	100
MW3C	3A	1.6
MW3C Filtered	4A	1.7
Rep. Limit		0.50

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Analyzed: 10/29/91
Date Reported: 11/05/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620
Batch No.: 53124
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Hexavalent Chromium	N/A	ND	0.010

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicatedin parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Prepared: N/A
Date Analyzed: 10/29/91
Date Reported: 11/05/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620
Batch No.: 53124
Matrix: WATER

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (mg/L)	MS Recovery (percent)
Hexavalent Chromium	N/A	0.20	102

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (mg/L)	MSD Recovery (percent)
Hexavalent Chromium	N/A	0.20	100

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Hexavalent Chromium	N/A	2.0

NR = Not reportable; see cover letter for explanation

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Hexavalent Chromium, EPA Method 7196

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Reported: 11/05/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620
Batch No.: 53124
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Hexavalent Chromium	N/A	0.20	103

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Sampled: 10/29/91
Date Received: 10/29/91
Date Extracted: 10/30/91
Date Analyzed: 10/30/91
Date Reported: 11/08/91
Client ID No.: MW3A

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620-1B
Batch No.: 8246
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	84

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Sampled: 10/29/91
Date Received: 10/29/91
Date Extracted: 10/30/91
Date Analyzed: 10/30/91
Date Reported: 11/08/91
Client ID No.: MW3B

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620-2B
Batch No.: 8246
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	95

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	25	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	1.2	0.5
1,2-Dichloroethane	107-06-2	1.7	0.5
1,1-Dichloroethene	75-35-4	13	0.5
1,2-Dichloroethene, total	540-59-0	45	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	6.8	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	650	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	6.4	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Sampled: 10/29/91
Date Received: 10/29/91
Date Extracted: 10/30/91
Date Analyzed: 10/30/91
Date Reported: 11/08/91
Client ID No.: MW3C

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620-3B
Batch No.: 8246
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	93

ANALYTE

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	25	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	5.4	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	61	0.5
1,2-Dichloroethene, total	540-59-0	46	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	1.7	0.5
1,1,1-Trichloroethane	71-55-6	34	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	180	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	18	1.0

ND = Not detected at or above indicated Reporting Limit
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Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Analyzed: 10/30/91
Date Reported: 11/08/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620
Batch No.: 8246
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	85

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Bromodichloromethane	72-27-4	ND	0.5
Bromoform	75-25-2	ND	1.0
Bromomethane	74-83-9	ND	1.0
Carbon tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	1.0
2-Chloroethyl vinyl ether	110-75-8	ND	1.0
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	1.0
Dibromochloromethane	124-48-1	ND	0.5
Dibromomethane	74-95-3	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	1.0
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
1,2-Dichloroethene, total	540-59-0	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene chloride	75-09-2	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	0.5
1,1,2-Trichlorotrifluorethane	76-13-1	ND	0.5
Vinyl chloride	75-01-4	ND	1.0

ND = Not detected at or above indicated Reporting Limit
NR = Not reportable; see cover letter for explanation
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Analyzed: 10/30/91
Date Reported: 11/08/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620
Batch No.: 8246
Matrix: WATER

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	91

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Chlorobenzene	108-90-7	20	89
1,1-Dichloroethene	75-35-4	20	95
Trichloroethene	79-01-6	20	91

NR = Not reportable; see cover letter for explanation.

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	10	93

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Chlorobenzene	108-90-7	20	96
1,1-Dichloroethene	75-35-4	20	103
Trichloroethene	79-01-6	20	104

NR = Not reportable; see cover letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Analyzed: 10/30/91
Date Reported: 11/08/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620
Batch No.: 8246
Matrix: WATER

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Chlorobenzene	108-90-7	8
1,1-Dichloroethene	75-35-4	8
Trichloroethene	79-01-6	13

NR = Not reportable; see cover letter for explanation

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.
CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Halogenated Volatile Organics, EPA Method 601
Purge and Trap, EPA Method 5030

Client: AEMC White Rock
11855 White Rock Road
Rancho Cordova, CA 95742

Project: ELECTRO-COATING, EMERYVILLE

Date Reported: 11/07/91

Project No.: 83210
Contact: MARK REISIG
Phone: (916) 985-6666

AELC Contact: MIKE JAEGER
Job No.: 83210
COC Log No.: 50014
AELC ID No.: L7620
Batch No.: 8246
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Chlorobenzene	108-90-7	20	91
1,1-Dichloroethene	75-35-4	20	106
Trichloroethene	79-01-6	20	100

AMERICAN
ENVIRONMENTAL MANAGEMENT CORP.

CHAIN OF CUSTODY

A1620
LOG NO. 50014

CLIENT NAME: Electro Coatings -
ADDRESS: Emeryville (EC-E)
PROJECT NAME: Electro Coating Emeryville
PROJECT MANAGER: Reisig, Mark PHONE #: 4056
SAMPLED BY: Mike Godinho
JOB DESCRIPTION: Water Sampling
SITE LOCATION:

CLIENT JOB NUMBER: 83210

DESTINATION LABORATORY:
- [x] AETC, 3249 FITZGERALD RD., RANCHO CORDOVA, CA 95670
- [ ] OTHER

ANALYSIS REQUESTED: Total Chrome; Hex. Chrome; Epa Method 601

FIELD CONDITIONS:

COMPOSITE:

SPECIAL INSTRUCTIONS: Filter 3A, 3B, 3C do Not Filter - 3C

DATE	TIME	SAMPLE IDENTIFICATION	DEPTH	METHOD	TYPE	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Total Chrome	Hex. Chrome	Epa Method 601					24 HOURS	48 HOURS	1 WEEK	2 WEEKS	NOTE / FIELD READINGS
10/29/91		MW 3A	-	-	water	3	1-Liter 2-VOA	3	/	/	/								✓	
10/29/91		MW 3B	-	-	water	3	1-Liter 2-VOA	3	/	/	/								✓	
10/29/91		MW 3C	-	-	water	4	2-Liter 2-VOA	3	/	/	/								✓	

SUSPECTED CONSTITUENTS:

SAMPLE RETENTION TIME:

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	REMARKS
Mike Godinho	10/29/91 19:48	Nathan Phillips	10/29/91 1948	rec'd cold + wet

PRESERVATIVES: (1) HCL (2) HNO3 (3) = COLD (4)

LAB TO SEND RESULTS TO: Reisig ORIGINAL ____ COPY

SHIPPED VIA: [ ] FED X [ ] UPS [x] OTHER CLIENT AIRBILL #

LA9

APPENDIX C

PLATES DEPICTING PRIOR GROUNDWATER CONDITIONS

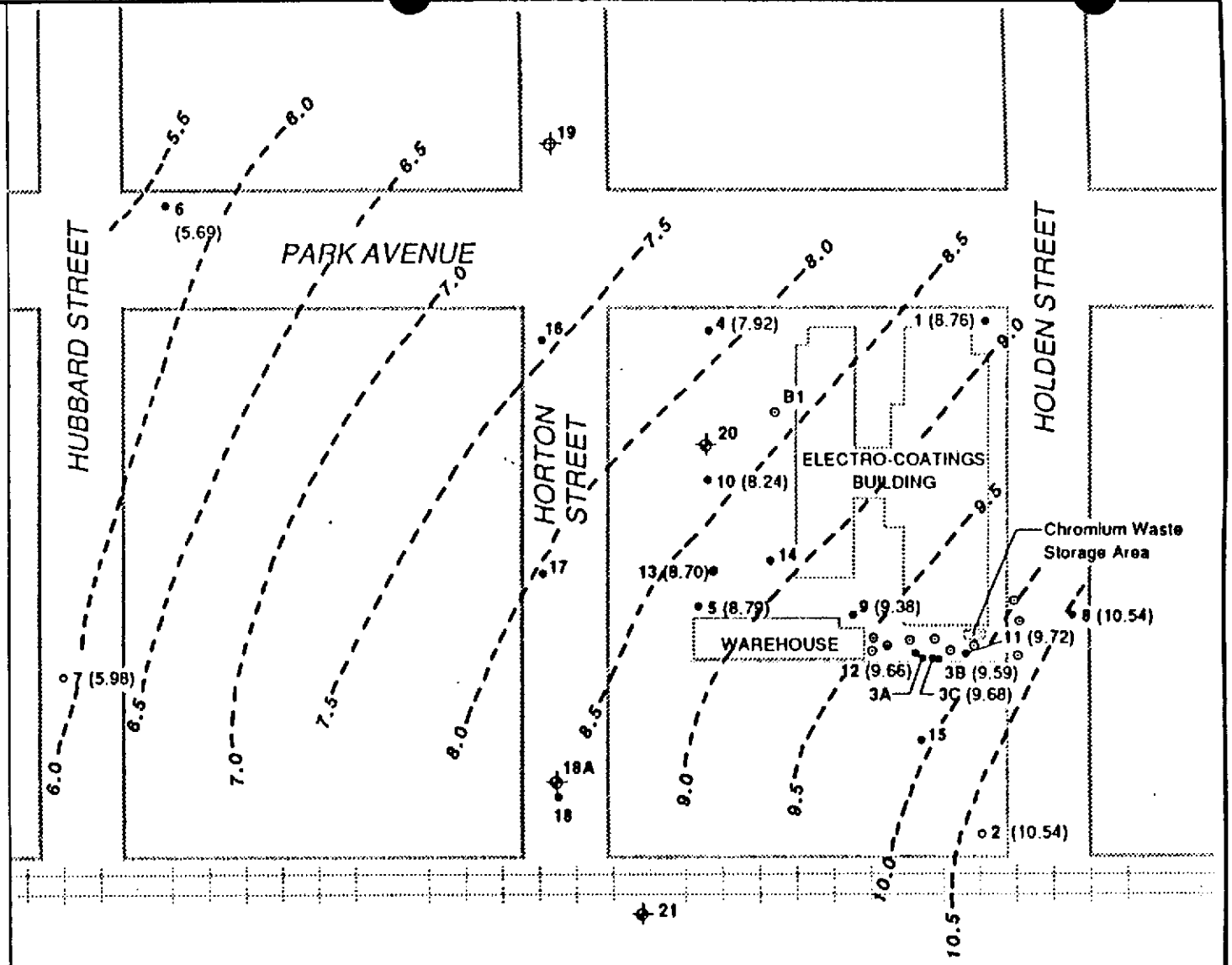
Groundwater Surface Contour Maps

1981, 1983, 1985, 1991

LEGEND

- ELECTRO-COATINGS, INC., PROPERTY LINE
- •1 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS
- ⊕ 20 — WELLS INSTALLED BY KLEINFELDER AS OF 1985
- ○ 2 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- ⊕ 19 — WELLS INSTALLED BY KLEINFELDER THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- B1 ⊙ — SOIL BORING
- (5.90) — GROUND WATER SURFACE ELEVATION (feet)
- 5.6 — GROUND WATER SURFACE ELEVATION CONTOUR (feet)

NOTE: Ground water elevations are based on an arbitrary survey datum.



120 0 120
Approximate Scale (feet)

KLEINFELDER

DRAFTED BY:	L. Sue/L. Latman	DATE:	4-17-91
CHECKED BY:	J. Romle	DATE:	4-23-91

INFERRED PIEZOMETRIC SURFACE CONTOUR MAP FOR SHALLOW WATER BEARING ZONE, JANUARY 1981

ELECTRO-COATINGS, INC.
1401 PARK AVENUE
EMERYVILLE, CALIFORNIA

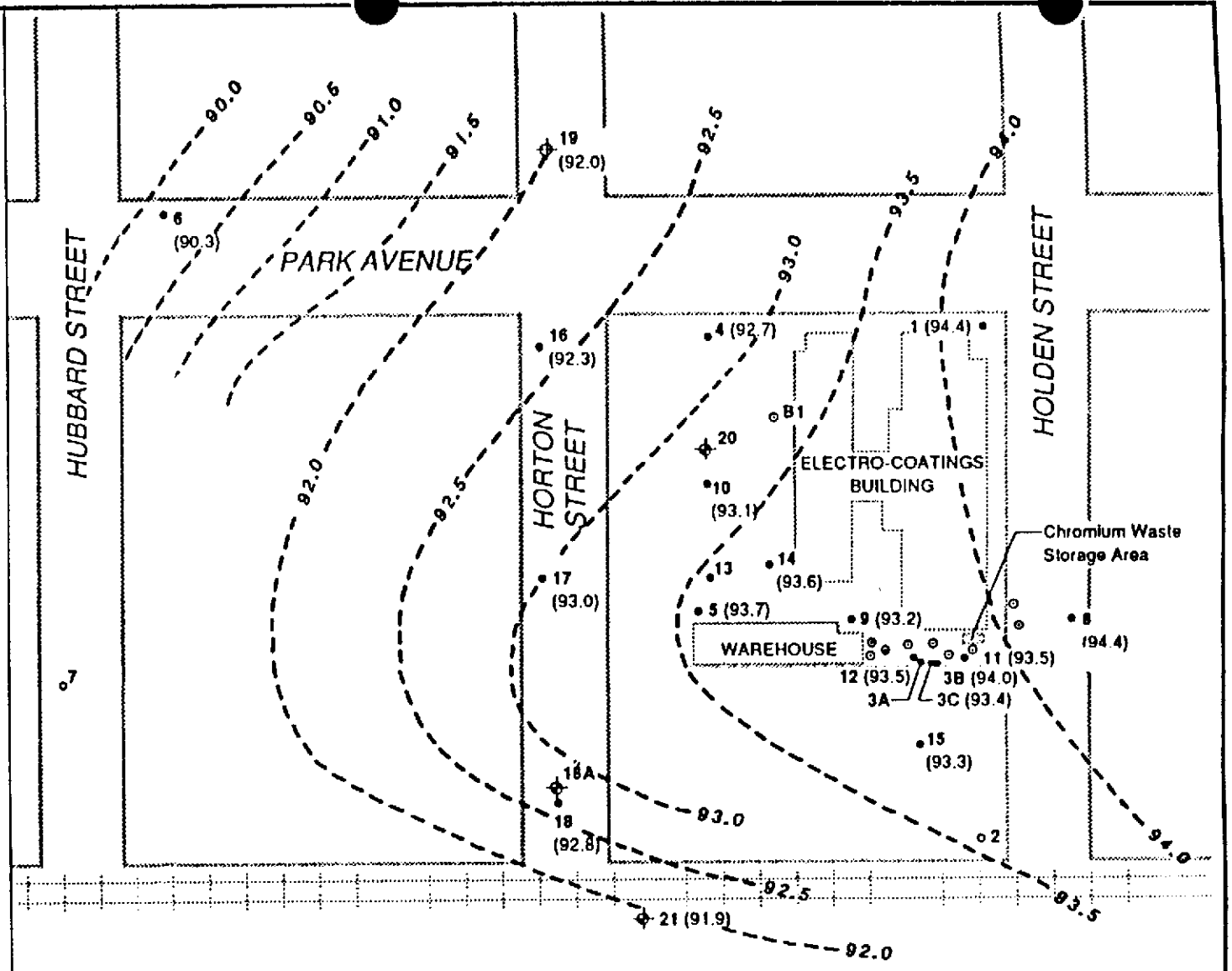
PROJECT NO. 10-2200-01

PLATE 6

LEGEND

- ELECTRO-COATINGS, INC., PROPERTY LINE
- 1 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS
- 20 — WELLS INSTALLED BY KLEINFELDER AS OF 1985
- 2 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- 19 — WELLS INSTALLED BY KLEINFELDER THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- B1 — SOIL BORING
- (90.3) — GROUND WATER SURFACE ELEVATION (feet)
- 91.0 — GROUND WATER SURFACE ELEVATION CONTOUR (feet)

NOTE: Ground water elevations are based on an arbitrary survey datum.



