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SUPPLEMENTARY SITE ASSESSMENT REPORT May 17, 1995

FORMER CHROMEX FACILITY 1400 Park Avenue Emeryville, California

Alton Project No. 41-0042

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Supplementary Site Assessment Report Former Chromex Facility May 17, 1995

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1.0 INTRODUCTION

This report presents the findings of a supplementary site assessment investigation conducted at the Former Chromex Facility, Charles Lowe Company, in Emeryville, California (Figure 1). This work was performed in accordance with the Alameda County Health Care Services Agency (ACHCSA), Department of Environmental Health requirements, and the Environmental Science and Engineering, Inc. (ESE) site assessment workplan dated September 29, 1994.

The objective of this investigation was to:

• Characterize the vertical and horizontal extent of selected metals and organic compounds, if any, in soil and groundwater in the vicinity of the former chrome plating facility.

2.0 SITE DESCRIPTION

Present Site Use:

The site is currently occupied by the Charles Lowe Company, a manufacturing facility that produces and repairs marine and industrial equipment.

Past Site Use:

A one room addition to the present building was constructed in 1973 by the Fred Myer company and was used to provide electroplating and metal spraying support for operations at the Charles Lowe facility. The addition was used by Modern Plating (a subsidiary of the Fred Myer company) until 1978, and by Chromex (a division of the Charles Lowe Company) until 1991. The addition was dismantled in July 1992 during closure of the Chromex facility (Environmental Science and Engineering, 1994).

Future Site Use:

The site is expected to continue its present use as an industrial facility. The Charles Lowe Company is in the process of vacating the premises.

Surrounding Properties:

Nearby properties include Electro-Coatings, Inc. (ECI) (formerly a metal plating business) which is located at 1401 Park Avenue directly south of the property, Sherwin-Williams manufacturing plant at 1450 Sherwin Drive to the west of the site, Plywood Lumber and Sales Company at 4050 Horton Street to the north of the site, and a Pacific Gas and Electric Company equipment yard located at 4227 Hollis Street to the east of the

site. Del Monte Plant #35 (a former food processing plant) is located approximately 400 feet east of the site at 4204 Hollis Street.

Geography:

The site is located approximately 1/4 mile east of the San Francisco Bay at an elevation of approximately 15 feet above mean sea level. The topography of the site is relatively flat and slopes gently to the west.

Geology:

The site is located on the tidal plane bounding the eastern edge of the San Francisco Bay. The sediments are Holocene interfluvial basin deposits consisting of poorly sorted organic-rich clays and silty clays overlying alluvial fan deposits of interfingered clayey gravel and sandy silty clay lenses (Helley et al, 1979).

Regional Hydrogeology:

Depth to groundwater in the area is approximately 10 feet below grade (fbg) with a general gradient direction from the southeast to the northwest. The groundwater gradient varies locally in direction and magnitude possibly due to seasonal groundwater fluctuations.

Groundwater Quality and Usage:

Information obtained from the Alameda County Public Works Agency in Hayward revealed no domestic water production wells in use within a 1-mile radius of the site.

3.0 BACKGROUND SITE CONDITIONS

The following conditions existed at the site prior to this investigation:

- Soil samples collected in 1992 indicated that background total chromium concentrations ranged from 27 to 88 parts per million (ppm) at the site.
- In 1992 background total lead concentrations ranged from less than 2.5 to 26 ppm at the site. One soil sample collected in 1992 from a depth of 1 foot below grade contained a lead concentration of 270 ppm.
- Ground water at the site is present at a depth of approximately 8 feet below grade.

- A below grade concrete vault, which acted as secondary containment for six former vats used during chrome plating activities, was removed in 1992. Dimensions of the vault are reported as 12 feet deep, 22 feet wide and 18.5 feet long (Excel Trans, 1992a). A Final Closure Report issued by Excel Trans on November 1, 1992 indicates that the vault was excavated and removed along with approximately 40 yards of soil generated during shoring activities prior to the vault removal (Excel Trans, 1992a). The report indicated that an excavation to a total depth of approximately 10 fbg was completed during vault removal activities. West of the vault an above ground bermed concrete pad that contained two tanks used during plating operations was also decommissioned. On September 9, 1992, two soil samples (SO-1 and SO-2) collected from beneath the floor of the vault at a depth of approximately 10 feet below grade indicated the presence of elevated chromium concentrations. Concentrations of 1,300 and 540 ppm total chromium were detected in the northwest and southeast corners of the vault, respectively (Excel Trans, 1992b). See Figure 3 for the approximate soil sample locations.
- On October 1, 1992, Excel Trans performed a subsurface investigation at the site after removal of the vault. Four soil borings were completed during the investigation. Boring B0 was completed as a control boring in the northeast corner of the site to establish a background level for total chromium at the site. Borings B2 and B3 were completed adjacent to the above ground concrete pad location and Boring B1 was completed adjacent to the northwest corner of the former vault. Soil samples were collected from the borings at depths of approximately 1-2, 5, and 10 fbg (Excel Trans, 1992b). See Figure 3 for the approximate boring locations and Table 1 for a summary of soil sample analysis.
- On October 1, 1992, Excel Trans collected grab water samples from borings B0, B1 and B3. Analysis of these samples indicated the presence of chlorinated solvents trichloroethene (TCE) and tetrachloroethene (PCE) in low concentrations. A grab surface water sample collected from the floor of the vault contained a concentration of 2.5 ppm chromium (Excel Trans, 1992b).

4.0 REGIONAL SOIL AND GROUNDWATER CONTAMINATION

The former Chromex facility is located in an area of Emeryville that has historically been occupied by industrial and manufacturing facilities. Several sites within a 5/8 mile radius of the former Chromex facility are listed as hazardous waste storage, generators, and/or release sites on existing federal and state databases. On February 6, 1995, Alton Geoscience conducted a detailed case review of nearby hazardous waste sites on file at ACHCSA. Files for two sites in

the immediate vicinity of the former Chromex facility with known chromium and/or solvent contamination were reviewed. A summary of conditions for the sites is provided in this section.

4.1 ELECTRO-COATINGS INC. FACILITY

The Electro-Coatings Inc. (ECI) facility is located at 1401 Park Avenue in Emeryville, approximately 100 feet south of the existing Charles Lowe facility at 1400 Park Avenue (Figure 2). ECI was formerly a chrome plating facility. Chrome plating activities ceased in 1989.

Historically, total chromium, hexavalent chromium, and chlorinated solvent concentrations have been detected in groundwater samples collected at the ECI facility since 1977. Recent data collected in July 1994 indicate the contaminants are migrating offsite to the north, northwest and west of the facility in the general direction of the former Chromex facility (Figures 4 and 5). ECI Monitoring Wells MW-4 and MW-16 are located on the northern most edge of the ECI facility directly across Park Avenue from the former Chromex facility. In July 1994, ECI Monitoring Well MW-4 contained concentrations of 6,300 parts per billion (ppb) hexavalent chromium and 6,500 ppb TCE, and Monitoring Well MW-16 contained 320,000 ppb hexavalent chromium and 22,000 ppb TCE. These wells are located approximately 200 feet crossgradient/upgradient from the former Chromex tank vault location. ECI Monitoring Well MW-19 located in Horton Street to the southwest of the former Chromex facility could not be located during site investigation work conducted by Alton Geoscience in December 1994. In 1985 this well contained 20 ppb hexavalent chromium, 20 ppb total chromium, and 91 ppb TCE (Entrix, 1994).

Soil samples collected from onsite soil borings drilled to the south of ECI's main building in 1983 and 1985, detected elevated total chromium concentrations at depths ranging from 4 to 8.5 fbg (maximum concentration of 5,200 ppm total chromium). A boring drilled in an abandoned railway track immediately to the east of ECI contained a maximum total chromium concentration of 6,700 ppm at a depth of 2.5 fbg (Entrix, 1994).

Complete historical results for the ECI facility are presented in a report prepared for ECI by Entrix, Inc., on October 28, 1994, on file at ACHCSA.

4.2 DEL MONTE PLANT 35

The Del Monte Plant 35 is located on two adjacent properties at 4202 Hollis Street (West Parcel) and 1250 Park Avenue (East Parcel) in Emeryville, directly east of the former Chromex site (Figure 2). This facility was a food processing plant from the late 1920's to 1989. Chlorinated solvents were first discovered in the soil and groundwater on the West Parcel in 1989 during

underground storage tank (UST) removal activities. Subsequent site assessment activities were carried out. Analytical results have shown dissolved-phase TCE and PCE concentrations as high as 1,600 ppb TCE and 110 ppb of PCE in 1992. The groundwater flow direction has been shown to be to the west and southwest in the general direction of the former Chomex facility. A groundwater treatment system was installed at the West Parcel of the property in 1993 and was expanded in 1994. Results of soil sample analyses during soil excavation activities on the East Parcel in 1994 indicated adsorbed-phase TCE and PCE concentrations as high as 6,800 ppb and 247,000 ppb, respectively. In addition, concentrations of 1,300 ppb cis-1,2-dichloroethene (cis-1,2-DCE), and 8,900 ppb vinyl chloride were detected in soil samples collected from the east parcel excavation (CH2M Hill, 1994 and 1995).

Del Monte Monitoring Well MW-12 is located offsite in a downgradient direction from the Del Monte West parcel, approximately 480 feet directly upgradient of the former Chromex facility (Figure 5). In March 1994, this well contained a dissolved-phase TCE concentration of 170 ppb and on December 29, 1994, a dissolved-phase TCE concentration of 28 ppb (CH2M Hill, 1995). Complete results for site assessment and remediation activities conducted at the Del Monte facility are on file at the ACHCSA.

5.0 FIELD ACTIVITIES

5.1 DRILLING AND SOIL SAMPLING

On December 19 and 20, 1994, Alton Geoscience conducted a supplementary site assessment at the Former Chromex Facility, Charles Lowe Company. The investigation included the drilling of six soil borings (B-1 through B-6) and the installation of three groundwater monitoring wells (MW-1 through MW-3) to an approximate depth of 24 fbg. Refer to Figure 6 for the soil boring and well locations. The groundwater monitoring wells were developed approximately 72 hours after installation using a surge block and bailer.

Soil samples were collected at depth intervals of 5 feet or less using a California-modified split spoon sampler. Refer to Appendix A for details regarding general field procedures, boring logs, and groundwater monitoring well construction details. See Figure 7 for a geologic cross section showing soil types beneath the site.

On March 17, 1995, Alton Geoscience collected additional soil samples from a depth of 5 fbg immediately adjacent to Soil Borings B-1, B-2, B-4, and B-5. These samples were collected using a hand-auger as per standard regulatory protocol. Onsite activities were observed by Mr. Brian Oliva of the ACHCSA.

All soil samples collected during drilling and hand-augering activities were submitted to a state-certified laboratory, and select soil samples were analyzed for halogenated volatile organic compounds (HVOC) using EPA Method 8010, total chromium and total lead using EPA Method 6010, and hexavalent chromium using EPA Method 7196. In addition, the soil sample collected from MW-3 at 6.5 fbg was analyzed for PCBs using EPA Method 8080 and total recoverable petroleum hydrocarbons (TRPH) using EPA Method 418.1. The results of the laboratory analysis of soil samples are listed in Table 2, and select results are shown on Figure 8. Refer to Appendix B for a description of the analytical methods used and copies of the official Laboratory Reports, Quality Assurance/Quality Control (QA/QC) Reports, and Chain of Custody Records.

5.2 WELL ELEVATION SURVEY

On December 23, 1994, the new wells were surveyed relative to a city of Emeryville benchmark by Ron Archer, Civil Engineer Inc. Refer to Appendix C for the survey data.

5.3 FLUID LEVEL MONITORING AND GROUNDWATER SAMPLING

On December 23, 1994, fluid levels were measured and groundwater samples collected from the monitoring wells as per standard regulatory protocol. The groundwater samples were submitted to a state-certified laboratory for analysis for HVOC's using EPA Method 601, total chromium and total lead using EPA Method 200.7, and hexavalent chromium using EPA method 7196. Fluid levels were measured again on January 5, 1995 due to anomalous data collected during the previous reading. A groundwater elevation contour map using the January 5, 1995 data is shown in Figure 9. The results of the laboratory analysis of water samples are listed in Tables 3 and 4, and select results are shown on Figure 10. Refer to Appendix B for a description of the analytical methods used and copies of the official Laboratory Reports, Quality Assurance/Quality Control (QA/QC) Reports, and Chain of Custody Records.

5.4 SOIL AND WATER DISPOSAL

Approximately 3.5 cubic yards of soil cuttings were generated during drilling activities. The soil was stockpiled on and covered with plastic sheeting pending disposal at a certified waste disposal facility. Approximately 500 gallons of rinsate water and groundwater generated during well development were stored onsite in DOT-approved drums pending transport and disposal at a certified waste disposal facility.

6.0 FINDINGS AND CONCLUSIONS

Hydrogeology

Average depth to groundwater at the site is approximately 8 fbg. The local hydraulic gradient is calculated to be approximately 0.007 foot-per-foot towards the northwest.

Soil Samples

- Hexavalent chromium concentrations of 1.2 and 27 ppm were detected in soil samples B-4 at 11.5 fbg and B-5 at 5 fbg, respectively. No hexavalent chromium concentrations were detected in any other soil samples collected at the site. The California Code of Regulations [CCR] Title 22, Article 11, Section 66699 total threshold limit concentration (TTLC) for hexavalent chromium is 500 ppm. The TTLC is used by the State of California to determine if a waste is a hazard to human health and safety, livestock and wildlife. The two hexavalent chromium concentrations detected at the site are significantly below the state TTLC level of 500 ppm. Laboratory results for soil samples collected at 5 fbg (27 ppm) and 11.5 fbg (vault floor level) (1.2 ppm), indicate that no significant (ie. 500 ppm or greater) hexavalent chromium soil contamination exists at the site in the vicinity of the former tank vault.
- Total chromium concentrations ranging from 19 to 91 ppm were detected in all soil samples collected at the site during this investigation. A maximum total chromium concentration of 91 ppm was detected in Boring B-5 at a depth of 5 fbg. Total chromium concentrations detected in soil samples collected from borings at the site during this investigation and borings completed during previous investigations (27 to 88 ppm [Excel Trans, 1992b]), are within the normal background range for soils of this type. Typical total chromium concentrations for shaley and sandy sediments range from 35 to 90 ppm (Drever, 1988). In addition, the concentrations detected are well below the CCR Title 22 TTLC of 2,500 ppm for chromium. For comparison, total chromium concentrations detected in soil samples collected at ECI ranged up to 6,700 ppm with several samples exceeding the TTLC.
- Elevated total chromium concentrations of 1,300 and 540 ppm were reported by Excel
 Trans in 1992 for two grab soil samples collected during vault closure activities. Soil
 Borings B-4 and B-2, completed during this investigation adjacent to the previous sample
 locations in the vault, did not detect elevated total chromium concentrations. Soil
 containing elevated total chromium concentrations may have been removed from the tank
 vault area during excavation for the installation of shoring prior to removing the vault

and/or is very limited in extent. The elevated chromium concentrations detected in 1992 are well below the CCR Title 22 TTLC of 2,500 ppm for chromium.

- Total lead concentrations were detected in all soil samples collected at the site during this investigation. A maximum total lead concentration of 12 ppm was detected in Boring B-5 at a depth of 5 fbg. Total lead concentrations detected during this investigation (3.4 to 12 ppm) and in borings (except B0 at 1 fbg) completed during previous investigations (less than 2.5 to 26 ppm [Excel Trans, 1992b]), are within the normal background range for soils of this type. Typical total lead concentrations for shaley and sandy sediments range from 7 to 20 ppm (Drever, 1988). Soil sample B0 collected by Excel Trans in 1992 from a depth of 1 foot below grade (Figure 3), contained a total lead concentration of 270 ppm. A total lead concentration of 3.5 ppm was detected at a depth of 5 fbg in boring B0. The shallow elevated lead concentration detected in 1992 likely reflects limited surface lead concentrations in soil resulting from past site activities. All lead concentrations detected at the site are well below the CCR Title 22 TTLC of 1,000 ppm for lead in soil.
- Adsorbed-phase HVOC concentrations (chlorinated solvents) were detected in two soil samples collected at the site. A TCE concentration of 8.0 ppb was detected in boring B-5 (adjacent to the former vault) at 11.5, fbg and a cis-1,2-DCE concentration of 30 ppb was detected in boring MW-3 (upgradient of the former vault) at 16.5 fbg. No other soil samples contained detectable concentrations of chlorinated solvents. The analytes detected are considered dense non-aqueous phase liquids (DNAPL), which have a higher density than water. In liquid form, these compounds will sink through permeable aquifer material and dissolve through the entire vertical section of the aquifer through which they have travelled. The concentrations of chlorinated solvents detected in the two soil samples are likely a result of dissolved-phase HVOC's present in groundwater (average depth to water of 7-8 fbg at the site) re-adsorbing to soil particles. No HVOC source was identified in the vicinity of the former tank vault location during this investigation.
- A TRPH concentration of 43 ppm was detected in soil boring MW-3 at a depth of 6.5 fbg. This concentration may have resulted from previous surface activities. Hydraulic lifting equipment was located at the site in the immediate vicinity of MW-3. The TRPH concentration detected is below the typical action level for adsorbed-phase hydrocarbons of this type and is likely limited in extent.

Groundwater Samples

 A dissolved-phase hexavalent chromium concentration of 0.025 ppm was detected in Monitoring Well MW-2. Hexavalent chromium was not detected in water samples collected from Monitoring Wells MW-1 and MW-3. No significant hexavalent chromium concentrations were detected in the soil samples collected around the former tank vault (the potential source area for groundwater contamination). Dissolved-phase hexavalent chromium is adequately characterized at the site. For comparison, dissolved-phase hexavalent chromium concentrations detected in groundwater samples collected at ECI in 1994 ranged up to 454 ppm.

- Dissolved-phase total chromium concentrations were detected in groundwater samples collected from MW-1 and MW-2 at the site (0.069 and 0.044 ppm, respectively). The CCR Title 22 primary drinking water maximum contaminant level (mcl) for chromium is 0.05 ppm. The total chromium concentration in Monitoring Well MW-1 is slightly above this level and the total chromium concentration detected in Monitoring Well MW-2 meets the drinking water standard. Dissolved-phase total chromium is adequately characterized at the site. For comparison, dissolved-phase total chromium concentrations detected in groundwater samples collected at ECI in 1994 ranged up to 230 ppm. See Figure 11 for a total chromium concentration contour map based on 1991 data (drawn by Entrix for ECI).
- Dissolved-phase total lead was not detected in any of the monitoring wells.
- Dissolved-phase chlorinated solvents cis-1,2-DCE, PCE, and TCE were detected in groundwater samples collected from Monitoring Wells MW-1, MW-2 and MW-3. Maximum concentrations of 23 ppb cis-1,2-DCE in MW-3, 10 ppb PCE in MW-1, and 11 ppb TCE in MW-1 were detected at the site. A chlorobenzene concentration of 1.5 ppb and trans-1,2-dichloroethene concentration of 0.69 ppb were detected in Monitoring Wells MW-1 and MW-3, respectively. Concentrations of chlorobenzene and trans-1,2-DCE were not detected in the other wells at the site. Concentrations of HVOC were detected upgradient of the former tank vault location in Monitoring Well MW-3, indicating that solvents are likely migrating onto the site from the east. A review of the dissolved-phase HVOC data for both the Del Monte plant and ECI indicates the regional nature of the groundwater HVOC contamination (Figure 5). For this reason, dissolved-phase HVOC concentrations should be considered adequately characterized onsite.
- Significant offsite chromium, hexavalent chromium, and HVOC release sites (specifically ECI) have been identified locally in an upgradient/crossgradient direction from the former Chromex facility. Two figures from the 1994 Entrix report for ECI are included as Figures 11 and 12 in this report. Both figures illustrate the size and concentration of the chromium and chlorinated solvent plume located directly to the south of the former Chromex facility (concentration contours from both figures encroach onto the former

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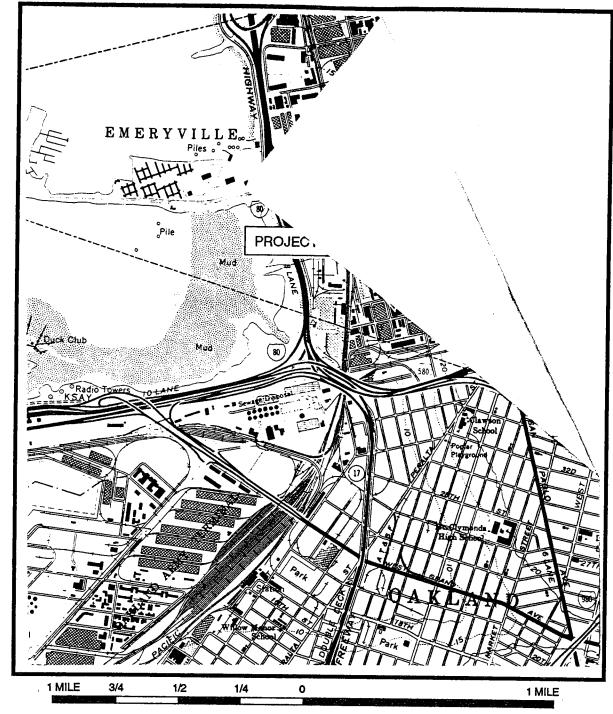
Chromex site). Concentrations of chromium, hexavalent chromium, and HVOC detected in the former Chromex monitoring wells may result from offsite sources.

The site assessment activities summarized in this report have been conducted in accordance with current practice and the standard of care exercised by geologists and engineers performing similar tasks in this area. No warranty, expressed or implied, is made regarding the conclusions and recommendations presented in this report. The conclusions and recommendations are based solely upon an analysis of the observed conditions. If actual conditions differ from those described in this report, our office should be notified.

7.0 REFERENCES

- CH2M Hill, 1994, Report on Focused Soil Removal: East Parcel Del Monte Plant 35, Emeryville, California, December.
- CH2M Hill, 1994, Quarterly Groundwater Monitoring and Groundwater Extraction and Treatment System Status Report: Del Monte Plant 35 West Parcel, 4204 Hollis Street, Emeryville, California, January 31.
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- Entrix, Inc., 1994, Summary of Site Conditions: Electro-Coatings, Inc. Facility, 1401 and 1421 Park Avenue, Emeryville, California, October 28.
- Environmental Science and Engineering, Inc., 1994a, Phase I Environmental Site Assessment: Former Chromex Plating Facility, 1400 Park Avenue, Emeryville, California, August 23,
- Environmental Science and Engineering, Inc., 1994b, Workplan for Phase II Environmental Site Assessment: Former Chromex Inc., 1400 Park Avenue, Emeryville, California, September 29.
- Excel Trans, Inc., 1992a, Final Closure Report: Chromex Plating Facility, 1400 Park Avenue, Emeryville, California, November 1.
- Excel Trans, Inc., 1992b, Summary of Subsurface Investigation and Immediate Mitigation Proposal: Chromex, 1400 Park Avenue, Emeryville, California, November 4.
- Helley, E.S., Laijoie, K.R., Spangle, W.E., and Blair, M.L., 1979, Flatland Deposits of the San Francisco Bay Region, California: U.S. Geological Survey Professional Paper 943.

