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8 April 1997

Mr. Sumadhu Arigala
California Regional Water Quality Control Board,
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

Subject: Results of Soil and Groundwater Investigations
on the Sherwin-Williams Site
Emeryville, California
(EKI 930028.83)

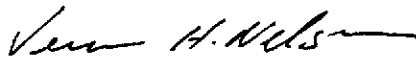
Dear Mr. Arigala:

On behalf of Chiron Corporation, Erler & Kalinowski, Inc. ("EKI") is pleased to present the enclosed report entitled *Results of Soil and Groundwater Investigations on the Sherwin-Williams Site*. The work described in this report was performed by EKI on 12 November 1996 through 15 November 1996 in accordance with EKI's *Work Plan for Collection of Soil and Groundwater Samples on the Sherwin-Williams Property, Emeryville, California*, dated 22 October 1996. This Work Plan was approved by the San Francisco Bay Region Regional Water Quality Control Board ("RWQCB") in its letter dated 8 November 1996.

Please call with any questions or comments.

Very truly yours,

ERLER & KALINOWSKI, INC.



Vera H. Nelson, P.E.
Project Manager



Thomas W. Kalinowski, Sc.D.
Vice President

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Mr. Sumadhu Arigala
RWQCB
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**Erler &
Kalinowski, Inc.**

cc: Stephen Morse (RWQCB) w/o enclosure
Ravi Arulanantham (RWQCB) w/o enclosure
Susan Hugo (Alameda County Department of Environmental Health)
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**Results of Soil and Groundwater Investigations
on the Sherwin-Williams Site**

**Chiron Corporation
Emeryville, California**

27 March 1997

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**Results of Soil and Groundwater Investigations
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**Chiron Corporation
Emeryville, California**

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**Erler &
Kalinowski, Inc.**

**Results of Soil and Groundwater Investigations
on the Sherwin-Williams Site**

**Chiron Corporation
Emeryville, California**

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Results of Soil and Groundwater Investigations **Erler & Kalinowski, Inc.**
on the Sherwin-Williams Site

Chiron Corporation
Emeryville, California

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1.0 INTRODUCTION

At the request of Chiron Corporation ("Chiron"), Erler & Kalinowski, Inc. ("EKI") has prepared this report on soil and groundwater investigations conducted on 12 November 1996 through 15 November 1996 on the Sherwin-Williams property located at 1450 Sherwin Avenue in Emeryville, California (the "Sherwin-Williams Site") (Figure 1).

The investigations focus on characterizing chemical concentrations in soil and groundwater located immediately adjacent to and upgradient (i.e., southeast) of the former Rifkin Property. Chemicals released in this area have or may have migrated onto the former Rifkin Property (Figure 2). The former Rifkin Property is located at 4525 Horton Street in Emeryville, California, and is now owned by Chiron.

Historical information obtained from reports prepared on behalf of Sherwin-Williams and the former Receiver of the Rifkin Property indicate that Sherwin-Williams operated a lead-arsenate manufacturing plant, an acid plant, and a lacquer plant immediately south of the Rifkin Property (see Sherwin-Williams historical facility maps in Appendix A).

Results of prior investigations performed by EKI and others on the former Rifkin Property indicate that soil and groundwater beneath the former Rifkin Property have been impacted by chemical migration from the Sherwin-Williams Site (EKI, 1993; Levine-Fricke ("LF") 1994; TMC Environmental, Inc. ("TMC"), 1994, 1995a,b). Chiron recently discovered low pH and elevated concentrations of arsenic, lead, and zinc (EKI, 1996c) in materials apparently leaching through the southern brick wall of the former Rifkin Building, which previously abutted the Sherwin-Williams Site.

The objective of this soil and groundwater investigation was to evaluate pH and concentrations of chemicals of concern in soil and groundwater on the Sherwin-Williams Site near the southern brick wall on the former Rifkin Property.

The investigations by EKI consisted of collecting and analyzing soil and groundwater samples from 11 shallow borings. The investigation was performed in accordance with EKI's *Work Plan for Collection of Soil and Groundwater Samples on the Sherwin-Williams Property*, Emeryville, California, dated 22 October 1996 ("the Work Plan"). The Work Plan was approved by the San Francisco Bay Region Regional Water Quality Control Board ("RWQCB") in its letter dated 8 November 1996. A site access agreement was executed by Chiron and Sherwin-Williams.

2.0 BACKGROUND

The Sherwin-Williams Site is located west of Horton Street, between 53rd Street and Sherwin Avenue, in Emeryville, California. The area of investigation, i.e., the northeastern corner of the Sherwin-Williams Site, is presently covered by an asphalt lot used for storing paint manufacturing materials.

The Sherwin-Williams Site abuts both the southern and western boundaries of the former Rifkin Property (Figure 2). Chiron is currently in the process of constructing a parking lot on the southern portion of the former Rifkin Property. A two-story, brick building ("the former Rifkin Building") was formerly located on the former Rifkin Property.

Groundwater on the Sherwin-Williams Site contains metals including arsenic, lead, zinc, volatile organic chemicals such as acetone, methyl ethyl ketone ("MEK"), methyl isobutyl ketone ("MIBK"), benzene, ethylbenzene, toluene, and xylenes ("BTEX") and has low pH (LF, 1990; TMC, 1994). A groundwater extraction and treatment system currently operates on the Sherwin-Williams Site. In addition, a slurry wall, extending to a depth of approximately 25 feet, surrounds the northern portion of the property. In the area of investigation (Figure 2), the slurry wall is located approximately 10 feet south of the southern boundary of the former Rifkin Property.

Results of prior investigations performed by EKI and others on the former Rifkin Property (EKI, 1993; LF, 1994; TMC, 1995a,b) indicate that soil and groundwater beneath the former Rifkin Property have been impacted by chemical migration from the Sherwin-Williams Site. Chiron recently discovered low pH and elevated concentrations of arsenic, lead, and zinc, in material apparently leaching through the southern wall of the former Rifkin Building, which previously abutted the Sherwin-Williams Site (EKI, 1996c).

Historical information obtained from reports prepared on behalf of Sherwin-Williams and the former Receiver of the Rifkin Property indicate that Sherwin-Williams operated a lead-arsenate manufacturing plant, an acid plant, and a lacquer plant immediately south of the former Rifkin Property (see Sherwin-Williams historical facility maps in Appendix A). Arsenic acid and acetic acid were stored in several tanks located adjacent to the southern wall of the former Rifkin Building as shown on Figure 3.

More recently, during the construction of the slurry wall, excavated soil containing arsenic was placed by Sherwin-Williams below an asphalt cap in the area adjacent to southern boundary of the former Rifkin Property area along Horton Street (LF, 1996). The excavated soil was compacted on top of a former building foundation on the Sherwin-Williams Site and paved with approximately 2 to 3.5 inches of asphalt in 1995.

3.0 FIELD INVESTIGATION

Soil borings were completed by EKI at 12 locations on the Sherwin-Williams Site to collect soil samples and, in some cases, grab shallow groundwater samples (Figure 2).

- Boring locations CH2, CH4, CH5, CH7, CH8, and CH9 were located within the slurry wall.
- Boring locations CH1, CH1B, CH3, CH6, and CH10 were located outside and downgradient of the slurry wall. These locations were approximately 3 feet from the southern boundary of the former Rifkin Property, except for boring location CH1B which was approximately 10 feet from the former Rifkin Property.
- One boring location (unnamed) located immediately adjacent to CH1 was terminated. No soil or water samples were collected from this boring and no log was prepared because the boring was terminated at a depth of 5 feet below ground surface ("bgs") when an obstruction was encountered.

3.1 Field Activities

Field activities performed by EKI on 12 November 1996 through 15 November 1996 at the Sherwin-Williams Site included the following:

- Three soil borings were advanced to a depth of 3 feet bgs, five soil borings were advanced to a depth of 4.5 to 6 feet bgs, and four soil borings were advanced to a depth of 16 to 19 feet bgs to obtain grab groundwater samples.
- Soil samples were collected for laboratory analysis at two depths in each boring. Soil samples collected at 1 to 2 feet bgs from the fill above the concrete slab (presumably a former foundation slab) were designated the "-A" samples, and soil samples collected at 3 to 6.5 feet bgs beneath the concrete slab were designated "-B". Only "A" samples were collected from borings CH1 and CH1B. "B" samples were not collected at these locations because concrete with a thickness greater than 2 feet was encountered at these locations. The concrete slab was not encountered at borings CH2 and CH4. The specific depth intervals sampled in each boring are summarized in Table 1.
- Grab groundwater samples were collected from borings CH5, CH6, CH9, and CH10. The depths of the temporary screened intervals from which water samples were taken are summarized in Table 1.

Prior to drilling, a permit was obtained from the Alameda County Flood Control and Water Conservation District Zone 7 Water Agency (Appendix B). Each proposed boring location was cleared for the presence of underground utilities through contact with Underground Services Alert ("USA"). EKI also obtained a site utility map from Sherwin-Williams to investigate the location of the Sherwin-Williams slurry wall and utilities; however, detailed record drawings of the slurry wall location were not available. Prior to drilling, EKI personnel met with Levine-Fricke-Recon personnel (representing Sherwin-Williams) at the Sherwin-Williams Site to review the slurry wall location and proposed boring locations.

Drilling was performed by Precision Sampling, Incorporated of San Rafael, California, under the supervision of an EKI field geologist. Methods and procedures for the completed work are described in Appendix C. Field Notes are included in Appendix D. Boring logs are included in Appendix E.

Levine-Fricke-Recon personnel, representing Sherwin-Williams, were present on-site for the majority of the drilling work. Levine-Fricke-Recon personnel did not collect split samples during this investigation.

Health and safety procedures were implemented by EKI in accordance with the *Site Health and Safety Plan for Soil and Grab Groundwater Sampling at the Sherwin Williams Property*, prepared by EKI, and dated 7 October 1996. All drilling and sampling work was conducted using Level C protection (i.e., coveralls, hard hat, steel-toed boots, and half-face air purifying respirators). Environmental Health Consultants, Incorporated of Burlingame, California, as a subcontractor to EKI, provided personal air quality monitoring. Results of personal air monitoring are provided in Appendix I.

Following the completion of the field sampling activities, all boreholes were grouted with a cement/bentonite mixture and patched with hot asphalt. The locations of the soil borings and six building corners were surveyed by a licensed surveyor (Appendix F). The locations of the soil borings are illustrated on Figure 2. The methods and procedures used in these post-sampling activities are described in more detail in Appendix C.

While advancing the borehole at location CH4 (approximately 15 feet from the southern boundary of the former Rifkin Property), a light gray material with cement-like texture was encountered at a depth of approximately 4.5 feet bgs. Levine-Fricke-Recon personnel on-site indicated that this material was most likely from the top of the slurry wall or spill-over from construction of the slurry wall. As a result, boring CH4 was not advanced farther and was terminated at a depth of 5.0 feet bgs. This and all other boreholes were grouted with a cement/bentonite mixture. Groundwater was not encountered in boring CH4.