KLEINFELDER

DRAFTED BY: L. Sue/L. Latman	DATE: 4-17-91
CHECKED BY: J. Romie	DATE: 4-23-91

INFERRED PIEZOMETRIC SURFACE CONTOUR MAP FOR SHALLOW WATER BEARING ZONE, AUGUST 9, 1983

ELECTRO-COATINGS, INC.
1401 PARK AVENUE
EMERYVILLE, CALIFORNIA

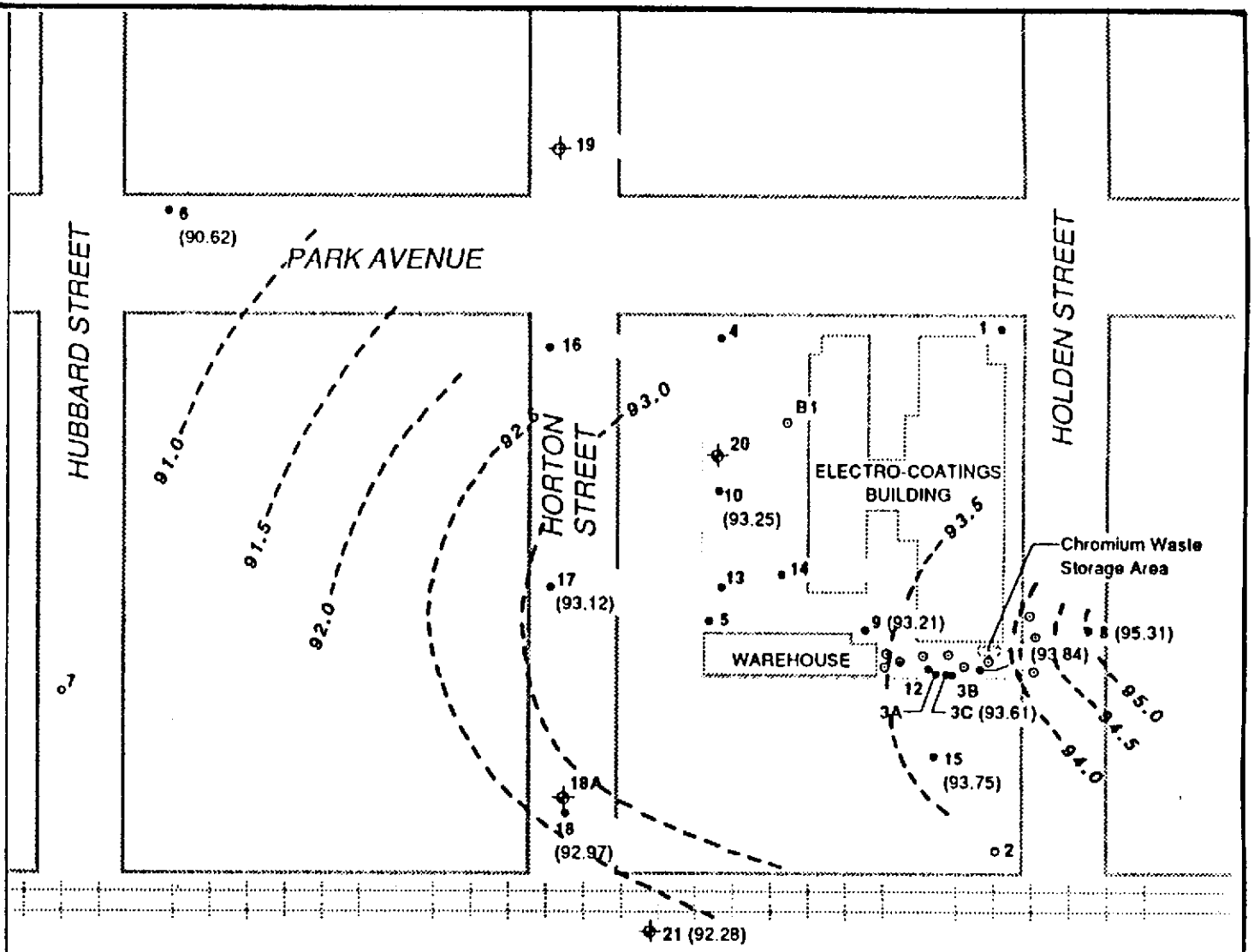
PROJECT NO. 10-2200-01

PLATE 7

LEGEND

- ELECTRO-COATINGS, INC., PROPERTY LINE
- 1 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS
- 20 — WELLS INSTALLED BY KLEINFELDER AS OF 1985
- 2 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- 19 — WELLS INSTALLED BY KLEINFELDER THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- B1 — SOIL BORING
- (90.62) — GROUND WATER SURFACE ELEVATION (feet)
- 92.0 — GROUND WATER SURFACE ELEVATION CONTOUR (feet)

NOTE: Ground water elevations are based on an arbitrary survey datum.



120 0 120
Approximate Scale (feet)

KLEINFELDER

DRAFTED BY: L. Sue/L. Latman	DATE: 4-17-91
CHECKED BY: J. Romie	DATE: 4-23-91

INFERRED PIEZOMETRIC SURFACE CONTOUR MAP FOR SHALLOW WATER BEARING ZONE, JUNE 6, 1985

ELECTRO-COATINGS, INC.
1401 PARK AVENUE
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-2200-01

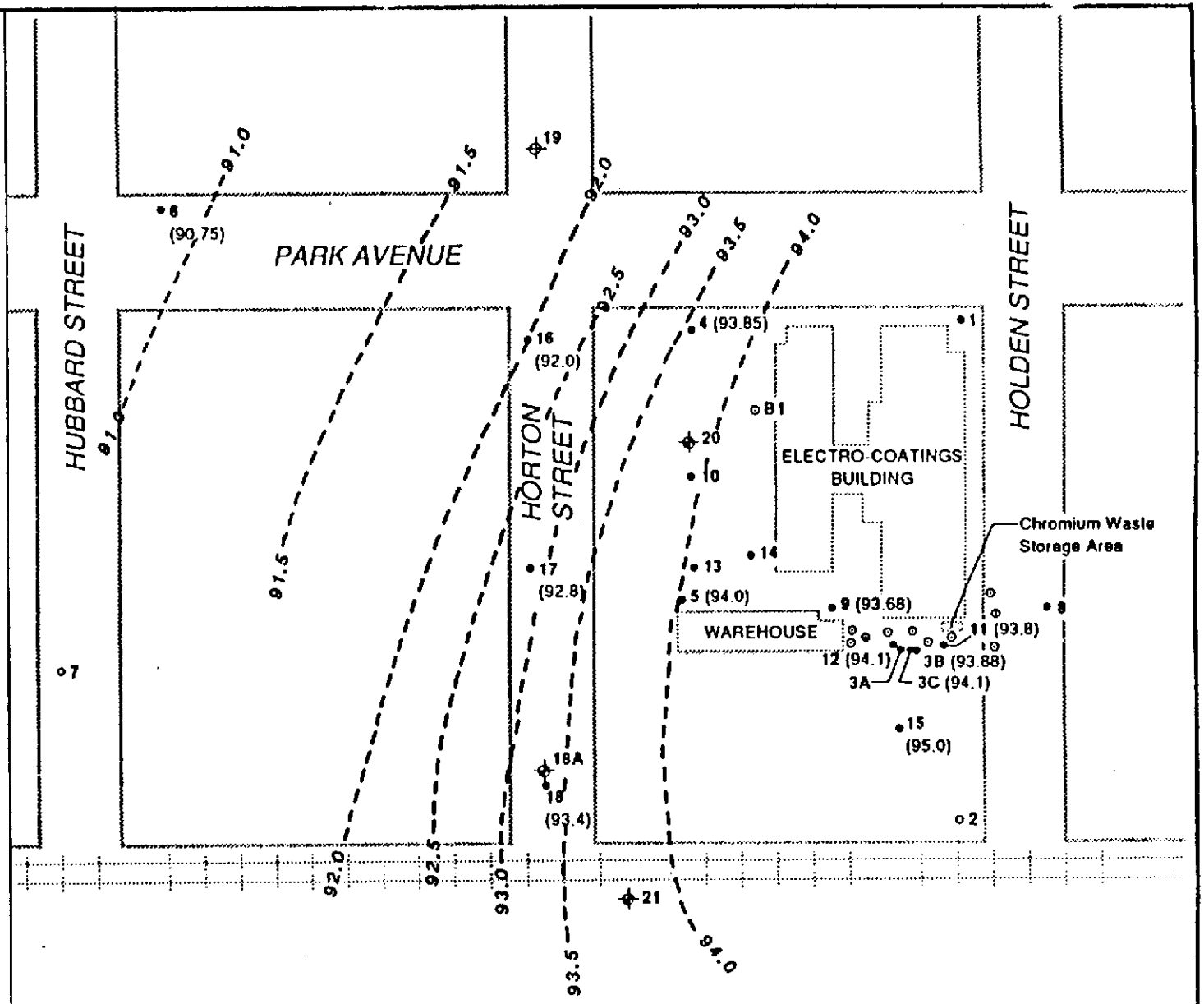
PLATE 8

LEGEND

- ELECTRO-COATINGS, INC., PROPERTY LINE
- •1 WELLS INSTALLED BY PREVIOUS INVESTIGATORS
- ⊕ 20 WELLS INSTALLED BY KLEINFELDER AS OF 1985
- ○ 2 WELLS INSTALLED BY PREVIOUS INVESTIGATORS THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- ⊕ 19 WELLS INSTALLED BY KLEINFELDER THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- B1 ⊙ SOIL BORING
- (93.4) GROUND WATER SURFACE ELEVATION (feet)
- 93.5 GROUND WATER SURFACE ELEVATION CONTOUR (feet)

NOTE: Ground water elevations are based on an arbitrary survey datum.

120 0 120
Approximate Scale (feet)



KLEINFELDER

DRAFTED BY: L. Sue/L. Latman DATE: 4-17-91

CHECKED BY: J. Romle DATE: 4-23-91

INFERRED PIEZOMETRIC SURFACE CONTOUR MAP FOR SHALLOW WATER BEARING ZONE, FEBRUARY 21, 1991

ELECTRO-COATINGS, INC.
1401 PARK AVENUE
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-2200-01

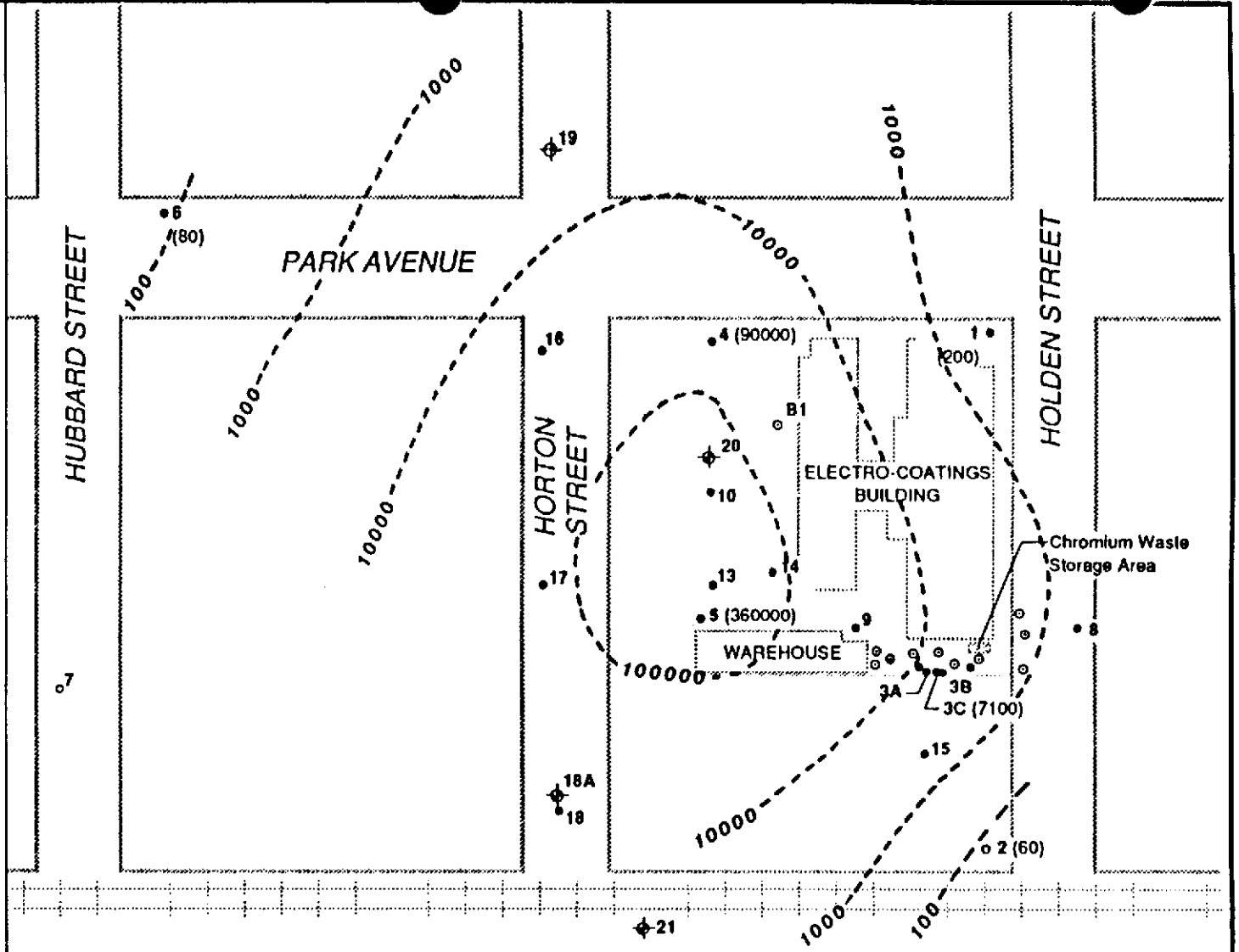
PLATE 9

Total Chromium in Shallow Groundwater

1977, 1981, 1985

LEGEND

- ELECTRO-COATINGS, INC., PROPERTY LINE
- •1 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS
- ⌖20 — WELLS INSTALLED BY KLEINFELDER AS OF 1985
- ○2 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- ⌖19 — WELLS INSTALLED BY KLEINFELDER THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- ⊙B1 — SOIL BORING
- (80) — CHROMIUM CONCENTRATION (µg/l)
- 100 — CHROMIUM ISOCONCENTRATION (µg/l)
- (ND) — NOT DETECTED at or above laboratory detection limit



N

120 0 120
Approximate Scale (feet)

KLEINFELDER

DRAFTED BY: L. Sue/L. Latman DATE: 4-17-91

CHECKED BY: J. Romie DATE: 4-23-91

TOTAL CHROMIUM IN SHALLOW WATER BEARING ZONE, AUGUST 1977

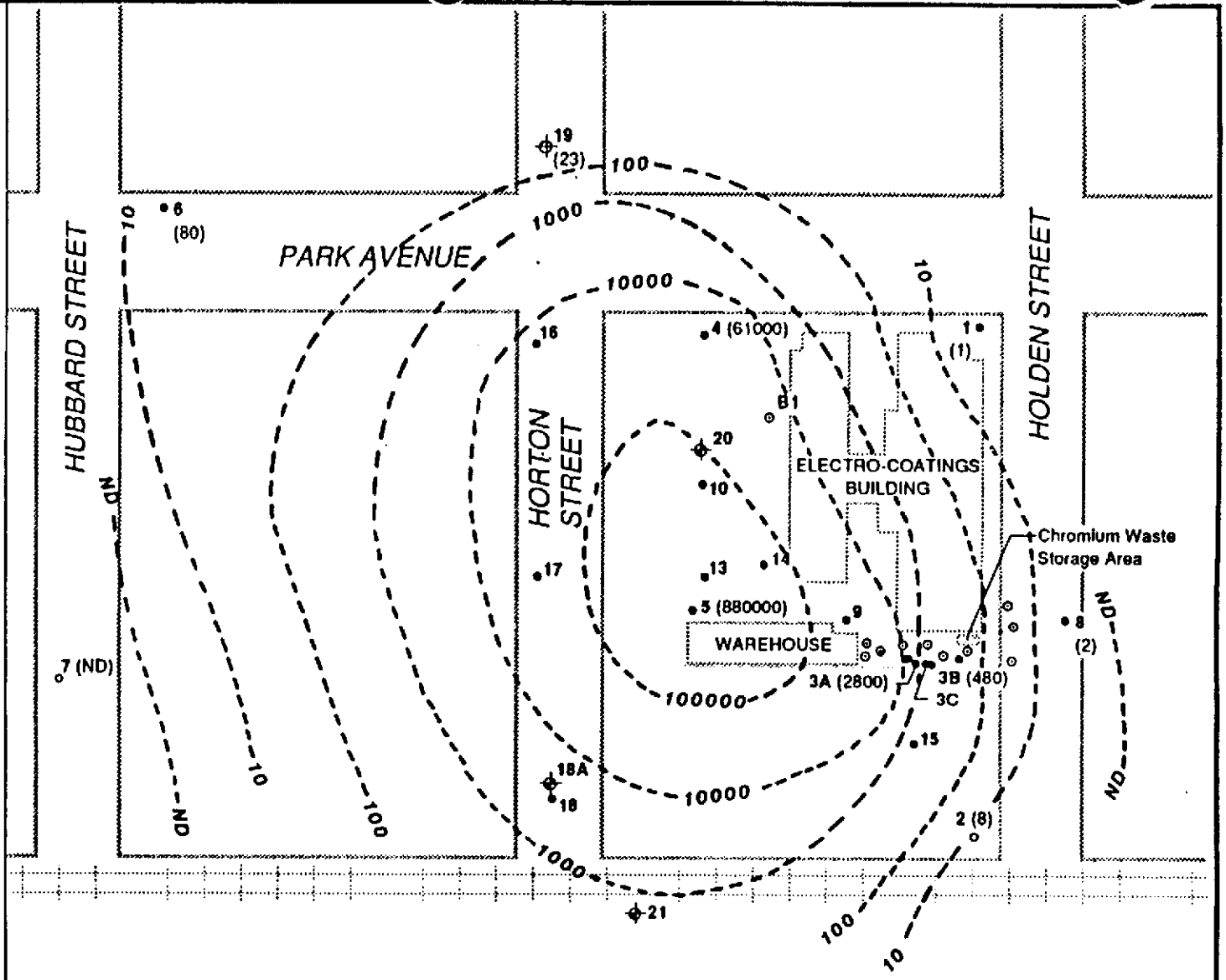
ELECTRO-COATINGS, INC.
1401 PARK AVENUE
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-2200-01