FIGURES



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Source: U.S.G.S. Map Oakland West Quadrangle California 7.5 Minute Series



VICINITY MAP

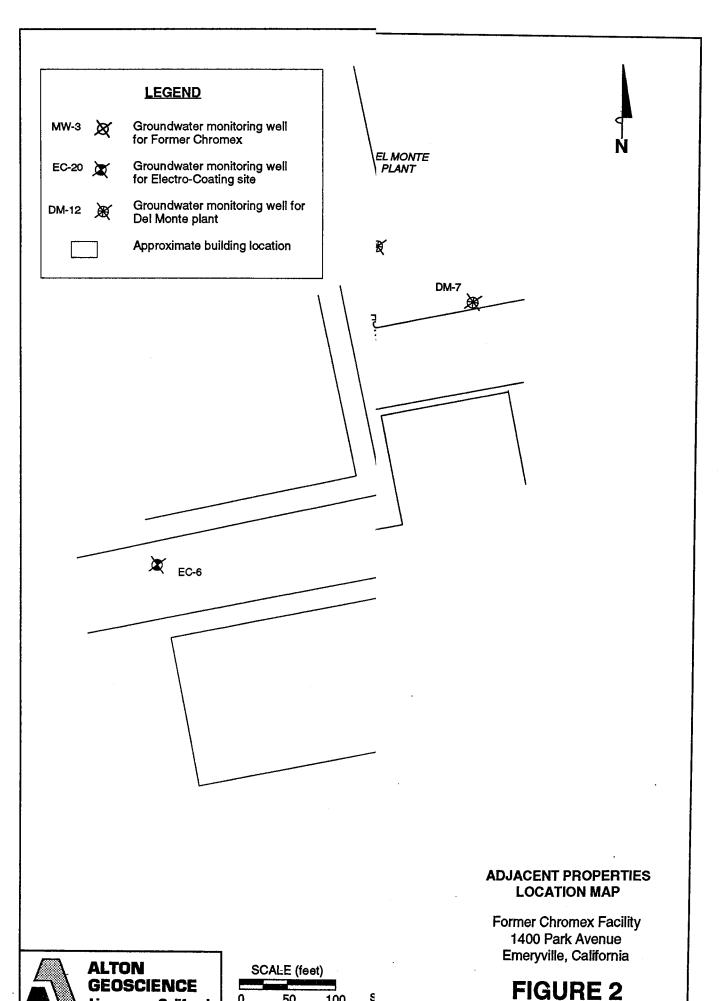
Former Chromex Facility 1400 Park Avenue Emeryville, California



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Project No. 41-0042

FIGURE 1

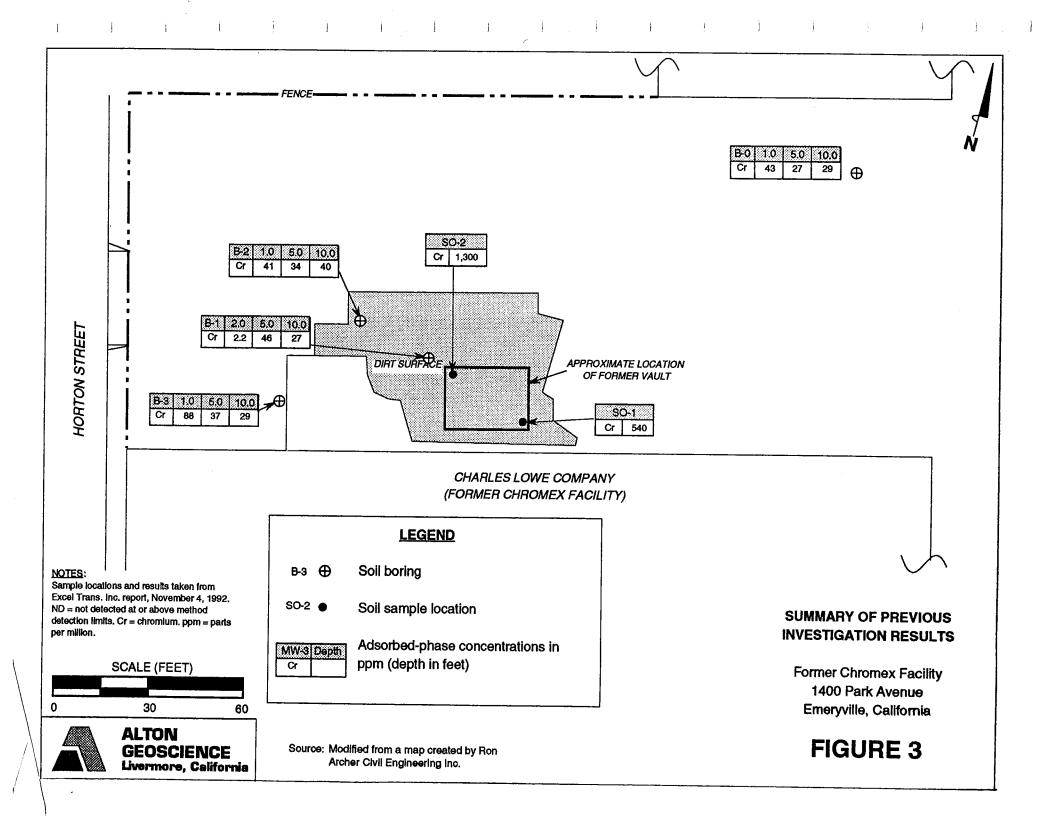


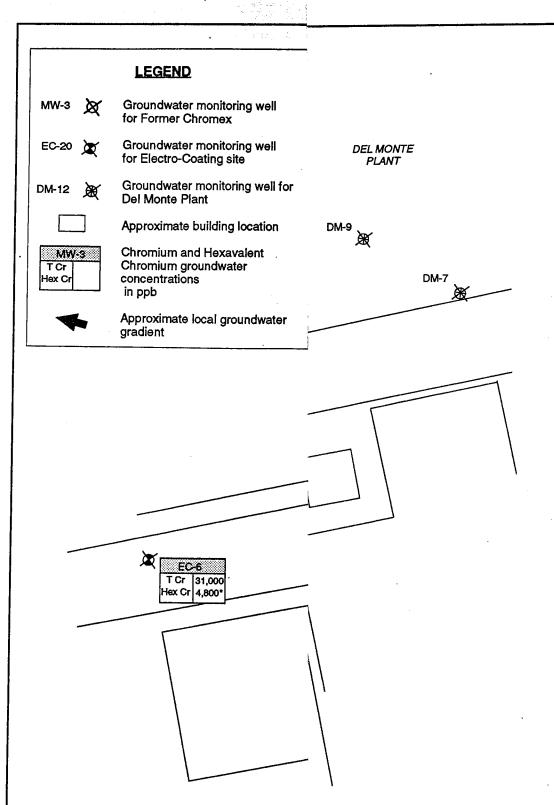
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Livermore, California

41-0042/11X17 SITE PLAN 04/21/954





NOTES:

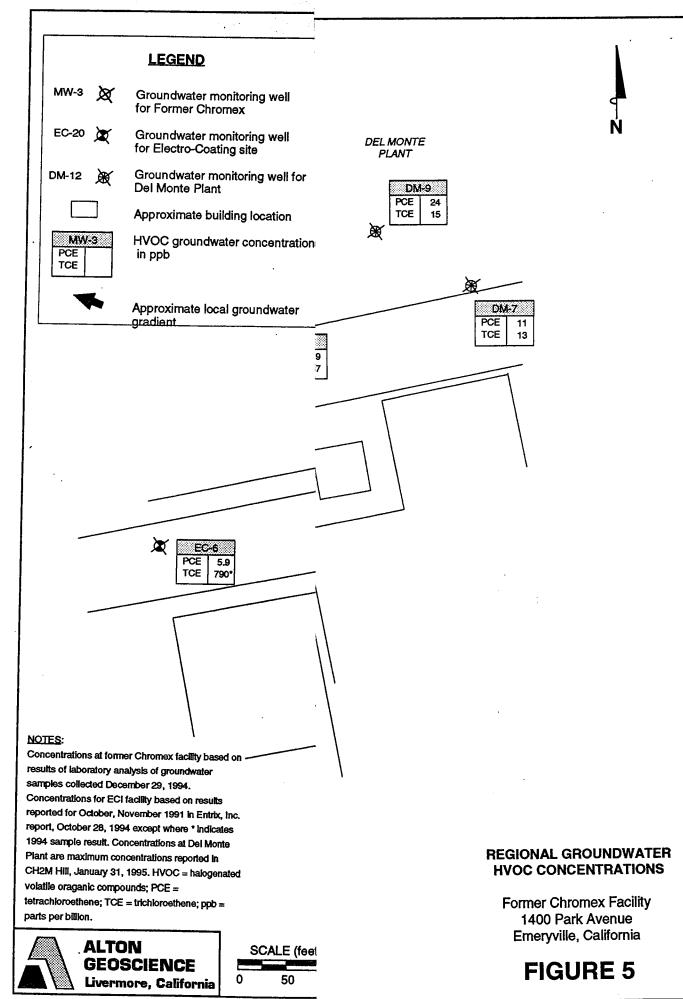
Concentrations at former Chromex facility based on results of laboratory analysis of groundwater samples collected December 29, 1994. Concentrations for ECI facility based on results reported for October, November 1991 in Entrix, Inc. report, October 28, 1994 except where 1994 results are denoted by *. T Cr = total chromium; Hex Cr = hexavalent chromium; ppb = parts per billion.

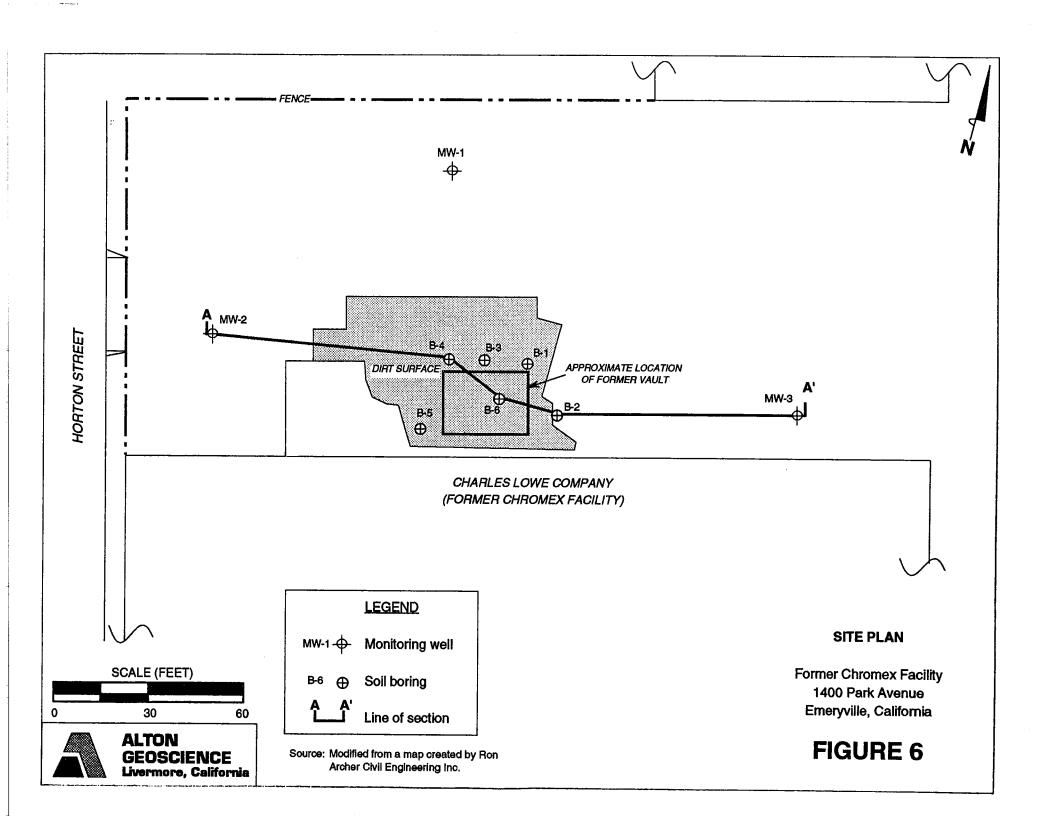
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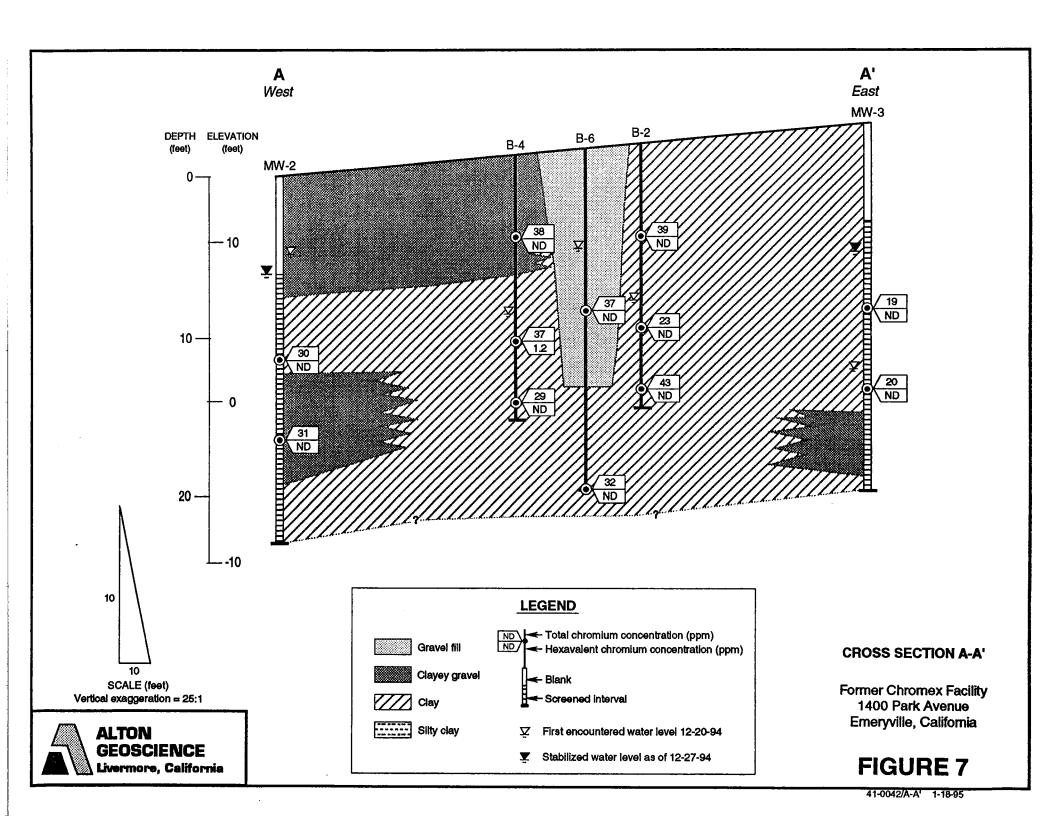
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HEXAVALENT CHROMIUM
CONCENTRATIONS

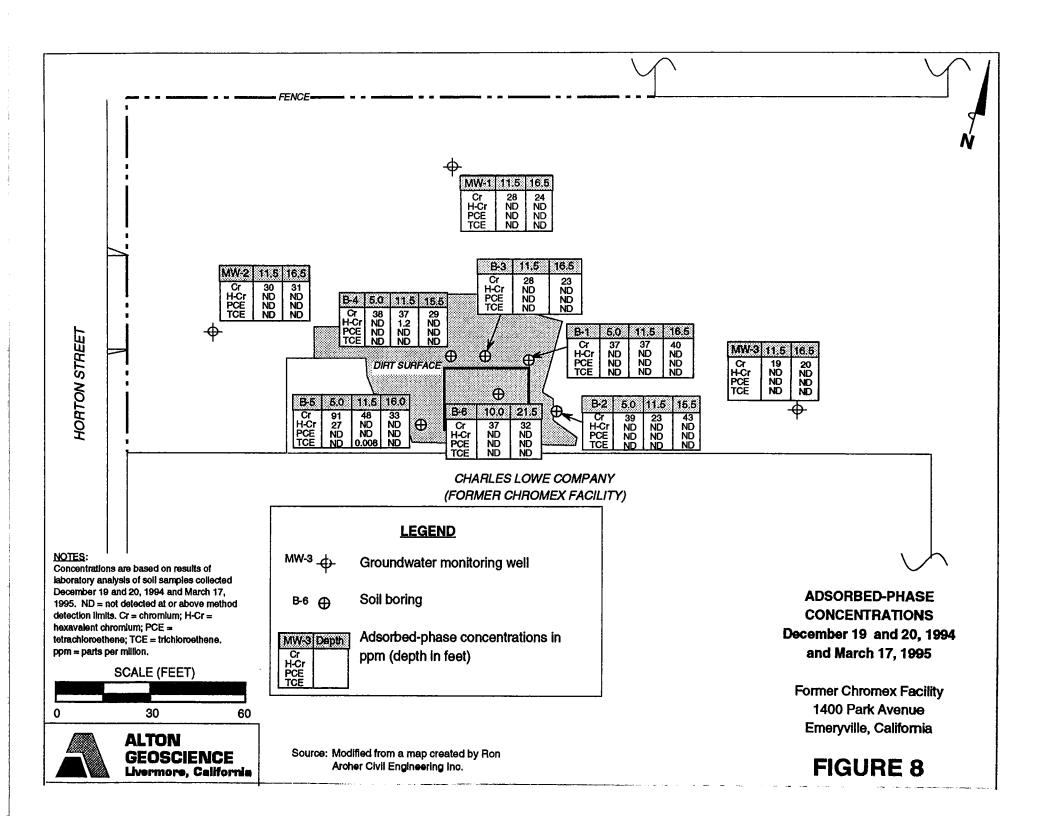
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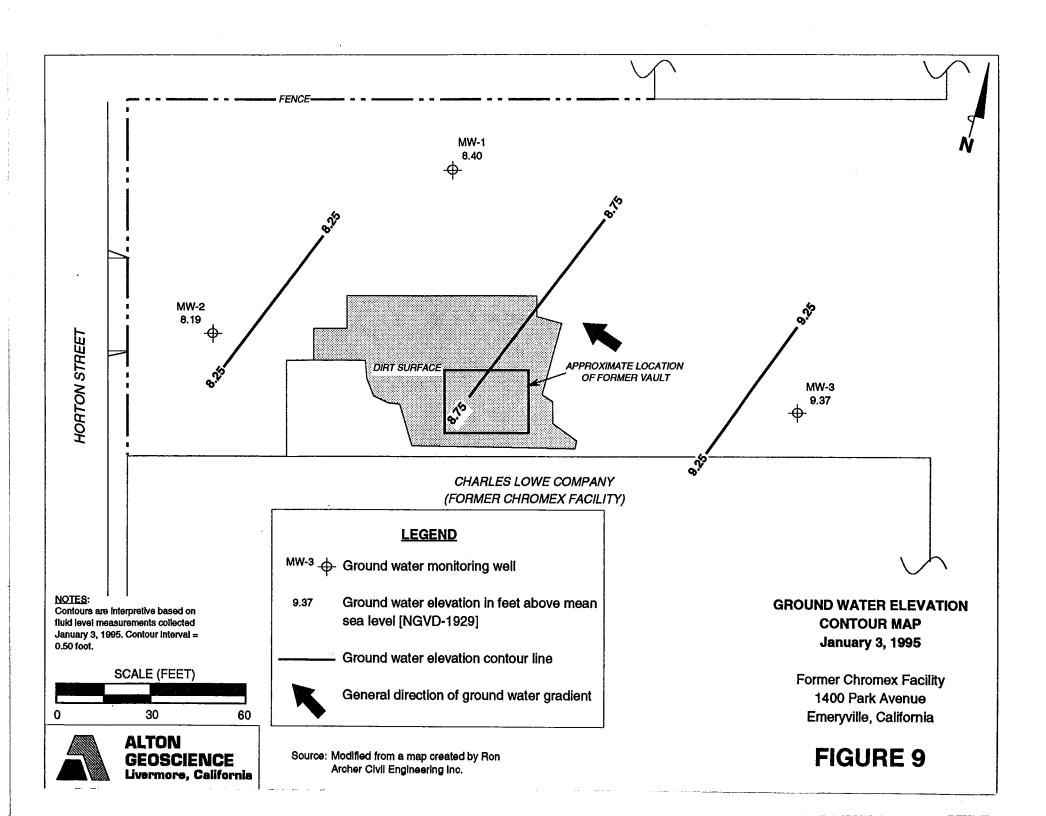
FIGURE 4