3.2 Soil and Groundwater Sample Analysis

Chemical analyses were performed by Sequoia Analytical Laboratory ("Sequoia") in Redwood City, California. Laboratory data sheets and chain-of-custody forms are included in Appendix G. An itemized list of laboratory analyses performed by Sequoia for soil and groundwater samples collected by EKI is presented in Table 2.

All soil samples (except sample CH4-B) and all groundwater samples were analyzed for the following chemical constituents:

- Arsenic, lead, and zinc by EPA Method 6000 Series
- pH by EPA Method 150.1 or EPA Method 9045

Soil sample CH4-B (collected from approximately 4.5 to 5.0 feet bgs) was not analyzed because the sample appeared to consist of slurry wall material, as discussed in Section 3.1.

Selected soil samples, as indicated in Table 2, and all groundwater samples were also analyzed for the following constituents:

- Title 22 Metals by EPA Method 6000 Series and EPA Method 7470 and 7471
- Volatile organic chemicals ("VOCs") by EPA Method 8240 with open scan
- Semivolatile organic chemicals ("SVOCs") by EPA Method 8270 with open scan

In addition, all soil samples except sample CH1B-A were subjected, either discretely or as part of a composite, to the toxicity characteristic leaching procedure ("TCLP") (EPA Method 1311). All extracts were analyzed for arsenic and lead. Selected extracts were also analyzed for VOCs. Table 2 lists the samples analyzed by TCLP.

An equipment rinseate blank was also collected and analyzed for Title 22 metals, pH, VOCs, and SVOCs using the EPA methods listed above. A blind duplicate groundwater sample from boring CH6 was also collected and analyzed. A discussion of quality assurance/quality control ("QA/QC") measures is presented in Appendix H.

4.0 RESULTS OF SOIL AND GROUNDWATER SAMPLING

The locations of the soil borings completed by EKI on the Sherwin-Williams Site are shown on Figure 2. For reference, the approximate locations of borings from previous environmental investigations on the Sherwin-Williams and Rifkin Properties are also shown, on the basis of information available to EKI.

The stratigraphy of soil encountered in borings on the Sherwin-Williams Site is discussed in Section 4.1. The results of chemical analyses of soil and groundwater samples collected from the borings are summarized in Tables 3 through 8 and discussed in Sections 4.2 and 4.3.

4.1 Stratigraphy

On the basis of field observations summarized in the Field Notes (Appendix D) and Boring Logs (Appendix E), shallow soil in the area of investigation on the Sherwin-Williams Site is generally described as follows:

- Ground surface consists of an asphalt cap ranging in thickness between 2 and 3.5 inches. The asphalt cap is observed to be cracked in some locations in the area of investigation.
- Fill material, consisting primarily of soil and concrete rubble, is located beneath the asphalt cap to a depth of approximately 2 to 3 feet beneath current ground surface.
- A concrete slab, generally 5 inches thick, was encountered beneath the fill at all locations except CH2 and CH4. This concrete slab was encountered between approximately 2 and 4 feet bgs and is believed to be a former building foundation.
- Baserock, fill, and/or native soil underlie the concrete slab.

The depths and thicknesses of these layers encountered at each boring location are summarized in Table 1.

4.2 Soil

Complete analytical results for soil samples are provided in Appendix G and are summarized in Tables 3 through 6. The following discussion is divided into sections describing results from soil samples collected (1) inside the Sherwin-Williams slurry wall

(Section 4.2.1) and (2) outside the slurry wall (Section 4.2.2). The results of the TCLP for soil samples collected from both areas and a discussion of hazardous waste criteria are presented in Section 4.2.3.

4.2.1 Soil Samples from Borings Inside Slurry Wall

The laboratory results of selected metals analyses and pH analyses on soil samples collected from borings located inside the slurry wall (i.e., borings CH2, CH4, CH5, CH7, CH8, and CH9) are summarized in the following table.

**Selected Metals Concentrations and pH
in Soil Samples from Borings Inside Slurry Wall**

Compound	Fill Above Concrete		Soil Below Concrete	
	Range (mg/kg) ^a	Max. Sample ^b	Range (mg/kg) ^a	Max. Sample ^b
Antimony	10 - 12	CH2-A	7.9 - 10	CH2-B
Arsenic	580 - 1,100	CH5-A	12 - 56,000	CH7-B
Barium	140 - 190	CH2-A	140 - 400	CH5-B
Beryllium	<0.5 - 0.51	CH5-A	<0.5 - 1.0	CH5-B
Cadmium	2.1 - 3.0	CH5-A	<0.5 - 0.60	CH2-B
Chromium	33 - 48	CH5-A	16 - 32	CH2-B
Cobalt	8.7 - 12	CH2-A	9.3 - 23	CH5-B
Copper	37 - 57	CH5-A	20 - 29	CH5-B
Lead	1,100 - 2,900	CH9-A	63 - 62,000	CH9-B
Mercury	0.28 - 0.62	CH2-A	0.079 - 1.6	CH5-B
Nickel	36 - 53	CH5-A	38 - 39	CH2-B
Vanadium	29 - 34	CH5-A	26 - 27	CH2-B
Zinc	160 - 230	CH7-A	75 - 3,100	CH9-B
pH	8.0 - 10		6.1 - 9.3	

Notes: (a) mg/kg = milligrams per kilogram except for pH
 (b) Soil samples from borings CH7, CH8, and CH9 were analyzed for only three of the Title 22 metals (i.e., arsenic, lead, zinc) and pH. Soil sample CH4-B was not analyzed for metals because it appeared to consist only of slurry wall material.

The maximum arsenic, lead, and zinc concentrations detected in the soil collected below the concrete slab were substantially greater than detected in fill material above the slab. All soil samples collected above the concrete slab contained total arsenic and lead at concentrations exceeding 500 mg/kg and 1000 mg/kg, respectively.

Molybdenum, selenium, silver, and thallium were not detected above laboratory method detection limits in soil samples collected inside the slurry wall.

VOCs and SVOCs were analyzed only in samples from two borings located inside the slurry wall, i.e., CH8 and CH9, in the former Sherwin-Williams lacquer plant area. Acetone, MIBK, ethylbenzene, toluene, and xylenes were each detected at concentrations exceeding 100 mg/kg in the soil sample collected from below the concrete slab in boring CH9 (Table 5). Concentrations of these organic compounds were less than 1 mg/kg or below laboratory method detection limits in the soil sample collected above the slab at location CH9. VOCs were not detected in the soil samples from boring CH8. Other tentatively identified compounds from the VOC open scan are listed in Table 4. The lower soil sample from boring CH9 contained the highest concentrations of tentatively identified VOCs, including five different cyclopentane compounds, heptane, and 3-methylheptane at concentrations exceeding 100 mg/kg each.

SVOCs reported under EPA Method 8270 were not detected above laboratory method detection limits in soil samples for CH8 and CH9, with the exception of bis(2-ethylhexyl)phthalate, which was detected at concentrations of 2.3 mg/kg or less. Other tentatively identified compounds from the SVOC open scan are listed in Table 5. The lower soil sample from boring CH9 contained dimethylbenzene at a concentration of 280 mg/kg and an unidentified hydrocarbon at a concentration of 45,000 mg/kg. The analytical laboratory indicated that this unidentified hydrocarbon may have been oil (Appendix G).

Soil samples from borings CH2, CH4, CH5, and CH7 were not analyzed for VOCs or SVOCs.

4.2.2 Soil Samples from Borings Outside Slurry Wall

The laboratory results of selected metals analyses and pH analyses on soil samples collected from borings located outside the slurry wall (i.e., borings CH1, CH1B, CH3, CH6, and CH10) are summarized in the following table.

**Selected Metals Concentrations and pH
in Soil Samples from Borings Outside Slurry Wall**

Compound	Fill Above Concrete		Soil Below Concrete	
	Range (mg/kg) ^a	Max. Sample	Range (mg/kg) ^a	Max. Sample
Antimony	<5 - 12	CH1-A	10 - 1,300	CH3-B
Arsenic	920 - 1,900	CH6-A	22 - 30,000	CH3-B
Barium	130 - 220	CH6-A	100 - 160	CH3-B
Cadmium	2.5 - 5.5	CH6-A	<0.5 - 94	CH3-B
Chromium	11 - 41	CH1B-A	12 - 42	CH10-B
Cobalt	<2.5 - 11	CH6-A	2.9 - 9.6	CH10-B
Copper	24 - 62	CH1-A	16 - 740	CH6-B
Lead	380 - 2,300	CH1B-A	23 - 120,000	CH6-B
Mercury	0.26 - 1.7	CH3-A	0.04 - 4.4	CH3-B
Nickel	11 - 44	CH1B-A	6.0 - 48	CH10-B
Silver	<0.5		<0.5 - 88	CH6-B
Thallium	<5		<5 - 9.3	CH3-B
Vanadium	9.1 - 37	CH1B-A	5.9 - 26	CH10-B
Zinc	120 - 200	CH6-A	35 - 510	CH6-B
pH	7.9 - 10		5.4 - 12	

Notes: (a) mg/kg = milligrams per kilogram except for pH

High total arsenic concentrations (i.e., exceeding 500 mg/kg) were detected in each of the five samples of fill soil collected above the concrete slab next to the former Rifkin Property. High lead concentrations (i.e., exceeding 1,000 mg/kg) were detected in two of the five samples of fill collected from above the concrete slab next to the former Rifkin Property. The maximum total arsenic and lead concentrations detected in the soil below the concrete slab were substantially greater than detected in fill material above the slab.

Beryllium, molybdenum, and selenium were not detected above laboratory method detection limits in soil samples collected outside the slurry wall.

The lowest pH (5.4) was detected in the lower soil sample from boring CH3. An acetic acid storage tank was formerly located in this area (see Figure 3).

VOCs and SVOCs were analyzed in all soil samples collected from borings located outside the slurry wall. VOCs were only detected in the soil sample collected below the concrete slab in boring CH10 (i.e., sample CH10-B). Low concentrations of acetone, MEK, MIBK, toluene, and xylenes were detected in the lower soil sample from boring CH10. Other tentatively identified compounds from the VOC open scan are listed in Table 5

SVOCs reported under EPA Method 8270 were detected primarily in the upper soil sample from boring CH1. In this sample, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, bis(2-ethylhexyl)phthalate, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, and pyrene were detected at concentrations less than 1 mg/kg. Bis(2-ethylhexyl)phthalate, a possible sampling or laboratory contaminant, was detected at concentrations of 2.3 mg/kg or less in several samples. Other tentatively identified compounds from the SVOC open scan are listed in Table 5. Dimethylbenzene, detected at 120 mg/kg in the lower soil sample from boring CH9, was also detected at concentrations ranging from 0.62 to 0.89 mg/kg in soil samples collected from borings CH1, CH3, and CH6 located outside the slurry wall. Unidentified hydrocarbons were detected at concentrations ranging from 160 mg/kg to 280 mg/kg in the upper soil samples from borings CH1, CH1B, CH6, and CH10. The analytical laboratory indicated that these unidentified hydrocarbons may have been oil (Appendix G).