PLATE 10

LEGEND

- ELECTRO-COATINGS, INC., PROPERTY LINE
- 1 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS
- 20 — WELLS INSTALLED BY KLEINFELDER AS OF 1985
- 2 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- 19 — WELLS INSTALLED BY KLEINFELDER THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- B1 — SOIL BORING
- (23) — CHROMIUM CONCENTRATION (µg/l)
- 10 — CHROMIUM ISOCONCENTRATION (µg/l)
- (ND) — NOT DETECTED at or above laboratory detection limit



120 0 120
Approximate Scale (feet)

KLEINFELDER

DRAFTED BY: L. Sue/L. Latman DATE: 4-17-91

CHECKED BY: J. Romie DATE: 4-23-91

TOTAL CHROMIUM IN SHALLOW WATER BEARING ZONE, OCTOBER 1981

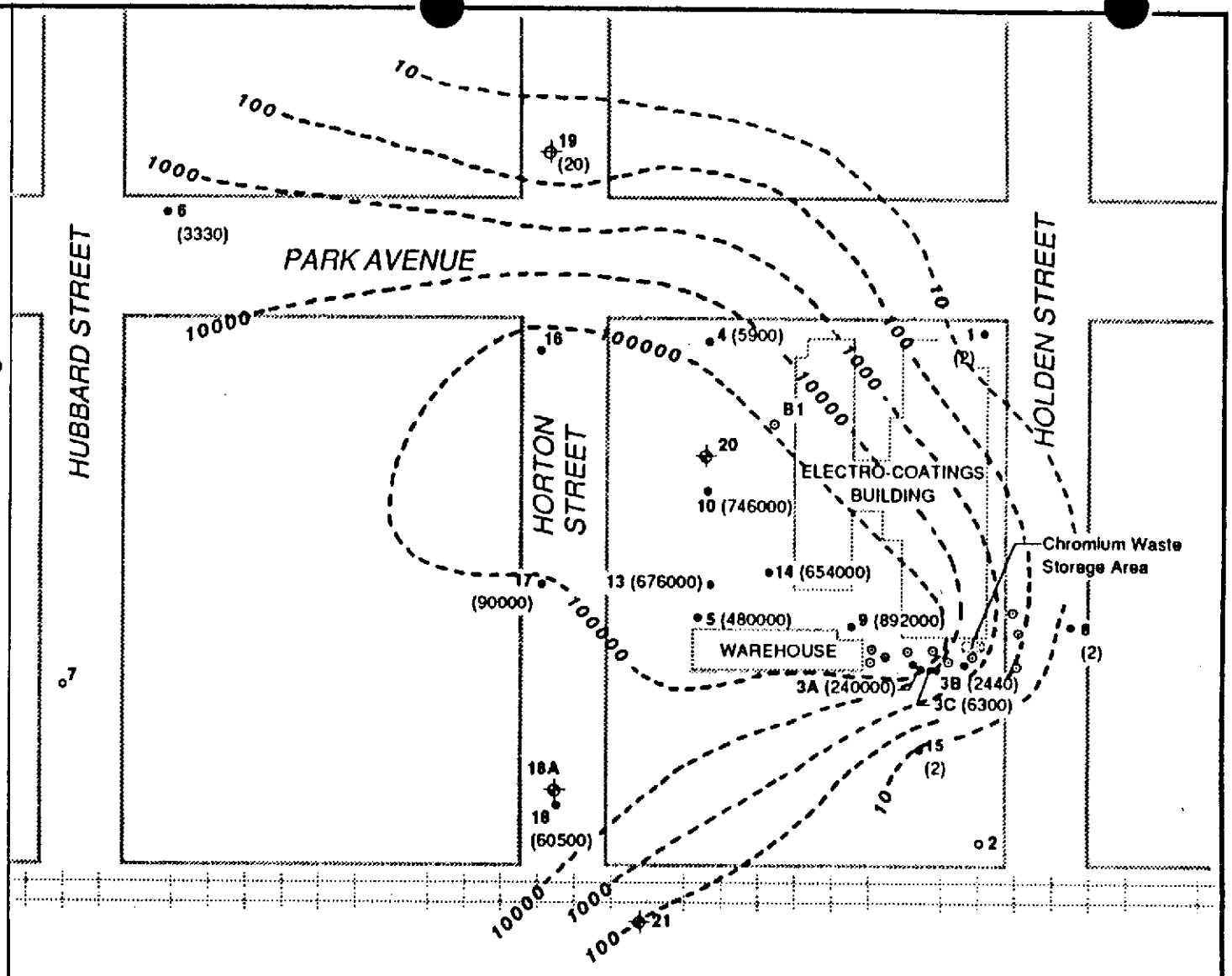
ELECTRO-COATINGS, INC.
1401 PARK AVENUE
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-2200-01

PLATE 11

LEGEND

- ELECTRO-COATINGS, INC., PROPERTY LINE
- •1 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS
- ⊕ 20 — WELLS INSTALLED BY KLEINFELDER AS OF 1985
- ○ 2 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- ⊕ 19 — WELLS INSTALLED BY KLEINFELDER THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- ○ B1 — SOIL BORING
- (1.7) — CHROMIUM CONCENTRATION (µg/l)
- 10 — CHROMIUM ISOCONCENTRATION (µg/l)
- (ND) — NOT DETECTED at or above laboratory detection limit



120 0 120
Approximate Scale (feet)

KLEINFELDER

DRAFTED BY: L. Sue/L. Latman DATE: 4-17-91

CHECKED BY: J. Romie DATE: 4-23-91

TOTAL CHROMIUM IN SHALLOW WATER BEARING ZONE, FEBRUARY1985

ELECTRO-COATINGS, INC.
1401 PARK AVENUE
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-2200-01

PLATE 12

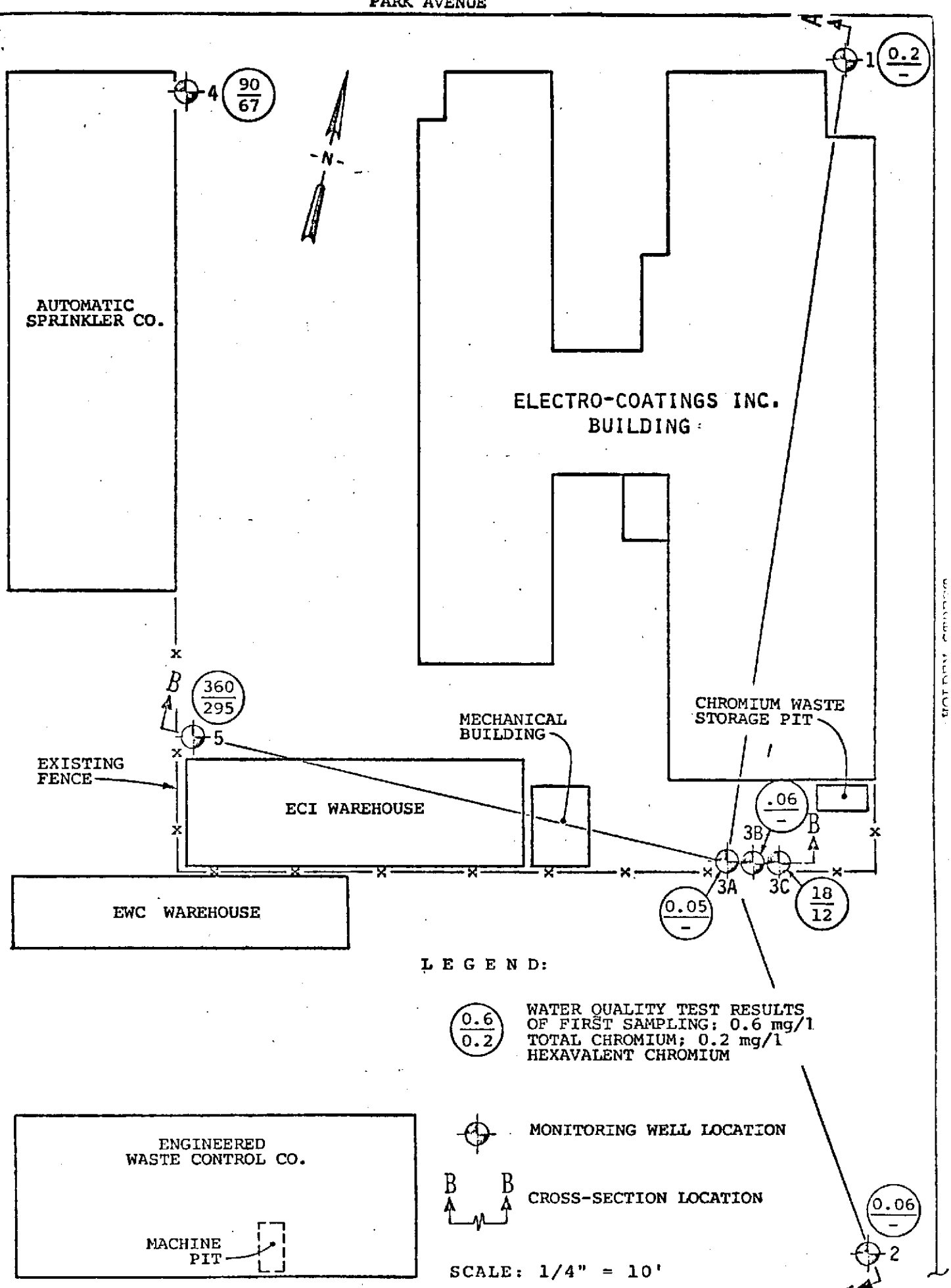
Trichloroethene in Shallow Groundwater

1985

TABLE I

SUMMARY OF GROUND WATER ANALYSES
ELECTRO COATINGS, INC.

HEAVY METALS	WELLS										
	1	2	3A	3B	3C	3C	4	5	A	F	I
Chromium											
Tri-Cr mg/l	--	--	--	--	6	0.36	23	65	<0.02	0.04	<0.02
Hex-Cr mg/l	--	--	--	--	12	6.7	67	295	<0.02	0.07	<0.02
T-Cr mg/l	0.2	0.06	0.05	0.06	18	7.1	90	360	<0.02	0.11	<0.02
Pb, mg/l	0.006	<0.005	<0.05	<0.05	<0.05	0.019	<0.05	0.013	0.05	0.25	<0.05
Zn, mg/l	0.01	<0.01	<0.005	<0.013	<0.005	<0.01	0.019	<0.03	0.45	0.30	0.13
Cu, mg/l	0.002	<0.002	<0.01	0.03	<0.01	<0.002	0.01	<0.002	0.03	0.09	0.01
Ni, mg/l	<0.02	<0.02	<0.02	0.03	0.03	0.08	0.02	0.06	<0.02	0.14	<0.02
Cd, mg/l	--	--	<0.002	0.013	<0.002	--	<0.002	--	<0.002	0.013	<0.002
Specific Conductance μmho/cm	390	360	735	1,840	1,670	720	1,510	720	548	365	679
Date sampled	8/24/77	8/24/77	8/18/77	8/18/77	8/18/77	8/24/77	8/18/77	8/24/77	--	--	--



Project No. 13895B WOODWARD-CLYDE CONSULTANTS	SITE & MONITORING WELL LOCATIONS ELECTRO COATINGS INC. Emeryville, California	Figure 1

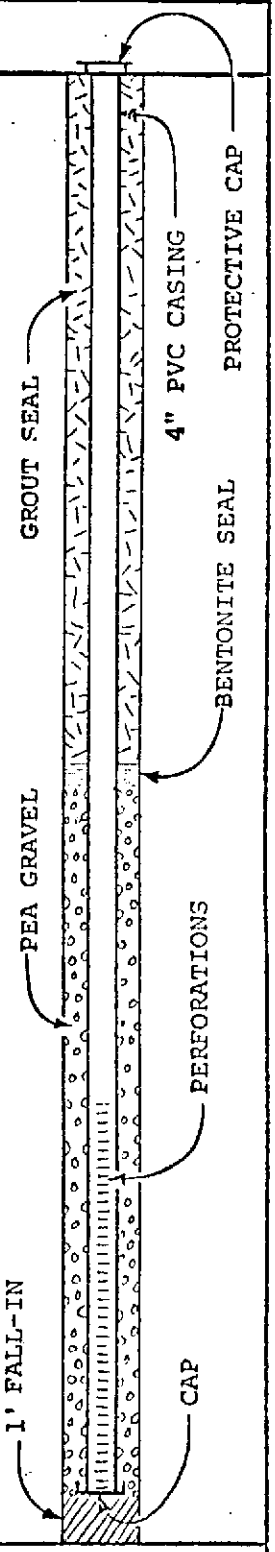
Project: ELECTRO COATINGS INC.
Emeryville, California

LOG OF WELL NO. 1

Date Drilled: August 18, 1977
Type of Boring: 6" Auger
Hammer Weight: ---
Remarks:
(See Legend Sheet for sampler sizes and hammer weights)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION
			Surface Elevation:
			S I L T Y C L A Y (CL-CH) Stiff, dry, dark gray Becomes moist (FILL)
5			S I L T Y C L A Y (CL-CH) Stiff, moist, dark gray
			▽ 9-8-77 S I L T Y C L A Y (CL) Medium stiff to stiff, moist, tan, very calcareous, with nodules
10			S I L T Y C L A Y (CL) Stiff, moist to wet, greenish tan, trace of sand and subrounded gravel Gravelly layer Becomes medium stiff to stiff, dark brown and gray mottled
15			S I L T Y C L A Y (CL) Stiff, wet, green and brown ▽ Upon completion of drilling Some sand
20			Becomes brown
			S I L T Y C L A Y (CL) Stiff, moist to wet, blue Stiff to very stiff Becomes very silty, blue and brown Thin gravelly layer
25			Grades to sandy clay Clayey sand and gravel layer
30			BOTTOM OF HOLE @ 30'

WELL INSTALLATION DETAILS



Proj. No. 13895B
WOODWARD-CLYDE CONSULTANTS
Figure 2

Project: ELECTRO COATINGS INC.
Emeryville, California

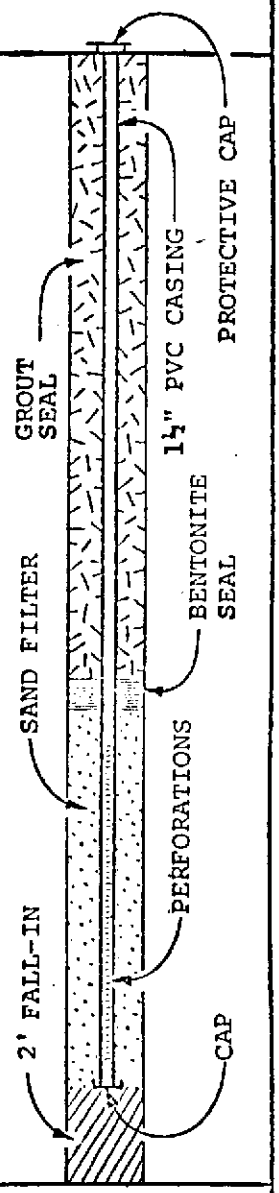
LOG OF WELL NO. 2

Date Drilled: August 18, 1977
Type of Boring: 6" Auger
Hammer Weight: ---

Remarks:

(See Legend Sheet for sampler sizes and hammer weights)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION	WELL INSTALLATION DETAILS
			Surface Elevation:	
			S I L T Y C L A Y (CL) (FILL) Dense, dry, light gray-brown, with trash	
			S I L T Y C L A Y (CL): Stiff, moist, mottled dark brown & black & green (FILL)	
5			S I L T Y C L A Y (CL) Stiff, moist, black Becomes grayish brown	
			9-8-77 S I L T Y C L A Y (CL) Stiff, moist, mottled green and gray, with trace of fine sand and gravel	
			SILTY GRAVEL (GM): Dense, damp, brown	
10			C L A Y E Y S I L T: Dense, damp, mottled gray and brown, with clay lenses	
			S I L T Y C L A Y (CL): Stiff, moist, grayish brown, trace of fine sand and small gravel Trace of water Trace to some gravel	
15			C L A Y E Y G R A V E L (GC) Dense, moist, brown	
			V E R Y S I L T Y C L A Y (CL) Stiff, moist, gray-brown, with sand pockets	
20			CLAYEY GRAVEL: Dense, wet, brown	
			V E R Y S I L T Y C L A Y (CL) Very stiff, moist, brown	
			BOTTOM OF HOLE @ 23'	
25				
30				



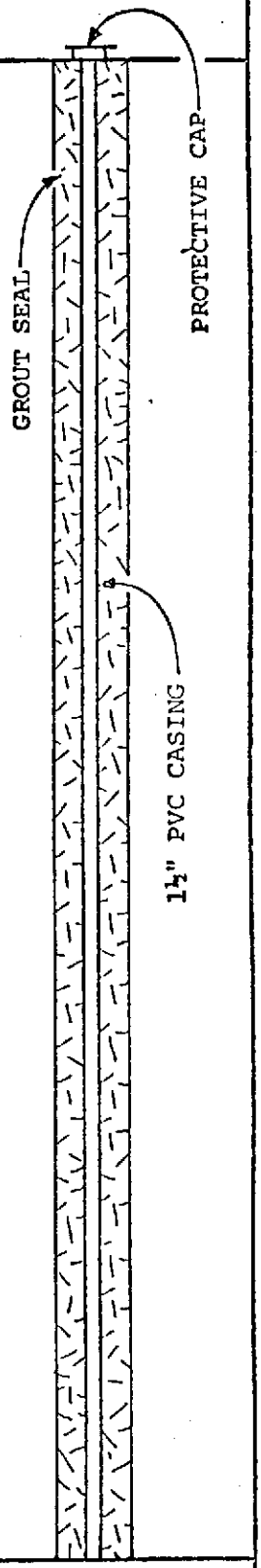
Proj. No. 13895B | WOODWARD-CLYDE CONSULTANTS | Figure 3

Project:	ELECTRO COATINGS INC. Emeryville, California	LOG OF WELL NO. 3A

Date Drilled: August 15, 1977
Type of Boring: 4 7/8" ϕ Rotary
Hammer Weight: ---
Remarks:
(See Legend Sheet for sampler sizes and hammer weights)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION
			Surface Elevation:
			6" ASPHALT CONCRETE
			S A N D Y C L A Y F I L L Stiff, moist, brown, with bricks & blue clay
			C L A Y E Y S A N D F I L L (SC-SP) Dense, moist, bluish green to brown
			GRAVEL LAYER: Dense, gray, with clay binder (FILL)
5			S I L T Y C L A Y (CL-CH) Very stiff, moist, black Becomes gray, with trace of gravel 9-8-77 Becomes bluish gray
10			S I L T Y C L A Y (CL) Stiff, moist, blue-gray
15			S I L T Y C L A Y (CL) Very stiff, moist, mottled gray and brown, with rust streaks
20			S A N D A N D G R A V E L (GW-SW) Dense, wet, brown, with trace of clay
25			
30			VERY SILTY CLAY (CL-ML): Medium stiff, very moist, blue, with trace of fine gravel --No gravel

WELL INSTALLATION DETAILS



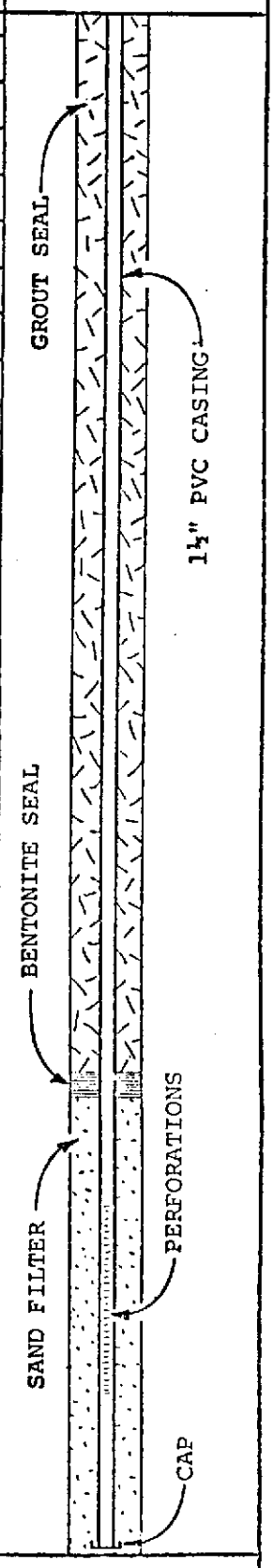
Proj. No. 13895B	WOODWARD-CLYDE CONSULTANTS	Figure 4

Project: ELECTRO COATINGS INC.
Emeryville, California

LOG OF WELL NO. 3A (Continued)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION
35			} Sand lense: black and blue
40			
45			V E R Y S I L T Y C L A Y (CL-ML) Stiff, moist, gray, possibly with thin sand lenses
50			
55			S I L T Y C L A Y (CL) Stiff, moist, brown
60			S I L T Y S A N D & G R A V E L (GM-SM) Dense, wet, reddish brown, gravel to ± 1" diameter
65			S I L T Y C L A Y (CL) Stiff, moist, reddish brown BOTTOM OF HOLE @ 65'

WELL INSTALLATION DETAILS



Proj. No. 13895B | WOODWARD-CLYDE CONSULTANTS | Figure 5

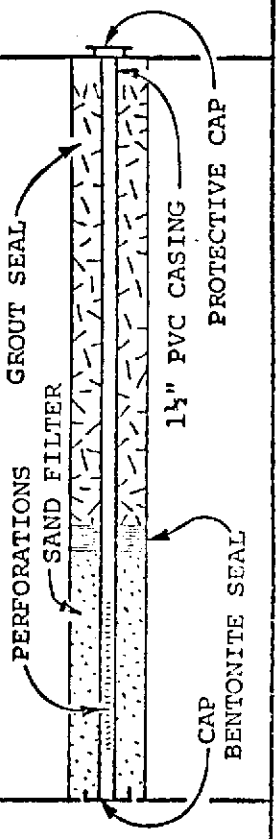
Project: ELECTRO COATINGS INC.
Emeryville, California

LOG OF WELL NO. 3C 3B

Date Drilled: August 15, 1977
Type of Boring: 4 7/8" ϕ Rotary
Hammer Weight: ---
Remarks:
(See Legend Sheet for sampler sizes and hammer weights)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION
			Surface Elevation:
			6" ASPHALT CONCRETE
			SANDY CLAY FILL: Stiff, moist, brown, with bricks
			C L A Y E Y S A N D F I L L (SC-SP) Dense, moist, blue green to brown
			CLAYEY GRAVEL: Dense, damp, brown, angular to 1½" in diameter (FILL)
5			▽ after drilling S I L T Y C L A Y (CL-CH) Very stiff, moist, black
			▽ 9-8-77 Becomes grayish blue, with organics, trace of fine gravel and hard nodules
10			SILTY CLAY (CL): Stiff, moist, mottled brown and blue-gray, with trace of organic materials
			SILTY CLAY (CL): Very stiff, moist, gray and brown and black mottled, with trace of fine gravel & sand
			SILTY CLAY (CL): Very stiff, moist, mottled gray and brown — — Trace of water
15			BOTTOM OF HOLE @ 15'
20			
25			
30			

WELL INSTALLATION DETAILS



Project: ELECTRO COATINGS INC.
Emeryville, California

LOG OF WELL NO. 3B 3C

Date Drilled: August 15, 1977
Type of Boring: 6" Auger
Hammer Weight: ---

Remarks:

(See Legend Sheet for sampler sizes and hammer weights)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION	WELL INSTALLATION DETAILS

Surface Elevation:

6" ASPHALT CONCRETE

SANDY CLAY FILL: Stiff, moist, brown, with bricks

C L A Y E Y S A N D (SC-SP): Medium dense, very moist, blue-green to brown

▽ 3'-0" after drilling

} Gravel lense, (FILL)

SILTY CLAY (CL): Very stiff, moist, black

▽ 9-8-77

Becomes gray, with organic material

Becomes mottled blue-gray, with trace of fine gravel

S I L T Y C L A Y (CL)

Medium stiff, moist, gray-brown, trace of fine gravel and sand

V E R Y S I L T Y C L A Y (CL)

Very stiff, moist, mottled gray and brown

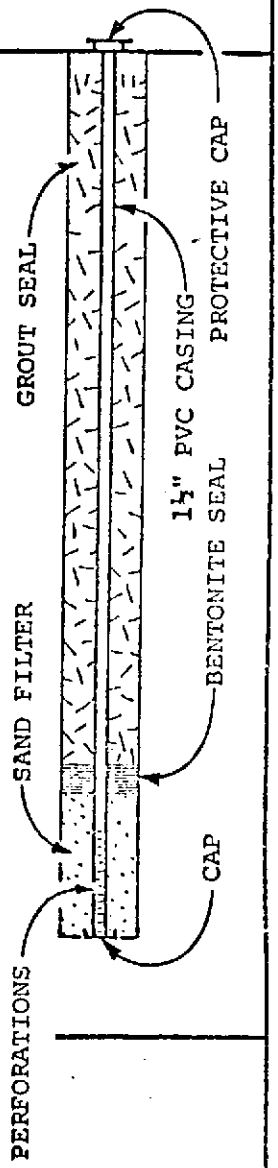
---Trace of water at time of drilling

S A N D A N D G R A V E L (SW-GW)

Dense, wet, dark brown, with trace of clay

Sand and gravel

BOTTOM OF HOLE @ 20'



Proj. No. 13895B	WOODWARD-CLYDE CONSULTANTS	Figure 6

Project: ELECTRO COATINGS INC.
Emeryville, California

LOG OF WELL NO. 4

Date Drilled: August 15, 1977
Type of Boring: 6" Auger
Hammer Weight: ---

Remarks:

(See Legend Sheet for sampler sizes and hammer weights)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION	WELL INSTALLATION DETAILS

Surface Elevation:

3" ASPHALT CONCRETE

S I L T Y C L A Y (CL)

Very stiff, moist, black

5

after drilling 16'-17'

9-8-77

Becomes gray

Trace of gravel

10

S I L T Y C L A Y (CL)

Very stiff, moist, gray-brown, with trace of gravel and sand

15

Water inflow, possibly gravelly layer

V E R Y C L A Y E Y S I L T (ML-CL)

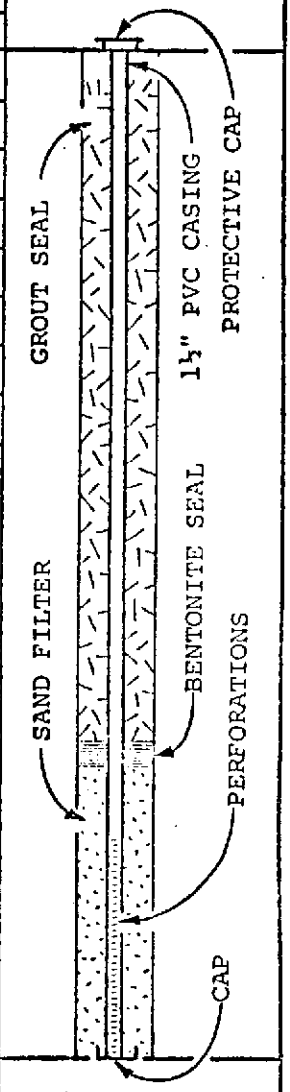
Medium dense, moist, brown

20

BOTTOM OF HOLE @ 20.5'

25

30



Proj. No. 13895B | WOODWARD-CLYDE CONSULTANTS | Figure 8

Project: ELECTRO COATINGS INC.
Emeryville, California

LOG OF WELL NO. 5

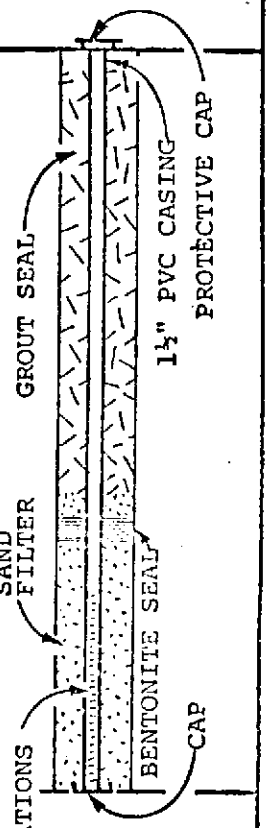
Date Drilled: August 15, 1977
Type of Boring: 6" Auger
Hammer Weight: ---

Remarks:

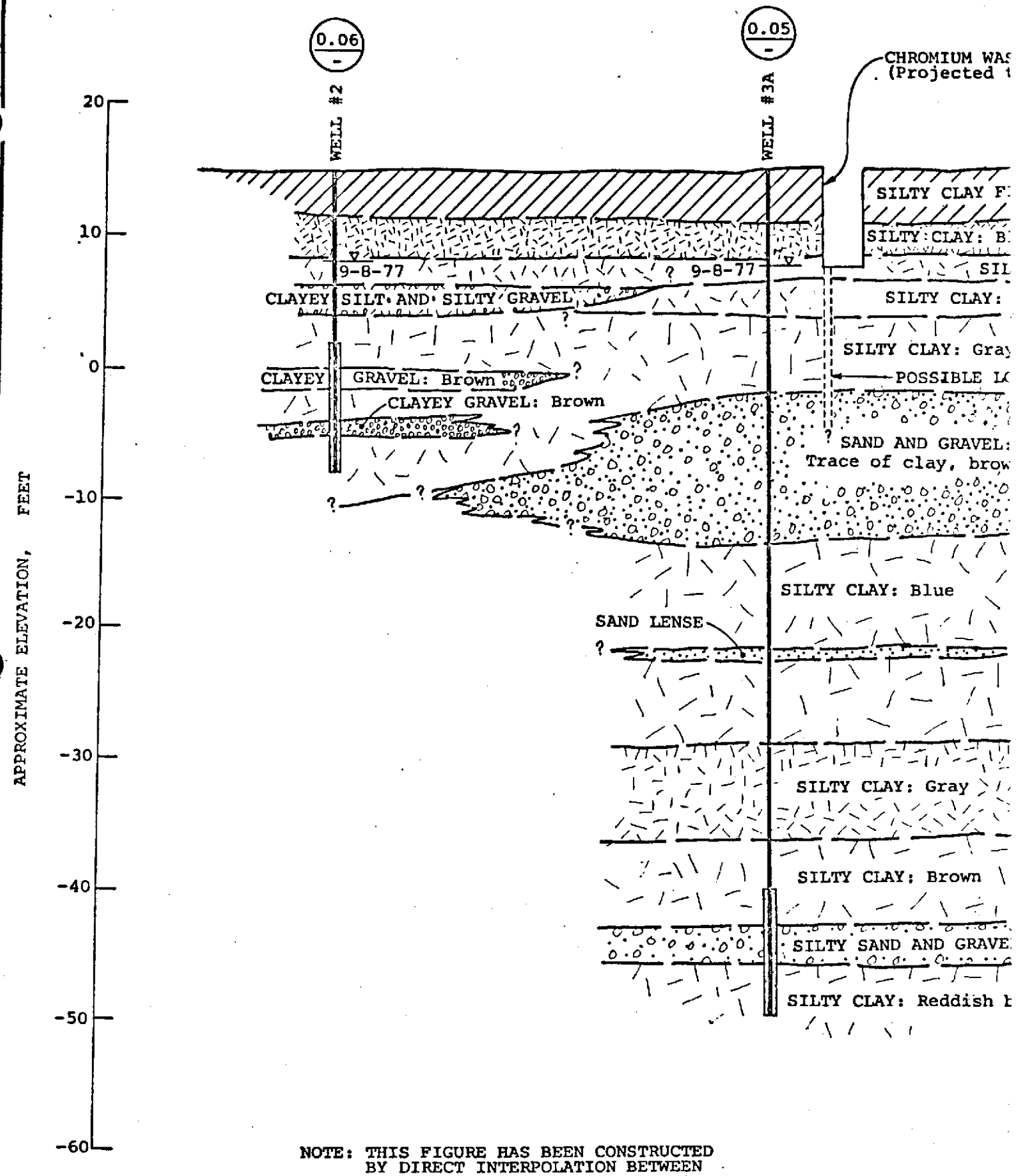
(See Legend Sheet for sampler sizes and hammer weights)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION
			Surface Elevation:
			3" ASPHALT CONCRETE
			CLAYEY GRAVEL (GC): Dense, moist, gray to reddish brown
			S I L T Y C L A Y (CL-CH)
			Very stiff, moist, black
			▽ 9-8-77 — Becomes bluish light gray, with trace of fine gravel
			SILTY CLAY (CL): Very stiff, moist, mottled gray & brown
			SILTY CLAY (CL): Very stiff, moist, brown, trace of fine gravel and sand
			CLAYEY GRAVEL (GC): Dense, wet, brown
			S I L T Y C L A Y: Very stiff, moist, gray-brown, with trace of fine gravel
			BOTTOM OF HOLE @ 15'