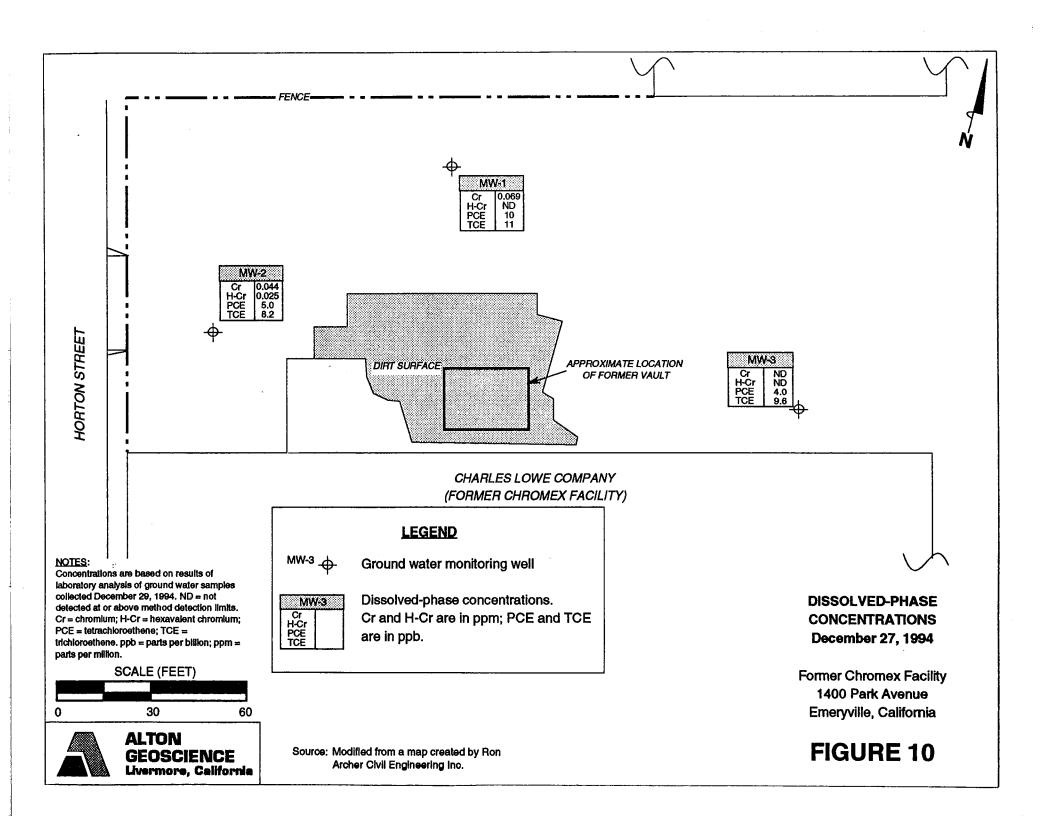






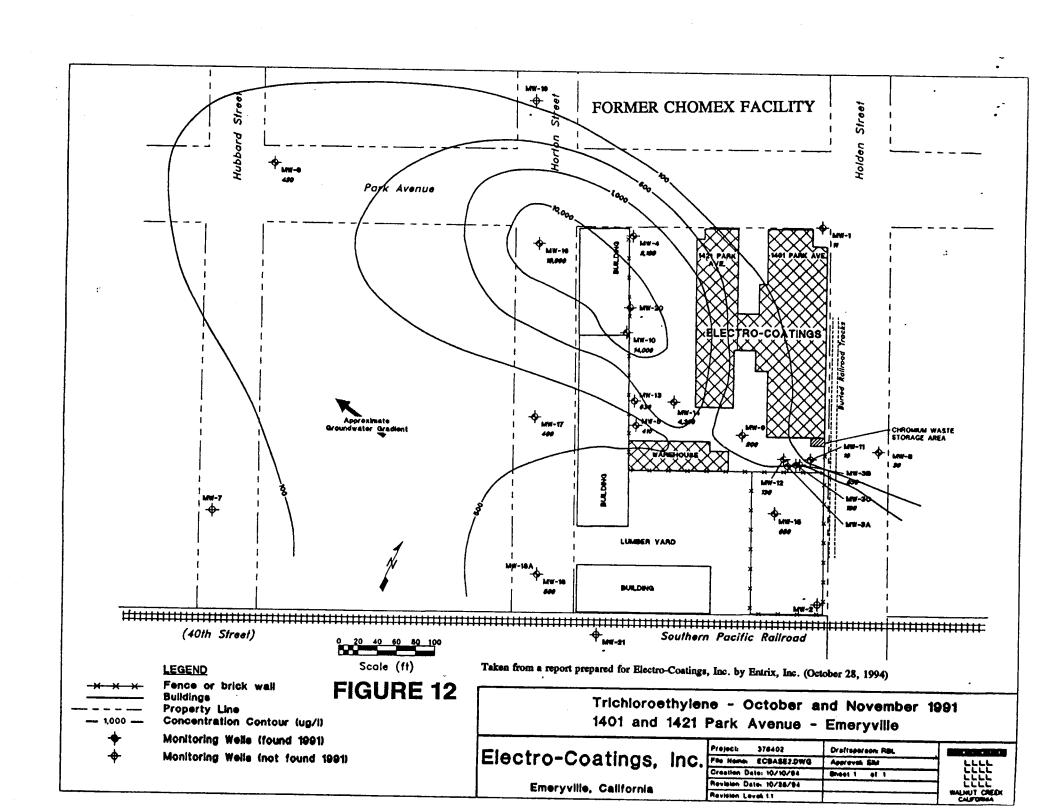






Emeryville, California

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TABLES

Table 1

Summary of Excel Trans. Soil Sample Analysis

October 1992

Sample ID	Date	Depth (feet)	Total Chromium (ppm)	Total Lead (ppm)
SO-1	9/22/92	NA	540	7.0
SO-2	9/22/92	NA	1,300	26
B-0	10/1/92	1.0	43	270
	10/1/92	5.0	27	3.5
	10/1/92	10.0	29	3.0
B-1	10/1/92	2.0	2.2	ND
	10/1/92	5.0	46	4.5
	10/1/92	10.0	27	3.8
B-2	10/1/92	1.0	41	11
	10/1/92	5.0	34	4.0
	10/1/92	10.0	40	5.0
B-3	10/1/92	1.0	88	6.5
	10/1/92	5.0	37	3.0
	10/1/92	10.0	29	4.0

NOTES:

ppm = NA = parts per million not applicable

ND =

not detected at or above method detection limit

Table 2 **Summary of Alton Geoscience Soil Sample Analysis** December 1994 and March 1995

Sample ID	Date	Depth (feet)	HVOC	Total	Total	Hexavalent	PCB	TRPH
		(1661)	(ppb)	Chromium (ppm)	Lead (ppm)	Chromium (ppm)	(ppm)	(ppm)
B-1	3/17/95	5.0	ND	37	6.4	ND	_	
	12/19/94	11.5	ND	37	4.2	ND		_
	12/19/94	16.5	ND	40	5.5	ND	-	_
B-2	3/17/95	5.0	ND	39	10	ND	_	
	12/19/94	11.5	ND	23	4.5	ND	-	_
	12/19/94	15.5	ND	43	5.2	ND	_	_
B-3	12/19/94	11.5	ND	28	5.5	ND		_
	12/19/94	16.5	ND	23	7.1	ND		_
B-4	3/17/95	5.0	ND	38	6.6	ND		_
	12/19/94	11.5	ND	37	5.8	1.2		_
	12/19/94	15.5	ND	29	5.1	ND	_	_
B-5	3/17/95	5.0	ND	91	12	27	_	
	12/19/94	11.5	8.0*	48	4.7	ND		
	12/19/94	16.0 ·	ND	33	3.7	ND		_
B-6	12/20/94	10.0	ND	37	10	ND	_	
	12/20/94	21.5	ND	32	7.2	ND	_	
MW-1	12/19/94	11.5	ND	28	4.5	ND	_	_
	12/19/94	16.5	ND	24	4.3	ND	_	_
MW-2	12/19/94	11.5	ND	30	5.4	ND		
	12/19/94	16.5	ND	31	3.4	ND		

Table 2

Summary of Alton Geoscience Soil Sample Analysis

December 1994 and March 1995

Sample ID	Date	Depth (feet)	HVOC (ppb)	Total Chromium (ppm)	Total Lead (ppm)	Hexavalent Chromium (ppm)	PCB (ppm)	TRPH (ppm)
MW-3	12/20/94	6.5	_	_		_	ND	43
	12/20/94	11.5	ND	19	4.4	ND	_	_
	12/20/94	16.5	30**	20	9.5	ND		_
OTES:		ppm =	parts per million			*=	trichloroethene	
		HVOC =	halogenated volatile	organic compounds		** =	cis-1,2-dichloroethene	
		PCB =	polychlorinated biph	nenyl		ppb =	parts per billion	
		TRPH =	total recoverable pe	troleum hydrocarbons				

Table 3

Summary of Ground Water Monitoring and Analysis

Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Ground Water Elevation (feet)	Total Chromium (ppm)	Total Lead (ppm)	Hexavalent Chromium (ppm)
MW-1	12/27/94 1/3/95	16.71	8.52 8.31	8.19 8.40	0.069	ND —	ND —
MW-2	12/27/94 1/3/95	13.99	8.02* 5.80	5.97 8.19	0.044	ND —	0.025 —
MW-3	12/27/94 1/3/95	17.69	8.62 8.32	9.07 9.37	ND —	ND —	ND —
NOTES:	ppm = * =	parts per million anomalous result			= ND =	not measured/not a not detected at or a limit	nalyzed bove method detection

Table 4
Summary of Ground Water HVOC Analysis

Well ID	Date	Chlorobenzene (ppb)	cis-1,2-DCE (ppb)	trans- 1,2-DCE (ppb)	PŒ (ppb)	Trichloroethene (ppb)
MW-1	12/27/94	1.5	2,5	ND	10	11
MW-2	12/27/94	ND	2.0	ND	5.0	8.2
MW-3	12/27/94	ND	23	0.69	4.0	9.6
OTES:	HVOC = ND = DCE =	halogenated volatile orga not detected at or above dichloroethene	•	ts	PCE = ppb =	tetrachioroethene parts per billion

APPENDIX A

GENERAL FIELD PROCEDURES, BORING LOGS, AND WELL CONSTRUCTION DETAILS

GENERAL FIELD PROCEDURES

A description of the general field procedures used during site investigation and monitoring activities is presented below. For an overview of protocol, refer to the appropriate section(s).

DRILLING AND SOIL SAMPLING

Soil borings are drilled using continuous-flight, hollow-stem augers. Borings that are not completed as monitoring wells are grouted to within 5 feet of the ground surface with a cement/bentonite slurry. The remaining 5 feet is filled with concrete.

Soil samples are obtained for soil description, field hydrocarbon vapor screening, and possible laboratory analysis. Soil samples are retrieved from the borings by one of two methods: 1) continuously, using a 5-foot-long, continuous-core barrel sampler advanced into the soil with the lead auger; sample tubes are driven into the core with a mallet, or 2) at 2.5- or 5-foot intervals, using a standard split-spoon sampler lined with four 1.5-inch-diameter stainless steel or brass sample inserts. The split-spoon sampler is driven approximately 18 inches beyond the lead auger with a 140-pound hammer dropped from a height of 30 inches.

For hand auger borings and hand-held, power-driven auger borings, soil samples are retrieved using a hand-driven slide hammer lined with a 1.5-inch-diameter stainless steel sample tube.

During drilling activities, soil adjacent to the laboratory sample is screened for combustible vapors using a combustible gas indicator (CGI) or equivalent field instrument. For each hydrocarbon vapor screening event, a 6-inch-long by 2.5-inch-diameter sample insert is filled approximately 1/3 full with the soil sample, capped at both ends, and shaken. The probe is then inserted through a small opening in the cap, and a reading is taken after approximately 15 seconds and recorded on the boring log. The remaining soil recovered is removed from the sample insert or sampler, and described in accordance with the Unified Soil Classification System. For each sampling interval, field estimates of soil type, density/consistency, moisture, color, and grading are recorded on the boring logs.

SOIL SAMPLE HANDLING

Soil sample handling follows the same basic protocol for both drilling and excavation activities. Upon retrieval, soil samples are immediately removed from the sampler, sealed with Teflon sheeting and polyurethane caps, and wrapped with tape. Each sample is labeled with the project number, boring/well number, sample depth, geologist's initials, and date of collection. After the samples have been labeled and documented in the chain of custody record, they are placed in a cooler with ice at approximately 4 degrees Celsius (°C) prior to and during transport to a state-certified laboratory for analysis. Samples not selected for immediate analysis may be transported in a cooler with ice and archived in a frostless refrigerator at approximately 4°C for possible future testing.

MONITORING WELL INSTALLATION

Monitoring wells are constructed of 4-inch-diameter, flush-threaded Schedule 40 PVC blank and screened (0.020-inch slot size) casing. Where possible, the screened interval will extend at least 10 feet above, and 10 to 20 feet below, the top of the groundwater table. The annular space surrounding the screened casing is backfilled with Sri Supreme # 8 sand (filter pack) to approximately 2 feet above the top of the screened section.

Recovery wells are constructed of 6-inch diameter flush-threaded Schedule 40 PVC blank and screened (0.030-inch slot size) casing. Where possible, the screened interval will extend at least 10 feet above, and 10 to 20 feet below, the top of the groundwater table. The annular space surrounding the screened casing is backfilled with medium aquarium sand (filter pack) to approximately 2 feet above the top of the screened section.

Vapor Extraction wells are constructed of 4-inch diameter flush-threaded Schedule 40 PVC blank and screened (0.030-inch slot size) casing. The annular space surrounding the screened casing is backfilled with medium aquarium sand (filter pack) to approximately 1 feet above the top of the screened section.

During monitoring and recovery well construction, the filter pack is completed by surging with a rig-mounted surge block. A 2 to 3 foot thick bentonite annular seal is placed above the filter pack. The remaining annular space is grouted with Portland cement and/or bentonite grout to the surface. Utility access boxes are installed slightly above grade. Locking, watertight caps are installed to prevent unauthorized access to the well, and limit infiltration of surface fluids.

FLUID LEVEL MONITORING

Fluid levels are monitored in the wells using an electronic interface probe with conductance sensors. The presence of liquid-phase hydrocarbons is verified using a hydrocarbon-reactive paste. The depth to liquid-phase hydrocarbons and water is measured relative to the well box top or top of casing. Well box or casing elevations are surveyed to within 0.02 foot relative to a county or city bench mark.

GROUNDWATER PURGING AND SAMPLING

Groundwater monitoring wells are purged and sampled in accordance with standard regulatory protocol. Typically, monitoring wells that contain no liquid-phase hydrocarbons are purged of groundwater prior to sampling so that fluids sampled are representative of fluids within the formation. Temperature, pH, and specific conductance are typically measured after each well casing volume has been removed. Purging is considered complete when these parameters vary less than 10% from the previous readings, or when four casing volumes of fluid have been removed. Samples are collected without further purging if the well does not recharge within 2 hours to 80% of its volume before purging. The purged water is either pumped directly into a licensed vacuum truck or temporarily stored in labeled drums prior to transport to an appropriate treatment or recycling facility. If an automatic recovery system (ARS) is operating at the site, purged water may be pumped into the ARS for treatment.

Groundwater samples are collected by lowering a 1.5-inch-diameter, bottom-fill, disposable polyethylene bailer just below the static water level in the well. The samples are carefully transferred from the check-valve-equipped bailer to 1-liter and 40-milliliter glass containers. The sample containers are filled to zero headspace and fitted with Teflon-sealed caps. Each sample is labeled with the project number, well number, sample date, and sampler's initials. Samples remain chilled at approximately 4°C prior to analysis by a state-certified laboratory.

CHAIN OF CUSTODY PROTOCOL

Chain of custody protocol is followed for all soil and groundwater samples selected for laboratory analysis. The chain of custody form(s) accompanies the samples from the sampling locality to the laboratory, providing a continuous record of possession prior to analysis.

DECONTAMINATION

Drilling and Soil Sampling

Drilling equipment is decontaminated by steam cleaning before being brought onsite. The augers are also steam cleaned before each new boring is commenced. Prior to use, the sampler and sampling tubes are brush-scrubbed in a Liqui-nox and potable water solution and rinsed twice in clean potable water. Sampling equipment and tubes are also decontaminated before each sample is collected to avoid cross-contamination between borings.

Groundwater Sampling

Purging and sampling equipment that could contact well fluids is either dedicated to a particular well or cleaned prior to each use in a Liqui-nox solution followed by two tap water rinses.

UNIFIED SOIL CLASSIFICATION SYSTEM

	MAJOR DIVIS	SIONS	TYPICAL NAMES	
	GRAVELS	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES,	
SH	MORE THAN HALF	BITTLE ON NO PINES	GP POORLY-GRADED GRAVELS, GRAVEL-BAND MIXTURE	8
COARSE-GRAINED SOILS MORE THAN HALF IS LARGER THAN No. 200 SIEVE	COARSE FRACTION IS LARGER THAN No. 4 SIEVE SIZE	GRAVELS WITH OVER	GM SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	
AINEC IS LAR SIEVE		12% FINES	GC CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES	
COARSE-GRAINED ORE THAN HALF IS LAR No. 200 SIEVE	24452	CLEAN SANDS WITH	SW WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
ARSE THAN	SANDS MORE THAN HALF	LITTLE OR NO FINES	SP POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
S M S M S M	COARSE FRACTION IS SMALLER THAN No. 4 SIEVE SIZE	SANDS WITH OVER	SM SILTY SANDS, SAND-SILT MIXTURES	
	SIEVE SIZE	12% FINES	SC CLAYEY SANDS, SAND-CLAY MIXTURES	
ω ^E			ML INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	R.
INE-GRAINED SOILS THAN HALF IS SMALLER THAN No. 200 SIEVE	SILTS ANE	•	CL INORGANIC CLAYS OF LOW- TO MEDIUM-PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
INED ISSM			OL ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
FINE-GRAINE THAN HALF IS S No. 200 SIE			MH INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FIN	€
FINE TAA	SILTS AND		CH INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
MORE	Daois amit and	VIEW IUVII OA	OH ORGANIC CLAYS OF MEDIUM- TO HIGH-PLASTICITY, ORGANIC SILTS	
	HIGHLY ORGA	ANIC SOILS	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	1

SYMBOLS AND NOTES

SAMPLE INTERVAL

SAMPLE NOT RECOVERED

BENTONITE

CONCRETE

GROUT

FILTER SAND PACK

STATIC WATER LEVEL

WATER LEVEL ENCOUNTERED WHEN DRILLING

ppb = parts per billion (µg/kg)

ND = not detected at detection limits stated in official laboratory reports

CGI = combustible restrictor

ppm = parts per million (mg/kg)

CGI = combustible gas indicator
OVA = organic vapor analyzer
PID = photoionization detector

LEL = lower explosive limit
TPH = total petroleum hydrocarbons

TRPH = total recoverable petroleum hydrocarbons

NA = not applicable



KEY TO BORING LOG

PROJECT NO.: 41-0042						DATE DRILLED:	1	2/19	/94	· · · · · · · · · · · · · · · · · · ·
<u>L</u>	OCA	TION:			or Chromex Facility	LOGGED BY:	ļ	\. Le	May	
					Park Avenue	APPROVED BY:	٨	И. К а	ten, RG	
			_ <u>E</u>	mery	ville, California	DRILLING CO.:	E	3C2		
BLOWS PER 6 INCHES	PID (ppm)	Total/Hexavalent Cr	SAMPLE	DEPTH (feet below grade)	DRILLING METHOD: 8-inch Hollow-Stem Auger SAMPLER TYPE: California Modified Split Spoon TOTAL DEPTH: 24.0 feet DEPTH TO WATER: 10.0 feet			ПТНОГОВУ	CONST	VELL FRUCTION ETAIL
9.0	=	P	S.A	E E	DESCRIPTION		SSS	5		
5,9,12 9,11,16	5	28/ND		5	Hand-augered to 4.0 feet. SANDY CLAY: olive brown, soft, damp, contains thin thick) of clayey gravel. As above to 10.5 feet.		CL		5	Utility box wit locking cap Neat Cement 2-Inch- diameter PVC blank casing Bentonite Seal #3 Monterey Sand
			┟┴┨	-	CLAYEY SAND: very dark grayish brown, medium den clasts to 1.5 inches.	se, saturated,	sc			
12,15,16 10,11,15 15,16,19 12,15,19	5 4	24/ND			CLAYEY GRAVEL: dark olive brown, medium dense, so and angular clasts to 0.75 inch. GRAVEL: olive brown, coarse, well graded, angular class SANDY CLAY: black, medium stiff, damp, fine-grained GRAVEL: black, coarse, well graded, angular clasts to C SANDY CLAY: black, medium stiff, damp, with interbed	sts to 0.5 inch-diameter sand for 10.0 inches 0.5 inch.	CL		15 1 1 1 1 1 1 1 1 1	2-inch- diameter —PVC casing 0.020-inch slottling
									25 - - - - - - - - - - - - -	
	ALTON GEOSCIENCE Livermore, California			ia	LOG OF EXPLORATOR	Y BORING			MW PAGE 1	OF 1

Livermore, California			iforn	ia						1 OF 1	
			CIEN			LOG OF EXPLORATOR	RY RORING			MV	N-2
	2.				- 30 - 30 - 35 - 35 					30 35 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
10,	16,19	4			_ - - -25 - -	SILTY CLAY: black, medium stiff, saturated, with 5.0 i sample interval, bottom few inches is sandy clay, light	nch gravel layer in olive brown.			25	End cap
_	-	4			20 	Light olive brown, damp, contains small rounded clast		CL		20-	
10,	15,16	4			-	SANDY CLAY: olive brown, medium stiff, saturated, fin	ne-grained with silt.				
18,	18,21	4	31/ND			CLAYEY GRAVEL: olive brown, medium dense, wet, inch-diameter.	angular clasts to 1.0	GC		15—	2-inch- diameter PVC casing 0.020-inch slotting
10,	10,11,15 4 30/ND =					SANDY CLAY: olive brown, medium stiff, wet, fine-groccasional clasts of gravel.	ained with	CL		10 1	#3 Monterey Sand
5,1	13,15	4			CLAYEY GRAVEL: olive brown, medium dense, satur interval, includes 6.0 inch sandy layer, olive brown.	rated sample	gc		1 1 1 1 1 1 1 1 1 1	Neat Cement 2-Inch- diameter PVC blank casing Bentonite Seal
	BLOWS PER 6 INCHES	PID (ppm)	Total/He	SAMPLE	DEPTH (feet below o	DESCRIPTION Hand-augered to 3.0 feet.	ATEM: 5.0 Teet	SSS	ГІТНОГОВУ	f	DETAIL Utility box with locking cap
-	ES	E)	Total/Hexavalent Gr	Ш	ow grade)	DRILLING METHOD: 8-inch Hollow-Stem Auger SAMPLER TYPE: California Modified Split Spoon TOTAL DEPTH: 24.0 feet DEPTH TO WATER: 5.0 feet				CON	WELL STRUCTION
				Ε	mery	ville, California	DRILLING CO.:		3C2		
		OCA	IION:			r Chromex Facility Park Avenue	LOGGED BY: APPROVED BY:			May ten, Ro	
		JECT			1-00-	· · · · · · · · · · · · · · · · · · ·	DATE DRILLED:	1	2/19	/94	<u> </u>

PRO.	JECT	NO.:	4	1-004	12	DATE DRILLED:	1	12/20)/94	
L	OCAT	TION:	F	orme	r Chromex Facility	LOGGED BY:		۱. Le	May	
					Park Avenue	APPROVED BY:		И. К є	aten, RG	
			E	mery	ville, California	DRILLING CO.:		3C2		
BLOWS PER 6 INCHES	PID (ppm)	DRILLING METHOD: 8-inch Hollow-Stem Auger SAMPLER TYPE: California Modified Split Spoon TOTAL DEPTH: 24.5 feet DEPTH TO WATER: 15.0 feet DESCRIPTION						LITHOLOGY	CONST	VELL FRUCTION ETAIL
				 0 	Hand-augered to 4.0 feet.		SOSN		0	Utility box with locking cap
4,11,12 6,9,15 11,15,18	64 48 28	19/ND 20/ND		- 5 - 10 - 10 - 15 - 15	SANDY CLAY: black, soft, damp, fine-grained sand w GRAVELLY CLAY: olive gray, soft, damp, small angul contains 1.0 inch thick layer of brownish yellow dayey	lar clasts of gravel, sand.	CL		10 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Neaf Cement 2-Inch- diameter PVC blank casing Bentonite Seal #3 Monterey Sand
12,17,18	20			- 20	sand, with silt, interbedded with gravel and black day thick. CLAYEY GRAVEL: dark yellowish brown, medium der dasts to 0.15 inch and sandy clay layers.		GC		20-	2-Inch- diameter PVC casing 0.020-inch slotting
<u> </u>	34		X	- - - - -25	GRAVELLY CLAY: black, saturated, with clasts to 0.15 sand.	5 inch-diameter and fine	CL		25—	K – End cap
				-30					17 17 17 17 17 17 17 17 17 17 17 17 17 1	,
ALTON GEOSCIENCE Livermore, California		ia	LOG OF EXPLORATOR	RY BORING			PAGE 1	OF 1		