4.2.3 Soil TCLP Results

The results of laboratory analysis of the TCLP extraction (EPA Method 1311) from soil samples collected from borings inside and outside the slurry wall are reported in Table 6. Lead and VOC concentrations in the TCLP extracts did not exceed levels for classification of a waste as a hazardous waste (Table 6).

However, arsenic concentrations exceeded the 5 mg/l hazardous waste criterion in the TCLP extracts from the following soil samples: CH1-A, CH3-A, CH3-B, CH10-A, the CH2-A/CH4-A/CH5-A composite, and the CH7-B/CH8-B/CH9-B composite.

4.3 Groundwater

Complete analytical results for grab groundwater samples are provided in the laboratory reports in Appendix G and are summarized in Tables 7 through 9. The results for metals analyses in grab groundwater samples are summarized in the following table. Grab groundwater samples to be analyzed for metals were filtered in the field using a 0.45 micron filter at the time of sample collection.

**Metals Concentrations and pH
Detected in Grab Groundwater Samples^a**

Compound	Borings Inside Slurry Wall		Borings Outside Slurry Wall	
	Range (ug/l) ^b	Max. Sample	Range (ug/l) ^b	Max. Sample
Antimony	<100 - 250	CH5	<100 - 180	CH6
Arsenic	650,000 - 820,000	CH9	5,400 - 310,000	CH10
Cadmium	3,400 - 4,100	CH9	63 - 1,400	CH10
Cobalt	110 - 290	CH9	<50 - 160	CH6
Nickel	200 - 630	CH9	<50 - 610	CH6
Zinc	2,300 - 2,900	CH9	83 - 14,000	CH6
pH	5.3 - 5.9		4.0 - 6.1	
pH in field	5.6 - 5.8		4.3 - 6.1	

Notes: (a) Grab groundwater samples analyzed for metals were filtered in the field using a 0.45 micron filter at the time of sample collection.
 (b) ug/l = micrograms per liter except for pH

High arsenic concentrations (i.e., 6,000 ug/l and 310,000 ug/l) were detected in the two grab groundwater samples (samples CH6 and CH10, respectively) collected outside the slurry wall, immediately adjacent to the former Rifkin Property.

The maximum zinc concentration detected in the grab groundwater sample collected at boring CH6 was 14,000 ug/l, in the vicinity of the former Sherwin-Williams acid plant (Figure 3).

Cadmium concentrations were 4,100 and 3,400 ug/l in the grab groundwater samples collected from the two borings (borings CH9 and CH5, respectively) located inside the slurry wall. Cadmium was also detected at a concentration of 1,400 ug/l in the grab groundwater sample collected from boring CH10 which is located outside the slurry wall.

Lead was not detected in the grab groundwater samples collected at borings CH5, CH6, CH9, and CH10. Barium, beryllium, chromium, copper, mercury, molybdenum, selenium, silver, thallium, and vanadium were also not detected in grab groundwater samples above the laboratory method detection limits, as reported in Table 7 and Appendix G.

The lowest pH (4.0) was measured in the grab groundwater sample collected from boring CH6. This location is near the area where residue samples with low pH were collected on the southern brick wall of the former Rifkin Building (EKI, 1996c).

The results for VOC and SVOC analyses in grab groundwater samples are summarized in the following table.

**VOC and SVOC Concentrations
Detected in Grab Groundwater Samples**

Compound	Inside Slurry Wall		Outside Slurry Wall	
	Range (ug/l) ^a	Max. Sample	Range (ug/l) ^a	Max. Sample
<u>VOCs</u>				
Acetone	8,500 - 830,000	CH9	<330 - 1,800	CH6
Ethylbenzene	59 - 7,400	CH9	140 - 1,800	CH6
MEK	6,500 - 420,000	CH9	<3,300	
MIBK	520 - 130,000	CH9	<3,300	
Toluene	330 - 280,000	CH9	2,000 - 30,000	CH6
Xylenes	160 - 36,000	CH9	840 - 8,400	CH6
<u>SVOCs</u>				
Benzoic Acid	<200		<200 - 120	CH6
2-Methylphenol	<5 - 180	CH9	<100	
4-Methylphenol	<5 - 160	CH9	<100	
Phenol	<5 - 120	CH9	<100	

Notes: (a) ug/l = micrograms per liter

The highest VOC concentrations were detected in the grab groundwater sample collected from boring CH9 located inside the slurry wall in the area of the former Sherwin-Williams lacquer plant. High ethylbenzene, toluene, and xylenes concentrations were also detected in the grab groundwater sample from boring CH6, located outside the slurry wall.

Tentatively identified compounds from the VOC open scans are reported in Appendix G and are summarized in Table 8. Methylcyclohexane was detected at a concentration of 19,000 ug/l in the groundwater sample collected from boring CH9 located inside the slurry wall in the area of the former Sherwin-Williams lacquer plant. Methylcyclohexane and 1,2,4-trimethylbenzene were detected at concentrations of 1,900 ug/l and 1,000 ug/l, respectively, in the groundwater sample collected from boring CH6 located outside the slurry wall.

Tentatively identified compounds from the SVOC open scans are reported in Appendix G and are summarized in Table 9. Several methyl and ethyl-substituted benzene compounds were detected (at concentrations up to 2,500 ug/l) in the grab groundwater sample from boring CH9 inside the slurry wall in the area of the former Sherwin-Williams lacquer plant. Many of these same organic compounds were also detected (at concentrations up to 1,800 ug/l) in the groundwater sample collected from boring CH6

inside the slurry wall. Other SVOCs tentatively identified in the sample from boring CH9 include 2-butoxyethanol at a concentration of 18,000 ug/l, butoxymethyloxirane at 4,900 ug/l, and an unidentified hydrocarbon (reported by the laboratory to possibly be oil, Appendix G) at 40,000 ug/l. Butoxymethyloxirane was also detected at 2,800 ug/l in the groundwater sample from boring CH6 outside the slurry wall. Likewise, an unidentified hydrocarbon (reported by the laboratory to possibly be oil, Appendix G) was also detected at 21,000 and 2,200 ug/l in the groundwater samples from borings CH10 and CH6, respectively.

5.0 FINDINGS

The available data from the recent soil and groundwater investigations on the Sherwin-Williams Site performed by EKI near the southern boundary of the former Rifkin Property indicate the following:

- High arsenic concentrations (i.e., exceeding 500 mg/kg) were detected in 16 of the 19 soil samples collected on the Sherwin-Williams Site. The maximum arsenic concentration detected was 56,000 mg/kg at boring CH7 in the soil sample collected below the concrete slab. An arsenic concentration of 30,000 mg/kg was found in soil at a depth of 4 to 4.5 feet bgs at boring CH3 located outside the slurry wall adjacent to the southern wall of the former Rifkin Building.
- Arsenic concentrations exceeding 500 mg/kg were detected in all 11 samples of fill material located above the concrete slab, including the five samples collected within approximately 3 to 10 feet of the southern wall of the former Rifkin Building.
- High arsenic concentrations (i.e., 6,000 ug/l and 310,000 ug/l) were detected in the two field-filtered grab groundwater samples collected from borings (CH6 and CH10, respectively) outside the slurry wall adjacent to the southern boundary of the former Rifkin Property. Arsenic concentrations in two field-filtered grab groundwater samples collected from nearby borings CH5 and CH9 inside the slurry wall were 650,000 ug/l and 820,000 ug/l, respectively.
- Lead concentrations exceeding 1,000 mg/kg were detected in 13 of 19 soil samples collected on the Sherwin-Williams Site. The maximum lead concentration detected in soil was 120,000 mg/kg at boring CH6 at a depth of 3.5 to 4 feet bgs outside the slurry wall adjacent to the southern wall of the former Rifkin Building.
- A pH of 5.4 was detected in the soil from boring CH3. This boring is near the former location of a Sherwin-Williams acetic acid storage tank (Figure 3).
- A pH of 4.0 was measured in the grab groundwater sample collected from boring CH6. This boring is in the former location of a Sherwin-Williams arsenic acid building (Figure 3). This location is also near the portion of the southern wall of the former Rifkin Building from which interior residue samples with low pH were collected previously (EKI, 1996c).
- The highest VOC concentrations (e.g., 830,000 ug/L acetone, 7,400 ug/L ethylbenzene, 420,000 ug/L MEK, 130,000 ug/L MIBK, 280,000 ug/L toluene, and 36,000 ug/L xylenes) detected in grab groundwater samples were

from boring CH9, located in the area of the former Sherwin-Williams lacquer plant (Figure 3). However, high acetone (1,800 ug/l), ethylbenzene (1,500 ug/l), toluene (24,000 ug/l), and xylenes (6,900 ug/l) concentrations were also detected in the grab groundwater sample collected from boring CH6, outside the slurry wall.

- High concentrations of tentatively identified volatile and semivolatile organic compounds were also detected in the soil samples collected from boring CH9 in the location of the former Sherwin-Williams lacquer plant. Chemicals detected in the lower soil sample from boring CH9 included several methyl and ethyl-substituted cyclopentane compounds, heptane, 3-methylhexane, and dimethylbenzene with concentrations ranging from 120 mg/kg to 710 mg/kg each. An unidentified semivolatile hydrocarbon (which the laboratory indicated may be oil) was also present in the lower soil sample from boring CH9 at a concentration of 45,000 mg/kg. Unidentified semivolatile hydrocarbons (which the laboratory indicated may be oil) were also detected at concentrations ranging from 160 to 530 mg/kg in soil samples collected from borings CH1, CH1B, CH3, CH6, and CH10 located outside the slurry wall.
- The grab groundwater sample collected from boring CH9 likewise contained high concentrations of tentatively identified volatile and semivolatile organic compounds. Chemicals detected at concentrations exceeding 1,000 ug/l in groundwater samples include 1,2,3-trimethylbenzene, 1-ethyl-3-methylbenzene, 2-butoxyethanol, and butoxymethyloxirane. Several of these compounds were also detected (at concentrations up to 2,800 ug/l) in the grab groundwater sample collected from boring CH6, located outside the slurry wall. The groundwater sample from boring CH6 also contained 1,2,4-trimethylbenzene and dimethylbenzene at concentrations exceeding 1,000 ug/l.

6.0 REFERENCES

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Sherwin-Williams Company. *Plant Layout*, drawing dated February 1947.