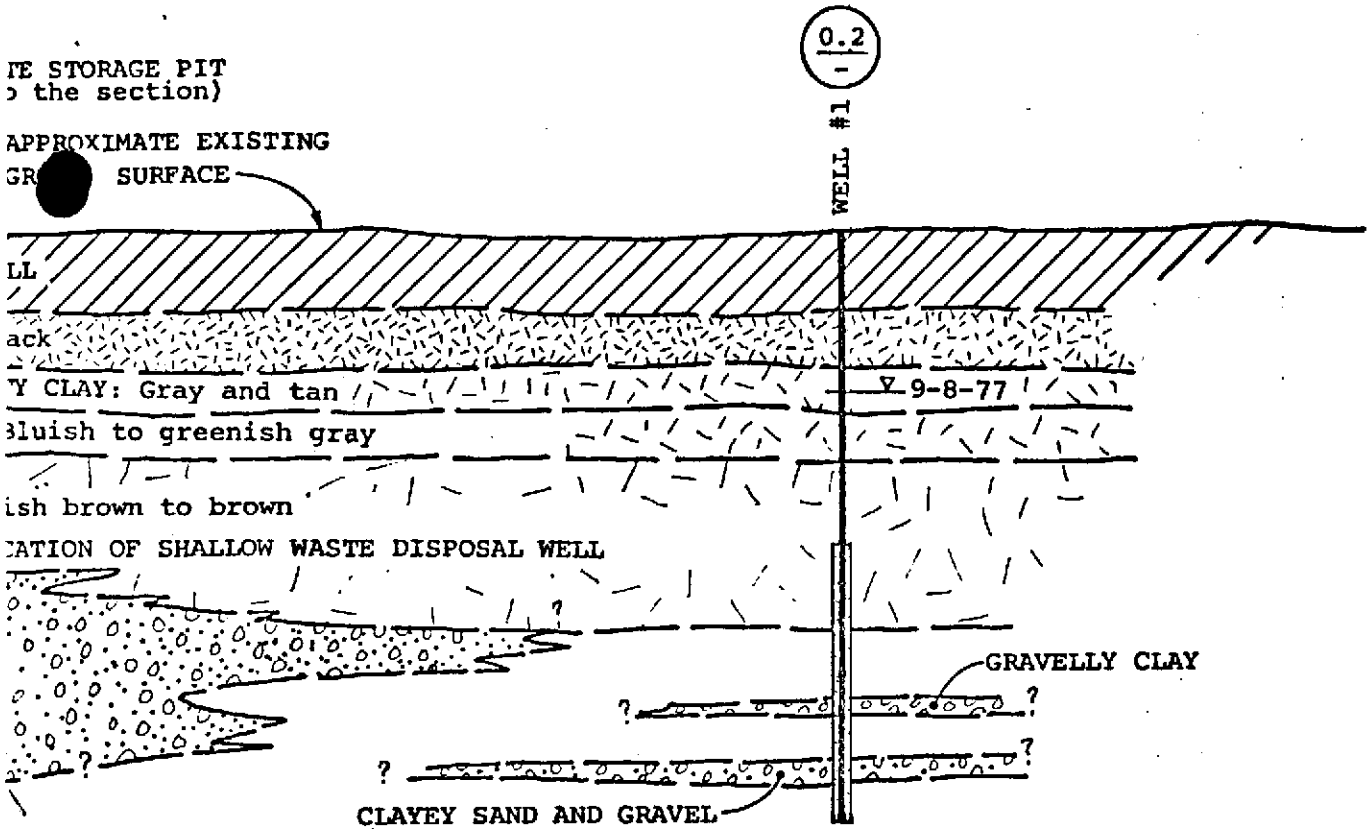
WELL INSTALLATION DETAILS



Proj. No. 13895B | WOODWARD-CLYDE CONSULTANTS | Figure 9



NOTE: THIS FIGURE HAS BEEN CONSTRUCTED BY DIRECT INTERPOLATION BETWEEN WELL BORINGS. ACTUAL SUBSURFACE CONDITIONS MAY DIFFER FROM THOSE POSTULATED ON THIS FIGURE.



L E G E N D:

WATER QUALITY SAMPLING LOCATION

9-8-77 WATER LEVEL MEASURED ON DATE INDICATED

0.6 / 0.2 WATER QUALITY TEST RESULTS OF FIRST SAMPLING: 0.6 mg/l TOTAL CHROMIUM; 0.2 mg/l HEXAVALENT CHROMIUM

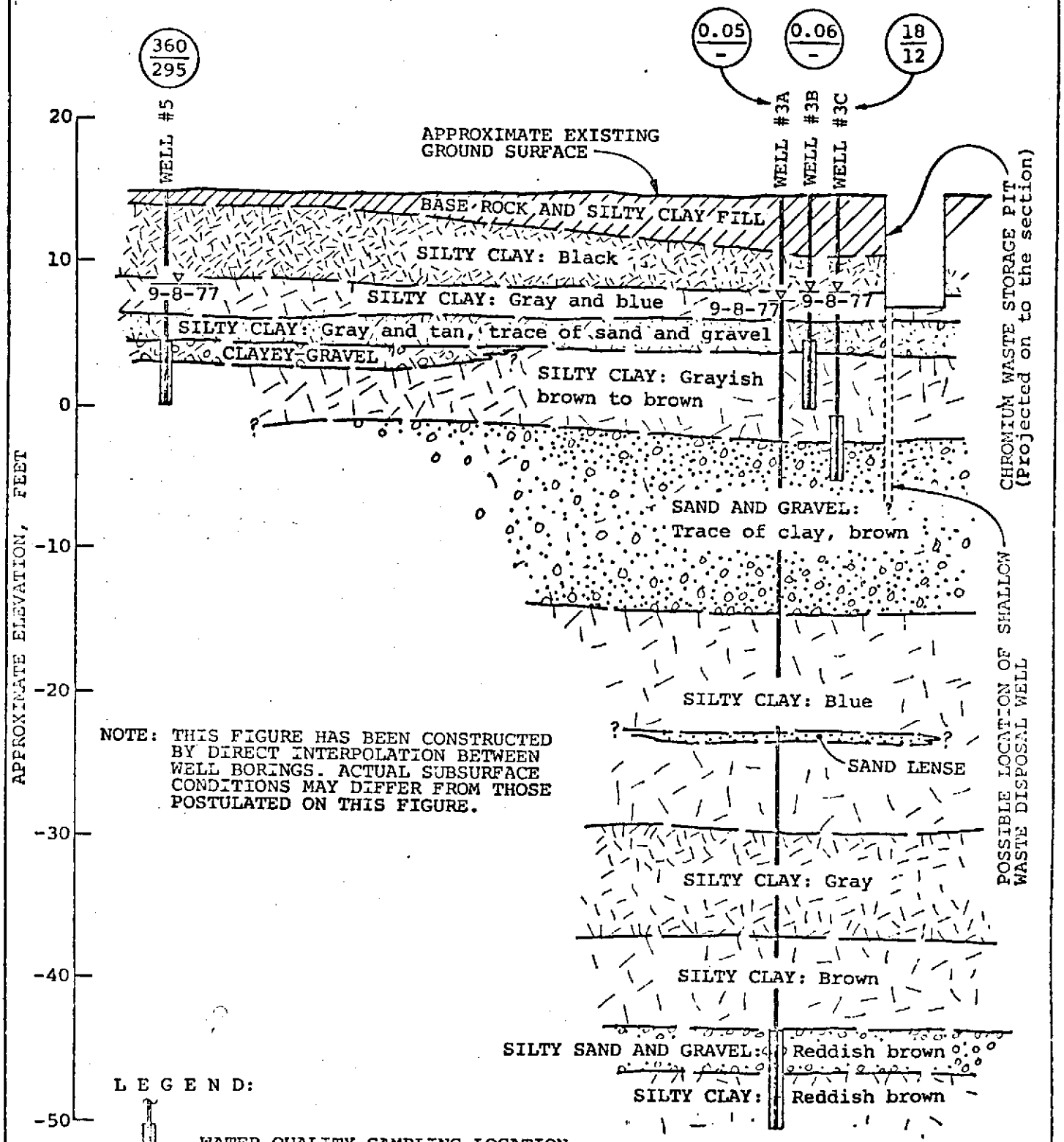
0 20 40 80 120

SCALE IN FEET

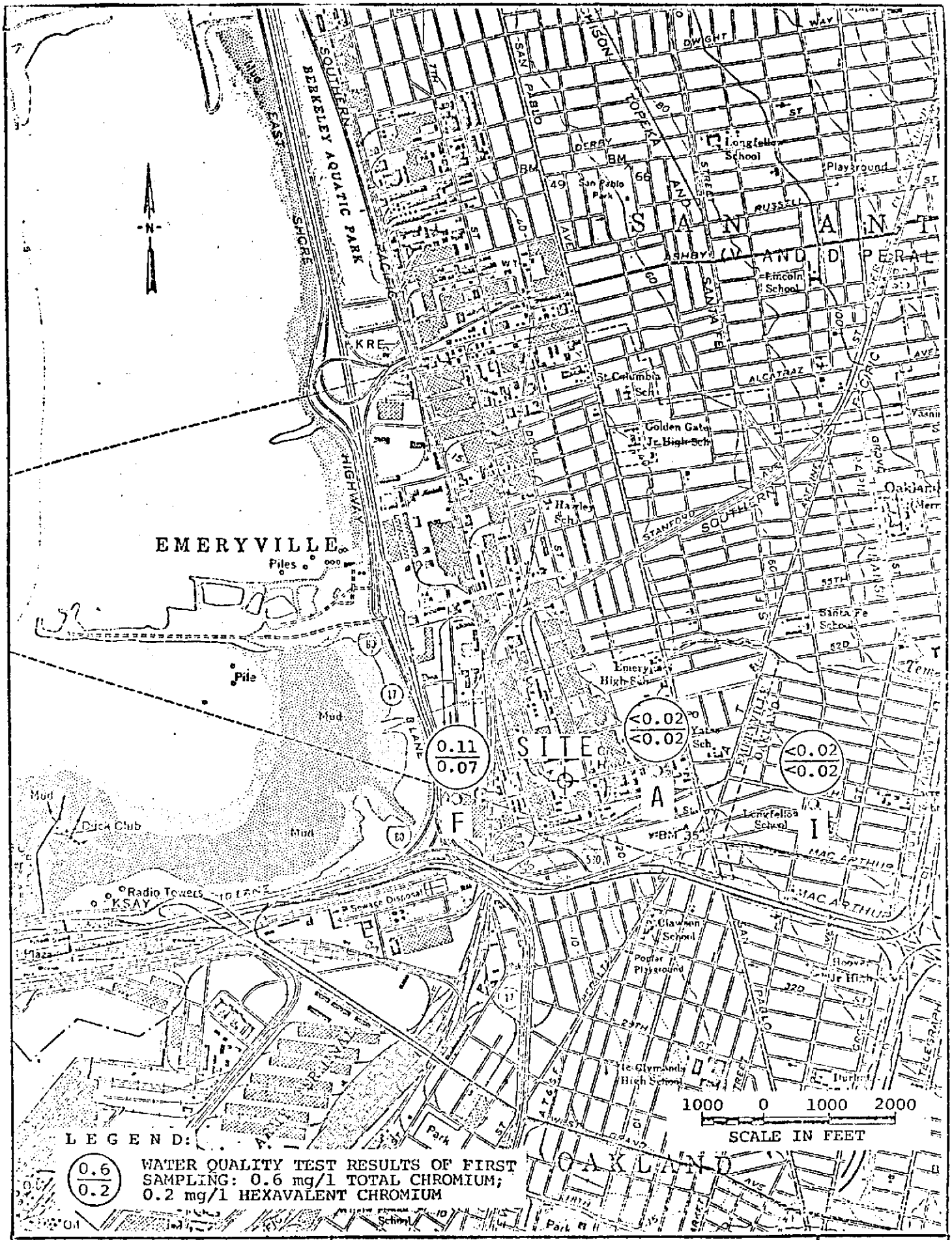
SECTION A - A
IDEALIZED SOIL PROFILE
ELECTRO COATINGS INC.
Emeryville, California

Project No. 13895B
WOODWARD-CLYDE CONSULTANTS

Figure 10



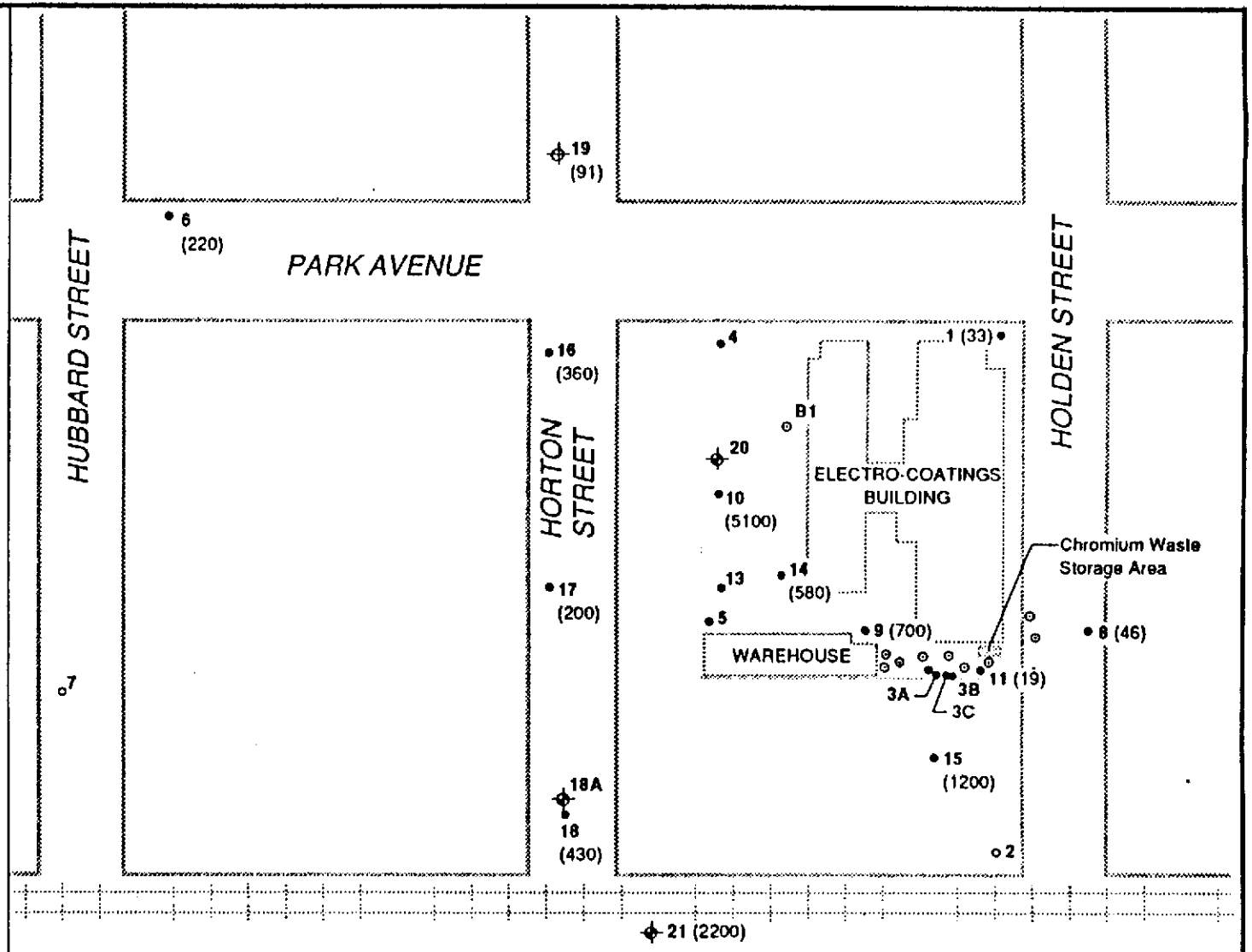
Project No. 13895B WOODWARD-CLYDE CONSULTANTS	IDEALIZED SOIL PROFILE - SECTION B - B ELECTRO COATINGS INC. Emeryville, California	Figure 11



Project No. 13895B WOODWARD-CLYDE CONSULTANTS	EXISTING WELL LOCATIONS ELECTRO COATINGS INC. Emeryville, California	Figure 12

LEGEND

- ELECTRO-COATINGS, INC., PROPERTY LINE
- 1 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS
- 20 — WELLS INSTALLED BY KLEINFELDER AS OF 1985
- 2 — WELLS INSTALLED BY PREVIOUS INVESTIGATORS THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- 19 — WELLS INSTALLED BY KLEINFELDER THAT COULD NOT BE LOCATED AS OF FEBRUARY 1991
- B1 — SOIL BORING
- (91) — TRICHLOROETHENE CONCENTRATION (ppb)



120 0 120

Approximate Scale (feet)

KLEINFELDER

DRAFTED BY: L. Sue/L. Latman DATE: 4-17-91

CHECKED BY: J. Romie DATE: 4-23-91

TRICHLOROETHENE IN SHALLOW WATER BEARING ZONE, 1985

ELECTRO-COATINGS, INC.
1401 PARK AVENUE
EMERYVILLE, CALIFORNIA

PROJECT NO. 10-2200-01

PLATE 13

STATE OF CALIFORNIA—RESOURCES AGENCY

EDMUND G. BROWN JR., Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
11 JACKSON STREET, ROOM 6040
OAKLAND 94607

Phone: Area Code 415
464-1255

February 2, 1978

File No. 2342.09 (RJC) sag

FEB 3 1978

Mr. Al Hartjen, Staff Engineer
Electro-Coatings, Incorporated
1401 Park Avenue
Emeryville, CA 94608

Dear Mr. Hartgen:

CLEANUP AND ABATEMENT ORDER 77-011

As a followup to our phone conversation on January 16, 1978, I would like to make several suggestions regarding the investigation and monitoring of the groundwater contaminated with chromium waste in the vicinity of your Emeryville facility.