PROJECT NO.: 41	-0042	DATE DRILLED: 12/19/94					
***************************************	rmer Chromex Facility	LOGGED BY:	A. Le	Мау			
	00 Park Avenue	APPROVED BY:		aten, RG			
Em	neryville, California	DRILLING CO.:	BC2				
BLOWS PER 6 INCHES PID (ppm) Total/Hexavalent G SAMPLE DEPTH	SAMPLER TYPE: California Modified St	TOTAL DEPTH: 16.5 feet DEPTH TO WATER: 8.0 feet					
SA To	DESCRIPTION		USCS				
16,11 5 7,9,12 6 37/ND 4,6,15 7 5,5,11 9 37/ND 7,12,15 12 40/ND	SILTY GRAVEL: olive brown, wet from surface SILTY SAND: dark yellowish brown, very soft, damp, we clasts to 1.0 inch. SANDY CLAY: brown, wet, contains occasional small at to 0.5 inch-diameter. Olive brown, saturated small layers of clayey sand up to inch thick. With silt. Damp, bottom 1.0 inch is gravelly clay with large pebble at NOTE: Laboratory result reported for the 5 foot samp sample collected by hand auger on March 17, 1995, im the original boring drilled on December 19, 1995.	with angular gravel angular gravel clasts 0.5	GM SM CL	0			
- 30 - 30 - 30 - 35 - 35 - 40				30			
ALTON GEOSCIENCE Livermore, California	LOG OF EXPLORATOR	Y BORING		B-1 PAGE 1 OF 1			

	0042	DATE DRILLED: 12/19/94			
	mer Chromex Facility	LOGGED BY: A. Le May			
	00 Park Avenue	APPROVED BY: M. Katen, RG			
	eryville, California	DRILLING CO.: BC2			
BLOWS PER 6 INCHES PID (ppm) Total/Hexavalent Cr SAMPLE DEPTH	DRILLING METHOD: 8-inch Hollow Stem A SAMPLER TYPE: California Modified Sp	olit Speep			
WS Pig HES ppm)	TOTAL DEPTH: 16.5 feet DEPTH TO WAT	ER: 10.0 feet CONSTRUCTIO			
BLOWS PER 6 INCHES PID (ppm) Total/Hexavale SAMPLE DEPTH	DESCRIPTION	ER: 10.0 feet Sy Fig. CONSTRUCTIO			
-0	Hand-augered to 4.0 feet.	77.0			
		CL - Neat Cement			
3,6,9 8 39/ND 5	SILTY CLAY: very dark gray, moist, contains small gra sample interval contains 0.25 inch thick layer of fine cla	ayey sand.			
7,11,12 12 23/ND = 10	SANDY CLAY: dark olive brown, wet, contains thin layer and gravel to 1.0 inch thick.	ors of clayey sand			
8,9,12 10 43/ND 15	CLAY: olive, damp, with angular gravel clasts, fines dow homogeneous very fine clay in bottom 6.0 inches of san	vnward to nple interval.			
	* NOTE: Laboratory result reported for the 5 foot sam sample collected by hand auger on March 17, 1995, in the original boring drilled on December 19, 1995.	ple represents a soil			
ALTON GEOSCIENCE Livermore, California	LOG OF EXPLORATOR	Y BORING B-2 PAGE 1 OF 1			

PRO	PROJECT NO.: 41-00		41-0	042	DATE DRILLED:	•	12/19	0/94			
	LOC	ATION	۷:		ner Chromex Facility	LOGGED BY: A. Le May					
					Park Avenue	APPROVED BY:		M. Ka	aten, RG		
				Eme	ryville, California	DRILLING CO.:		3C2			
İ		₽ E		grade)	DRILLING METHOD: 8-inch Hollow Stem A	uger					
E .		Vale		V gra	SAMPLER TYPE: California Modified S	AMPLER TYPE: California Modified Split Spoon					
\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	mdd	Ę	믵	문율	TOTAL DEPTH: 16.5 feet DEPTH TO WAT	ER: 10.0 feet		١ğ	CONSTRUCTION		
BLOWS PER 6 INCHES	PID (ppm)	Total/Hexavalent G	SAMPLE	DEPTH (feet below	DESCRIPTION		SSS	ІТНОГОВУ	DETAIL		
		†	一	-0	Hand-augered to 4.0 feet.	 		╁▔	0		
		ļ		_	GRAVEL (Fill)		Fill	ļ			
Ī			ľ	F			i				
				E_			L'		Neat Cement		
			-	<u>-</u> 5	CLAYEY SILT: mottled black and dark olive brown, mo	viet containe graval	ML		5—		
9,11,15	5	1	Ш	F	clasts to 0.25 inch-diameter and clayey gravel layer for sample interval.	top 6.0 inches of					
				F	sample interval.			Щ			
				ĒΙ					3		
7,7,8	4	00415	╁	10	SANDY CLAY: olive brown, saturated, fine sand.		CL		10 ▼		
7,7,8	7	28/ND	Щ	F	ON TO DEAT. ON TO DIOWIT, SALUTATED, THE SALID.						
				Εİ					3		
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9,10,2	9	23/ND	\vdash	15	Fine sand and occasional small gravel clasts to 0.15 inc			15			
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Livermore, California									PAGE 1 OF 1		

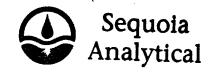
PRO	DJEC	T NO). <u>:</u>	41-0	042	DATE DRILLED:		12/19)/94	
	LOCA	ATION	1 :		ner Chromex Facility	LOGGED BY:	,	A. Le	Мау	
					Park Avenue	APPROVED BY:		M. Ka	aten, RG	
				Eme	ryville, California		3C2			
		S E		8	DRILLING METHOD: 8-inch Hollow Stem A	uger			<u> </u>	***************************************
Ħ,	DRILLING METHOD: 8-inch Hollow Stem Auger SAMPLER TYPE: California Modified Split Spoon							≿	w	/ELL
NS E	PID (ppm)	Ĕ	끮	불	TOTAL DEPTH: 16.5 feet DEPTH TO WAT	ER: 10.0 feet		Įğ		RUCTION
BLOWS PER 6 INCHES	P OF	Total/Hexavalent G	SAMPLE	DEPTH (feet below g	DESCRIPTION		SSS	ПТНОСОБУ) DE	TAIL
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1				F						
				F			GC] -	7
l	l			Ē,				1//		_ Neat Cement
				- 5	CLAYEY GRAVEL: dark olive brown, damp, contains o	widiwad angular alaata			5	
4,3,6	36	38/ND	X	F	to 1.0 inch-diameter, with silt.	MUMBU ANGUIAI GASIS				
				E			<u> </u>			
							CL			
5,5,12	20	37/1.2	П	10	SANDY CLAY: olive brown, wet, fine-grained sand, con	tains laver of clavey			10	∇
,,,,,			Щ		gravel (1.0 inch thick) which is mottled black.	and layor or orayoy			_	
				_						
7,9,11	8	29/ND	Т	— 15 -	Very dark grayish brown, saturated, fine sand with trace and thin layer of coarse clayey sand in sample interval.	angular gravel clasts			15	
				- 1				14		
				-	* NOTE: Laboratory result reported for the 5 foot sam sample collected by hand auger on March 17, 1995, in	ple represents a soil nmediately adjacent to				
				- - - 20	the original boring drilled on December 19, 1995.					
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	LOC	ATION	1:		ner Chromex Facility	LOGGED BY:	- /	۱. Le	May	
					Park Avenue	APPROVED BY:		Л. Ka	aten, RG	
				Eme	ryville, California	DRILLING CO.:	Е	3C2		
BLOWS PER 6 INCHES	PID (ppm)	Total/Hexavalent G	SAMPLE	DEPTH (feet below grade)	DRILLING METHOD: 8-inch Hollow Stem A SAMPLER TYPE: California Modified SI TOTAL DEPTH: 16.5 feet DEPTH TO WAT DESCRIPTION	olit Spoon	nscs	ПТНОГОВУ	CONST	/ELL RUCTION TAIL
	 			_o	Hand-augered to 4.0 feet.		 -		0	
4,6,11 7,7,9 6,8,11	7 8	91/27 48/ND 33/ND		5 10 15	SANDY CLAY: very dark grayish brown, stiff, damp, 1 gravel layer at 5.0 feet below grade. Dark grayish brown, saturated, fine sand. CLAYEY GRAVEL: dark grayish brown, saturated, anginch-diameter, sample interval includes clay layer approximately approximately to the 5 foot sample collected by hand auger on March 17, 1995, im the original boring drilled on December 19, 1995.	ular clasts to 1.0 oximately 1.0 inch thick.	GC		0 	Neat Cement
	ALT	DIN		- 25					25 30 35 40	
	ALTON GEOSCIENCE Livermore, California			LOG OF EXPLORATOR	Y BORING			B-5		

	PROJECT NO.: 41-0042				DATE DRILLED: 12/20/94						
1		LOC	ATION	1 :		ner Chromex Facility	LOGGED BY:	/	4. Le	May	
						Park Avenue	APPROVED BY:			aten, RG	
L					Eme	ryville, California	DRILLING CO.:	E	3C2		
ı			Total/Hexavalent G		grade)	DRILLING METHOD: 8-inch Hollow Stem A	uger				
١	E S		avade		§	SAMPLER TYPE: California Modified Sp			≿		'ELL
	SES SES	PID (ppm)	₽ Xe Xe	SAMPLE	DEPTH (feet below g	TOTAL DEPTH: 21.5 feet DEPTH TO WAT	ER: 5.0 feet	 	ІТНО ГОВУ		RUCTION TAIL
l	BLOWS PER 6 INCHES	윤	Total	SAN		DESCRIPTION		USCS	Ē		IAL
r				Г	<u> </u>	Hand-augered to 3.0 feet.				0-	
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			}	-	5	GRAVEL: dark yellowish brown, saturated, coarse grave	ol fill no DID socials			5—	∇
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ı					E	matenal.				-	Neat Cement
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ľ	3,10,20			Х	-	and the second s		CL			
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١.	7,12,9	10	32/ND	\blacksquare	20	Dark yellowish brown, contains angular clasts to 0.25 inc	ch_diameter			20	
				Ш	-	July John Mar Drown, commission angular classes to 0.25 and	ardialitetel.				
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i		GEO	SCIE			LOG OF EXPLORATOR	Y BORING			B- 6	•
	Livermore, California			alifo	rnia					PAGE 1	
										41-0042/B-6 (01/11/95

APPENDIX B

OFFICIAL LABORATORY REPORTS AND CHAIN OF CUSTODY RECORDS



660 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8

Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis Method:

Lab Number:

Former Chromex Soll, B-1 (5') EPA 5030/8010 503-0794

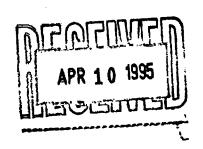
Sampled: Mar 17, 1995 Received: Mar 17, 1995 Analyzed: Mar 21, 1995 Reported: Mar 28, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	1	Sample Results µg/kg
Bromodichloromethane	5.0		
Bromoform	5.0	***************************************	N.D.
Bromomethane	5.0	***************************************	N.D.
Carbon tetrachloride	10		N.D.
Chlorobenzene	5.0	***************************************	N.D.
Chloroethane	5.0		N.D.
2-Chloroethylvinyl ether	10		N.D.
Chloroform	10		N.D.
Chloromethane	5.0	***************************************	N.D.
Dibromochloromethane	10		N.D.
1 2-Dichlorohenzene	5.0	***************************************	N.D.
1,2-Dichlorobenzene	5.0	***************************************	N.D.
1,3-Dichlorobenzene	5.0	***************************************	N.D.
1,4-Dichlorosthana	5.0	***************************************	N.D.
1,1-Dichloroethane	5.0	***************************************	N.D.
1,2-Dichloroethane	5.0	***************************************	N.D.
1,1-Dichloroethene	5.0	***************************************	N.D.
cis-1,2-Dichloroethene	5.0	***************************************	N.D.
trans-1,2-Dichloroethene.	5.0	***************************************	N.D. N.D.
1,2-Dichioropropane	5.0	***************************************	
cis-1,3-Dichloropropene	5.0	***************************************	N.D.
trans-1,3-Dichloropropene	5.0	***************************************	N.D.
weutylene chloride	50		N.D.
1, 1,2,2-1 etrachioroethane	5.0	***************************************	N.D.
l etrachioroethene	5.0	***************************************	N.D.
1, 1, 1-1 nchloroethane	5.0 5.0	***************************************	N.D.
1, 1,2-1 richioroethane	5.0 5.0	***************************************	N.D.
rrichioroethene	5.0		N.D.
richiorofluoromethane		***************************************	N.D.
Vinyl chloride	5.0	***************************************	N.D.
***************************************	10		N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271





680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8

Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis Method: Lab Number:

Former Chromex Soll, B-2 (5') EPA 5030/8010 503-0795

Sampled: Mar 17, 1995 Received: Mar 17, 1995 Analyzed: Mar 21, 1995 Reported: Mar 28, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit	1	Sample Results µg/kg
Bromodichloromethane	5.0		
Bromoform	5.0 5.0	***************************************	N.D.
Bromomethane	5.0	***************************************	N.D.
Carbon tetrachloride	10	***************************************	N.D.
Chloropene	5.0		N.D.
Chloroethane	5.0	***************************************	N.D.
2-Chloroethylvinyl ether	10	***************************************	N.D.
Chloroform.	10		N.D.
Chloromethane	5.0	***************************************	N.D.
Dibromochloromethane	10	***************************************	N.D.
1.2-Dichlorohenzene	5.0	***************************************	N.D.
1,2-Dichlorobenzene	5.0		N.D.
1,3-Dichlorobenzene	5.0	***************************************	N.D.
1,4-Dichloroethano	5.0	***************************************	N.D.
1,1-Dichloroethane	5.0	***************************************	N.D.
1,2-Dichloroethane	5.0	***************************************	N.D.
1,1-Dichloroethene	5.0	***************************************	N.D.
cis-1,2-Dichloroethene	5.0	***************************************	N.D. N.D.
trans-1,2-Dichloroethene	5.0	***************************************	N.D. N.D.
1,2-Dichloropropane	5.0	***************************************	N.D. N.D.
cia-1,a-Dictiiotobtobene	5.0		·· - ·
uans-1,3-Dichloropropene	5.0	***************************************	N.D.
Metriylerie Chionge	50	***************************************	N.D.
1, 1,2,2-1 etrachioroethane	5.0	***************************************	N.D.
Tetrachloroethene	5.0		N.D.
G G G G G G G G G G G G G G G G G G G	5.0	***************************************	N.D.
1, 1,2-11IChioroethane	5.0	***************************************	N.D.
THOMOTOELIENE	5.0	*******************************	N.D.
The file for the first of the f	5.0	***************************************	N.D.
Vinyl chloride	10	***************************************	N.D.
	. 10	***************************************	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Cherapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8

Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis Method: Lab Number: Former Chromex Soll, B-4 (5') EPA 5030/8010 503-0796

Sampled: Mar 17, 1995 Received: Mar 17, 1995 Analyzed: Mar 21, 1995 Reported: Mar 28, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit		Sample Results #g/kg
Bromodichloromethane	5.0		
Bromoform	5.0	***************************************	N.D.
Bromomethane	10	***************************************	N.D.
Carbon tetrachloride	5.0	***************************************	N.D.
Chlorobenzene	5.0 5.0	***************************************	N.D.
Chloroethane	10	***************************************	N.D.
2-Chloroethylvinyl ether	10	***************************************	N.D.
Chloroform.	5.0	•••••••	N.D.
Chloromethane			N.D.
Dibromochloromethane	10	•••••	N.D.
1,2-Dichlorobenzene	5.0	***************************************	N.D.
1,3-Dichlorobenzene	5.0	***************************************	N.D.
1,4-Dichlorobenzene.	5.0	***************************************	N.D.
1,1-Dichloroethane.	5.0	***************************************	N.D.
1,2-Dichloroethane	5.0	***************************************	N.D.
1 1-Dichloroethane	5.0		N.D.
1,1-Dichloroethenecis-1,2-Dichloroethene	5.0		N.D.
trans-1 2-Dichloroothons	5.0	***************************************	N.D.
trans-1,2-Dichloroethene	5.0		N.D.
1,2-Dichloropropane	5.0	***************************************	N.D.
cis-1,3-Dichloropropene	5.0	***************************************	N.D.
trans-1,3-Dichloropropene	5.0	***************************************	N.D.
Methylene chloride	50	***************************************	N.D.
1,1,2,2-Tetrachloroethane	5.0	***************************************	N.D.
Tetrachloroethene	5.0	***************************************	N.D.
1,1,1-Trichloroethane	5.0		N.D.
1,1,2-Trichloroethane	5.0	***************************************	N.D.
Trichloroethene	5.0	***************************************	N.D.
Inchlorofluoromethane	5.0	***************************************	•
Vinyl chloride	10		N.D.
			N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 404 N. Wiget Lane \$19 Striker Avenue, Suite \$ Sacramento, CA 95834

Redwood City, CA 94063 Walnut Creek, CA 94598

(415) 364-9600 (510) 988-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis Method: Lab Number:

Former Chromex Soil, B-5 (5') EPA 5030/8010 503-0797

Sampled: Mar 17, 1995 Received: Mar 17, 1995 Analyzed: Mar 21, 1995 Reported: Mar 28, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	i.	Sample Results µg/kg
Bromodichloromethane	5.0		
Bromoform	5.0	***************************************	N.D.
Bromomethane	10	* *************************************	N.D.
Carbon tetrachloride	5.0	***************************************	N.D.
Chlorobenzene	•.•	***************************************	N.D.
Chloroethane	5.0	***************************************	N.D.
2-Chloroethylvinyl ether	10	***************************************	N.D.
Chloroform	10		N.D.
Chloromethane	5.0	***************************************	N.D.
Dibromochloromethane	10	***************************************	N.D.
1 2-Dichlorobonzone	5.0		N.D.
1,2-Dichlorobenzene	5.0		N.D.
1,3-Dichlorobenzene	5.0	***************************************	N.D.
1,4-Dichlorosthana	5.0	********************************	N.D.
1,1-Dichloroethane	5.0	***************************************	N.D.
1,2-Dichloroethane	5.0	***************************************	N.D.
1,1-Dichloroethene	5.0	***************************************	N.D.
cis-1,2-Dichloroethene.	5.0	***************************************	N.D.
trans-1,2-Dichloroethene	5.0	***************************************	N.D.
1,2-Dichloropropane	5.0	******************************	N.D. N.D.
cis-1,3-Dichioropropene	5.0	***************************************	
trans-1,3-Dichloropropene	5.0	***************************************	N.D.
Methylene chloride	50		N.D.
1,1,2,2-letrachloroethane	5.0	***************************************	N.D.
l etrachloroethene	5.0	***************************************	N.D.
1,1,1-Trichloroethane	5.0	***************************************	N.D.
1,1,2-Trichloroethane	5.0 5.0	***************************************	N.D.
Trichloroethene	5.0 5.0		N.D.
Trichlorofluoromethane			N.D.
Vinyl chloride	5.0		N.D.
,	10	******************************	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8 Sacramento, CA 95834

Redwood City, CA 94063 Walnut Creek, CA 94598

(415) 364-9600 (510) 988-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Sample Descript:

Lab Number:

Soll, B-1 (5')

503-0794

Sampled: Mar 17, 1995 Received: Mar 17, 1995

Extracted: Mar 20-21, 1995 Analyzed: Mar 22, 1995

Reported: Mar 28, 1995

LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Chromium	0.50	 37
Lead	1.0	6.4
Hexavalent Chromium	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 404 N. Wiget Lane \$19 Striker Avenue, Suite \$

Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Alton Geosclence 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript:

Lab Number:

Former Chromex Soll, B-2 (5')

503-0795

Sampled: Received:

Mar 17, 1995 Mar 17, 1995 Extracted: Mar 20-21, 1995

Analyzed: Reported:

Mar 22, 1995 Mar 28, 1995

LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Chromium	0.50	 39
Lead	1.0	10
Hexavalent Chromium	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8 Sacramento, CA 95834

Redwood City, CA 94063 Walnut Creek, CA 94598

(415) 364-9600 (510) 988-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Alton Geoscience 30-A Undbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript:

Lab Number:

Former Chromex Soll, B-4 (5')

503-0796

Sampled: Mar 17, 1995 Received: Mar 17, 1995

Extracted: Mar 20-21, 1995 Analyzed: Mar 22, 1995

Reported: Mar 28, 1995

LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Chromium	0.50	 38
Lead	1.0	6.6
Hexavalent Chromium	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

\$EQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 404 N. Wiget Lane \$19 Striker Avenue, Suite \$

Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript:

Lab Number:

Soil, B-5 (5')

Former Chromex

503-0797

Sampled: Mar 17, 1995 Received: Mar 17, 1995

Extracted: Mar 20-21, 1995 Analyzed: Mar 22, 1995

Reported: Mar 28, 1995

LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Chromium	0.50	 91
Lead	1.0	12
Hexavalent Chromium	0.50	27

Analytes reported as N.D. were not present above the stated limit of detection.