Table 1
Summary of Soil Boring Information on the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Boring ID	Depth of Sample (ft bgs) (a)			Concrete Slab	
	"A" Soil	"B" Soil	Groundwater (b)	Depth to Upper Surface (ft bgs)	Thickness (inches)
CH1	1.5-2.0	NS (c)	NS	2.8	NA (d)
CH1B	1.5-2.0	NS	NS	2.8	NA (d)
CH2	1.0-1.5	5.5-6.0	NS	Not present	Not present
CH3	1.0-1.5	4.0-4.5	NS	2.5	5.5
CH4	1.0-1.5	4.5-5.0 (e)	NS	Not present	Not present
CH5	1.5-2.0	4.0-4.5	10-19	2.5	5.0
CH6	1.5-2.0	3.5-4.0	10-16	2.0	4.5
CH7	1.0-1.5	4.0-4.5	NS	2.0 (f)	6.0
CH8	1.0-1.5	4.0-4.5	NS	1.7	5.0
CH9	1.5-2.0	3.0-3.5	10-16	2.1	5.0
CH10	1.5-2.0	6.0-6.5	13-19	4.0 (g)	5.0

Notes:

Soil and groundwater samples collected by EKI from 12 November 1996 to 15 November 1996.

(a) Feet below ground surface ("ft bgs").

(b) Depth of temporary screened interval for grab groundwater samples.

(c) No sample collected ("NS").

(d) Concrete slab thickness not available ("NA") because coring did not penetrate through entire concrete section.

(e) Sample appeared to consist of slurry wall material.

(f) 3-inch layer of asphalt encountered at 1.8 ft bgs.

(g) Chunks of concrete encountered between 2.5 and 4 ft bgs.

Table 2
Analytical Schedule for Soil and Water Samples
Collected by EKI on the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Sample		Analyses Performed (a)					
		3 Metals and pH	Title 22 Metals	VOCs	SVOCs	TCLP for As, Pb	TCLP for VOCs
Location	Type						
CH1-A	Soil	x	x	x	x	x	
CH1B-A	Soil	x	x	x	x		
CH2-A	Soil	x	x			x (b)	
CH2-B	Soil	x	x			x (b)	
CH3-A	Soil	x	x	x	x	x	
CH3-B	Soil	x	x	x	x	x	
CH4-A	Soil	x	x			x (b)	
CH4-B	Soil	NA (c)	NA			x (b)	
CH5-A	Soil	x	x			x (b)	
CH5-B	Soil	x	x			x (b)	
CH6-A	Soil	x	x	x	x	x	
CH6-B	Soil	x	x	x	x	x	
CH7-A	Soil	x				x (b)	x (b)
CH7-B	Soil	x				x (b)	x (b)
CH8-A	Soil	x		x	x	x (b)	x (b)
CH8-B	Soil	x		x	x	x (b)	x (b)
CH9-A	Soil	x		x	x	x (b)	x (b)
CH9-B	Soil	x		x	x	x (b)	x (b)
CH10-A	Soil	x	x	x	x	x	x
CH10-B	Soil	x	x	x	x	x	
CH5	Water	x (d)	x (d)	x	x		
CH6	Water	x	x	x	x		
CH6 dup.	Water	x	x	x	x		
CH9	Water	x	x	x	x		
CH10	Water	x	x	x	x		
ERB (e)	Water	x	x	x	x		

Notes:

- (a) 3 Metals and pH = arsenic, lead, zinc (total wet weight basis), and pH
 Title 22 Metals = antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium silver, thallium, vanadium, and zinc by EPA Method 6000 Series, and mercury by EPA Method 7470/1 (total wet weight basis)
 VOCs = volatile organic compounds by EPA Method 8240 (with open scan)
 SVOCs = semivolatile organic compounds by EPA Method 8270 (with open scan)
 TCLP for As, Pb = toxicity characteristic leaching procedure for arsenic and lead
 TCLP for VOCs = toxicity characteristic leaching procedure for VOCs
- (b) Samples CH2-A, CH4-A, and CH5-A; samples CH2-B, CH4-B, and CH5-B; samples CH7-A, CH8-A, and CH9-A; and samples CH7-B, CH8-B, and CH9-B were combined into four composite samples by the laboratory prior to TCLP extraction.
- (c) Soil sample CH4-B was not analyzed as it appeared to consist of slurry wall material.
- (d) Grab groundwater samples analyzed for metals were filtered in the field using a 0.45 micron filter at the time of sample collection.
- (e) Equipment rinsate blank.

Table 3
Metals Concentrations (mg/kg) and pH in Soil Samples
from the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Sample ID (a)	CH1	CH1B	CH2		CH3		TTLC (b)
	A	A	A	B	A	B	
Antimony	12	8.8	12	10	6.4	1,300	500
Arsenic	1,500	960/1,100 (c)	750	12	920	30,000	500
Barium	150	150	190	140	130	160	10,000
Beryllium	<0.5 (d)	<0.5	<0.5	<0.5	<0.5	<0.5	75
Cadmium	3.9	4.1	2.1	0.60	2.5	94	100
Chromium	33	41	39	32	35	12	2,500
Cobalt	<2.5	10	12	9.3	7.9	2.9	8,000
Copper	62	48	47	20	33	450	2,500
Lead	2,000	2,300	1,600	63	520	8,900	1,000
Mercury	0.42	0.37	0.62	0.079	1.7	4.4	20
Molybdenum	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	3,500
Nickel	38	44	50	39	35	6.0	2,000
Selenium	<5	<5	<5	<5	<5	<5	100
Silver	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	500
Thallium	<5	<5	<5	<5	<5	9.3	700
Vanadium	29	37	32	27	34	5.9	2,400
Zinc	160	150	170	120	120	320	5,000
pH	8.7	8.5	9.0	7.0	10	5.4	2.0 (e) / 12.5

Notes:

Soil samples collected by EKI from 12 November 1996 to 15 November 1996.

All concentrations in mg/kg.

(a) Sample ID indicates boring location.

"A" soil samples collected at 1.0 to 2.0 feet below ground surface.

"B" soil samples collected between 3.5 and 6.5 feet below ground surface.

(b) Total threshold limit concentration ("TTLC") for characterization of a waste as a California hazardous waste. Concentrations in boldface type exceed TTLC.

(c) Duplicate analyses shown as values separated by forward slash ("/").

(d) Less than symbol ("<") indicates concentration less than reported laboratory method detection limit as shown.

(e) A solid waste is characterized as a California hazardous waste if it has a pH less than 2 or greater than 12.5 as measured by EPA Method 9045.

(f) The soil sample CH4-B was not analyzed ("NA") because the sample appeared to consist only of slurry wall material.

Table 3
Metals Concentrations (mg/kg) and pH in Soil Samples
from the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Sample ID (a)	CH4		CH5		CH6		CH7		TTLIC (b)
	A	B	A	B	A	B	A	B	
Antimony	10	NA (f)	12	7.9	8.2	38	NA	NA	500
Arsenic	780	NA	1,100	42	1,900	4,500	580	56,000	500
Barium	140	NA	140	400	220	130	NA	NA	10,000
Beryllium	<0.5	NA	0.51	1.0	<0.5	<2.5	NA	NA	75
Cadmium	2.3	NA	3.0	<0.5	5.5	19	NA	NA	100
Chromium	33	NA	48	16	33	34	NA	NA	2,500
Cobalt	8.7	NA	12	23	11	<13	NA	NA	8,000
Copper	37	NA	57	29	37	740	NA	NA	2,500
Lead	1,200	NA	2,800	72	580	120,000	1,400	1,400	1,000
Mercury	0.28	NA	0.38	1.6	0.97	2.4	NA	NA	20
Molybdenum	<2.5	NA	<2.5	<2.5	<2.5	<25	NA	NA	3,500
Nickel	36	NA	53	38	36	41	NA	NA	2,000
Selenium	<5	NA	<5	<5	<5	<25	NA	NA	100
Silver	<0.5	NA	<0.5	<0.5	<0.5	88	NA	NA	500
Thallium	<5	NA	<5	<5	<5	<25	NA	NA	700
Vanadium	29	NA	34	26	29	19	NA	NA	2,400
Zinc	170	NA	160	75	200	510	230	260	5,000
pH	10	NA	8.2	9.3	8.7	7.5	9.1	6.1	2.0 (e) / 12.5

Notes:

- Soil samples collected by EKI from 12 November 1996 to 15 November 1996.
- All concentrations in mg/kg.
- (a) Sample ID indicates boring location.
 - "A" soil samples collected at 1.0 to 2.0 feet below ground surface.
 - "B" soil samples collected between 3.5 and 6.5 feet below ground surface.
- (b) Total threshold limit concentration ("TTLIC") for characterization of a waste as a California California hazardous waste. Concentrations in boldface type exceed TTLIC.
- (c) Duplicate analyses shown as values separated by forward slash ("/").
- (d) Less than symbol ("<") indicates concentration less than reported laboratory method detection limit as shown.
- (e) A solid waste is characterized as a California hazardous waste if it has a pH less than 2 or greater than 12.5 as measured by EPA Method 9045.
- (f) The soil sample CH4-B was not analyzed ("NA") because the sample appeared to consist only of slurry wall material.

Table 3
Metals Concentrations (mg/kg) and pH in Soil Samples
from the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Sample ID (a)	CH8		CH9		CH10		TTLC (b)
	A	B	A	B	A	B	
Antimony	NA	NA	NA	NA	<5	10	500
Arsenic	700	18,000	610	27,000	930	42/22	500
Barium	NA	NA	NA	NA	200	100	10,000
Beryllium	NA	NA	NA	NA	<0.5	<0.5	75
Cadmium	NA	NA	NA	NA	3.0	<0.5	100
Chromium	NA	NA	NA	NA	11	42	2,500
Cobalt	NA	NA	NA	NA	3.1	9.6	8,000
Copper	NA	NA	NA	NA	24	16	2,500
Lead	1,100	40,000	2,900	62,000	380	23	1,000
Mercury	NA	NA	NA	NA	0.26	0.04	20
Molybdenum	NA	NA	NA	NA	<2.5	<2.5	3,500
Nickel	NA	NA	NA	NA	11	48	2,000
Selenium	NA	NA	NA	NA	<5	<5	100
Silver	NA	NA	NA	NA	<0.5	<0.5	500
Thallium	NA	NA	NA	NA	<5	<5	700
Vanadium	NA	NA	NA	NA	9.1	26	2,400
Zinc	180	440	160	3,100	180	35	5,000
pH	9.4	7.9	8.0	7.3	7.9	12	2.0 (e) / 12.5

Notes:

- Soil samples collected by EKI from 12 November 1996 to 15 November 1996.
- All concentrations in mg/kg.
- (a) Sample ID indicates boring location.
 - "A" soil samples collected at 1.0 to 2.0 feet below ground surface.
 - "B" soil samples collected between 3.5 and 6.5 feet below ground surface.
- (b) Total threshold limit concentration ("TTLC") for characterization of a waste as a California California hazardous waste. Concentrations in boldface type exceed TTLC.
- (c) Duplicate analyses shown as values separated by forward slash ("/").
- (d) Less than symbol ("<") indicates concentration less than reported laboratory method detection limit as shown.
- (e) A solid waste is characterized as a California hazardous waste if it has a pH less than 2 or greater than 12.5 as measured by EPA Method 9045.
- (f) The soil sample CH4-B was not analyzed ("NA") because the sample appeared to consist only of slurry wall material.