I would recommend the following actions be taken so that the situation can be more fully assessed before we make a determination of the type and extent of corrective action:

✓ A. To document the direction of groundwater movement in the area, an accurate survey should be conducted to establish the elevation of the top of the casing for the recently drilled wells. This will permit the establishment of an accurate elevation of the groundwater surface.

✓ B. It is recommended that monthly monitoring be continued to establish both the seasonal variations in base line data and to evaluate the changes in concentration of the chromium waste in the monitoring wells. (The parameters should include chromium and specific conductance). In addition, it is recommended that a series of water levels be taken periodically, say, every hour, in the wells drilled for the study over a period of one day to evaluate if tidal effects influence the water level readings.

✓ C. To the West of the site, Holes Nos. 4 and 5 show contamination of the groundwater at these points, but are inadequate to determine the extent of contamination in this direction. Additional holes should be located

to the southwest and northwest of the point of discharge to delineate the effected area. (If the groundwater is not found to be moving westward, then a well should be placed 100 feet to the east to determine movement in that direction).

If you have any questions regarding this matter please contact Mr. Richard J. Condit at 464-0432.

Sincerely,

Teng-chung Wu

TENG-CHUNG WU, Chief
South Bay Division

cc: State Department of Health
Hazardous Waste Section
2151 Berkeley Way
Berkeley, CA 94607

ES

ENGINEERING-SCIENCE, INC.
RESEARCH AND DEVELOPMENT LABORATORY
600 BANCROFT WAY · BERKELEY, CALIFORNIA 94710 · 415/548-7970

CABLE ADDRESS: ENGINSCI
TELEX: 33-6438

2 February 1978
REF: 8037.63

FEB 3 1978

Electro-Coatings, Inc.
1401 Park Avenue
Emeryville, CA 94608

Attention: Al Hartjen

Gentlemen:

Listed below are the results of the tests performed on your sample received in our laboratory 25 January 1978.

Sample	T-Cr, mg/l	Cr^{+6}, mg/l	Cr^{+3}, mg/l
SPS #5 (ES#780153)	57	55	2.0

If there are any questions, please do not hesitate to contact us.

Very truly yours,

Thomas A. Helbig
Laboratory Manager

TAH/sc

ES

ENGINEERING-SCIENCE, INC.
RESEARCH AND DEVELOPMENT LABORATORY
600 BANCROFT WAY • BERKELEY, CALIFORNIA 94710 • 415/548-7970

CABLE ADDRESS: ENGINSCI
TELEX: 33-6436

2 February 1978
REF: 8037.63

Electro-Coatings, Inc.
1401 Park Avenue
Emeryville, CA 94608

Attention: Al Hartjen

Gentlemen:

Listed below are the results of the tests performed on your samples received in our laboratory 25 January 1978.

Sample	T-Cr, mg/l	Cr^{+6}, mg/l	Cr^{+3}, mg/l	Cond., µmbo/cm
#3B 1005 (ES#780154)	.20	-	-	2060
#3C 1015 (ES#780155)	44.	43.5	0.5	2380
#4 1023 (ES#780156)	88.	88.	<.01	1190
#% 1032 (ES#780157)	475.	475.	<.01	1470

If there are any questions, please do not hesitate to contact us.

Very truly yours,

Thomas A. Helbig
Laboratory Manager

TAH/sc

2/2/73 Well Water Depth Log

Well No.	Time / Depth						H.T. 6:14 AM GG / L.T. 1:24 PM GG
	Targ. Time 7:2[illegible]	9:[illegible]	11:[illegible]	1:[illegible]	2:3[illegible]	4:00	+29 Min For [illegible]
3B	6'-4 3/8	6'-5"	6-[illegible]	6-5 3/4	6-[illegible]	[illegible]-3 3/8	
	Act Time 7:15	9:03	10:[illegible]	12:37	2:11	3:3[illegible]	
3C	6-5"	6-4 1/2	6-4 3/4	6-4 1/4	6-4 1/8	6-4 1/2	
	Act Time 7:17	9:04	10:[illegible]	12:35	2:12	3:37	
4	[illegible]	6-[illegible]	6-[illegible]	6-4"	6-[illegible]	6-4 1/2	
	Act Time 7:[illegible]	9:20	11:09	12:52	2:29	3:57	
5	[illegible]-7 1/2	6-8	6-8 1/4	[illegible]	[illegible]	[illegible]	
	Act Time [illegible]	9:21	11:10	1:02	2:39	4:13	

Note: All Dim. Down From Top Of Well Casing

ES

ENGINEERING-SCIENCE, INC.
RESEARCH AND DEVELOPMENT LABORATORY
600 BANCROFT WAY · BERKELEY, CALIFORNIA 94710 · 415/548-7970

CABLE ADDRESS: ENGINSCI
TELEX: 33-6438

10 February 1978
REF: 8037.63

Electro-Coatings, Inc.
1401 Park Avenue
Emeryville, CA 94608

FEB 1 = 1978

Att: Al Hartjen

Gentlemen:

Listed below are the results of the tests performed on your samples received in our laboratory 3 February 1978.

Sample	T-Cr, mg/l	Cr^{+6}, mg/l	Cond., µmho/cm
3B - 7.20	1.6	1.6	2,610
3B - 9.08	1.1	-	2,420
3B - 10.48	1.3	-	2,260
3B - 12.41	1.4	-	2,120
3B - 2.15	1.8		2,420
3B - 3.44	2.4	-	2,420
3C - 7.25	80.	80.	2,120
3C - 9.13	57.	-	2,260
3C - 10.52	39.	38.	2,120
3C - 12.45	33.	-	2,610
3C - 2.19	28.	-	2,830
3C - 3.50	28.	28.	2,420
4 - 7.26	88.		1,410
4 - 9.20	88.		1,410
4 - 11.03	88.	Composite	1,210
4 - 12.55	88.	= 80	1,300
4 - 2.33	88.		1,410
4 - 4.02	88.		1,300
5 - 7.07	490.		2,120
5 - 9.33	490.		2,260
5 - 11.13	500.	Composite	2,420
5 - 1.04	500.	=480	2,830
5 - 2.42	500.		2,120
5 - 4.15	500.		2,610

If there are any questions, please do not hesitate to contact us.

Very truly yours,

Thomas A. Helbig
Laboratory Manager

TAH/sc

ELECTRO-
COATINGS
INC.

REPLY TO:
1605 School Street
Moraga, CA 94556
415/376-5161

February 15, 1978

Mr. Richard J. Condit
California Regional Water Quality
Control Board
1111 Jackson Street
Room 6040
Oakland, CA 94607

RE: Cleanup And Abatement Order 77-011

Dear Mr. Condit:

Enclosed are copies of the following items:

1. Dwg. D-1003-1, Well Data

2. Summary of Chemical Analysis for Wells 3B, 3C, 4 & 5 up to 2/2/78

3. Map of part of Emeryville showing the relative locations of existing wells and proposed wells #6 & 7.

Dwg. D-1003-1 shows the elevation of the existing wells related to Mean Sea Level. Also shown are water level measurements made on 2/2/78 and high and low tide data.

Separate sheets, for each well, 3B, 3C, 4 & 5 summarize the results of chemical analyses performed to date. As additional data becomes available they will be added to these sheets.

The map of Emeryville near the plant site at 1401 Park Avenue has been marked to show the existing well locations and the location of new wells #6 & #7. These wells will be drilled and logged on February 21, 1978. As soon as chemical analysis data becomes available, it will be forwarded to you. Also, elevation data will be added to Dwg. D-1003-1.

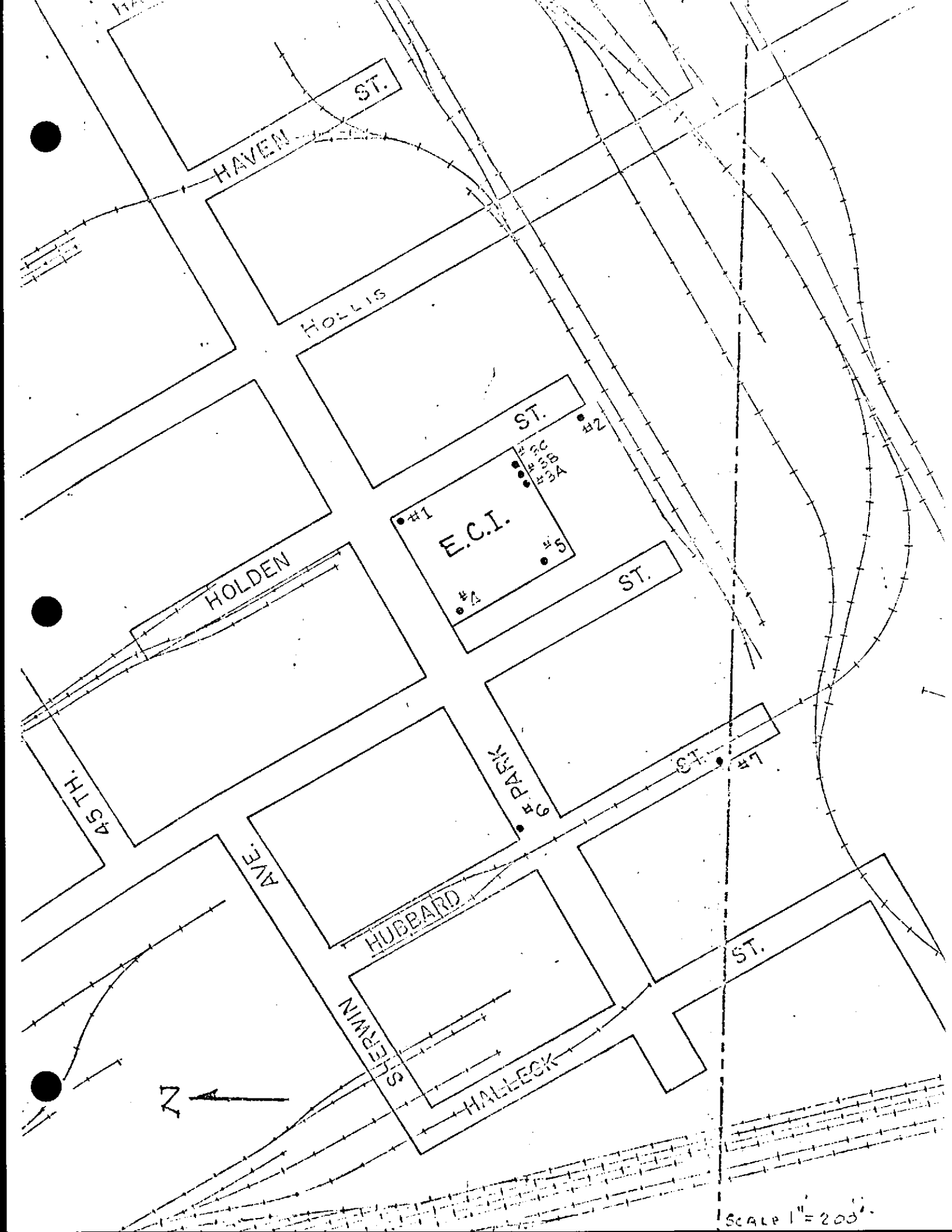
If you have any questions please contact me at the above address.

AL J. HARTJEN
Staff Engineer

AJH:eb

Enclosures

CC: Pete Paulson
Ted Splitter


HAVEN ST.
HOLLIS
ST.
#2
#3C
#3B
#3A
#1
E.C.I.
#5
#4
HOLDEN
ST.
ST.
#7
#6
PARK
AVE.
HUBBARD
ST.
HALLECK
NIAGARA ST.
N
Scale 1" = 200'

WELL # B

DATE	8/18/77	9/22/77	11/4/77	1/24/78	2/2/78	2/2/78	2/2/78	2/2/78	2/2/78	2/2/78	
TIME					7:30A	9:09A	10:18A	12:40P	2:15P	3:30P	
CHEMICAL PARAMETER											
CHROMIUM mg/l											
Cr + 6	—	—	—	—	1.6	—	—	—	—	—	
Cr + 3	—	—	—	—	—	—	—	—	—	—	
Cr T	.06	.10	.03	.20	1.6	1.1	1.3	1.4	1.8	2.1	
Sp. Cond.											
μ mho/cm	1840	2500	—	2060	2410	2420	2260	2120	2420	2420	

DATE											
TIME											
CHEMICAL PARAMETER											
CHROMIUM mg/l											
Cr + 6											
Cr + 3											
Cr T											
Sp. Cond.											
μ mho/cm											

WELL # C

DATE	8/18/77	3/24/[illegible]	9/22/77	11/[illegible]/77	1/24/78	2/2/78	[illegible]/2/78	[illegible]/2/78	[illegible]/2/78	[illegible]/2/78	2/2/78
TIME						7:25A	9:13A	10:52A	12:[illegible]P	2:19 P	3:[illegible]P
CHEMICAL PARAMETER											
CHROMIUM mg/l											
Cr + 6	6	0.36	0.1	2.5	0.5	8.0	—	[illegible]	—	—	[illegible]
Cr + 3	12	6.7	3.4	[illegible]	43.5	—	—	—	—	—	—
Cr T	18	7.1	3.5	7.3	44.0	80	57	39	33	28	[illegible]
Sp. Cond.											
μ mho/cm	1670	720	2200	—	2380	2120	2260	2120	2610	2380	[illegible]

DATE											
TIME											
CHEMICAL PARAMETER											
CHROMIUM mg/l											
Cr + 6											
Cr + 3											
Cr T											
Sp. Cond.											
μ mho/cm											

WELL # ●

DATE	8/18/77	9/22/77	11/4/77	12/14/77	illegible	illegible	illegible	illegible	illegible	illegible	
TIME					illegible	illegible	illegible	illegible	illegible	illegible	
CHEMICAL PARAMETER											
CHROMIUM mg/l											
Cr + 6	23	2	illegible	illegible	illegible	illegible	illegible	illegible	illegible	illegible	
Cr + 3	67	110	illegible	83	—	—	—	—	—	—	
Cr T	90	110	illegible	illegible	illegible	illegible	illegible	illegible	illegible	illegible	
Sp. Cond.											
μ mho/cm	1510	1500	—	1190	1410	1410	1210	1300	1410	1300	

DATE											
TIME											
CHEMICAL PARAMETER											
CHROMIUM mg/l											
Cr + 6											
Cr + 3											
Cr T											
Sp. Cond.											
μ mho/cm											

WELL # 2

DATE	3/24/77	2/22/77	[illegible]	1/24/78	2/2/78	2/2/78	2/2/78	2/2/78	2/2/78	2/2/78	
TIME					7:37A	9:33A	11:13A	1:21P	2:42P	4:15P	
CHEMICAL PARAMETER											
CHROMIUM mg/l					COMPOSITE - 480						
Cr + 6	65	30	20	<.01							
Cr + 3	295	[illegible]	420	475	—	—	—	—	—	—	
Cr T	360	430	460	475	490	490	500	500	500	500	
Sp. Cond. μ mho/cm	720	2500	—	1420	2120	2260	2420	2350	2120	2610	

DATE											
TIME											
CHEMICAL PARAMETER											
CHROMIUM mg/l											
Cr + 6											
Cr + 3											
Cr T											
Sp. Cond. μ mho/cm											

ELECTRO-
COATINGS
INC.