SEŒUOIA ANALYTICAL, #1271



680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8

Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Matrix: Former Chromex

Solid

QC Sample Group: 5030794-97

Reported:

Mar 28, 1995

QUALITY CONTROL DATA REPORT

		QUALITY CO	SINTROL DI	AIA KEPO	RT	
ANALYTE	1,1-Dichloro- ethene	Trichloro- ethene	Chloro- benzene	Chromlum	Lead	Hexavalent Chromium
Method: Analyst:	EPA 8010 K. Niil	EPA 8010 K. Nill	EPA 8010 K. Nill	EPA 6010 K. Anderson	EPA 6010 K. Anderson	EPA 7196
MS/MSD Batch#:	5030579	5030579	5030579	5030792	5030792	5030797
Date Prepared: Date Analyzed: Instrument I.D.#: Conc. Spiked:	3/21/95 3/21/95 HP5890/7 10 µg/kg	3/21/95 3/21/95 HP5890/7 10 µg/kg	3/21/95 3/21/95 HP5890/7 10 µg/kg	3/20/95 3/22/95 Liberty-100 50 mg/kg	3/20/95 3/22/95 Liberty-100 50 mg/kg	3/21/95 3/22/95 Spec-340 100 mg/kg
Matrix Spike % Recovery: Matrix Spike	77	49	76	106	92	108
Duplicate % Recovery:	72	38	75	100	94	124
Relative % Difference:	6.7	25	1.3	5.8	2.2	14
LCS Batch#:	LCS032195	LCS032195	LCS032195	BLK032095	BLK032095	BLK032195
Date Prepared: Date Analyzed: Instrument I.D.#:	3/21/95 3/21/95 HP5890/7	3/21/95 3/21/95 HP5890/7	3/21/95 3/21/95 HP5890/7	3/20/95 3/22/95 Liberty-100	3/20/95 3/22/95 Liberty-100	3/21/95 3/22/95 Spec-340
LCS % Recovery:	107	102	95	100	91	106
% Recovery Control Limits:	28-167	35-146	38-150	75-125	75-125	60-140

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook

Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.



- ☐ 819 Striker Ave., Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (415) 364-9233
- 1900 Bates Ave., Suite LM Concord, CA 94520 (510) 686-9600 FAX (510) 686-9689

Consultin	g Firm	: A	LT0/	V I	4	19		1-/	116	Ī															
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Tel: 510 60	ci le	CII	50	Fax.		151		Zip:	Cy	45	<u>ک</u> ``					Heer:				_/	1/10	<u>ي د ز</u>	. 111	136	7/*
		T -	Ť	Irax.	: T		1	1	T -		ζ. Τ	T^{-1}	San	pler		gnatu	re):		/_	44.		<u> </u>	(.,
Sample I.D.	Matrix	Date Sampled	ф	Preservation	Number of Containers	Type of Containers	X - EPA 602/8020	BTEX -TPH EPA M602/8015/8020 /GAS)		Grease	- EPA 418.1	60 MEGO HUCC	624/8240	EPA 625/8270	Title 22 Metals EPA 6010/7000	Lead Org./DHS Lead Total	EDB/DBCD - EPA 504		Bioassay - Title 22 Haz. Waste	say - Effluent	7196 Hextr	Ch to tol	Code 1	(che	DDING eck one) Emergency Response .: Site Assessment
			Time	O.	_		втех	BTE EPA	Gas	o io S	ТРН	EPA	EPA	EPA	Title (Lead Org	90	표	Sioas	Bioassay	7	60	Code 3		
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B-2(51)	1		11:00						0.3	1		×									\	X	Code 4		Active Remed. (Install./Start-up)
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51-1)							2-1	C-t	•			L	π		/		X		Code 6		Passive Remed/ Monitoring
SP-2				_							1./		الدر			1	a d	1					Code 7		Closure
5P-3	-			^						1	-(21		74	1/2	<u>و. </u>		;			Code 8		Construction
<u>5P-9</u>	-	<u> </u>		_	} 					1	2.6	1	a	<	?	1	120	-					Code 9		Litigation/Claims
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Remarks:		-/		!)			6	チ		! 	<u>' '/</u>	<u> </u>		4 /))\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Sample Inte Intact_	grity:	On Ice



680 Chesapeake Drive 1900 Bates Avenue, Suite L. Concord, CA 94520

Redwood City, CA 94063 819 Striker Avenue, Suite 8 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project iD: Sample Descript: Analysis Method:

Lab Number:

Former Chromex Soll, B-1(11.5) EPA 5030/8010

Sampled: Dec 19, 1994 Received: Dec 19, 1994 Analyzed: Dec 28, 1994 Reported: Dec 30, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg		Sample Results µg/kg
Bromodichloromethane	5.0		
Bromoform	5.0	***************************************	N.D.
Bromomethane	3.0 10	***************************************	N.D.
Carbon tetrachloride	5.0	***************************************	N.D.
Chlorobenzene	5.0 5.0	***************************************	N.D.
Chloroethane	5.0 10	***************************************	N.D.
2-Chloroethylvinyl ether	10		N.D.
Chloroform		***************************************	N.D.
Chloromethane	5.0	•	N.D.
Dibromochloromethane	10		N.D.
1,2-Dichlorobenzene	5.0		N.D.
1,3-Dichlorobenzene	5.0	•••••	N.D.
1,4-Dichlorobenzene	5.0	••••••	N.D.
1,1-Dichloroethane	5.0	***************************************	N.D.
1,2-Dichloroethane	5.0	••••••	N.D.
1,1-Dichloroethene	5.0	***************************************	N.D.
cis-1,2-Dichloroethene.	5.0		N.D.
trans-1,2-Dichloroethene	5.0	***************************************	N.D.
1,2-Dichloropropane.	5.0		N.D.
cis-1,3-Dichloropropene.	5.0		N.D.
trans-1,3-Dichloropropene	5.0		N.D.
Methylene chloride	5.0		N.D.
1,1,2,2 Tetrachloroethane	50	***************************************	N.D.
Tetrachloroethene	5.0		N.D.
1,1,1-Trichloroethane	5.0	***************************************	N.D.
1,1,2-Trichloroethane	5.0		N.D.
Trichloroethene		***************************************	N.D.
Trichlorofluoromethane	5.0		N.D.
Vinyl chloride	5.0		N.D.
	10	•••••••	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 1900 Bates Avenue, Suite L 819 Striker Avenue, Suite 8

Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Form Sample Descript: Soil, I Analysis Method: EPA 5 Lab Number: 412-1

Former Chromex Soil, B-1(16.5) EPA 5030/8010 412-1282 Sampled: Dec 19, 1994 Received: Dec 19, 1994 Analyzed: Dec 28, 1994 Reported: Dec 30, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg		Sample Results #g/kg
Bromodichloromethane	5.0		
Bromoform	5.0 5.0	***************************************	N.D.
Bromomethane	- -	***************************************	N.D.
Carbon tetrachloride	10		N.D.
Chlorobenzene	5.0	•••••	N.D.
Chloroethane	5.0	***************************************	N.D.
2-Chloroethylvinyl ether	10	•••••	N.D.
Chloroform	10		N.D.
Chloromethane	5.0		N.D.
Dibromochloromethone	10		N.D.
Dibromochloromethane	5.0		N.D.
1,2-Dichlorobenzene	5.0		N.D.
1,3-Dichlorobenzene	5.0	***************************************	N.D.
1,4-Dichlorobenzene	5.0	***************************************	N.D.
1,1-Dichloroethane	5.0	******************************	N.D.
1,2-Dichloroethane	5.0	***************************************	N.D.
1,1-Dichloroethene	5.0	***************************************	N.D.
cis-1,2-Dichloroethene	5.0	***************************************	N.D.
trans-1,2-Dichloroethene	5.0	***************************************	N.D.
1,2-Dichloropropane	5.0	***************************************	N.D.
cis-1,3-Dichloropropene	5.0	***************************************	N.D.
trans-1,3-Dichloropropene	5.0	***************************************	N.D.
Metnylene chloride	50	***************************************	N.D.
1,1,2,2-letrachloroethane	5.0	***************************************	· ··· •
Tetrachloroethene	5.0	***************************************	N.D.
1,1,1-Trichloroethane	5.0		N.D.
1,1,2-I richloroethane	5.0		N.D.
Trichloroethene	5.0	***************************************	N.D.
Trichlorofluoromethane	5.0 5.0	***************************************	N.D.
Vinyl chloride	5.0 10	******************************	N.D.
	10	********************************	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 1900 Bates Avenue, Suite L 819 Striker Avenue, Suite 8

Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis Method: Lab Number:

Former Chromex Soll, B-2(11.5) EPA 5030/8010 412-1283

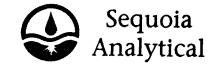
Sampled: Dec 19, 1994 Received: Dec 19, 1994 Analyzed: Dec 28, 1994 Reported: Dec 30, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

		,	
Analyte	Detection Limit		Sample Results µg/kg
Bromodichloromethane			
Bromoform	5.0	***************************************	N.D.
Bromomethane	5.0	***************************************	N.D.
Bromomethane	10	***************************************	N.D.
Carbon tetrachloride	5.0	***************************************	N.D.
Chloropensene	5.0	***************************************	· · · = •
Choroethane	10	***************************************	N.D.
2-Chloroethylvinyi ether	10		N.D.
Chlorotorm	5.0	***************************************	N.D.
Chloromethane	10	***************************************	N.D.
Dibromochioromethane	5.0	***************************************	N.D.
1,2-Dichioropenzene			N.D.
r,3-Dichiorobenzene	5.0	***************************************	N.D.
1,4-Dichlorophana	5.0	••••••	N.D.
1,1-Dichloroethane	5.0		N.D.
1,2-Dichloroethane	5.0		N.D.
1,1-Dichloroethene	5.0	***************************************	N.D.
cis-1 2-Dichloroethene	5.0		N.D.
cis-1,2-Dichloroethene	5.0		N.D.
trans-1,2-Dichloroethene	5.0	***************************************	N.D.
1,2-Dichloropropane	5.0		N.D.
cis-1,3-Dichlotopropene	5.0	***************************************	
uans-1,3-Dichloropropene	5.0 ´		N.D.
Metriylerie Chioride	50	***************************************	N.D.
1,1,2,2-1 etrachioroethane	5.0		N.D.
retrachioroethene	5.0	***************************************	N.D.
i, i, i-i richioroethane	5.0 5.0	***************************************	N.D.
r, r,2-rrichioroethane		••••••	N.D.
i i ci i oroetnene	5.0	***************************************	N.D.
Trichlorofluoromethane	5.0		N.D.
Vinyl chloride	5.0		N.D.
-	10		N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 1900 Bates Avenue, Suite L. Concord, CA 94520 819 Striker Avenue, Suite 8 Sacramento, CA 95834

Redwood City, CA 94063

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Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis Method: Lab Number:

Former Chromex Soll, B-2(15.5) EPA 5030/8010 412-1284

Sampled: Dec 19, 1994 Received: Dec 19, 1994 Analyzed: Dec 28, 1994 Reported: Dec 30, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	1	Sample Results #g/kg
Bromodichloromethane	5.0		
Bromoform	5.0	***************************************	N.D.
Bromomethane	10	***************************************	N.D.
Carbon tetrachloride	5.0		N.D.
Chlorobenzene		***************************************	N.D.
Chloroethane	5.0		N.D.
2-Chloroethylvinyl ether	10	•••••	N.D.
Chloroform	10		N.D.
Chloromethane	5.0	•••••	N.D.
Dibromochloromethane	10	•••••	N.D.
1,2-Dichlorobenzene	5.0		N.D.
1,3-Dichlorobenzene	5.0	***************************************	N.D.
1,4-Dichlorobenzene	5.0		N.D.
1,1-Dichloroethane	5.0		N.D.
1,2-Dichloroethane.	5.0	***************************************	N.D.
1,1-Dichloroethene	5.0		N.D.
cis-1,2-Dichloroethene.	5.0		N.D.
trans-1,2-Dichloroethene	5.0	•••••	N.D.
1 2-Dichloropropage	5.0		N.D.
1,2-Dichloropropane	5.0	***************************************	N.D.
cis-1,3-Dichloropropene	5.0	***************************************	N.D.
trans-1,3-Dichloropropene	5.0	***************************************	N.D.
Methylene chloride	50	***************************************	N.D.
1,1,2,2-Tetrachloroethane	5.0	***************************************	N.D.
Tetrachloroethene	5.0		N.D.
1,1,1-Trichloroethane	5.0		N.D.
1,1,2-Trichloroethane	5.0	***************************************	N.D.
Trichloroethene	5.0	***************************************	N.D.
Trichlorofluoromethane	5.0		N.D.
Vinyl chloride	, 10		N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 1900 Bates Avenue, Suite L Concord, CA 94520 819 Striker Avenue, Suite 8

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(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Sample Descript: Soil, B-3(11.5) Analysis Method: EPA 5030/8010 Lab Number: 412-1285

Sampled: Dec 19, 1994 Received: Dec 19, 1994 Analyzed: Dec 28, 1994 Reported: Dec 30, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	alyte Detection Limit μg/kg		Sample Results	
Bromodichloromethane	5.0			
Bromoform	5.0	••••••	N.D.	
Bromomethane	5.0	•••••	N.D.	
Carbon tetrachloride	10	••••••	N.D.	
Chlorobenzene	5.0	•••••	N.D.	
Chloroethane	5.0		N.D.	
2-Chloroethylvinyl ether	10	***************************************	N.D.	
Chloroform	10		N.D.	
Chloromethane	5.0	•••••	N.D.	
Dibromochloromethane	10		N.D.	
1,2-Dichlorobenzene.	5.0	***************************************	N.D.	
1,3-Dichlorobenzene	5.0	***************************************	N.D.	
1,4-Dichlorobenzene	5.0		N.D.	
1,1-Dichloroethane	5.0		N.D.	
1,2-Dichloroethane	5.0	***************************************	N.D.	
1.1-Dichloroethono	5.0	***************************************	N.D.	
1,1-Dichloroethene	5.0	***************************************	N.D.	
cis-1,2-Dichloroethene	5.0	***************************************	N.D.	
trans-1,2-Dichloroethene	5.0	***************************************	N.D.	
1,2-Dichloropropane	5.0		N.D.	
cis-1,3-Dichloropropene	5.0	***************************************	N.D.	
trans-1,3-Dichloropropene	5.0		N.D.	
Methylene chloride	50	***************************************	N.D.	
1,1,2,2-Tetrachloroethane	5.0	***************************************	N.D.	
Tetrachloroethene	5.0	***************************************	N.D.	
1,1,1-Trichloroethane	5.0	***************************************		
1, 1,2-1 richioroethane	5.0	***************************************	N.D.	
Trichloroethene	5.0	***************************************	N.D.	
ricilorofluoromethane	5.0	***************************************	N.D.	
Vinyl chloride	10		N.D.	
•	••	•••••••••••	Ŋ.D.	

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Karen L. Enstrom **Project Manager**

4121281.ALT <5>



680 Chesapeake Drive 1900 Bates Avenue, Suite L Concord, CA 94520

Redwood City, CA 94063 819 Striker Avenue, Suite 8 Sacramento, CA 95834

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FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Sample Descript: Analysis Method: Lab Number:

Soil, B-3(16.5) EPA 5030/8010 412-1286

Sampled: Dec 19, 1994 Received: Dec 19, 1994 Analyzed: Dec 28, 1994 Reported: Dec 30, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	1	Sample Results µg/kg
Bromodichloromethane	5.0		
Bromoform	5.0		N.D.
Bromomethane	3.0 10	***************************************	N.D.
Carbon tetrachloride	5.0	***************************************	N.D.
Chlorobenzene		***************************************	N.D.
Chloroethane	5.0	•	N.D.
2-Chloroethylvinyl ether	10	•••••••	N.D.
Chloroform	10	•••••	N.D.
Chloromethane	5.0		N.D.
Dibromochloromethane	10	***************************************	N.D.
1,2-Dichlorobenzene	5.0	***************************************	N.D.
1,3-Dichlorobenzene	5.0		N.D.
1,4-Dichlorobenzene	5.0	***************************************	N.D.
1,1-Dichloroethane	5.0	••••••	N.D.
1,2-Dichloroethane.	5.0		N.D.
1,1-Dichloroethene.	5.0		N.D.
cis-1,2-Dichloroethene.	5.0		N.D.
trans-1,2-Dichloroethene.	5.0	***************************************	N.D.
1,2-Dichloropropane	5.0	***************************************	N.D.
cis-1,3-Dichloropropene.	5.0		N.D.
trans-1,3-Dichloropropene	5.0	***************************************	N.D.
Methylene chloride	5.0	***************************************	N.D.
1,1,2,2-Tetrachloroethane.	50	***************************************	N.D.
Tetrachloroethene	5.0		N.D.
1,1,1-Trichloroethane	5.0		N.D.
1,1,2-Trichloroethane	5.0	***************************************	N.D.
Trichloroethene	5.0	***************************************	N.D.
Trichlorofluoromethane	5.0		N.D.
Vinyl chloride	5.0	***************************************	N.D.
	10	***************************************	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 1900 Bates Avenue, Suite L Concord, CA 94520

Redwood City, CA 94063 819 Striker Avenue, Suite 8 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geosclence 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Sample Descript: Soll, B-4(11.5) Analysis Method: EPA 5030/8010 Lab Number: 412-1287

Sampled: Dec 19, 1994 Received: Dec 19, 1994 Analyzed: Dec 28, 1994 Reported: Dec 30, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg		Sample Results µg/kg
Bromodichloromethane	5.0		MB
Bromoform	5.0 5.0	***************************************	N.D.
Bromomethane	3.0 10	***************************************	N.D.
Carbon tetrachloride	5.0	***************************************	N.D.
Chlorobenzene	5.0	***************************************	N.D.
Chloroethane	5.0 10	***************************************	N.D.
2-Chloroethylvinyl ether	10	***************************************	N.D.
Chloroform	· -	***************************************	N.D.
Chloromethane	5.0 10	***************************************	N.D.
Dibromochloromethane	5.0	***************************************	N.D.
1,2-Dichlorobenzene		***************************************	N.D.
1,3-Dichlorobenzene	5.0	•••••	N.D.
1,4-Dichlorobenzene	5.0	•••••	N.D.
1,1-Dichloroethane	5.0	***************************************	N.D.
1,2-Dichloroethane	5.0	•••••	N.D.
1 1-Dichloroothono	5.0	***************************************	N.D.
1,1-Dichloroethene	5.0	***************************************	N.D.
cis-1,2-Dichloroethene	5.0		N.D.
trans-1,2-Dichloroethene	5.0	***************************************	N.D.
1,2-Dichloropropane	5.0	***************************************	N.D.
cis-1,3-Dichloropropene	5.0		N.D.
trans-1,3-Dichloropropene	5.0		N.D.
Methylene chloride	50	***************************************	N.D.
1,1,2,2-Tetrachloroethane	5.0	***************************************	N.D.
Tetrachloroethene	5.0	***************************************	N.D.
1,1,1-Trichloroethane	5.0		N.D.
1,1,2-Trichloroethane	5.0	***************************************	N.D.
Trichloroethene	5.0	*****	N.D.
Trichlorofluoromethane	5.0	***************************************	N.D.
Vinyl chloride	10	***************************************	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 1900 Bates Avenue, Suite L. Concord, CA 94520

Redwood City, CA 94063 \$19 Striker Avenue, Suite 8 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan Client Project ID: Sample Descript: Analysis Method:

Lab Number:

Former Chromex Soil, B-4(15.5) EPA 5030/8010 412-1288

Sampled: Dec 19, 1994 Received: Dec 19, 1994 Analyzed: Dec 28, 1994 Reported: Dec 30, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit μg/kg		Sample Results µg/kg
Bromodichloromethane	5.0	***************************************	N.D.
Bromoform	5.0		N.D.
Bromomethane	10		
Carbon tetrachloride	5.0	***************************************	N.D.
Chlorobenzene	5.0	***************************************	N.D.
Chloroethane	10	***************************************	N.D.
2-Chloroethylvinyl ether	10	***************************************	N.D.
Chloroform	5.0		N.D.
Chloromethane		•••••••••••••••••••••••••••••••••••••••	N.D.
Dibromochloromethane	10		N.D.
1,2-Dichlorobenzene	5.0	***************************************	N.D.
1.3-Dichlorobonzono	5.0	***************************************	N.D.
1,3-Dichlorobenzene	5.0	***************************************	N.D.
1,4-Dichlorosthana	5.0	***************************************	N.D.
1,1-Dichloroethane	5.0		N.D.
1,2-Dichloroethane	5.0	***************************************	N.D.
1,1-Dichloroethene	5.0	***************************************	N.D.
cis-1,2-Dichloroethene	5.0	***************************************	N.D.
trans-1,2-Dichloroethene	5.0	***************************************	N.D.
1,2-Dichloropropane	5.0	***************************************	N.D.
cis-1,3-Dichloropropene	5.0	***************************************	N.D.
trans-1,3-Dichloropropene	5.0	***************************************	N.D.
Methylene chloride	50	1	N.D.
1,1,2,2-Tetrachloroethane	5.0	***************************************	N.D.
Tetrachloroethene	5.0		
1,1,1-Trichloroethane	5.0	***************************************	N.D.
1,1,2-Trichloroethane	5.0	***************************************	N.D.
Trichloroethene	5.0	***************************************	N.D.
Trichlorofluoromethane	5.0 5.0	***************************************	N.D.
Vinyl chloride			N.D.
· · · · · · · · · · · · · · · · · · ·	10	***************************************	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 1900 Bates Avenue, Suite L

Redwood City, CA 94063 Concord, CA 94520 819 Striker Avenue, Suite 8 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geosclence 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Sample Descript: Soll, B-5(11.5) Analysis Method: EPA 5030/8010 Lab Number: 412-1289

Sampled: Dec 19, 1994 Received: Dec 19, 1994 Analyzed: Dec 28, 1994 Reported: Dec 30, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg		Sample Results µg/kg	
Bromodichloromethane	5.0			
Bromoform	5.0	***************************************	N.D.	
Bromomethane	10	***************************************	N.D.	
Carbon tetrachloride	5.0	***************************************	N.D.	
Chlorobenzene	5.0	***************************************	N.D.	
Chloroethane	10	***************************************	N.D.	
2-Chloroethylvinyl ether	10	***************************************	N.D.	
Chloroform.	5.0	***************************************	N.D.	
Chloromethane	5.0 10	***************************************	N.D.	
Dibromochloromethane	5.0	***************************************	N.D.	
1,2-Dichlorobenzene		***************************************	N.D.	
1,3-Dichlorobenzene.	5.0	••••••	N.D.	
1,4-Dichlorobenzene	5.0		N.D.	
1,1-Dichloroethane	5.0	***************************************	N.D.	
1,2-Dichloroethane	5.0	••••••	N.D.	
1,1-Dichloroethene	5.0	•••••	N.D.	
cis-1,2-Dichloroethene	5.0	***************************************	N.D.	
trans-1 2-Dichloroothons	5.0		N.D.	
trans-1,2-Dichloroethene	5.0		N.D.	
1,2-Dichloropropane	5.0	***************************************	N.D.	
cis-1,3-Dichloropropene	5.0	***************************************	N.D.	
trans-1,3-Dichloropropene	5.0	***************************************	N.D.	
Methylene chloride	50		N.D.	
1,1,2,2-Tetrachloroethane	5.0	***************************************	N.D.	
Tetrachloroethene	5.0		N.D.	
1,1,1-Trichloroethane	5.0		N.D.	
1,1,2-Trichloroethane	5.0	***************************************	N.D.	
i richioroethene	5.0	******	8.0	
Trichlorofluoromethane	5.0	***************************************	8.0 N.D.	
Vinyl chloride	10			
1	••		N.D.	