Table 4
Volatile Organic Chemical Concentrations (mg/kg) in Soil Samples
from the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Sample ID (a)	CH1	CH1B	CH2		CH3		CH4		CH5	
	A	A	A	B	A	B	A	B	A	B
Acetone (b)	<0.5 (c)	<0.5	NA (d)	NA	<0.5	<0.5	NA	NA	NA	NA
Methyl ethyl ketone	<0.5	<0.5	NA	NA	<0.5	<0.5	NA	NA	NA	NA
Methyl isobutyl ketone	<0.5	<0.5	NA	NA	<0.5	<0.5	NA	NA	NA	NA
Ethylbenzene	<0.1	<0.1	NA	NA	<0.1	<0.1	NA	NA	NA	NA
Toluene	<0.1	<0.1	NA	NA	<0.1	<0.1	NA	NA	NA	NA
Xylenes	<0.1	<0.1	NA	NA	<0.1	<0.1	NA	NA	NA	NA
Other TICs (e)										
Cyclohexane, methyl-	<0.25	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
Cyclopentane, 1,2,3-trimethyl-	<0.25	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
Cyclopentane, 1,2,4-trimethyl-	<0.25	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
Cyclopentane compound (f)	<0.25	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
Cyclopentane compound (g)	<0.25	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
Cyclopentane, ethyl-	<0.25	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
Heptane	<0.25	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
Hexane, 3-methyl-	<0.25	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
2-Hexanol	<0.25	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
2-Methyl-1-propanol	<0.25	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA

Notes:

Soil samples collected by EKI from 12 November 1996 to 15 November 1996.

All concentrations in mg/kg.

(a) Sample ID indicates boring location.

"A" soil samples collected at 1.0 to 2.0 feet below ground surface.

"B" soil samples collected between 3.5 and 6.5 feet below ground surface.

(b) Only those chemicals detected above laboratory method detection limits in soil samples are shown.

(c) Less than symbol (" $<$ ") indicates concentration less than reported laboratory method detection limit as shown.

(d) Not analyzed ("NA").

(e) Other tentatively identified compounds ("TICs") from open scan.

(f) Cyclopentane, 1,2-dimethyl-, trans-

(g) Cyclopentane, 1,3-dimethyl-, trans-

Table 4
Volatile Organic Chemical Concentrations (mg/kg) in Soil Samples
from the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Sample ID (a)	CH6		CH7		CH8		CH9		CH10	
	A	B	A	B	A	B	A	B	A	B
Acetone (b)	<0.5	<0.5	NA	NA	<0.5	<0.5	0.87	420	<0.5	13
Methyl ethyl ketone	<0.5	<0.5	NA	NA	<0.5	<0.5	<0.5	<200	<0.5	1.7
Methyl isobutyl ketone	<0.5	<0.5	NA	NA	<0.5	<0.5	<0.5	300	<0.5	0.93
Ethylbenzene	<0.1	<0.1	NA	NA	<0.1	<0.1	<0.1	110	<0.1	<0.1
Toluene	<0.1	<0.1	NA	NA	<0.1	<0.1	0.13	2,600	<0.1	0.15
Xylenes	<0.1	<0.1	NA	NA	<0.1	<0.1	<0.1	570	<0.1	0.20
Other TICs (e)										
Cyclohexane, methyl-	<0.25	<0.25	NA	NA	<0.25	0.51	<0.25	<100	0.55	<0.25
Cyclopentane, 1,2,3-trimethyl-	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	190	<0.25	<0.25
Cyclopentane, 1,2,4-trimethyl-	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	170	<0.25	<0.25
Cyclopentane compound (f)	<0.25	<0.25	NA	NA	<0.25	0.38	<0.25	710	<0.25	<0.25
Cyclopentane compound (g)	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	250	<0.25	<0.25
Cyclopentane, ethyl-	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	150	<0.25	<0.25
Heptane	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	560	<0.25	<0.25
Hexane, 3-methyl-	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	270	<0.25	<0.25
2-Hexanol	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	<100	<0.25	0.44
2-Methyl-1-propanol	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	<100	<0.25	0.66

Notes:

Soil samples collected by EKI from 12 November 1996 to 15 November 1996.

All concentrations in mg/kg.

(a) Sample ID indicates boring location.

"A" soil samples collected at 1.0 to 2.0 feet below ground surface.

"B" soil samples collected between 3.5 and 6.5 feet below ground surface.

(b) Only those chemicals detected above laboratory method detection limits in soil samples are shown.

(c) Less than symbol (" $<$ ") indicates concentration less than reported laboratory method detection limit as shown.

(d) Not analyzed ("NA").

(e) Other tentatively identified compounds ("TICs") from open scan.

(f) Cyclopentane, 1,2-dimethyl-, trans-

(g) Cyclopentane, 1,3-dimethyl-, trans-

Table 5
Semivolatile Organic Chemical Concentrations (mg/kg) in Soil Samples
from the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Sample ID (a)	CH1	CH1B	CH2		CH3		CH4		CH5	
	A	A	A	B	A	B	A	B	A	B
Benzo(a)anthracene (b)	0.25	<0.25 (c)	NA (d)	NA	<0.25	<0.25	NA	NA	NA	NA
Benzo(a)pyrene	0.68	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
Benzo(b)fluoranthene	0.41	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
Benzo(k)fluoranthene	0.37	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	<0.5	<0.5	NA	NA	<0.5	<0.5	NA	NA	NA	NA
Chrysene	0.57	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
Fluoranthene	0.28	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	0.28	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
Pyrene	0.34	<0.25	NA	NA	<0.25	<0.25	NA	NA	NA	NA
<u>Other TICs (e)</u>										
Acetic acid compound (f)	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
Benzene, dimethyl-	0.62	<0.13	NA	NA	0.89	0.82	NA	NA	NA	NA
2-Butoxyethanol	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
Copaene	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
Cycloalkane	<0.13	<0.13	NA	NA	0.15	<0.13	NA	NA	NA	NA
Decane, 5-propyl-	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
Decane,2,6,7-trimethyl-	<0.13	<0.13	NA	NA	<0.13	0.32	NA	NA	NA	NA
Dodecane,2,6,10-trimethyl-	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
Dodecane,2,7,10-trimethyl-	<0.13	<0.13	NA	NA	0.99	<0.13	NA	NA	NA	NA
Elemene	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
Heptacosane	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
Heptadecane, 9-octyl-	<0.13	<0.13	NA	NA	0.21	<0.13	NA	NA	NA	NA
Hexane,2,2,5,5-tetramethyl-	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
Hexatriacontane	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
3-Hexen-2-one, 5-methyl-	<0.13	<0.13	NA	NA	0.16	<0.13	NA	NA	NA	NA
Naphthalene compound (g)	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
Nonacosane	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
1-Nonanol, 4,8-dimethyl-	<0.13	<0.13	NA	NA	0.48	<0.13	NA	NA	NA	NA
Octane, 2,3,7-trimethyl-	<0.13	<0.13	NA	NA	0.15	<0.13	NA	NA	NA	NA
Pentatriacontane	<0.13	<0.13	NA	NA	0.57	<0.13	NA	NA	NA	NA
Phenanthrene, methyl-	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
Tetracontane compound (h)	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
Tridecane	<0.13	<0.13	NA	NA	0.28	<0.13	NA	NA	NA	NA
Undecane	<0.13	<0.13	NA	NA	0.18	<0.13	NA	NA	NA	NA
Undecane, 5,6-dimethyl-	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
2-Undecene, 4,5-dimethyl-	<0.13	<0.13	NA	NA	<0.13	<0.13	NA	NA	NA	NA
Unknown hydrocarbon (i)	280	160	NA	NA	<0.13	530	NA	NA	NA	NA
Unknowns	0.30	0.70	NA	NA	0.53	0.26	NA	NA	NA	NA
					0.21					

Table 5
Semivolatile Organic Chemical Concentrations (mg/kg) in Soil Samples
from the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Sample ID (a)	CH6		CH7		CH8		CH9		CH10	
	A	B	A	B	A	B	A	B	A	B
Benzo(a)anthracene (b)	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	<62	<0.25	<2.5
Benzo(a)pyrene	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	<62	<0.25	<2.5
Benzo(b)fluoranthene	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	<62	<0.25	<2.5
Benzo(k)fluoranthene	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	<62	<0.25	<2.5
Bis(2-ethylhexyl)phthalate	1.3	<0.5	NA	NA	1.0	<0.5	<0.5	<120	2.3	<5
Chrysene	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	<62	<0.25	<2.5
Fluoranthene	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	<62	<0.25	<2.5
Indeno(1,2,3-cd)pyrene	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	<62	<0.25	<2.5
Pyrene	<0.25	<0.25	NA	NA	<0.25	<0.25	<0.25	<62	<0.25	<2.5
<u>Other TICs (e)</u>										
Acetic acid compound (f)	<0.13	<0.13	NA	NA	<0.13	<0.13	<0.13	<33	0.71	<1.3
Benzene, dimethyl-	<0.13	0.65	NA	NA	0.50	0.76	0.70	120	<0.13	<1.3
2-Butoxyethanol	<0.13	<0.13	NA	NA	<0.13	<0.13	<0.13	<33	<0.13	22
Copaene	0.63	<0.13	NA	NA	<0.13	<0.13	<0.13	<33	<0.13	<1.3
Cycloalkane	<0.13	<0.13	NA	NA	<0.13	<0.13	<0.13	<33	<0.13	<1.3
Decane, 5-propyl-	<0.13	<0.13	NA	NA	<0.13	<0.13	<0.13	35	<0.13	<1.3
Decane,2,6,7-trimethyl-	<0.13	<0.13	NA	NA	<0.13	<0.13	<0.13	<33	<0.13	<1.3
Dodecane,2,6,10-trimethyl-	<0.13	<0.13	NA	NA	<0.13	0.28	<0.13	<33	<0.13	<1.3
Dodecane,2,7,10-trimethyl-	<0.13	<0.13	NA	NA	<0.13	0.34	<0.13	<33	<0.13	<1.3
Elemene	0.48	<0.13	NA	NA	<0.13	<0.13	<0.13	<33	<0.13	<1.3
Heptacosane	<0.13	<0.13	NA	NA	<0.13	0.3	<0.13	<33	<0.13	<1.3
Heptadecane, 9-octyl-	<0.13	<0.13	NA	NA	<0.13	<0.13	<0.13	<33	<0.13	<1.3
Hexane,2,2,5,5-tetramethyl-	<0.13	<0.13	NA	NA	0.28	<0.13	<0.13	<33	<0.13	<1.3
Hexatriacontane	<0.13	0.45	NA	NA	<0.13	<0.13	<0.13	<33	<0.13	<1.3
3-Hexen-2-one, 5-methyl-	<0.13	<0.13	NA	NA	<0.13	<0.13	<0.13	<33	<0.13	<1.3
Naphthalene compound (g)	0.74	<0.13	NA	NA	<0.13	<0.13	<0.13	<33	<0.13	<1.3
Nonacosane	<0.13	0.21	NA	NA	<0.13	<0.13	<0.13	<33	<0.13	<1.3
1-Nonanol, 4,8-dimethyl-	<0.13	<0.13	NA	NA	<0.13	<0.13	<0.13	<33	<0.13	<1.3
Octane, 2,3,7-trimethyl-	<0.13	<0.13	NA	NA	<0.13	<0.13	<0.13	<33	<0.13	<1.3
Pentatriacontane	<0.13	<0.13	NA	NA	<0.13	0.41	<0.13	<33	<0.13	<1.3
Phenanthrene, methyl-	<0.13	<0.13	NA	NA	<0.13	0.35	<0.13	<33	<0.13	<1.3
Tetracontane compound (h)	<0.13	<0.13	NA	NA	0.19	<0.13	<0.13	<33	<0.13	<1.3
Tridecane	<0.13	<0.13	NA	NA	<0.13	<0.13	<0.13	<33	<0.13	<1.3
Undecane	<0.13	<0.13	NA	NA	0.14	<0.13	<0.13	<33	<0.13	<1.3
Undecane, 5,6-dimethyl-	<0.13	<0.13	NA	NA	0.13	<0.13	<0.13	<33	<0.13	<1.3
2-Undecene, 4,5-dimethyl-	<0.13	<0.13	NA	NA	0.15	<0.13	<0.13	<33	<0.13	<1.3
Unknown hydrocarbon (i)	230	<0.13	NA	NA	210	<0.13	110	45,000	260	<1.3
Unknowns	0.26	0.20	NA	NA	0.26	0.26	0.38	<33	<0.13	5.4,2.2
					0.18,	0.16				1.4