REPLY TO:
1605 School Street
Moraga, CA 94556
415/376-5161

February 15, 1978

Mr. Ted Splitter
Woodward-Clyde Consultants
Oakland, CA 94623

Dear Ted:

Enclosed is a copy of letter and enclosures to Dick Condit.

I'll see you in Emeryville on 2/21/78 at 8:00 a.m.

AL J. HARTJEN
Staff Engineer

AJH:eb

Enclosures

ELECTRO-
COATINGS
INC.

REPLY TO:
1605 School Street
Moraga, CA 94556
415/376-5161

March 1, 1978

Mr. Richard J. Condit
California Regional Water Quality
1111 Jackson Street
Oakland, CA 94607

RE: CLEANUP AND ABATEMENT ORDER 77-011

Dear Mr. Condit:

Enclosed is one copy of each of the following items:

1. Dwg. D-1003-1, Rev. 1, Well Data
2. Summary of Chemical Analysis for Wells 6 and 7
3. Well logs for 6 and 7

Dwg. D-1003-1, Rev. 1, has been revised to include the pertinent data for wells 6 and 7.

The chemical analysis sheets for wells 6 and 7 indicate the results of the initial tests performed on these wells. As more data becomes available, it will be added to the sheets. However, future chemical analysis will be restricted to total Cr and specific conductivity.

The well logs show the ground strata for these two wells. Every attempt was made to top the aquafer of wells 4 and 5.

Well #8, which will be located on the east side of Holden Street, will be drilled in 10 days to 2 weeks. This time will be necessary in order to obtain the necessary permission and schedule the drilling contractor.

If you have any questions, please contact me at the above address.

Very truly yours,

ALBERT J. HARTJEN
Staff Engineer

AJH:pw
Enclosures
CC: Mr. Pete Paulson
Mr. Ted Splitter

Project: ELECTRO COATINGS INC. Emeryville, California	LOG OF WELL NO. 6

Date Drilled: February 21, 1978 Remarks:

Type of Boring: 6" Auger

Hammer Weight: ---

(See Legend Sheet for sampler sizes and hammer weights)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION	WELL INSTALLATION DETAILS
			Surface Elevation: 9.09	
			1" ASPHALT CONCRETE	
			5" C O N C R E T E	
			SILTY CLAY (CL-CH): Medium stiff, moist, dark gray to black	
			▽ 2/24/78	
			Becomes brown and dark gray mottled	
			Becomes stiff	
5			Becomes stiff to very stiff, trace of calcareous fragments	
			Becomes brownish gray, trace of organics	
			▽ ATD	
			Trace of yellow and green with fine sand	
			SILTY CLAY (CL): Stiff to very stiff, wet yellowish green, some fine sand, trace of fine gravel	
10			Becomes yellow with a trace of sand	
			Very silty clay layer, yellowish brown	
			Becomes brown, no sand or gravel	
15			Becomes medium stiff, brown and gray interbedded	
			Very silty sand to sandy silt layer	
			BOTTOM OF HOLE @ 18'	
20				
25				
30				

PROTECTIVE CAP
PVC CASING
GROUT SEAL
BENTONITE SEAL
PEA GRAVEL
PERFORATIONS
CAP

Proj. No. 13895C	WOODWARD-CLYDE CONSULTANTS	Figure

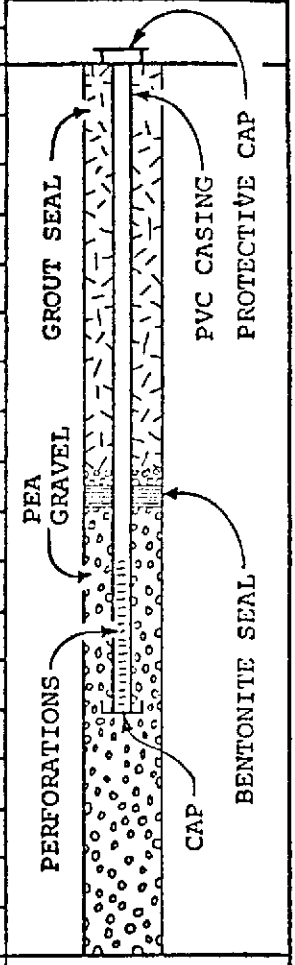
Project: ELECTRO COATINGS INC.
Emeryville, California

LOG OF WELL NO. 7

Date Drilled: February 21, 1978
Type of Boring: 6" Auger
Hammer Weight: ---
Remarks:
(See Legend Sheet for sampler sizes and hammer weights)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION
			Surface Elevation: 9.58
			S I L T Y C L A Y (CL)
			Medium stiff to stiff, moist, dark gray to black
		▽ 2/24/78	
			Trace of fine gravel
			Becomes stiff, dark bluish gray, with trace of brown
5			Trace of lime nodules, bluish gray
			S I L T Y C L A Y (CL-CH): Stiff to very stiff, moist to wet, light green
			S I L T Y C L A Y (CL): Very stiff, moist, green and brown, some gravel and sand
10			More sand and gravel (GC-CL) seep in bottom of hole
			CLAYEY SAND AND GRAVEL (SC-GC)
			Medium dense, wet, brown, gravel to 1"
			S I L T Y C L A Y (CL)
15			Stiff to very stiff, brown, trace of fine gravel
			Becomes brown and gray mottled
			BOTTOM OF HOLE @ 18'
20			
25			
30			

WELL INSTALLATION DETAILS



Proj. No. 13895C | WOODWARD-CLYDE CONSULTANTS | Figure

Three Embarcadero Center, Suite 700
San Francisco, California 94111
415-956-7070

Woodward-Clyde Consultants

JOB NO. 13895C

March 27, 19 78

TO: Electro-Coatings, Inc.
1605 School Street
Moraga, California 94556

Attention: Mr. Al Hartjen

SUBJECT: MONITORING WELL INSTALLATION
WELL 8, HOLDEN SOUTH OF PARK
Emeryville, California

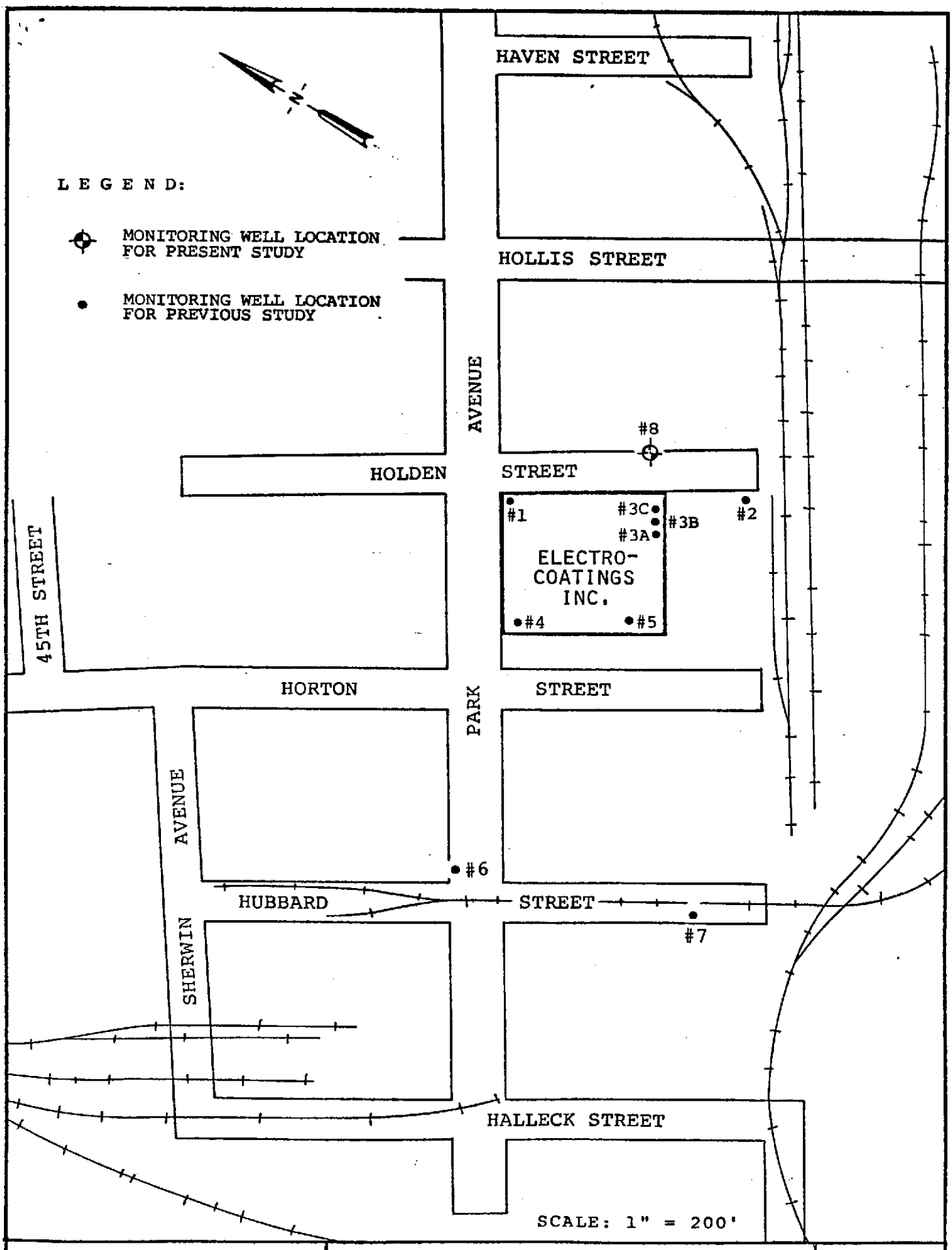
Transmitted herewith, please find four copies of the "Site and Monitoring Well Locations" Plan and the "Log of Well" 8. Well 8 was drilled by AAA drilling Service on March 13, 1978 using a 6-inch diameter continuous flight auger. The cuttings were returned to the surface frequently and were logged by Mr. Ted Splitter of our firm. If further information, findings or conclusions are desired, please contact Mr. Ted Splitter or the undersigned.

Very truly yours,

Woodward-Clyde Consultants

By Edward Margason
Edward Margason

RECEIVED
MAR 30 1978



Project No. 13895C WOODWARD-CLYDE CONSULTANTS	SITE & MONITORING WELL LOCATIONS ELECTRO COATINGS INC. Emeryville, California	Figure 1

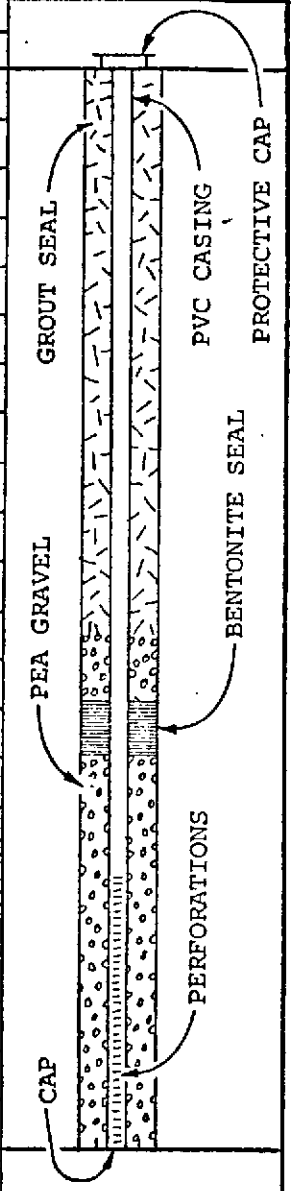
Project: ELECTRO COATINGS INC.
Emeryville, California

LOG OF WELL NO. 8

Date Drilled: March 13, 1978
Type of Boring: 6" Auger
Hammer Weight: ---
Remarks:
(See Legend Sheet for sampler sizes and hammer weights)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION
			Surface Elevation:
			4" ASPHALT CONCRETE 5" AGGREGATE BASE
			CLAYEY SAND & GRAVEL FILL (SC-GC): Loose, moist, black
			SILTY CLAY (CL-CH) (FILL): Medium stiff, moist, black, trace of wood
			CLAYEY TO SANDY SILT (ML)(FILL) Loose, wet, black, trace of wood
5			SILTY CLAY (CL-CH): Stiff, moist, dark gray Grades to grayish blue, trace of lime nodules
			S I L T Y C L A Y (CL) Stiff to very stiff, wet, bluish green, trace of lime nodules
		▽ ATD	Trace of fine gravel
10			Becomes more silty, brown interbedded with dark gray
			S I L T Y C L A Y (CL): Stiff to very stiff, moist, reddish brown and gray marbled
			Trace of fine sand, slightly greenish
15			With some sand
			CLAYEY SAND & FINE GRAVEL (SC) Medium dense, wet, reddish brown
			VERY SILTY CLAY (CL): Medium stiff, wet, brown, trace of sand and fine gravel With thin clayey and silty fine and coarse sand layers
20			VERY SILTY CLAY (CL): Stiff to very stiff, brown marbled with gray
			BOTTOM OF HOLE @ 22'
25			
30			

WELL INSTALLATION DETAILS



Proj. No. 13895C | WOODWARD-CLYDE CONSULTANTS | Figure 2

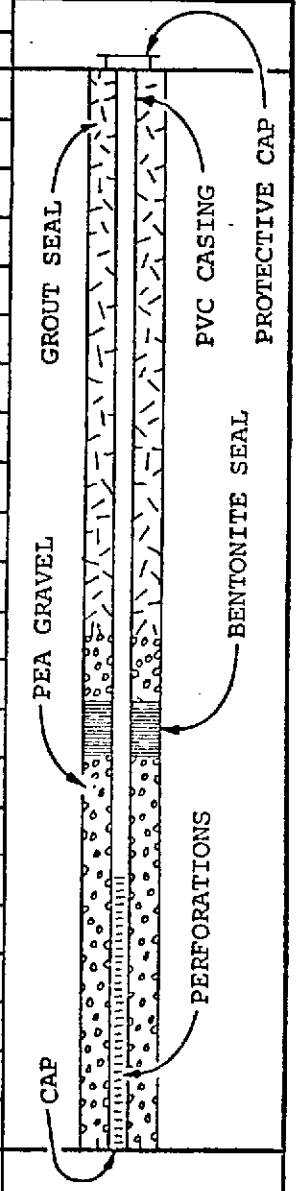
Project: ELECTRO COATINGS INC.
Emeryville, California

LOG OF WELL NO. 8

Date Drilled: March 13, 1978
Type of Boring: 6" Auger
Hammer Weight: ---
Remarks:
(See Legend Sheet for sampler sizes and hammer weights)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION
			Surface Elevation:
			4" ASPHALT CONCRETE 5" AGGREGATE BASE
			CLAYEY SAND & GRAVEL FILL (SC-GC): Loose, moist, black
			SILTY CLAY (CL-CH) (FILL): Medium stiff, moist, black, trace of wood
			CLAYEY TO SANDY SILT (ML) (FILL) Loose, wet, black, trace of wood
5			SILTY CLAY (CL-CH): Stiff, moist, dark gray Grades to grayish blue, trace of lime nodules
			S I L T Y C L A Y (CL) Stiff to very stiff, wet, bluish green, trace of lime nodules
			▽ ATD
			Trace of fine gravel
10			Becomes more silty, brown interbedded with dark gray
			S I L T Y C L A Y (CL): Stiff to very stiff, moist, reddish brown and gray marbled
			Trace of fine sand, slightly greenish
15			With some sand
			CLAYEY SAND & FINE GRAVEL (SC) Medium dense, wet, reddish brown
			VERY SILTY CLAY (CL): Medium stiff, wet, brown, trace of sand and fine gravel
			With thin clayey and silty fine and coarse sand layers
20			VERY SILTY CLAY (CL): Stiff to very stiff, brown marbled with gray
			BOTTOM OF HOLE @ 22'
25			
30			

WELL INSTALLATION DETAILS



Proj. No. 13895C | WOODWARD-CLYDE CONSULTANTS | Figure 2

2722 Adeline Street
Oakland, California 94607
415-444-1256

Post Office Box 24075
Oakland, California 94623

Woodward-Clyde Consultants

July 22, 1977

Project: 13895A

Electro-Coatings, Inc.
1401 Park Avenue
Emeryville, California 94608

Attention: Mr. John Kelly

Gentlemen:

REPORT OF FINDINGS
DATA STUDY REGARDING SUBSURFACE SOIL
AND GROUNDWATER CONDITIONS
Electro-Coatings, Inc.
Emeryville, California

As requested, we are pleased to submit the results of our data study on the subsurface soil and groundwater conditions near the site of the Electro-Coatings, Inc. facilities at 1401 Park Avenue in Emeryville, California. This study has been completed to aid Electro-Coatings, Inc. in complying with the orders presented in the California Regional Water Quality Control Board Cleanup and Abatement Order No. 77-011. No test borings were drilled as part of our study, however, prior borings were utilized.