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 1900 Bates Avenue, Suite L. Concord, CA 94520

Redwood City, CA 94063 819 Striker Avenue, Suite 8 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Sample Descript: Soil, B-5(16.0) Analysis Method: EPA 5030/8010 Lab Number: 412-1290

Sampled: Dec 19, 1994 Received: Dec 19, 1994 Analyzed: Dec 28, 1994 Reported: Dec 30, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg		Sample Results µg/kg
Bromodichloromethane	5.0		
Bromoform			N.D.
Bromomethane	5.0		N.D.
Carbon tetrachloride	10	***************************************	N.D.
Chlorobenzene	5.0		N.D.
Chloroethane	5.0	***************************************	N.D.
2-Chloroethylvinyl other	10		N.D.
2-Chloroethylvinyl ether	10	***************************************	N.D.
Chloroform	5.0		N.D.
Chloromethane	10	**********	N.D.
Dibromochloromethane	5.0	***************************************	N.D.
1,2-Dichlorobenzene	5.0	********	N.D.
1,3-Dichlorobenzene	5.0	***************************************	N.D.
1,4-Dichlorobenzene	5.0	***************************************	N.D.
1,1-Dichloroethane	5.0	***************************************	N.D.
1,2-Dichloroethane	5.0	***************************************	N.D.
1,1-Dichloroethene	5.0	***************************************	N.D.
cis-1,2-Dichloroethene.	5.0	***************************************	N.D.
trans-1,2-Dichloroethene	5.0	***************************************	
1,2-Dichloropropane	5.0		N.D.
CIS-1,3-DICNIoropropene	5.0		N.D.
uaris-1,3-Dichloropropene	5.0	***************************************	N.D.
wetryrene chionde	50	***************************************	N.D.
i, i,z,z-i etrachioroethane	5.0	***************************************	N.D.
retrachioroethene	5.0 5.0	•••••••	N.D.
1,1,1-Trichloroethane	- · -		N.D.
1,1,2-Trichloroethane	5.0		N.D.
Trichloroethene	5.0		N.D.
Trichlorofluoromethane	5.0		N.D.
Vinyl chloride	5.0	***************************************	N.D.
*	10	**************	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



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FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan Client Project ID: Sample Descript:

Former Chromex Soll

Analysis for: Chromium First Sample #: 412-1281

Sampled: Dec 19, 1994

Received: Dec 19, 1994 Extracted: Dec 27, 1994

Analyzed: Dec 27, 1994 Reported: Dec 30, 1994

LABORATORY ANALYSIS FOR:

Chromium

DISCHARGE ANALISIS FOR.				
Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg	
412-1281	B-1(11.5)	0.50	37	
412-1282	B-1(16.5)	0.50	40	
412-1283	B-2(11.5)	0.50	23	
412-1284	B-2(15.5)	0.50	43	
412-1285	B-3(11.5)	0.50	28	
412-1286	B-3(16.5)	0.50	23	
412-1287	B-4(11.5)	0.50	37	
412-1288	B-4(15.5)	0.50	29	
412-1289	B-5(11.5)	0.50	48	
412-1290	B-5(16.0)	0.50	33	

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



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Lead

(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Sample Descript: Soil Analysis for: Lead First Sample #: 412-1281

Sampled: Dec 19, 1994 Received: Dec 19, 1994 Extracted: Dec 27, 1994 Analyzed: Dec 27, 1994 Reported: Dec 30, 1994

LABORATORY ANALYSIS FOR-

LABORATORY ANALYSIS FOR:					
Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg		
412-1281	B-1(11.5)	1.0	4.2		
412-1282	B-1 (16.5)	1.0	5.5		
412-1283	B-2(11.5)	1.0	4.5		
412-1284	B-2(15.5)	1.0	5.2		
412-1285	B-3(11.5)	1.0	5.5		
412-1286	B-3(16.5)	1.0	7.1		
412-1287	B-4(11.5)	1.0	5.8		
412-1288	B-4(15.5)	1.0	5.1		
412-1289	B-5(11.5)	1.0	4.7		
412-1290	B-5(16.0)	1.0	3.7		

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



Per Charles en en el Carlo d**e Carlo**

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Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript:

Former Chromex Soil

UNIVERSITY OF THE PARTY OF THE

Analysis for: Hexavalent Chromium First Sample #: 412-1281

Sampled: Dec 19, 1994

Received: Dec 19, 1994 Extracted: Dec 20, 1994

Analyzed: Dec 20, 1994 Reported: Dec 30, 1994

LABORATORY ANALYSIS FOR:

Hexavalent Chromium

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg		
412-1281	B-1(11.5)	0.50	N.D.		
412-1282	B-1(16.5)	0.50	N.D.		
412-1283	B-2(11.5)	0.50	N.D.		
412-1284	B-2(15.5)	0.50	N.D.		
412-1285	B-3(11.5)	0.50	N.D.		
412-1286	B-3(16.5)	0.50	N.D.		
412-1287	B-4(11.5)	0.50	1.2		
412-1288	B-4(15.5)	0.50	N.D.		
412-1289	B-5(11.5)	0.50	N.D.		
412-1290	B-5(16.0)	0.50	N.D.		

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



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FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID:

Matrix:

Former Chromex

Solid

QC Sample Group: 4121281-90

Reported:

Jan 12, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloro- ethene	Trichloro- ethene	Chloro- benzene	1,1-Dichloro- ethene	Trichloro- ethene	Chloro- benzene	
Method: Analyst:	EPA 8010 K. Nill	EPA 8010 K. Nili					
MS/MSD Batch#:	4121281	4121281	4121281	4121281	4121281	4121281	
Date Prepared: Date Analyzed: Instrument I.D.#: Conc. Spiked:	12/28/94 12/28/94 HP5890/6 10 µg/kg	12/28/94 12/28/94 HP5890/6 10 µg/kg	12/28/94 12/28/94 HP5890/6 10 µg/kg	12/29/94 12/29/94 HP5890/6 10 µg/kg	12/29/94 12/29/94 HP5890/6 10 µg/kg	12/29/94 12/29/94 HP5890/6 10 µg/kg	
Matrix Spike % Recovery:	76	121	105	75	112	102	
Matrix Spike Duplicate % Recovery:	64	108	98	78	115	103	
Relative % Difference:	17	11	6.9	3.9	2.6	0.98	

LCS Batch#:	LCS122894	LCS122894	LCS122894	LCS122994	LCS122994	LCS122994	
Date Prepared: Date Analyzed: Instrument I.D.#:	12/28/94 12/28/94 HP5890/6	12/28/94 12/28/94 HP5890/6	12/28/94 12/28/94 HP5890/6	12/29/94 12/29/94 HP5890/6	12/29/94 12/29/94 HP5890/6	12/29/94 12/29/94 HP5890/6	
LCS % Recovery:	99	105	96	84	101	94	
% Recovery Control Limits:	28-167	35-146	38-150	28-167	35-146	38-150	

SEQUOIA ANALYTICAL, #1271

Karen L. Enstrom Project Manager Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.



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Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Matrix:

Solid

QC Sample Group: 4121281-90

Reported:

Jan 12, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Chromium	Lead	Hexavalent	Hexavalent	
			Chromium	Chromium	
Method:	EPA 6010	EPA 6010	EPA 7196	EPA 7196	
Analyst:	J. Dinsay	J. Dinsay	M. Nguyen	_M. Nguyen	
MS/MSD					
Batch#:	4121280	4121280	4121286	4121290	
Date Prepared:	12/27/94	12/27/94	12/20/94	12/20/94	
Date Analyzed:	12/27/94	12/27/94	12/20/94	12/20/94	
nstrument I.D.#:	Liberty-100	Liberty-100	Spec-340	Spec-340	
Conc. Spiked:	50 mg/kg	50 mg/kg	5.0 mg/kg	5.0 mg/kg	
Matrix Spike % Recovery:	98	89	95	108	
Matrix Spike Duplicate % Recovery:	100	97			
•	. 100	87	106	110	
Relative %					
Difference:	2.0	2.3	11	1.8	

LCS Batch#:	BLK122794	BLK122794	BLK122094	BLK122094	
Date Prepared: Date Analyzed: Instrument I.D.#:	12/27/94 12/27/94 Liberty-100	12/27/94 12/27/94 Liberty-100	12/20/94 12/20/94 Spec-340	12/20/94 12/20/94 Spec-340	
LCS % Recovery:	102	98	101	101	
% Recovery Control Limits:	75-125	75-125	70-130	70-130	

YTICAL, #1271

Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.



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Consultin	g Firm	: 11	701	61					<u>-</u> -				<u> </u>						_				/	-	O) 686-9689
Address: 30A	/	111	NBE		11	L. A. E.	1 ,	<u>~</u>					Project Contact: Keying Kennyan												
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City: LIVE				,	State:				94				Мор	i Oil	Engi	acer:			1				POP	42	6377
Tel: 570 606	, 9,	/ <u>/</u>) T	Fax.	511	26	2	69	226	6 C	? 		Sam	pler	s) (si	gnatu	ге):	_/·	L				 7		
				•	y y		0	(GAS)	ã□	413.2		200			6010/7000				z. Waste			The second	A CO		ODING eck one)
6		led led		Ę	Containers	ntainers	4 602/8020	8015/802(EPA Modified 8015	· EPA	418.1	10) AV	40	70	EPA TLC	<u> </u>	- EPA 504		· Title 22 Haz.	Effluent	Chronicm Chronicm	Huave	Code 1		Emergency Response
Sample 1.D	Matrix	Date Sampled	Time	Preservation	Number of	Type of Containers	BTEX - EPA	BTEX -TPH EPA M602/8015/8020	TPH EPA N	Oil & Grease	TPH - EPA	EPA 601/80107	EPA 624/8240	EPA 625/8270	Title 22 Metals	Lead Org /DHS	EDB/DBCD	_	Bioassay - T	Bioassay - E	0009	96	Code 2	T	Site Assessment
B-3 (6.0)	7		9:20		1	stee!	8	8	_ ნ	· //			D D		ĒE	الم الم	<u> </u>	H	Bic	ĕ	9	7	Code 3		Remediation (Plan Devipmt.)
B-3 (11.5)	_		9.30	_	1								M		41:	12	95				X	X	Code 4		Active Remed. (Install/Start-up)
B-3 (16.5) B-4 (5.5)	1	1	9.35	~						1/			E.		417	1,2	86	_	_		X	X	Code 5		Active Remed. (O & M)
B-4(11.5)			11:15	1	1	-				#	O	L X	Δ		412	12	877	\exists	\dashv	_	X	X	Code 6		Passive Remed/
B-4(15.5)			//.20									X		-	412						X	<u>/</u>	Code 7		Closure
3-5 (6.5)	_		12:45	_	1	4				4	0	4	D									1	Code 8		Construction
B-5 (11.5)		-	D:56	_	-	-				_		X			412						X	X	Code 9		
0-5(16.0) Relinquished by:		<u></u>				ate/Time			Relingu	istred	by:	$\frac{1}{2}$			112		0		D	ate/Ti	*	X	Turnaround		Litigation/Claims Fines
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X	1900 Bates Ave., Suite LM • Concord, CA 94520 • (510) 686-9600 FAX (510) 686-9689
	510) 686-9600 FAX (510) 686-9680

Station No./Site Address: Former Chromer								
Address: 30 A Lindbergs			Constitution					
		1011	Project Contact: Kevin K	eenan				
City: Livermore	State: CA	_	Mobil Oil Engineer:	1//				
City: Live(more) Tel: 606 9150	Fax.: 606	9260	Sampler(s) (signature):	Med /				
		20 (GAS) 8015 413.2	6010/7000	Waste	CODING (check one)			
eq	ervation ber of Containen of Containers	K · EPA 602/8020 K · TPH M602/8015/8020 (G EPA Modified 8015 Diesel Grease · EPA 413.2 EPA 418.1	10 % % % % % % % % % % % % % % % % % % %	Effluent chemin chemin	Code 1 Emergency Response			
Sample I.D. Matrix Date Sampled	Preservation Number of Containers Type of Containers		EPA 624/8240 EPA 625/8270 Title 22 Metals I TTLC S Lead Org./DHS Lead Total C EDB/DBCD - EF	Bioassay - Title 22 Haz. Bioassay - Effluent 60/0 chomin 1 tab 7/96 Herrauan	Code 2 Site Assessment			
B-1 (4.0) 5.1 12-19 (8:00)	- 1 steet	BTTPP Gaa Gaa TPPP Ga Gaa Gaa Gaa Gaa Gaa Gaa Gaa Gaa G			Code 3 Remediation (Plan Devipmt.)			
B-Z (6.8) 8:05 B-1 (7.0) 8:15	+++++		- KOLD -		Code 4 Active Remed. (Instatl./Start-up)			
B-1 (7.0) 8:15 B-1 (115) 8:25	 		4000		Code 5 Active Remed.			
B-1 (14.6) 7:45			40 60	XX	Code 6 Passive Remed/			
B-1 (16.5) 8:50		X	4121282	1 1	Code 7 Closure			
B-2(5.0) 9:00			4040	- - - -				
3-2 (11.5) 9:05		X	4121283	XX	Code 8 Construction			
B-2 (15,5) 1 910 elinquished by:	Date/fime:	Relinquists Ou (4121244	XX	Code 9 Litigation/Claims Fines			
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elinquished by:	1フ-パーペリ タ Date/Time:	Relinquished in Lab by:	TV Division	Date/Time:	1 day 2 day 5 day			
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Redwood City, CA 94063

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FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis Method: Lab Number:

Former Chromex Soll, MW-1 (11.5) EPA 5030/8010 412-1279

Sampled: Dec 19, 1994 Received: Dec 19, 1994 Analyzed: Dec 20, 1994. Reported: Dec 29, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit μg/kg		Sample Results #g/kg
Bromodichloromethane	5.0		
Bromoform	5.0		N.D.
Bromomethane	10	***************************************	N.D.
Carbon tetrachloride	5.0		N.D.
Chlorobenzene	5.0 5.0	***************************************	N.D.
Chloroethane	5.0 10	•	N.D.
2-Chloroethylvinyl ether		***************************************	N.D.
Chloroform	10		N.D.
Chloromethane	5.0	•••••	N.D.
Dibromochloromethane	10		N.D.
1,2-Dichlorobenzene	5.0	***************************************	N.D.
1,3-Dichlorobenzene	5.0		N.D.
1,4-Dichlorobenzene	5.0		N.D.
1,1-Dichloroethane	5.0		N.D.
1.2-Dichloroethano	5.0		N.D.
1,2-Dichloroethane	5.0		N.D.
1,1-Dichloroethene	5.0		N.D.
cis-1,2-Dichloroethene	5.0		N.D.
trans-1,2-Dichloroethene	5.0	***************************************	N.D.
1,2-Dichloropropane	5.0		N.D.
cis-1,3-Dichloropropene	5.0		N.D.
trans-1,3-Dichloropropene	5.0		N.D.
Methylene chloride	50		N.D.
1,1,2,2-Tetrachloroethane	5.0	***************************************	N.D.
Tetrachloroethene	5.0		N.D.
1,1,1-Trichloroethane	5.0		N.D.
1,1,2-Trichloroethane	5.0	***************************************	N.D. N.D.
Trichloroethene	5.0		N.D.
Trichlorofluoromethane	5.0	***************************************	
Vinyl chloride	10		N.D. N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



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FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis Method: Lab Number: Former Chromex Soil, MW-1 (16.5) EPA 5030/8010 412-1280

Sampled: Dec 19, 1994
Received: Dec 19, 1994
Analyzed: Dec 20, 1994
Reported: Dec 29, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg		Sample Results µg/kg
Bromodichloromethane	5.0		AL D
Bromoform	5.0	***************************************	N.D.
Bromomethane	10	***************************************	N.D.
Carbon tetrachloride	5.0	***************************************	N.D.
Chlorobenzene	5.0	******************************	N.D.
Chloroethane		***************************************	N.D.
2-Chloroethylvinyl ether	10	•••••	N.D.
Chloroform	10	***************************************	N.D.
Chloromethane	5.0	***************************************	N.D.
Dibromochloromethane	10	***************************************	N.D.
1,2-Dichlorobenzene	5.0	***************************************	N.D.
1.3-Dichlorobonzona	5.0		N.D.
1,3-Dichlorobenzene	5.0	***************************************	N.D.
1,4-Dichlorosthana	5.0	***************************************	N.D.
1,1-Dichloroethane	5.0	***************************************	N.D.
1,2-Dichloroethane	5.0	***************************************	N.D.
1,1-Dichloroethene	5.0	***************************************	N.D.
cis-1,2-Dichloroethene	5.0	**********	N.D.
trans-1,2-Dichloroethene	5.0		N.D.
1,2-Dichloropropane	5.0		N.D.
cis-1,3-Dichloropropene	5.0		N.D.
trans-1,3-Dichloropropene	5.0	***************************************	N.D.
Methylene chloride	50	***************************************	N.D.
1,1,2,2-Tetrachloroethane	5.0		N.D.
Tetrachloroethene	5.0	***************************************	N.D. N.D.
1,1,1-Trichloroethane	5.0	***************************************	N.D. N.D.
1,1,2-Trichloroethane	5.0	***************************************	
Trichloroethene	5.0		N.D.
Trichlorofluoromethane	5.0	***************************************	N.D.
Vinyl chloride	10	***************************************	N.D.
	10		N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



Lab Number:

Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Sample Descript:

Soil, MW-1 (11.5)

412-1279

Dec 19, 1994 Sampled: Received: Dec 19, 1994

Extracted: Dec 20-27, 1994 Analyzed: Dec 20-27, 1994

Reported: Dec 29, 1994

LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Chromium	0.50	 28
Lead	1.0	4.5
Hexavalent Chromium	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan Client Project ID: Former Chromex Sample Descript:

Sampled: Received:

Dec 19, 1994 Dec 19, 1994

Soil, MW-1 (16.5) Lab Number:

412-1280

Extracted: Dec 20-27, 1994 Analyzed: Dec 20-27, 1994

Reported:

Dec 29, 1994 alam maria

LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Chromium	0.50	 24
Lead	1.0	4.3
Hexavalent Chromium	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID:

Former Chromex Matrix: Solld

QC Sample Group: 4121279-80

Reported:

Dec 29, 1994

QUALITY CONTROL DATA PEDOL

		QUALITY CO	IN I ROL DA	MA REPO	RT		
ANALYTE	1,1-Dichloro- ethene	Trichloro- ethene	Chloro-	Chromium	Lead	Hexavalent	Hexavalent
		0010110	benzene			Chromium	Chromium:
Method:	EPA 8010	EPA 8010	EPA 8010	EPA 6010	EPA 6010	EDA 7100	
Analyst:	K. Nill	K. Nill	K. Nili	J. Dinsay	J. Dinsay	EPA 7196 M. Nguyen	EPA 7196
MO (MOD					y	W. Hydyen	M. Nguyen
MS/MSD Batch#:	4404045						
batcn#:	4121345	4121345	4121345	4121280	4121280	4121286	4121290
Date Prepared:	12/20/94	12/20/94	12/20/94	400704			
Date Analyzed:	12/20/94	12/20/94	12/20/94	12/27/94	12/27/94	12/20/94	12/20/94
Instrument i.D.#:	HP5890/6	HP5890/6	HP5890/6	12/27/94	12/27/94	12/20/94	12/20/94
Conc. Spiked:	10 μg/kg	10 µg/kg	10 µg/kg	Liberty-100	Liberty-100	Spec-340	Spec-340
•		ro pg/kg	io µg/kg	50 μg/kg	50 µg/kg	5.0 mg/kg	5.0 mg/kg
Matrix Spike							
% Recovery:	97	96	85	98	89	95	100
			-	33	03	95	108
Matrix Spike							
Duplicate %							
Recovery:	92	93	81	100	87	106	110
Relative %							
Difference:	5.3	3.2	4.8	2.0	0.0		
w		5.2	4.0	2.0	2.3	11	1.8
LCS Batch#:	LCS122094	LCS122094	LCS122094	DI 1/40070 4			
		200122004	103122094	BLK122794	BLK122794	BLK122094	BLK122094
Date Prepared:	12/20/94	12/20/94	12/20/94	12/27/04	40.07.0		
Date Analyzed:	12/20/94	12/20/94	12/20/94	12/27/94 12/27/94	12/27/94	12/20/94	12/20/94
Instrument i.D.#:	HP5890/6	HP5890/6	HP5890/6		12/27/94	12/20/94	12/20/94
		···	111 0030/0	Liberty-100	Liberty-100	Spec-340	Spec-340
LCS %					•		
Recovery:	130	109	96	102	98	101	404
9/ D 2222	···			- 	00	101	101
% Recovery Control Limits:	20.40					· · · · · · · · · · · · · · · · · · ·	
Jone of Littles.	28-167	35-146	38-150	75-125	75-125	70-130	70-130

SEQUOIA ANALYTICAL, #1271

aren L. Enstrom Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.