Table 5
Semivolatile Organic Chemical Concentrations (mg/kg) in Soil Samples
from the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Notes:

Soil samples collected by EKI from 12 November 1996 to 15 November 1996.

All concentrations in mg/kg.

(a) Sample ID indicates boring location.

"A" soil samples collected at 1.0 to 2.0 feet below ground surface.

"B" soil samples collected between 3.5 and 6.5 feet below ground surface.

(b) Only those chemicals detected above laboratory method detection limits in soil samples are shown.

(c) Less than symbol (" $<$ ") indicates concentration less than reported laboratory method detection limit as shown.

(d) Not analyzed ("NA").

(e) Other tentatively identified compounds ("TICs") from open scan.

(f) Naphthalene, 1,2,3,5,6,8A-hexahydro-4,7-Dimethyl-1-(1-Methylethyl)-

(f) Acetic acid, 1-methylethyl ester

(g) Naphthalene, 1,2,3,5,6,8A-hexahydro-4,7-Dimethyl-1-(1-Methylethyl)-

(h) Tetracontane, 3,5,24-trimethyl-

(i) Laboratory indicated that unknown hydrocarbon may be oil.

Table 6
TCLP Extract Concentrations (mg/l) of Soil Samples
from the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Sample ID (a)	CH1	CH3		CH6		CH10		CH2/CH4/CH5		CH7/CH8/CH9		Hazardous Waste Criteria (b)
	A	A	B	A	B	A	B	A	B	A	B	
Selected Metals												
Arsenic	11	13	89	4.7	0.47	6.8	1.8	6.2	0.19	4.3	97	5.0
Lead	<0.1 (c)	<0.1	<0.1	<0.1	3.9	0.15	<0.1	<0.1	<0.1	<0.1	<0.1	5.0
Purgeable Organics												
Benzene (d)	NA (e)	NA	NA	NA	NA	<0.02	NA	NA	NA	<0.02	0.26	0.5
Methyl ethyl ketone	NA	NA	NA	NA	NA	<0.1	NA	NA	NA	<0.1	2.8	200

Notes:

Soil samples collected by EKI from 12 November 1996 to 15 November 1996.

All concentrations in mg/l.

(a) Sample ID indicates boring location.

"A" soil samples collected at 1.0 to 2.0 feet below ground surface.

"B" soil samples collected between 3.5 and 6.5 feet below ground surface.

Where three sample IDs are shown, the three soil samples were combined into a composite sample by the laboratory prior to analysis.

(b) Toxicity Characteristic Leaching Procedure ("TCLP") extract concentration of chemical for characterization of a waste as a hazardous waste. Concentrations in boldface type exceed hazardous waste criteria.

(c) Less than symbol ("<") indicates concentration less than laboratory method detection limit shown.

(d) Only those chemicals detected above laboratory method detection limits in soil samples are shown (See Appendix G).

(e) Not analyzed ("NA").

Table 7
Metals Concentrations (ug/l) and pH in Grab Groundwater Samples
from the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Sample ID (a)	CH5	CH6	duplicate CH6 (b)	CH9	CH10	ERB (c)
Antimony	250	<100 (d)	180	<100	<100	<100
Arsenic	650,000	6,000	5,400	820,000	310,000	<100
Barium	<100	<100	<100	<100	<100	<100
Beryllium	<10	<10	<10	<10	<10	<10
Cadmium	3,400	63	64	4,100	1,400	<10
Chromium	<10	<10	<10	<10	<10	<10
Cobalt	110	150	160	290	<50	<50
Copper	<10	<10	<10	<10	<10	<10
Lead	<100	<100	<100	<100	<100	<100
Mercury	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Molybdenum	<50	<50	<50	<50	<50	<50
Nickel	200	570	610	630	<50	<50
Selenium	<100	<100	<100	<100	<100	<100
Silver	<10	<10	<10	<10	<10	<10
Thallium	<100	<100	<100	<100	<100	<100
Vanadium	<50	<50	<50	<50	<50	<50
Zinc	2,300	12,000	14,000	2,900	83	19
pH	5.9	4.0	4.0	5.3	6.1	7.1
pH in field (e)	5.8	4.3	NA (f)	5.6	6.1	NA

Notes:

Water samples collected by EKI on 14 November 1996.

All concentrations in ug/l.

Grab groundwater samples analyzed for metals were filtered in the field using a 0.45 micron filter and acidified at the time of sample collection (Appendix C).

(a) Sample ID indicates boring location.

(b) Duplicate of CH6 groundwater sample submitted to laboratory for chemical analyses.

(c) Equipment rinseate blank ("ERB") sample.

(d) Less than symbol ("<") indicates concentration less than reported laboratory method detection limit as shown.

(e) pH value measured in the field by EKI personnel at time of sample collection.

(f) Not analyzed ("NA").

Table 8
Volatile Organic Chemical Concentrations (ug/l) in Grab Groundwater Samples
from the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Sample ID (a)	CH5	CH6	duplicate CH6 (b)	CH9	CH10	ERB (c)
Acetone (d)	8,500	1,800	<3,300 (e)	830,000	<330	18
Ethylbenzene	59	1,500	1,800	7,400	140	<2
Methyl ethyl ketone	6,500	<1,700	<3,300	420,000	<330	<10
Methyl isobutyl ketone	520	<1,700	<3,300	130,000	<330	<10
Toluene	330	24,000	30,000	280,000	2,000	<2
Xylenes	160	6,900	8,400	36,000	840	<2
Other TICs (f)						
Cyclohexane, methyl	<55	1,500	1,900	19,000	<5	<5
1,2,4-Trimethylbenzene	<55	1,000	<1,700	<13,000	<5	<5

Notes:

Water samples collected by EKI on 14 November 1996.

All concentrations in ug/l.

Water samples were acidified in the field (Appendix C).

(a) Sample ID indicates boring location.

(b) Duplicate of CH6 groundwater sample submitted to laboratory for chemical analyses.

(c) Equipment rinseate blank ("ERB") sample.

(d) Only those chemicals detected above laboratory detection limits in groundwater samples are shown.

(e) Less than symbol ("<") indicates concentration less than reported laboratory method detection limit as shown.

(f) Other tentatively identified compounds ("TICs") from open scan.

Table 9
Semivolatile Organic Chemical Concentrations (ug/l) in Grab Groundwater Samples
from the Sherwin-Williams Site

Chiron Corporation, Emeryville, California

Sample ID (a)	duplicate			CH9	CH10	ERB (c)
	CH5	CH6	CH6 (b)			
Benzoic Acid (d)	<10 (e)	120	<200	<200	<200	<10
2-Methylphenol	<5	<25	<100	180	<100	<5
4-Methylphenol	<5	<25	<100	160	<100	<5
Phenol	<5	<25	<100	120	<100	<5
<u>Other TICs (f)</u>						
2-Hexen-1-ol, (z)-	31	420	400	<80	<80	<4
Benzene, (1-methylethyl)-	<4	82	<80	320	<80	<4
Benzene, (2-methoxyethyl)-	<4	53	<80	<80	<80	<4
Benzene, 1,1-(1-ethenyl-1,3-propanediyl)	<4	60	<80	<80	<80	<4
Benzene, 1,2,3,5-tetramethyl-	<4	<20	<80	220	<80	<4
Benzene, 1,2,3-trimethyl-	<4	360	280	2,500	<80	<4
Benzene, 1,2,4-trimethyl-	25	1,100	1,100	870	<80	<4
Benzene, 1,3,5-trimethyl	<4	330	240	<80	<80	<4
Benzene, 1-ethyl-2-methyl-	21	240	<80	520	<80	<4
Benzene, 1-ethyl-3-methyl-	12	800	680	1,700	<80	<4
Benzene, 1-ethyl-4-methyl-	<4	<20	200	<80	<80	<4
Benzene, 1-ethyl-4-methyl-	<4	<20	<80	990	<80	<4
Benzene, dimethyl-	<4	1,600	1,800	<80	<80	<4
Benzene, propyl-	<4	150	<80	270	<80	<4
Benzeneacetic acid, alpha,-methyl-	<4	43	<80	<80	<80	<4
Benzoic acid, 3-methyl-	<4	47	<80	<80	<80	<4
Benzoic acid, 4-methyl-	<4	70	<80	<80	<80	<4
Butanoic acid, heptylester	<4	100	<80	<80	<80	<4
1-Butanol, 2-methyl-, acetate	<4	51	<80	<80	<80	<4
Cyclohexanone	360	<20	<80	<80	<80	<4
Cyclopentanol, 2-methyl-acetate, trans	<4	<20	<80	210	<80	<4
Ethane, 1,1'-oxybis[2-methoxy]-	16	<20	<80	<80	<80	<4
Ethanol, 2-(2-butoxyethoxy)-	<4	<20	<80	650	<80	<4
Ethanol, 2-butoxy-	350	<20	<80	18,000	<80	<4
Hexanoic acid, 2-ethyl-	<4	<20	<80	320	<80	<4
Nonane, 2-methyl-	<4	<20	<80	440	<80	<4
Oxirane, (butoxymethyl)-	600	<20	2,800	4,900	<80	<4
1,3,5-Trithiane	15	<20	<80	<80	<80	<4
1,2,4-Trithiolane	30	<20	<80	<80	<80	<4
Undecane	<4	<20	<80	740	<80	<4
Unknowns	71; 21	2,200	310	40,000	21,000	<4
		530		690; 590	4,000	
		66; 52		330; 280	290	

Notes:

Water samples collected by EKI on 14 November 1996. All concentrations in ug/l.