According to the Cleanup and Abatement Order No. 77-011, Electro-Coatings, Inc. was found to have discharged chromium-rich wastewater into a shallow well located beneath a leaking storage pit on their Emeryville plant site. The chromium-rich wastewater, which is yellow in color, was detected in May, 1977 in a construction-pit well-dewatering operation approximately 215 feet southwest of the leaking pit.

The Cleanup and Abatement Order requires that in addition to other items, a proposed groundwater monitoring plan be submitted for the Board's review and approval. According to the Board, such a plan should include a sufficient number of exploratory shallow and deep wells to evaluate the extent of the heavy metal contamination to both shallow and deep groundwater aquifers. These wells should be constructed to permit both sampling and pumpout operations.

Monthly groundwater monitoring was ordered according to the Cleanup and Abatement order beginning in August, 1977. Water samples will be tested for concentration of all heavy metals such as those used in the plating operation and for conductivity. Sampling will continue as specified by the Regional Water Quality Control Board.

The purpose of our office study was to establish as well as possible the subsurface soil and groundwater conditions at or near the site through review of data available in our files, data in files of others which are open to the public, and by review of published reports and maps pertinent to the site conditions. In addition, our summary of findings and recommendations contained in this report are intended to provide Electro-Coatings, Inc. with sufficient data for developing a reasonable and adequate monitoring program which will satisfy the appropriate agencies.

The scope of our study included the following items of work:

1. Review of our files for exploratory borings near the subject site.

2. Discussions with personnel of the Department of Water Resources, Alameda County Flood Control District, City of Emeryville and other data sources.

3. Collection and review of available publications for groundwater and subsurface soil conditions at the site.

4. Presentation of our findings in a letter report.

DATA STUDY

Our efforts to obtain published reports on soil and groundwater conditions in the Emeryville area revealed the fact that very little groundwater resource data is available from conventional agency sources. There are few well or cathodic protection borings filed with the County of Alameda, and those that are filed represent sites about 3400 feet to 9000 feet from the subject site. Such borings were logged in general terms by the well drillers and do not contain the detailed stratigraphy desired for an aquifer evaluation. Borings that were reviewed are shown on Figure 1 as Borings 1, 2 and 3.

Efforts to obtain documented well data from the City of Emeryville have also proven fruitless since records of wells are not maintained by the city. Personal communications between Mr. Ted Splitter of our firm and Mr. Frank Thomas of the City of Emeryville have yielded several possible additional well locations. These locations have been previously transmitted to Electro-Coatings, Inc. for their continuing well canvass.

The search of our files for previous work in the area of the site has resulted in uncovering the 13 borings shown on Figure 1. The majority of the borings range from 30 feet to about 75 feet in depth and were drilled for improvements along the Temescal Creek Alignment. More than one hundred borings were located in our files for the Watergate Peninsula area. Those of greatest interest (closest to the site) are shown as borings 5 and 6 on Figure 1. Sources of the exploratory boring data are given on the reference list according to the boring number shown on the Site and Boring Location Plan, Figure 1.

The site geology discussed in the following findings is based on work by Radbruch (1957) for the Oakland West Quadrangle.

DISCUSSION OF FINDINGS

Geologic Setting

Understanding the geologic setting at the site is perhaps the single most valuable guide to the types of soils expected beneath the site and their relative depths.

The Electro-Coatings site appears to be underlain by the Temescal Formation. The Temescal Formation is an alluvial fan deposit derived from the hill areas to the east. It is comprised of interfingering lenses of clayey gravel, sandy silty clays, and sand-silt-clay mixtures. Layers are irregular in shape and pinch out, swell and interfinger at random. The Temescal Formation is thicker near the Berkeley Hills and thins near the bay. Review of the available borings logs suggest that the Temescal Formation is from about 3 to 5 feet thick at the subject site. The Temescal is reported to have moderate permeability with gravel lenses containing considerable water. However, since the Temescal Formation appears to be very thin at this site, it likely has little impact on groundwater conditions at the plant site.

Underlying the Temescal Formation the Alameda Formation is encountered. The upper portion of the Alameda Formation consists of silty sandy clay while the lower portion consists of clay, silt, sand and gravel. The Alameda Formation is considered to be of Continental origin (alluvial fan deposit) grading westerly to blue clays that appear to be of marine origin. An idealized soil profile was drawn to evaluate the continuity of soil layers through known borings at the Temescal Creek Alignment (see Figure 2). This idealized profile demonstrates that the alluvial fan deposit at this location is composed, like the Temescal Formation, of interfingerings of various soil types. Not until the blue clay (marine deposit) is encountered at about 33 feet to 36 feet do the borings indicate relatively consistent layering between borings. The bottom of the Alameda Formation is likely 300 to 500 feet or greater beneath the site surface. At this depth the Franciscan bedrock would likely be encountered.

The Alameda Formation according to Radbruch (1957) has moderate to low permeability. Webster (1972) indicates that the maximum probable yield from alluvial wells in the area of the plant site would be 50 to 500 gpm (68 percent chance) and 10 to 100 gpm (95 percent chance). These yields imply that moderately pervious water bearing strata may be present beneath the site.

Expected Soil and Groundwater Conditions

Based on the data described previously, we expect soils beneath the Electro-Coatings site to be generally similar to those conditions indicated on Figure 2 between Borings 11 and 10.

It is our opinion, based on our limited data, that little if any Bay Mud or thick fills will be encountered beneath the site, and that the Temescal Formation overlying the Alameda Formation represent the full depth of the soil profile over bedrock.

Groundwater levels recorded in the available soil borings indicate water levels from about 7 feet to 10 feet below the ground surface. These levels appear consistent with those reported by Engineering Waste Control Co. in their dewatering pit.

In our opinion, insufficient data is presently available to us to accurately locate the exact depths to aquifers beneath the site. However, it is most likely that water-bearing, moderately pervious strata would be encountered beginning at the groundwater level and would be found interbedded with clays and silts

to bedrock. We would expect water movement through the formation to move in a down slope (toward the bay) direction, however, since the slopes of the pervious beds appear only very gently sloping toward the bay, it is possible that contaminants entering such a pervious layer might also move upslope some distance. This distance would be a function of the thickness, continuity and flow characteristics of the aquifers.

RECOMMENDATIONS

It is recommended that a deep boring be drilled at or near the location shown on the Proposed Monitoring Well Plan which is included in the letter from Electro-Coatings, Inc. to the California Regional Water Quality Control Board, dated July 14, 1977. This boring should be carefully logged in detail to locate the shallow and deep aquifers beneath the site area.

As a minimum we would recommend that the boring extend just through the first aquifer beneath the Alameda Formation clay of marine origin (blue clay). It is recommended that this boring also serve as a deep observation well and should be installed similarly to other observation wells so that contaminants cannot migrate between aquifer layers. A detail of a recommended scheme to minimize the potential for communication between aquifers is shown on Figure 3.

It is recommended that selected potential aquifers found in the deep boring be monitored and pumped by drilling and placing additional wells at the appropriate depths. It is recommended that all wells be logged in detail to fully evaluate the subsurface soil and groundwater conditions.

It is also recommended that a distant upslope well or wells be selected and monitored periodically to establish baseline data with which to compare the downslope wells' water quality.

LIMITATIONS

Our discussion, finding and recommendations are based on extrapolated data from borings and maps available to us. Should conditions be found which differ from those expected, WCC should be consulted for further recommendations.

Sincerely yours,

Ted Splitter

Ted Splitter
Senior Staff Engineer

Edward Margason

Edward Margason
Associate

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Boring

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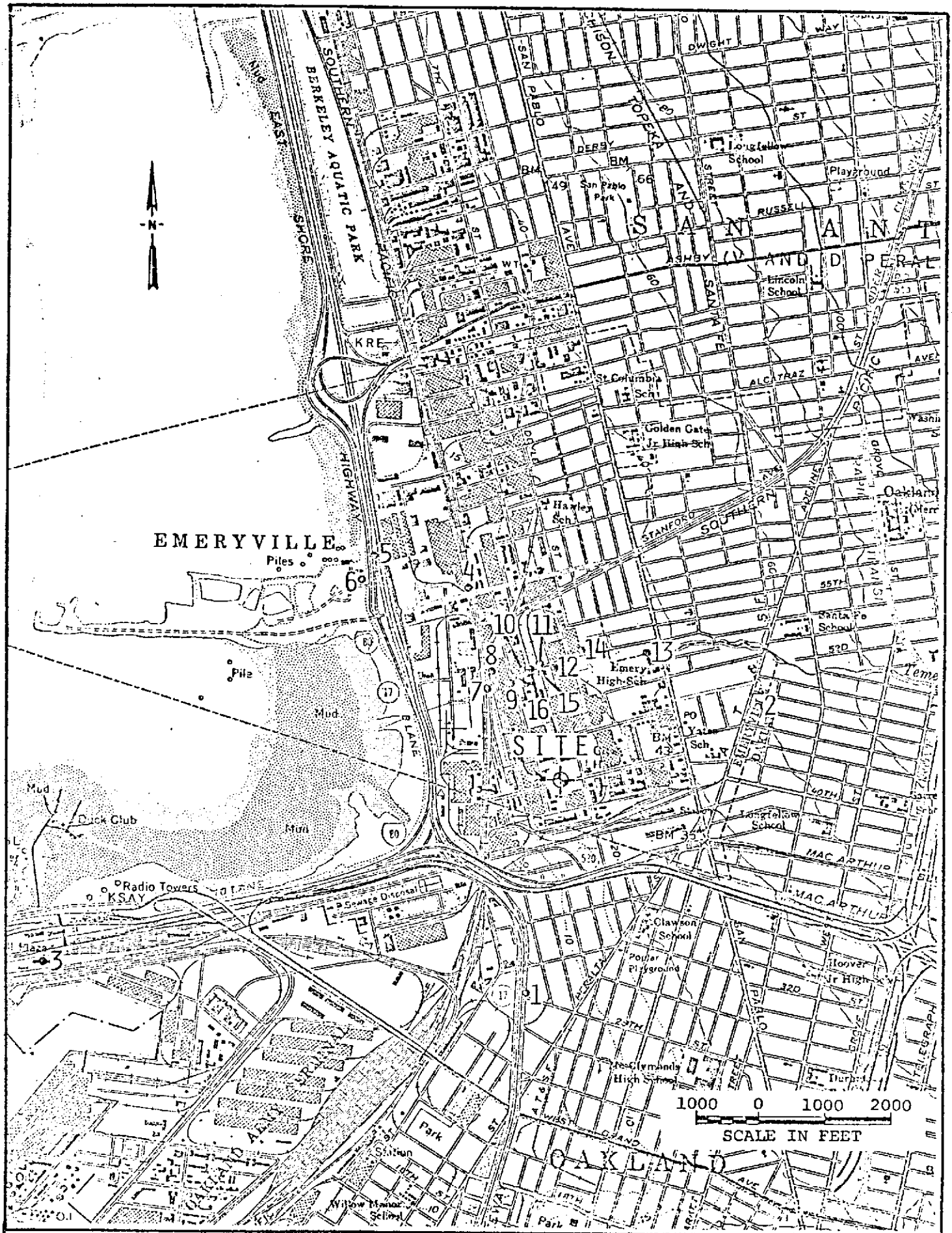
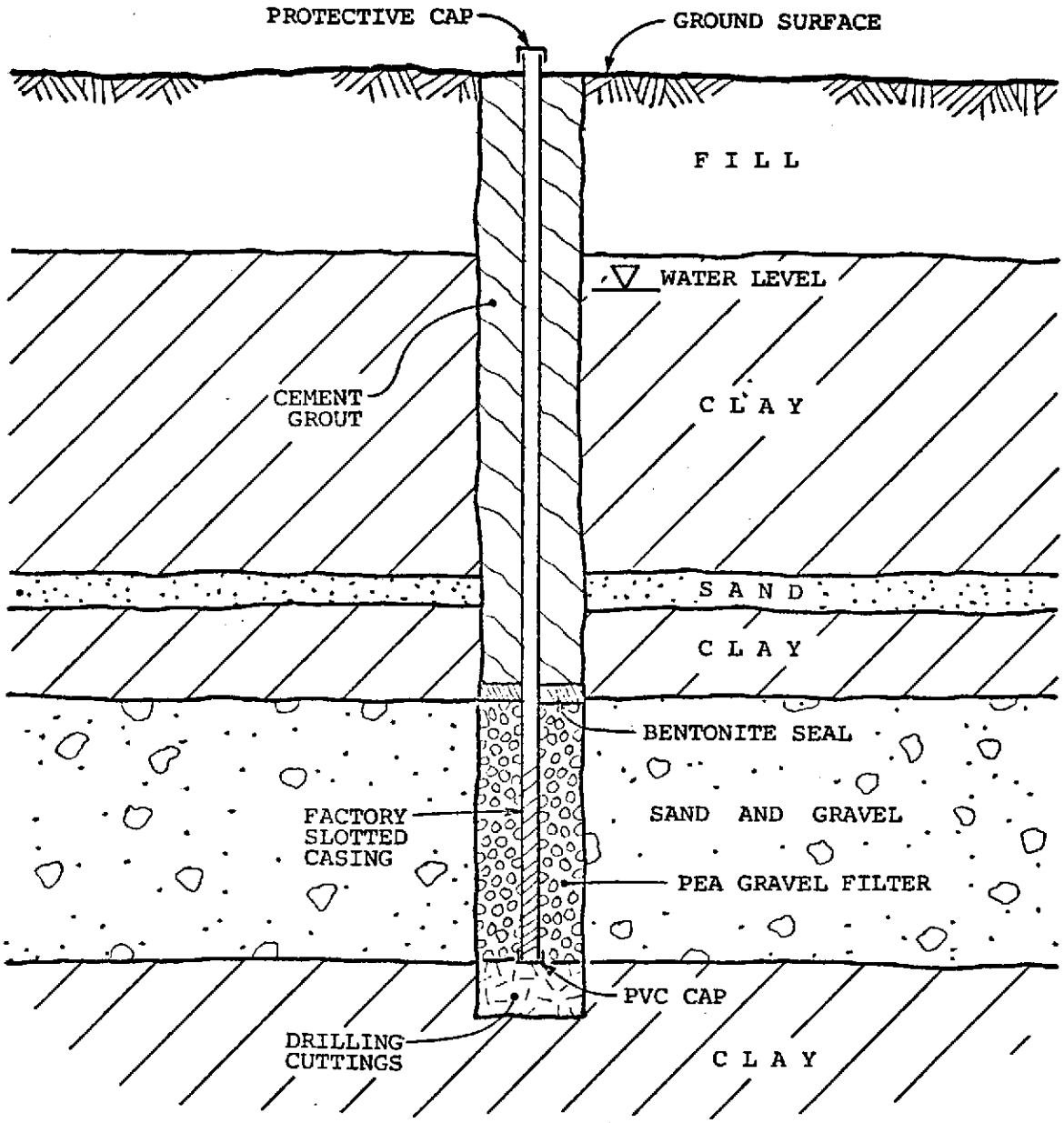


Project No. 13895A WOODWARD-CLYDE CONSULTANTS	SITE AND BORING LOCATIONS ELECTRO-COATINGS INC. Emeryville, California	Figure 1



Project No. 13895A WOODWARD-CLYDE CONSULTANTS	TYPICAL OBSERVATION WELL DETAILS ELECTRO-COATINGS INC. Emeryville, California	Figure 3