L	680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600 FAX (415) 364-9233
	319 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100
Z ()	1900 Bates Ave. Suite I.M. Concord. CA. 04520 - (510) 521 5000 TAX (510) 921-0100

Marie Consulting Firm:	1 05000				/ (510) 060-9689
Address: 30A Lindhere	7-J		Station No./Site Address:	- I EKING	Chromey
			Project Contact:		\mathcal{Q}
City: Livermore	State:CA		Mobil Dil Fagincer:	P.O. # 420	6377
Tel: 510 606 9150	Fax.: 510 60	69260	Sampler(s) (signature):	al -	
Sample I.D. Matrix Date Sampled	Preservation Number of Containers Type of Containers BTEX - EPA 602/8020	EPA M602/8015/8020 (GAS) TPH EPA Modified 8015 Gas Diesel OI & Grease - EPA 413.2 TPH - EPA 418.1 EPA 607/8010 MMMC	EPA 624/8240 EPA 625/8270 Title 22 Metals EPA 6010/7000 TTLC STLC Lead Org./DHS Lead Total Lead Foral EPA 504	Bioassay - Title 22 Haz. Waste Bioassay - Effluent bolo chombon 7/96 Hayard	Response Code 2 Site
MW-1(6.5) Sil 12-192:10	- 1 Herd -	BTE EPA Gas Oil & TPH	EPA 6 Title 2 TTIC TTIC TIC TEGAC TE	Bioass Bioass	Code 3 Remediation (Plan Devipmt.)
MW-1 (11.5) 1 2:15	- / A	Х	1 1 -	1279 🐰	Code 4 Active Remed. (Install / Start-up)
MW-1(16.5) 2:20 MW-1(17.0) 2:25	-	X	4121	280 X X	Code 5 Active Remed. (O & M)
MW-1 (19.0) 2.29	_	2	#0 LD		Code 6 Passive Remed/
MW-1 (20.5) 2:36 MW-1 (21.0) 2:41	-		- # O C D		Code 7 Closure
MW-1 21.0 2:41 MW-1 225 2:85			+ 0 L D		Code 8 Construction
Relinquished by:	Date/Time:	Relinquighed by:		Date/Firms	Code 9 Litigation/Claims Fines
Relinquished by: Relinquished by:	Date/Time: 12-19-99 4:5	Relinquished by:	2 2	Date/Time: Date/Time:	Turnaround Time: (check one): Normal Same day 1 day 2 day 4 5 day
Remarks: 1/	romium -	Recieved 1	me My P.C	Date/Time: 12/19/44 4:55	



680 Chesapeake Drive 1900 Bates Avenue, Suite L

Redwood City, CA 94063 Concord, CA 94520 819 Striker Avenue, Suite 8 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project (D: Sample Descript: Analysis Method:

Lab Number:

Former Chromex Soil, MW-2 (11.5) EPA 5030/8010 412-1491

Sampled: Dec 19, 1994 Received: Dec 20, 1994 Analyzed: Dec 29, 1994 Reported: Dec 29, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg		Sample Results
Bromodichloromethane	5 0		
Bromoform.	5.0	***************************************	N.D.
Bromomethane	5.0		N.D.
Carbon tetrachloride	10		N.D.
Chlorobenzene	5.0		N.D.
Chloroethane.	5.0	***************************************	N.D.
2-Chloroethylvinyl ether	10		N.D.
Chloroform.	10	***************************************	N.D.
Chloromethane	5.0	***************************************	N.D.
Dibromochloromethane	10	***************************************	N.D.
1,2-Dichlorobenzene	5.0		N.D.
1,3-Dichlorobenzene	5.0	***************************************	N.D.
1,4-Dichlorobenzene	5.0	***************************************	N.D.
1,1-Dichloroethane	5.0	***************************************	N.D.
1,2-Dichloroethane.	5.0	***************************************	N.D.
1,1-Dichloroethene.	5.0	***************************************	N.D.
cis-1,2-Dichloroethene.	5.0		N.D.
trans-1,2-Dichloroethene	5.0	***************************************	N.D.
1,2-Dichloropropane	5.0		N.D.
cis-1,3-Dichloropropene	5.0		N.D.
trans-1,3-Dichloropropene	5.0		N.D.
Methylene chloride	5.0	***************************************	N.D.
1,1,2,2-Tetrachloroethane	50	***************************************	N.D.
Tetrachloroethene	5.0	***************************************	N.D.
1,1,1-Trichloroethane	5.0	***************************************	N.D.
1,1,2-Trichloroethane	5.0	***************************************	N.D.
Trichloroethene	5.0	***************************************	N.D.
Trichlorofluoromethane	5.0		N.D.
Vinyl chloride	5.0	***************************************	N.D.
	10		N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geosclence 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Sample Descript: Soll, MW-2 (16.5) Analysis Method: EPA 5030/8010 Lab Number: 412-1492

Sampled: Dec 19, 1994
Received: Dec 20, 1994
Analyzed: Dec 29, 1994
Reported: Dec 29, 1994

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg		Sample Results µg/kg
Bromodichloromethane	5.0	***************************************	N.D.
Bromoform	5.0		N.D.
Bromomethane	10	***************************************	N.D.
Carbon tetrachloride	5.0		N.D.
Chlorobenzene	5.0		N.D.
Chloroethane	10		N.D.
2-Chloroethylvinyl ether	10		N.D.
Chloroform	5.0	***************************************	N.D.
Chloromethane	10		N.D.
Dibromochloromethane	5.0	***************************************	N.D.
1,2-Dichlorobenzene	5.0		N.D.
1,3-Dichlorobenzene	5.0	***************************************	N.D.
1,4-Dichlorobenzene	5.0		N.D.
1,1-Dichloroethane	5.0		N.D.
1,2-Dichloroethane	5.0	***************************************	N.D.
1,1-Dichloroethene	5.0		N.D.
cis-1,2-Dichloroethene	5.0	***************************************	N.D.
trans-1,2-Dichloroethene	5.0		N.D.
1,2-Dichloropropane	5.0	***************************************	N.D.
cis-1,3-Dichloropropene	5.0	***************************************	N.D.
trans-1,3-Dichloropropene	5.0	***************************************	N.D.
Methylene chloride	50	***************************************	N.D.
1,1,2,2-Tetrachloroethane	5.0	***************************************	N.D.
Tetrachloroethene	5.0	***************************************	N.D.
1,1,1-Trichloroethane	5.0	***************************************	N.D.
1,1,2-Trichloroethane	5.0	***************************************	N.D.
Trichloroethene	5.0		N.D. N.D.
Trichlorofluoromethane	5.0		N.D. N.D.
Vinyl chloride	10		N.D. N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Karen L. Enstrom Project Manager ٿ:



680 Chesapeake Drive 1900 Bates Avenue, Suite L Concord, CA 94520 819 Striker Avenue, Suite 8

Redwood City, CA 94063 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Sample Descript: Soil, MW-2 (11.5)

Sampled: Dec 19, 1994 Received: Dec 20, 1994

Lab Number:

412-1491

Extracted: Dec 21-28, 1994 Analyzed: Dec 21-28, 1994

Reported: Dec 29, 1994

LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Chromium	0.50	 30
Lead	1.0	5.4
Hexavalent Chromium	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 1900 Bates Avenue, Suite L. Concord, CA 94520 819 Striker Avenue, Suite 8

Lab Number:

Redwood City, CA 94063 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Sample Descript:

Soll, MW-2 (16.5)

412-1492

Dec 19, 1994 Sampled: Received: Dec 20, 1994

Extracted: Dec 21-28, 1994 Analyzed: Dec 21-28, 1994

Reported: Dec 29, 1994

LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Chromium	0.50	 31
Lead	1.0	3.4
Hexavalent Chromium	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 1900 Bates Avenue, Suite L Concord, CA 94520 819 Striker Avenue, Suite 8 Sacramento, CA 95834

Redwood City, CA 94063

(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis Method: Lab Number:

Former Chromex Soll, B-6(10.0) EPA 5030/8010 412-1478

Dec 20, 1994 Sampled: Received: Dec 20, 1994 Analyzed: Dec 28, 1994 Reported: Jan 3, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg		Sample Results µg/kg
Bromodichloromethane	5.0		
Bromoform	5.0	***************************************	N.D.
Bromomethane	3.0 10	***************************************	N.D.
Carbon tetrachloride	5.0	***************************************	N.D.
Chlorobenzene		***************************************	N.D.
Chloroethane	5.0	***************************************	N.D.
2-Chloroethylvinyl ether	10	***************************************	N.D.
Chloroform	10	***************************************	N.D.
Chloromethane	5.0	***************************************	N.D.
Dibromochloromethane	10		N.D.
1,2-Dichlorobenzene	5.0	***************************************	N.D.
1.3-Dichlorobenzono	5.0	***************************************	N.D.
1,3-Dichlorobenzene	5.0	***************************************	N.D.
1,4-Dichloropthano	5.0	***************************************	N.D.
1,1-Dichloroethane	5.0	***************************************	N.D.
1,2-Dichloroethane	5.0		N.D.
1,1-Dichloroethene	5.0	***************************************	N.D.
cis-1,2-Dichloroethene	5.0	***************************************	N.D.
trans-1,2-Dichloroethene.	5.0	***************************************	N.D.
1,2-Dichloropropane	5.0	***************************************	N.D.
cis-1,3-Dichloropropene	5.0		N.D.
trans-1,3-Dichloropropene	5.0	***************************************	N.D.
Methylene chloride	50	***************************************	N.D.
1,1,2,2-Tetrachloroethane	5.0	***************************************	N.D.
Tetrachloroethene	5.0	***************************************	N.D.
1,1,1-1 nchloroethane	5.0		
1,1,2-1 richloroethane	5.0	**	N.D.
i richioroethene	5.0	***************************************	N.D.
I richloroffuoromethane	5.0 5.0	***************************************	N.D.
Vinyl chloride	10		N.D.
	10		N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 1900 Bates Avenue, Suite L. Concord, CA 94520

Redwood City, CA 94063 819 Striker Avenue, Suite 8 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Sample Descript: Soil, B-6(21.5) Analysis Method: EPA 5030/8010 Lab Number: 412-1479

Sampled: Dec 20, 1994 Received: Dec 20, 1994 Analyzed: Dec 28, 1994 Reported: Jan 3, 1995.

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg		Sample Results µg/kg
Bromodichloromethane	5.0		
Bromoform	5.0 5.0	***************************************	N.D.
Bromomethane			N.D.
Carbon tetrachloride	10	***************************************	N.D.
Chlorobenzene	5.0	***************************************	N.D.
Chloroethane	5.0	***************************************	N.D.
2-Chloroethylvinyl ether	10	***************************************	N.D.
Chloroform	10	***************************************	N.D.
Chloromethane	5.0	***************************************	N.D.
Dibromochloromethane	10	***************************************	N.D.
1,2-Dichlorobenzene	5.0	***************************************	N.D.
1,3-Dichlorobenzene	5.0	•••••••	N.D.
1,4-Dichlorobenzene	5.0	***************************************	N.D.
1,1-Dichloroethane	5.0	***************************************	N.D.
1,2-Dichloroethane	5.0	***************************************	N.D.
1,1-Dichloroethene.	5.0	***************************************	N.D.
cis-1,2-Dichloroethene	5.0		N.D.
trans-1,2-Dichloroethene	5.0	***************************************	N.D.
1,2-Dichloropropane.	5.0	***************************************	N.D.
cis-1,3-Dichloropropene	5.0		N.D.
trans-1,3-Dichloropropene	5.0		N.D.
Methylene chloride	5.0		N.D.
1,1,2,2-Tetrachloroethane.	50	***************************************	N.D.
Tetrachloroethene	5.0		N.D.
1,1,1-Trichloroethane	5.0	***************************************	N.D.
1,1,2-Trichloroethane	5.0		N.D.
Trichloroethene	5.0		N.D.
Trichloroffuoromethane	5.0	***************************************	N.D.
Vinyl chloride	5.0	***************************************	N.D.
Vinyl chloride	10	••••••	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan Client Project ID: Former Chromex

Matrix: So

Solid

QC Sample Group: 4121491-92

Reported:

Jan 9, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloro-	Trichloro-	Chloro-	Chromium	Lead	Hexavalent	
	ethene	ethene	benzene	Giloilliaill	Leau		
		0	D0112011 0			Chromium	
Method:	EPA 8010	EPA 8010	EPA 8010	EPA 6010	EPA 6010	EPA 7196	
Analyst:	K. Nill	K. Nill	K. Nili	J. Dinsay	J. Dinsay	M. Nguyen	
MS/MSD							
Batch#:	4101001	4404004					
Dattii#:	4121281	4121281	4121281	4121696	4121696	4121492	
Date Prepared:	12/29/94	12/29/94	12/29/94	12/28/94	40/00/04	40/04/04	
Date Analyzed:	12/29/94	12/29/94	12/29/94	12/28/94	12/28/94 12/28/94	12/21/94	
Instrument i.D.#:	HP5890/6	HP5890/6	HP5890/6			12/21/94	
Conc. Spiked:	10 μg/kg	10 μg/kg		Liberty-100	Liberty-100	Spec-340	
- construction	7- 13-13	io pg/kg	10 μg/kg	50 μg/kg	50 µg/kg	5.0 mg/kg	
Matrix Spike							
% Recovery:	75	112	102	98	96	114	
•			102	30	30	114	
Matrix Spike							
Duplicate %							
Recovery:	78	115	103	90	98	128	
			.00	30	30	120	
Relative %							
Difference:	3.9	2.6	0.98	8.5	2.1	12	
						12	
LCS Batch#:	1.00400004						
LOS Balcii#.	LCS122994	LCS122994	LCS122994	BLK122894	BLK122894	BLK122194	
Date Prepared:	12/29/94	12/29/94	12/29/94	12/28/94	400004	40040	
Date Analyzed:	12/29/94	12/29/94	12/29/94	12/28/94	12/28/94	12/21/94	
nstrument I.D.#:	HP5890/6	HP5890/6	HP5890/6		12/28/94	12/21/94	
-		550070	111 3030/0	Liberty-100	Liberty-100	Spec-340	
LCS %							
Recovery:	84	101	94	102	102	119	
% Recovery							
Control Limits:	28-167	35-146	20.452	** 4**	-		
	20-107	30-140	38-150	75-125	75-125	70-130	

SEQUOIA ANALYTICAL, #1271

Karen L. Enstrom Project Manager Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.



	680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600 FAX (415) 364-9233
Ò	819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100
烟	1900 Bates Ave., Suite LM • Concord, CA 94520 • (510) 686-9600 FAX (510) 686-9689

(44)		
MONOS Consulting Firm: ALTON GEOSCIENCE	Station No./Site Address: FORMER Chrome	cess
Address: 30A Lindbergh Ave	Project Contact: Kevin Keenan	70
City: LIVERMORE State: CA Zip: 94550	Mobil Oil Engineer: PO# 426377	
Tel: \$10 606 9150 Fax.: \$10 606 9260	Sampler(s) (signature):	7
s s s s s s s s s s s s s s s s s s s		CODING (check one)
on ntainers ntainers A 602/8020 Modified 801 Diesel [1418.1		Response
Sample I.D. Sample I.D. Time Trime Preservation Number of Containers Type of Containers BTEX - EPA 602/8020 BTEX - TPH EPA M602/8015/8020 (G TPH EPA Modified 8015 Gas Diesel Coll & Grease - EPA 413.2 Oil & Grease - EPA 413.2 TPH - EPA 418.1	A 624 A 625	Site Assessment
MW-2 (65) Si: 12-19 4100 - 1 steel	記 記 記 声 F 3 3 出 も 高 名 M Code 3 [Remediation (Plan Devlpmt.)
MW-2 (11.5) 1 4:05 - 1	4171491 X X Code 4	Active Remed. (Install /Start-up)
MW-2 (16-6) 4:10 - 1 X	- Code 5	Active Remed. (O & M)
NW-220) 4:25 - 1	HO L D Code 6	Passive Remed/
MW-2(240) L 4:35 - 1 L	₩ O C D Code 7	Closure
	Code 8	Construction
Relinquished by: Policy P	Code 9	Litigation/Claims Fines
Date/Time: Relinquished by:	Date/Time: Turnaround Time: Normal \(\) Date/Time: 1 day	e: (check one): Same day 2 day
Relinquished by: Date/Time: Relinquished in Lab by		-
Hexavalent Elizarium - Will phone in	P.O. Inlact	On Ice



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FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Matrix Descript: Analysis Method:

First Sample #:

Former Chromex Soll

EPA 418.1 (I.R. with clean-up) 412-1475

Dec 20, 1994 Dec 20, 1994

Extracted: Analyzed: Reported:

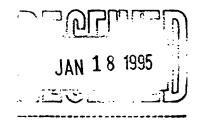
Sampled:

Received:

Dec 28, 1994 Dec 28, 1994 Jan 3, 1995

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

Sample Number	Sample Description	Petroleum Oil mg/kg (ppm)	Detection Limit Multiplication Factor
412-1475	MW-3(6.5)	43	1.0



Detection Limits:

1.0

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Karen L. Enstrom **Project Manager**

4121475.ALT <1>

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680 Chesapeake Drive 1900 Bates Avenue, Suite L. Concord, CA 94520 819 Striker Avenue, Suite 8 Sacramento, CA 95834

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FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis Method: Lab Number:

Former Chromex Soil, MW-3(6.5) **EPA 8080** 412-1475

Dec 20, 1994 Sampled: Received: Dec 20, 1994 Extracted: Dec 27, 1994 Analyzed: Dec 27, 1994 Reported: Jan 3, 1995

ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/kg	·	Sample Results µg/kg
Aldrin	1.0		
alpha-BHC	1.0	***************************************	N.D.
Deta-BHC	1.0	***************************************	N.D.
delta-BHC	1.0		N.D.
gamma-BHC (Lindane)	1.0	***************************************	N.D.
Chlordane		***************************************	N.D.
4,4'-DDD	20		N.D.
4,4'-DDE	6.0		N.D.
4,4'-DDT	2.0	••••••	N.D.
Dieldrin	6.0		N.D.
Endosulfan I	2.0	***************************************	N.D.
Endosulfan II	2.0	***************************************	N.D.
Endosulfan sulfate	2.0	***************************************	N.D.
Endrin	6.0	***************************************	N.D.
Endrin aldehyde	2.0	***************************************	N.D.
Hentachlor	6.0	*	N.D.
Heptachlor	1.0		N.D.
Heptachlor expoxide	1.0	***************************************	N.D.
Methoxychlor	20	***************************************	N.D.
Toxaphene	80	***************************************	N.D.
PCB-1016	20		N.D.
PCB-1221	80		N.D.
PCB-1232	20	***************************************	N.D.
PCB-1242	20		N.D.
PCB-1248	20	***************************************	N.D.
PCB-1254	20	***************************************	N.D.
PCB-1260	20	***************************************	
	-		N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1624

Karen L. Enstrom Project Manager

4121475.ALT <2>



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FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis Method: Lab Number:

Former Chromex Soil, MW-3(11.5) EPA 5030/8010 412-1476

Sampled: Dec 20, 1994 Received: Dec 20, 1994 Analyzed: Dec 28, 1994 Reported: Jan 3, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg		Sample Results µg/kg
Bromodichloromethane	5.0		
Bromoform	5.0	***************************************	N.D.
Bromomethane	5.0 10	••••••	N.D.
Carbon tetrachloride	• •	***************************************	N.D.
Chlorobenzene	5.0		N.D.
Chloroethane	5.0	***************************************	N.D.
2-Chloroethylvinyl ether	10	***************************************	N.D.
Chloroform.	10	•••••	N.D.
Chloromethane	5.0	•••••	N.D.
Dibromochloromethane	10	••••••	N.D.
1,2-Dichlorobenzene	5.0		N.D.
1,3-Dichlorobenzene	5.0	***************************************	N.D.
1,4-Dichlorobenzene	5.0	***************************************	N.D.
1,1-Dichloroethane	5.0	***************************************	N.D.
1,2-Dichloroethane.	5.0	***************************************	N.D.
1,1-Dichloroethene.	5.0	***************************************	N.D.
cis-1,2-Dichloroethene.	5.0	***************************************	N.D.
trans-1,2-Dichloroethene	5.0		N.D.
1 2-Dichloropropage	5.0		N.D.
1,2-Dichloropropage	5.0	***************************************	N.D.
cis-1,3-Dichloropropene	5.0		N.D.
trans-1,3-Dichloropropene	5.0		N.D.
Methylene chloride	50	***************************************	N.D.
1,1,2,2-Tetrachloroethane	5.0	••••••	N.D.
Tetrachloroethene	C 0	***************************************	N.D.
1,1,1-Trichloroethane	5.0	***************************************	N.D.
1,1,2-Trichloroethane	5.0	***************************************	N.D.
Trichloroffuerometh	5.0	***************************************	N.D.
Trichlorofluoromethane	5.0	***************************************	N.D.
Vinyl chloride	10		N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Karen L. Enstrom Project Manager

4121475.ALT <3>



680 Chesapeake Drive 1900 Bates Avenue, Suite L Concord, CA 94520 819 Striker Avenue, Suite 8 Sacramento, CA 95834

Redwood City, CA 94063

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis Method: Lab Number:

Former Chromex Soil, MW-3(16.5) EPA 5030/8010 412-1477

Dec 20, 1994 Sampled: Received: Dec 20, 1994 Analyzed: Dec 28-29, 1994 Reported:

Jan 3, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg		Sample Results µg/kg
Bromodichloromethane	5.0		
Bromoform	5.0 5.0	***************************************	N.D.
Bromomethane	10	***************************************	N.D.
Carbon tetrachloride	5.0	***************************************	N.D.
Chlorobenzene	5.0 5.0	***************************************	N.D.
Chloroethane	5.0 10	***************************************	N.D.
2-Chloroethylvinyl ether	10	***************************************	N.D.
Chloroform	· -		N.D.
Chloromethane	5.0	***************************************	N.D.
Dibromochloromethane	10	***************************************	N.D.
1,2-Dichlorobenzene	5.0	***************************************	N.D.
1,3-Dichlorobenzene	5.0		N.D.
1,4-Dichlorobenzene	5.0 5.0	•••••	N.D.
1,1-Dichloroethane.	5.0	***************************************	N.D.
1,2-Dichloroethane.	5.0	***************************************	N.D.
1,1-Dichloroethene.	5.0	***************************************	N.D.
cis-1,2-Dichloroethene.	5.0	***************************************	N.D.
trans-1,2-Dichloroethene	5.0	••••••••••	30
1,2-Dichloropropane.	5.0		N.D.
cis-1,3-Dichloropropene	5.0		N.D.
trans-1,3-Dichloropropene	5.0		N.D.
Methylene chloride	5.0		N.D.
1,1,2,2-Tetrachloroethane	50		N.D.
Tetrachloroethene	5.0	***************************************	N.D.
1,1,1-Trichloroethane	5.0	***************************************	N.D.
1,1,2-Trichloroethane	5.0	***************************************	N.D.
Trichloroethene	5.0		N.D.
Trichlorofluoromethane	5.0		N.D.
Vinvl chloride	5.0	***************************************	N.D.
Vinyl chloride	10		N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



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Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis for:

Former Chromex Soll

Analysis for: Chromium First Sample #: 412-1476

Sampled: Received: Extracted:

Dec 20, 1994 Dec 20, 1994 Dec 28, 1994

Analyzed: Di Reported:

Dec 28, 1994 Jan 3, 1995

LABORATORY ANALYSIS FOR:

Chromium

			U 11.
Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg
412-1476	MW-3(11.5)	0.50	19
412-1477	MW-3(16.5)	0.50	20
412-1478	B-6(10.0)	0.50	37
412-1479	B-6(21.5)	0.50	32

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



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(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Sample Descript: Soll Analysis for: Lead First Sample #: 412-1476

Sampled: Dec 20, 1994 Received: Dec 20, 1994 Extracted: Dec 28, 1994 Analyzed: Dec 28, 1994 Reported: Jan 3, 1995

LABORATORY ANALYSIS FOR:								
Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg					
412-1476	MW-3(11.5)	1.0	4.4					
412-1477	MW-3(16.5)	1.0	9.5					
412-1478	B-6(10.0)	1.0	10					
412-1479	B-6(21.5)	1.0	7.2					

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Sample Descript: Analysis for:

First Sample #:

Former Chromex Soll

Hexavalent Chromium 412-1476

Sampled: Received: Extracted:

Dec 20, 1994 Dec 20, 1994 Dec 21, 1994

Analyzed: Dec 21, 1994 Reported: Jan 3, 1995

LABORATORY ANALYSIS FOR:

Hexavalent Chromium

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg
412-1476	MW-3(11.5)	0.50	N.D.
412-1477	MW-3(16.5)	0.50	N.D.
412-1478	B-6(10.0)	0.50	N.D.
412-1479	B-6(21.5)	0.50	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Karen L. Enstrom Project Manager