(a) Sample ID indicates boring location.

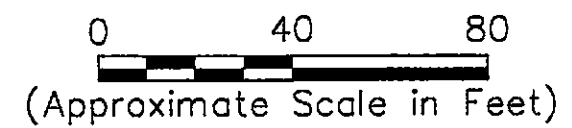
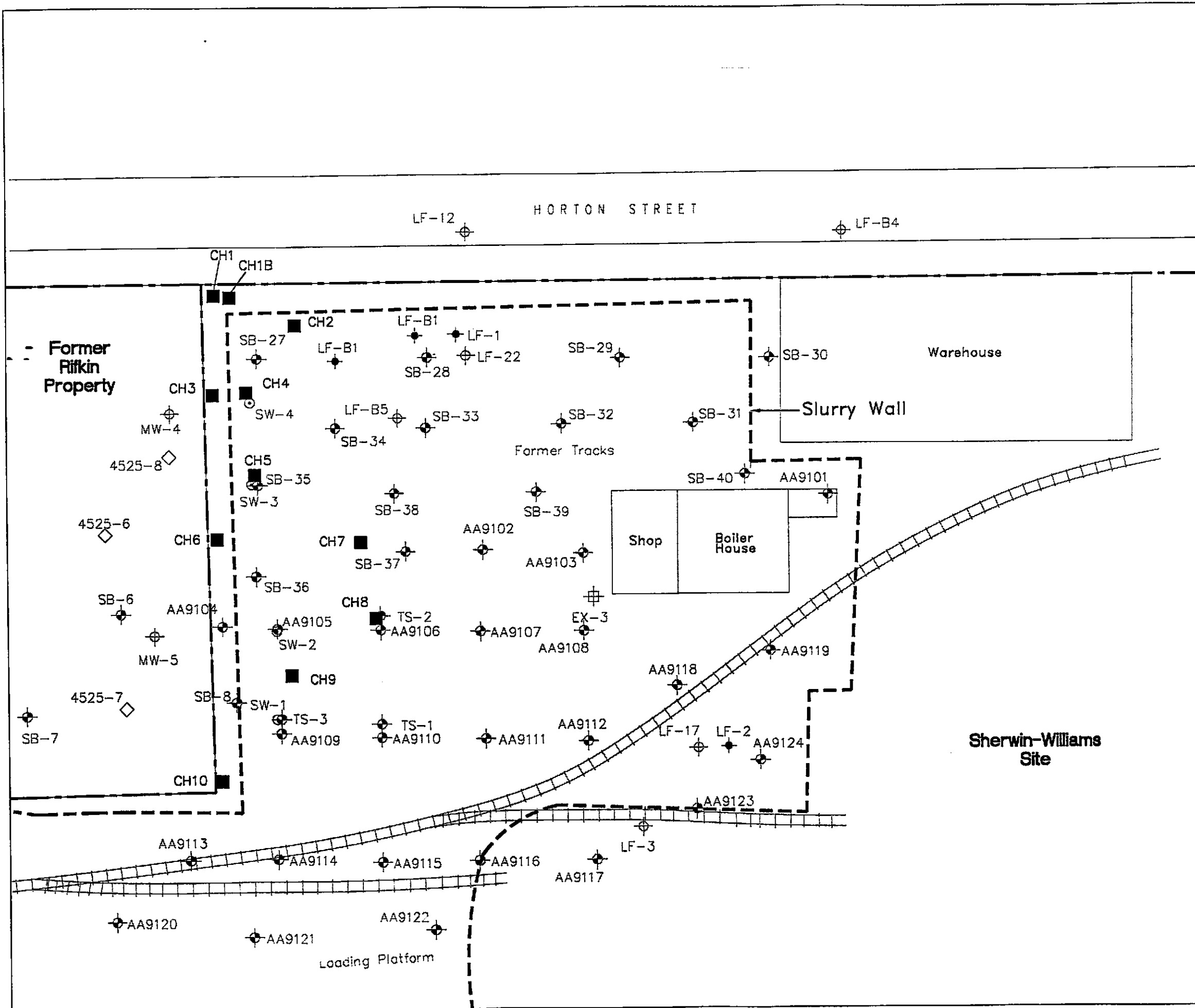
(b) Duplicate of CH6 groundwater sample submitted to laboratory for chemical analyses.

(c) Equipment rinseate blank ("ERB") sample.

(d) Only those chemicals detected above laboratory detection limits in groundwater samples are shown.

(e) Less than symbol ("<") indicates concentration less than laboratory method detection limit as shown.

(f) Other tentatively identified compounds ("TICs") from open scan.



LEGEND

- Property Boundary
- - - Slurry Wall by Sherwin-Williams
- Soil Boring Location by EKI (1996)
- ⊕ Existing Monitoring Well Location
- ⊕ Existing Extraction Well Location
- ⊕ Destroyed Monitoring Well Location
- ◇ Prior Soil Boring Location by EKI (1993)
- ⊙ Prior Soil/Grab Groundwater Location by TMC (1994)
- ⊕ Prior Soil/Grab Groundwater Location by Levine-Fricke (1990)

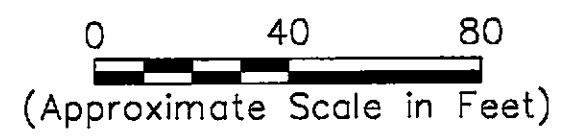
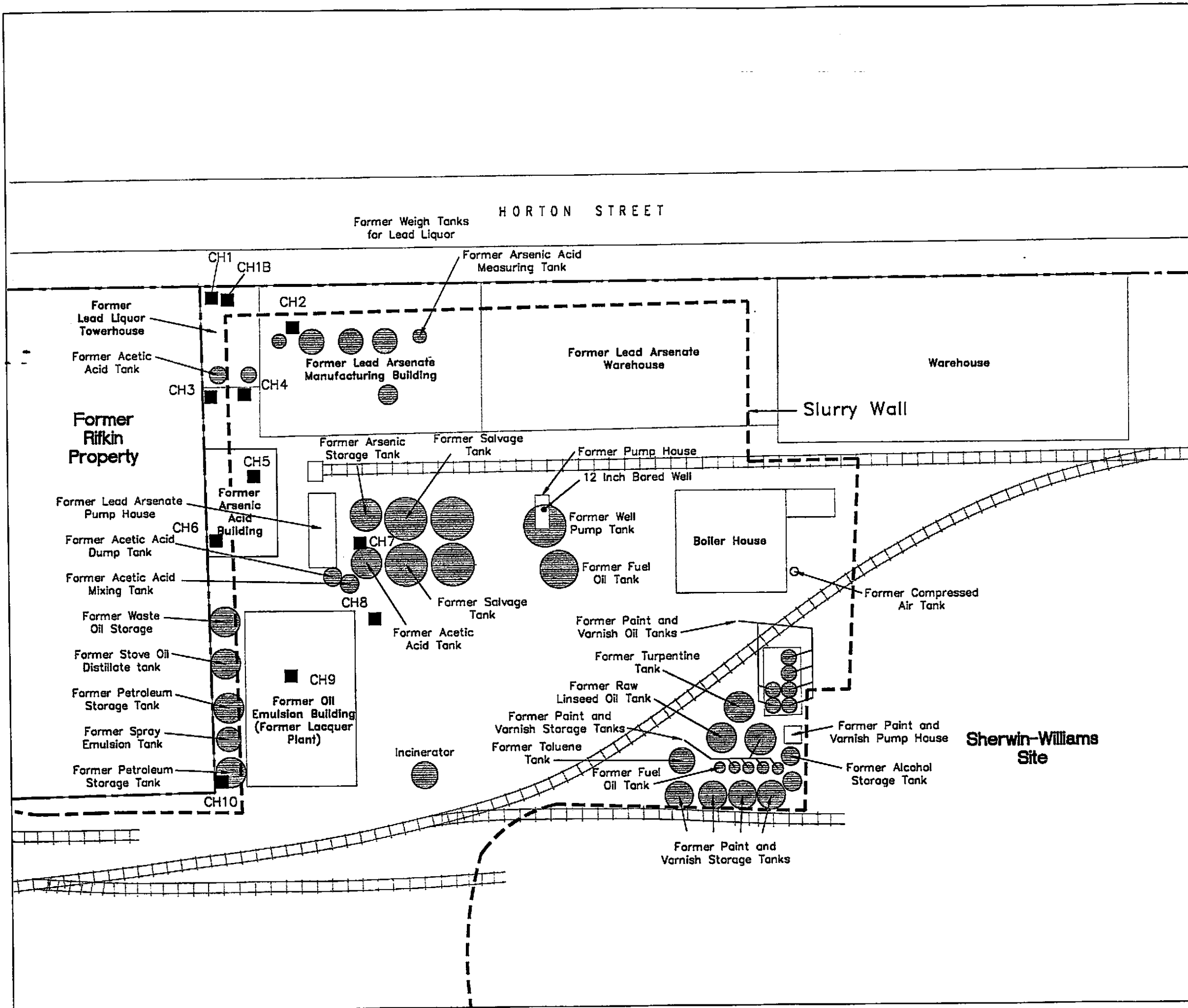
Notes:

1. All locations are approximate.
2. Figure Revised 12 November 1996.

Erler & Kalinowski, Inc.

Soil Boring Locations on the Sherwin-Williams Site

Chiron Corporation
 Emeryville, CA
 March 1997
 EKI 930028.83
 Figure 2



- LEGEND**
- Slurry Wall by Sherwin-Williams
 - - - Property Boundary
 - Soil Boring Location by EKI (1996)

- Notes:**
1. All locations are approximate.
 2. Drawing derived from Property Plot, Sherwin Williams, Oakland, California, dated 1 August 1929.

Erler & Kalinowski, Inc.