4121475.ALT <9>



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(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID:

Matrix:

Former Chromex

Solid

QC Sample Group: 4121475-79

Reported:

Jan 3, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Oil & Grease	Chromium			
, , , , , , ,	Oil of Glease	Chromium	Lead	Hexavalent	
				Chromium	
Method:	EPA 418.1	EPA 6010	ED4 0040		
Analyst:	S. Le	J. Dinsay	EPA 6010	EPA 7196	•
<u> </u>		U. Dilisay	J. Dinsay	M. Nguyen	
MS/MSD					
Batch#:	4120916	4121696	4121695	4121492	
Date Prepared:	12/28/94	12/28/94	12/28/94	10/01/04	
Date Analyzed:	12/28/94	12/28/94	12/28/94	12/21/94 12/21/94	
Instrument I.D.#:	Miran-IFF	Liberty-100	Liberty-100	Spec-340	
Conc. Spiked:	50 mg/kg	50 mg/kg	50 mg/kg	5.0 mg/kg	
Matrix Spike		υ, υ	•••···································	o.o mg/kg	
% Recovery:	109	98	96	114	
Matrix Spike Duplicate % Recovery:	103	90	98	128	
Relative % Difference:	5.7	8.5	2.1	12	
LCS Batch#:	BLK122894	BLK122894	BLK122894	BLK122194	
Date Prepared:	12/28/94	12/20/04	40 /00 /0 :		
Date Analyzed:	12/28/94	12/28/94 12/28/94	12/28/94	12/21/94	
Instrument I.D.#:	Miran-IFF	Liberty-100	12/28/94	12/21/94	
		Douty-100	Liberty-100	Spec-340	
LCS %					

102

75-125

SEQUOIA ANALYTICAL, #1271

Recovery:

% Recovery Control Limits: 124

70-130

Karen L Enstrom Project Manager Please Note:

102

75-125

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

119

70-130



Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834

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FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan Client Project ID: Matrix:

Former Chromex

Solld

QC Sample Group: 4121476-79

Reported:

Jan 3, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloro- ethene	Trichloro-	Chloro-	1,1-Dichloro-	Trichloro-	Chloro-	
	amana	ethene	benzene	ethene	ethene	benzene	
Method:	EPA 8010	EPA 8010	EPA 8010	EPA 8010	EPA 8010	FD1 4044	
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill	K. Nill	EPA 8010 K. Nill	
			 .			C. Mill	
MS/MSD			•				
Batch#:	4121281	4121281	4121281	4121281	4121281	4121281	
Date Prepared:	12/28/94	12/28/94	12/28/94	12/29/94	1000004	40.00	
Date Analyzed:	12/28/94	12/28/94	12/28/94	12/29/94	12/29/94	12/29/94	
Instrument I.D.#:	HP5890/6	HP5890/6	HP5890/6	HP5890/6	12/29/94 HP5890/6	12/29/94	
Conc. Spiked:	10 µg/kg	10 µg/kg	10 μg/kg	10 µg/kg	10 µg/kg	HP5890/6	
		10 0	· · rs···s	10 pg/kg	то ружу	10 µg/kg	
Matrix Spike							
% Recovery:	76	121	105	75	112	102	
Matrix Spike							
Duplicate %							
Recovery:	64	108	00	70			
	04	106	98	78	115	103	
Relative %							
Difference:	17	11	6.9	3.9	2.6	0.98	
***************************************				0.0	2.0	0.56	

LCS Batch#:	LCS122894	LCS122894	LCS122894	LCS122994	LCS122994	1004000	
			200,22004	100122994	LCS122994	LCS122994	
Date Prepared:	12/28/94	12/28/94	12/28/94	12/29/94	12/29/94	12/29/94	
Date Analyzed:	12/28/94	12/28/94	12/28/94	12/29/94	12/29/94	12/29/94	
Instrument I.D.#:	HP5890/6	HP5890/6	HP5890/6	HP5890/6	HP5890/6	HP5890/6	
			_		0000/0	115 3030/0	
LCS %							
Recovery:	99	105	96	84	101	. 94	
% Recovery							
Control Limits:	28-167	35-146	38-150	20.4~			
		55 140	30-130	28-167	35-146	38-150	i

SEQUOIA ANALYTICAL, #1271

Karen L. Enstrom **Project Manager**

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.



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Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Matrix:

Former Chromex Solid

QC Sample Group: 412-1475

Reported:

Jan 3, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Lindane	Heptachlor	Aldrin	Dieldrin	Endrin	DDT
Method:	EPA 8080	EPA 8080	EPA 8080	EPA 8080	EPA 8080	
Analyst:	C. Chapman	C. Chapman	C. Chapman	C. Chapman	C. Chapman	EPA 8080 C. Chapman
MS/MSD				······································		o, onapman
Batch#:	BLK122794	BLK122794	BLK122794	BLK122794	BLK122794	BLK122794
Date Prepared:	12/27/94	12/27/94	12/27/94	12/27/94	12/27/94	10/07/04
Date Analyzed:	12/27/94	12/27/94	12/27/94	12/27/94	12/27/94	12/27/94
nstrument I.D.#:	GCHP-4A	GCHP-4A	GCHP-4A	GCHP-4A	GCHP-4A	12/27/94
Conc. Spiked:	2.5 μg/kg	2.5 µg/kg	2.5 µg/kg	5.0 µg/kg	5.0 µg/kg	GCHP-4A 5.0 µg/kg
Matrix Spike						
% Recovery:	92	84	76	70	82	80
Matrix Spike Duplicate % Recovery:	116	100	92	88	100	96
Relative %					100	3 0
Difference:	27	17	19	23	20	18
LCS Batch#:	BLK122794	BLK122794	BLK122794	BLK122794	BLK122794	BLK122794
Date Prepared:	12/27/94	12/27/94	12/27/94	12/27/94	100704	10.000
Date Analyzed:	12/27/94	12/27/94	12/27/94	12/27/94	12/27/94	12/27/94
strument I.D.#:	GCHP-4A	GCHP-4A	GCHP-4A	GCHP-4A	12/27/94 GCHP-4A	12/27/94 GCHP-4A
LCS %				•	W 1	-0111 -m/1
Recovery:	92	84	76	71	82	80
% Recovery			<u> </u>			
Control Limits:	60-130	60-130	60-130	60-130	60-130	60-130

SEQUOIA ANALYTICAL, #1624

Karen L. Enstrom Project Manager Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

4121475.ALT <12>



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- Marie Control of Calciamento CA 0593/ 4/046/004 005	
1900 Bates Ave., Suite LM • Concord, CA 94520 • (510) 686-9600 FAX (510)	686-9689

Consulting Firm:	ALTON	GENSI	سنم ر د				, T				Jiu, (.	- 94	520	• (51	0) 68	6-9600 F	AX (5	10) 686-9689
Address: 30 A LIND	RERIA	GEO SC	16	NCF			Sta	tion I	No./Site	Addr	ess:/	DRN	IER	, (ZHK	OMEX	/	
City LIVER MOR		^					Pro	ject (Contac	t: X	evi			en		/ .		
City: LIVERMORE Tel: 510 606 9150		State: /		p: 945	50		T .		Engine					<u> </u>				
Tel: 5 /0 606 9 / 50	Fax.	: 510 60	6 %	260			1		(s) (sig		 -			77				
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		Number of Containers Type of Containers	602/8020	EPA M602/8015/8020 (G TPH EPA Modified 8015 Gas Diesel	EPA 41					$\neg \mid$	504	ίlċ		chronium	1 3	Code 1		,
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Sample I.D. Matrix Matrix Date Sampled	Time	Number of Contain Type of Containers	BTEX - EPA BTEX - TPH	%	Oil & Grease	EPA 601/8010)	EPA 624/8240	EPA 625/8270	Title 22 Metals		. 1	Title		0	H.	Code 2	· r	/' · · · · · · · · · · · · · · · · · · ·
Samp Matrix Date S	Time	dmb eqy	BTEX BTEX	A H S	Ø :	A 60	A 62,	4 625	22 0	Lead Org./L	EDB/DBCD	assay - Ti	ssay	0	16	9	4	Site Assessment
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B-6(21.5)	12:15		41	2147	/0	1,		<u>" </u>			175							į.
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Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Atton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Plating Facility
Sample Descript: Water, MW1
Analysis Method: EPA 601
Lab Number: 412-1742

Sampled: Dec 27, 1994
Received: Dec 27, 1994
Analyzed: Dec 30, 1994
Reported: Jan 5, 1995

PURGEABLE HALOCARBONS (EPA 601)

Analyte	Detection Limi µg/L	t	Sample Results
Bromodichloromethane	0.50		
Bromoform	0.50	***************************************	N.D.
Bromomethane	1.0	***************************************	N.D.
Carbon tetrachloride	0.50	***************************************	N.D.
Chlorobenzene	0.50	***************************************	N.D.
Chloroethane	1.0	***************************************	1.5
2-Chloroethylvinyl ether	1.0	***************************************	N.D.
Chloroform	0.50	***************************************	N.D.
Chloromethane		***************************************	N.D.
Dibromochloromethane	1.0	***************************************	N.D.
1,3-Dichlorobenzene	0.50	***************************************	N.D.
1,4-Dichlorobenzene	0.50	***************************************	N.D.
1,2-Dichlorobenzene	0.50	***************************************	N.D.
1,1-Dichloroethane	0.50	***************************************	N.D.
1,2-Dichloroethane	0.50		N.D.
1,1-Dichloroethene	0.50	***************************************	N.D.
cis-1,2-Dichloroethene.	0.50	***************************************	N.D.
trans-1,2-Dichloroethene	0.50		2.5
1 2-Dichloropropage	0.50		N.D.
1,2-Dichloropropane	0.50		N.D.
cis-1,3-Dichloropropene	0.50		N.D.
trans-1,3-Dichloropropene	0.50		N.D.
Methylene chloride	5.0		N.D.
1,1,2,2-Tetrachloroethane	0.50	***************************************	N.D.
Tetrachloroethene	0.50	***************************************	10
1,1,1-Trichloroethane	0.50	***************************************	N.D.
1,1,2-Trichloroethane	0.50	***************************************	N.D.
Trichloroffuere method	0.50		11
Trichlorofluoromethane	0.50	***************************************	N.D.
Vinyl chloride	1.0	••••••	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Karen L. Enstrom Project Manager JAN 1 8 1995

4121742.ALT <1>



680 Chesapeake Drive 1900 Bates Avenue, Suite L Concord, CA 94520 819 Striker Avenue, Suite 8 Sacramento, CA 95834

Lab Number:

Redwood City, CA 94063

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geosclence 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Plating Facility Sample Descript: Water, MW2 Analysis Method: EPA 601

412-1743

Sampled: Dec 27, 1994 Dec 27, 1994 Received: Analyzed: Dec 30, 1994 Reported: Jan 5, 1995

PURGEABLE HALOCARBONS (EPA 601)

Analyte	Detection Lim	it	Sample Results
Bromodichloromethane	0.50		
Bromoform	0.50	***************************************	N.D.
Bromomethane	1.0	***************************************	N.D.
Carbon tetrachloride	0.50	***************************************	N.D.
Chlorobenzene			N.D.
Chloroethane	0.50	***************************************	N.D.
2-Chloroethylvinyl ether	1.0	***************************************	N.D.
Chloroform	1.0	***************************************	N.D.
Chloromethane	0.50		N.D.
Dibromochloromethane	1.0	***************************************	N.D.
1,3-Dichlorobenzene.	0.50		N.D.
1,4-Dichlorobenzene	0.50		N.D.
1,2-Dichlorobenzene	0.50		N.D.
1,1-Dichloroethane	0.50		N.D.
1,2-Dichloroethane	0.50		N.D.
1 1-Dichloroethene	0.50	***************************************	N.D.
1,1-Dichloroethene	0.50	***************************************	N.D.
cis-1,2-Dichloroethene	0.50		2.0
trans-1,2-Dichloroethene	0.50		N.D.
1,2-Dichloropropane	0.50		N.D.
cis-1,3-Dichloropropene.	0.50		N.D.
trans-1,3-Dichloropropene	0.50	***************************************	N.D.
Methylene chloride	5.0		N.D.
1,1,2,2-Tetrachloroethane	0.50	***************************************	·
Tetrachloroethene	0.50	***************************************	N.D.
1,1,1-Trichloroethane	0.50	***************************************	5.0 N.D.
1,1,2-Trichloroethane	0.50	***************************************	N.D.
rictioroeinene	0.50		N.D.
Inchiorofluoromethane	0.50	***************************************	8.2
Vinyl chloride	1.0	*************	N.D.
	1.0		N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834 (415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Plating Facility
Sample Descript: Water, MW3
Analysis Method: EPA 601
Lab Number: 412-1744

Sampled: Dec 27, 1994
Received: Dec 27, 1994
Analyzed: Dec 30, 1994
Reported: Jan 5, 1995

PURGEABLE HALOCARBONS (EPA 601)

Analyte	Detection Lim μg/L	it	Sample Results
Bromodichloromethane	0.50		
Bromotorm	0.50	***************************************	N.D.
bromometnane	1.0	***************************************	N.D.
Carbon tetrachloride	0.50	***************************************	N.D.
Chlorobenzene	- -	***************************************	N.D.
Chloroethane.	0.50	***************************************	N.D.
2-Chloroethylvinyl ether	1.0	***************************************	N.D.
Chloroform	1.0	•••••	N.D.
Chloromethane.	0.50	•••••	N.D.
Dibromochloromethane	1.0	***************************************	N.D.
1,3-Dichlorobenzene	0.50	***************************************	N.D.
1,4-Dichlorobenzene	0.50	***************************************	N.D.
1,2-Dichlorobenzene	0.50	***************************************	N.D.
1,1-Dichloroethane	0.50	***************************************	N.D.
1,2-Dichloroethane	0.50	***************************************	N.D.
1,1-Dichloroethene	0.50	***************************************	N.D.
cis-1,2-Dichloroethene	0.50		N.D.
trans-1 2-Dichloroothone	0.50	***************************************	23
trans-1,2-Dichloroethene	0.50	***************************************	0.69
1,2-Dichloropropane	0.50	***************************************	N.D.
cis-1,3-Dichloropropene	0.50		N.D.
trans-1,3-Dichloropropene.	0.50	***************************************	N.D.
Methylene chloride	5.0	***********	N.D.
1,1,2,2-Tetrachloroethane	0.50	***************************************	N.D.
Tetrachloroethene	0.50		4.0
1,1,1-Trichloroethane	0.50	***************************************	4.0 N.D.
1,1,2-Trichloroethane	0.50	***************************************	N.D.
Trichloroethene	0.50	***************************************	9.6
Trichlorofluoromethane	0.50	***************************************	9.6 N.D.
Vinyl chloride	1.0	***************************************	N.D. N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Karen L. Enstrom Project Manager

4121742.ALT <3>



680 Chesapeake Drive 1900 Bates Avenue, Suite L. Concord, CA 94520 819 Striker Avenue, Suite 8

Redwood City, CA 94063 Sacramento, CA 95834

Lead

(415) 364-9600 (\$10) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Undbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Plating Facility Sample Descript: Water Analysis for: Lead First Sample #: 412-1742

Sampled: Dec 27, 1994 Received: Dec 27, 1994 Extracted: Dec 28, 1994

Analyzed: Jan 4, 1995 Reported: Jan 5, 1995

LABORATORY ANALYSIS FOR:

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
412-1742	MW1	0.020	N.D.
412-1743	MW2	0.020	N.D.
412-1744	MW3	0.020	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Plating Facility Sample Descript: Water

Analysis for: Chromlum

Sampled: Dec 27, 1994 Received: Dec 27, 1994 Extracted: Dec 28, 1994

First Sample #: 412-1742 Analyzed: Jan 4, 1995 Reported: Jan 5, 1995 I AROBATORY ANA

Chromium

	LABURATO	JHY ANALYSIS	ALYSIS FOR:						
Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L						
412-1742	MW1	0.010	0.069						
412-1743	MW2	0.010	0.044						
412-1744	MW3	0.010	N.D.						

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



680 Chesapeake Drive 1900 Bates Avenue, Suite L Concord, CA 94520 819 Striker Avenue, Suite 8

Redwood City, CA 94063 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9235 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Sample Descript: Water Analysis for:

First Sample #:

Client Project ID: Former Chromex Plating Facility

Hexavalent Chromium 412-1742

Sampled: Received: Dec 27, 1994 Dec 27, 1994

Extracted: Analyzed: Dec 28, 1994 Dec 28, 1994

Reported:

Jan 5, 1995

LABORATORY ANALYSIS FOR:

Hexavalent Chromium

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
412-1742	MW1	0.0050	N.D.
412-1743	MW2	0.0050	0.025
412-1744	MW3	0.0050	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271



Redwood City, CA 94063 Concord, CA 94520 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

Alton Geoscience 30-A Lindbergh Ave. Livermore, CA 94550 Attention: Kevin Keenan

Client Project ID: Former Chromex Plating Facility

Matrix: Liquid

QC Sample Group: 4121742-44

Reported:

Jan 5, 1995

QUALITY CONTROL DATA REPORT

		QUALITY C	ON I ROL D	AIA REP	ORT		
ANALYTE	1,1-Dichloro- ethene	Trichloro- ethene	Chloro-	Chromium	Lead	Hexavalent	· · · · · · · · · · · · · · · · · · ·
	70.00	ethene	benzene			Chromium	
Method:	EPA 601	EPA 601	EPA 601	ED4 000 =			
Analyst:	K. Nill	K. Nill	K. Nill	EPA 200.7 J. Dinsay	EPA 200.7		
			7.5.1411	o. Dilisay	J. Dinsay	M. Nguyen	
MS/MSD							
Batch#:	4121483	4121483	4121483	4121653	4121653	4121744	
Date Prepared:	12/30/94	12/30/94	12/30/94	40000			
Date Analyzed:	12/30/94	12/30/94	12/30/94	12/28/94	12/28/94	12/28/94	
Instrument I.D.#:	HP5890/6	HP5890/6		1/4/95	1/4/95	12/28/94	
Conc. Spiked:	10 µg/L	10 µg/L	HP5890/6	Liberty-100	Liberty-100	Spec-340	
•	·- F3-	io pg/c	10 μg/L	1.0 mg/L	1.0 mg/L	0.050 mg/L	
Matrix Spike							
% Recovery:	100	108	97	93	95	131	
Matrix Spike					~	101	
Duplicate %							
Recovery:	112	100					
nood tory.	112	103	96	98	97	124	
Relative %							
Difference:	11	4.7	1.0				
	• •	7.1	1.0	5.2	2.1	5.5	
LCS Batch#:	LCS123094	LCS123094	LCS123094	BLK122894	DI Kroone :		
.				JUNI22034	BLK122894	7196 MN12H-1	
Date Prepared:	12/30/94	12/30/94	12/30/94	12/28/94	12/29/04	10mam :	
Date Analyzed:	12/30/94	12/30/94	12/30/94	1/4/95	12/28/94 1/4/95	12/28/94	
strument I.D.#:	HP5890/6	HP5890/6	HP5890/6	Liberty-100		12/28/94	
				-weity-100	Liberty-100	Spec-340	
LCS %							
Recovery:	96	101	96	101	103	104	
% Recovery				· · · · · · · · · · · · · · · · · · ·			
Control Limits:	28-167	35-146	38-150	75 105			
· 			30-130	75-125	75-125	75-125	

SEQUOIA ANALYTICAL, #1271

Karen L. Enstrom Project Manager Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

4121742.ALT <7>



	680 Chesapeake Drive • Redwood City, CA	04000 /445	
0	819 West Striker Avo a Sassamunt Co.	94063 • (415) 364-9600	FAX (415) 364-9233
N	819 West Striker Ave. • Sacramento, CA 99	5834 • (916) 921-9600	FAX (916) 921-0100
/	1900 Bates Ave., Suite LM • Concord, CA 9	4520 • (510) 686-9600	FAX (510) 696 0000

Company Name:	Hon Geo	Science					Projec	t Name	a· ,	=04							
Address: 304 L	find bergh	Ave						Addre	<u> </u>	OK.	MER	<u>-111</u>	ROME	EXI	LAZ	TING FACE	with
City: Livemore	ى State:	Ca		Zip Cod	e:945				35 (11		:nt):						
Telephone: 570	606 915	0	FAX #:	606	9211	2	 PO #	: 42	, 6		~					· · · · · · · · · · · · · · · · · · ·	
Report To: KEVIA	KEENAN	Sample	r. A40	11 RA	< 11000	FOLC						—— <u> </u>					
Time: 7 Wor	king Days	3 Workin 2 Workin 24 Hours	g Days	□ 2 - 8	Hours	☐ Dri	nking ste W	Water /ater	CPF.	A (Sta	-0.7	Analy	- X D	equest	Level ed	C D Level D	
Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type		quoia's mple #	ier	100	10 6 1 10 6 1		hrowing		//	//	/.		
1. MW I	12 27/1130	1120	5	316.913.			X	X	X	X		1	121	142	/	Comment	
2. MW2	12.27 1100			1				1	1	1	-		121'		11-6		Seguoia
3. MW 3	12 27/1200						-	_		-					-		Š
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7.					-											Note:	_
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	19 11															innediately.	White
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Relinquished By:			Date:		Time:		Rece	ived By	<u>':</u>				Dat			lime	
Relinquished By:			Date:		Time:		Recei	ved By) <i>[]</i> Lab	Kil	Very				14	Tune OC 271	_

APPENDIX C SURVEY DATA

RON ARCHER

CONSULTING . PLANNING . DESIGN . SURVEYING

4133 Mohr Ave., Suite E • Pleasanton, CA 94566 (510) 462-9372



DECEMBER 13, 1994

JOB NO. 2223

ELEVATIONS OF EXISTING MONITORING WELLS AT THE FORMER CHROMEX FACILITY LOCATED AT 1400 PARK AVENUE BETWEEN HORTON STREET AND HOLDEN STREET, CITY OF EMERYVILLE, ALAMEDA COUNTY, CALIFORNIA.

FOR; ALTON GEOSCIENCE INC.

BENCHMARK: #H-130 - U.S.G.S.

A FOUND U.S.G.S BRASS DISK SET IN THE NORTHEAST CORNER OF THE TOWN HALL BUILDING LOCATED AT 1333 PARK AVENUE AT HOLLIS STREET. ELEVATION TAKEN AS 24.514 U.S.G.S. DATUM.

MONITORING WELL DATA TABLE

14000	WELL DA	IN IABLE
WELL DESIGNATION	TOP OF CASING ELEVATION	TOP OF BOX ELEVATION
MW-1		TELVATION
14144-1	16.71	16.00
MAN	Agrica Line	16.96
MW-2	13.99	14.00
14140		14.22
MW-3	17.69	18.03
		10.03