Historic Chemical Use Areas on the Sherwin-Williams Site

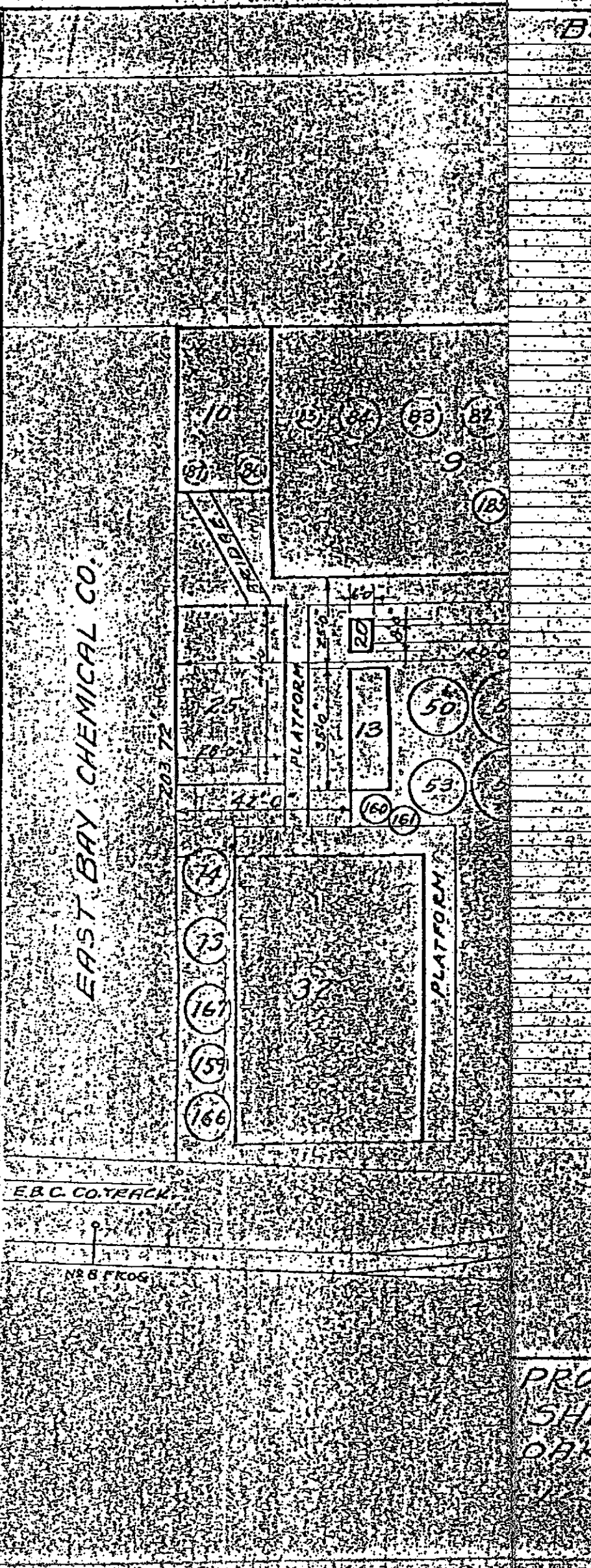
Chiron Corporation
 Emeryville, CA
 March 1997
 EKI 930028.83
 Figure 3

APPENDIX A

1929 and 1947 Plant Layout of Sherwin-Williams Company
Oakland, California

BUILDING INDEX - BUILDINGS

1	GENERAL OFFICE & WAREHOUSE
2	PAINT MANUFACTURING
3	RAW MATERIAL STORAGE 35'-0" x 100'-0" - DISMANTLED
4	" " " " 35'-0" x 84'-0" " " " "
5	VARNISH FIRE ROOM
6	FILTER PRESS & PUMP ROOM
7	VARNISH BLENDING & FILLING
8	VARNISH STORAGE - 3 ROOMS
9	MANUFACTURING BLDG - ARSENATE OF LEAD
10	LEAD LIQUOR TOWER HOUSE
11	PUMP ROOM FOR BOILER HOUSE
12	BOILER HOUSE
13	PUMP HOUSE FOR ARSENATE OF LEAD 10'-0" x 35'-0"
14	OIL EMULSION BLDG - DISMANTLED
15	COPPER SHED WITH GARAGE AT NORTH END
16	PUMP HOUSE FOR PAINT & VARNISH 7'-0" x 8'-0"
17	TRANSFORMER HOUSE
18	INCINERATOR
19	HOUSE FOR PUMP - SERVING BORED WELL 7'-0" x 10'-0"
20	CAR PULLING STATION
21	FOREMAN'S OFFICE - PAINT DEPT.
22	ELEVATED GRAVITY CONVEYER ON WOOD BENTS
23	BARREL SKIDWAY - CAR FLOOR LEVEL
24	STORAGE FOR DENATURED ALCOHOL BENEATH PLATFORM
25	ARSENIC ACID BLDG - 87'-0" GRADE TO COPING - 28'-0" x 44'-0"
26	ARSENATE OF LEAD WAREHOUSE 60'-0" x 124'-0"
27	LACQUER BLENDING UNIT 35' x 70'
28	NEW 3 STORY PAINT BUILDING 60' x 60'
29	NEW VARNISH FIRE BUILDING 30' x 30'
30	VARNISH COLD CUT BUILDING 41' x 33'
31	NEW 3 STORY WAREHOUSE 145' x 68'
32	OIL EMULSION BUILDING 30' x 70'
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
TANKS	
50	ARSENIC STORAGE - 12'-0" x 16'-0"
51	SALVAGE TANK - 18'-0" x 6'-0"
52	" " " " " " " "
53	ACETIC ACID TANK - 12'-0" x 12'-0"
54	SALVAGE TANK - 18'-0" x 6'-0"
55	" " " " " " " "
56	FUEL OIL STORAGE
57	66 INCL. TANKS - PAINT & VARNISH OIL STORAGE TANKS
58	71 INCL. 6 TANKS - VARNISH OIL STORAGE & REFINED OIL 50' x 10'-0"
59	UNDERGROUND GASOLINE STORAGE TANK 5' x 18'-0"
60	TANK - STOVE OIL DISTILLATE USED IN SPRAY EMULSION
61	" " - WHALE OIL STORAGE
62	" " - FUEL OIL STORAGE 100 GAL.
63	UNDERGROUND TANK - STOVE OIL STORAGE
64	" " " " " " " "
65	" " " " " " " "
66	SPRINKLER TANK 10,000 GAL. ON ROOF OF PAINT BLDG
67	" " " " " " " "
68	ARSENIC ACID MEASURING TANK ON SCALE
69	STRIKING TUBS 9'-0" x 12'-0"
70	" " " " " " " "
71	WEIGH TANK FOR LEAD LIQUOR
72	FUEL OIL STORAGE TANK - 1000 GAL. CAP.
73	ACETIC ACID TANK
74	TOWER - LEAD HOUSE - DISMANTLED
75	" " " " " " " "
76	104 INCL. 14 TANKS - OIL SUPPLY TANKS FOR PAINT DEPT. 11'-0" x 5'-0"
77	107 INCL. 8 TANKS - VARNISH AGING TANKS 6'-0" x 6'-0"
78	113 INCL. 15 TANKS " " " " " " " " 5'-0" x 10'-0"
79	116 FUEL OIL TANK FOR VARNISH FILLS 4'-0" x 4'-0"
80	119 STORAGE TANK FOR SPRAY EMULSION FINISHED PROD. 18' x 10'
81	120 ACETIC ACID DUMP TANK COVERED TOP FLUSH WITH GRADE - 6' x 16'
82	121 ACETIC ACID MIXING TANK SET ON 4 X 4 TIMBERS - 6' x 6'
83	122 WELL PUMP TANK - 25,000 GAL. CAP. AT 60' ST. TOWER - 11' x 15'-0"
84	123 COMPRESSED AIR TANK
85	124 " " " " " " " "
86	125 RAY LINED OIL TANK - 20 DIA. 12' HIGH CAP. 12,500 GAL.
87	126 PETROLEUM OIL STORAGE TANK - 14' DIA. 5' HIGH CAP. 10,724 GAL.
88	127 " " " " " " " " 12' x 13' 8" HIGH CAP. 5,000 GAL.
89	128 TURPENTINE TANK 17' x 15'
90	129 TANK FOR ALCOHOL 9'-6" x 15'
91	130 TANK FOR (50%) 17' x 15'
92	131 175 INCL. STORAGE TANKS FOR LACQUER SALVAGES 8' x 11'
93	132 TOLUOL TANK 9'-6" x 15'
94	133 185 INCL. VARNISH STORAGE TANKS ON BUILDING 18' x 5' x 5'-6"
95	134 STRIKING TUBS 9' x 12'



BUI

PROF

SHE

OAK

11/30

HORTON STREET

SEWER 14.87'

598.02'

26

31

16'-0" DRIVEWAY

120'-0"

PLAT FORM

72

29'-0"

12" BORED WELL

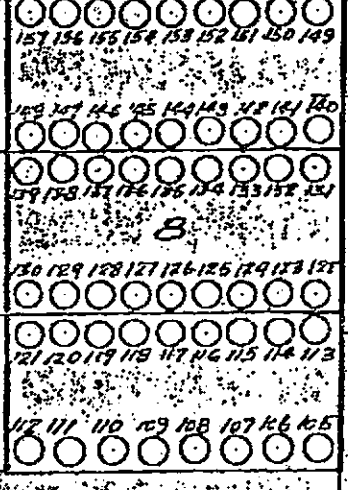
12

11

17

163

S.W.-CO. SPUR TRACK



CONCRETE PAVEMENT

RD. B.

168

165

65

16

174

158

169

29

60

59

58

57

30

4

1'-0" 1'-0" 1'-0" 1'-0"

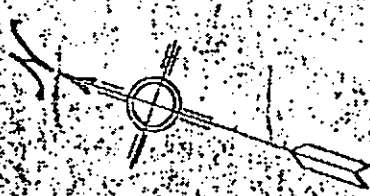
598.76'

S.W.-CO. SPUR

S.P.R.Y. CO. DRILL

SEWER 12.94'

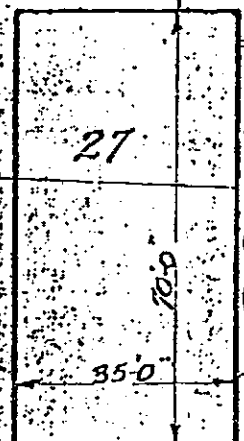
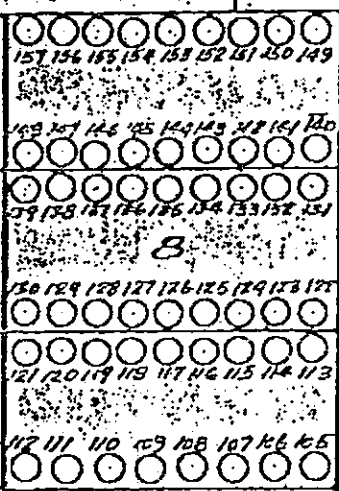
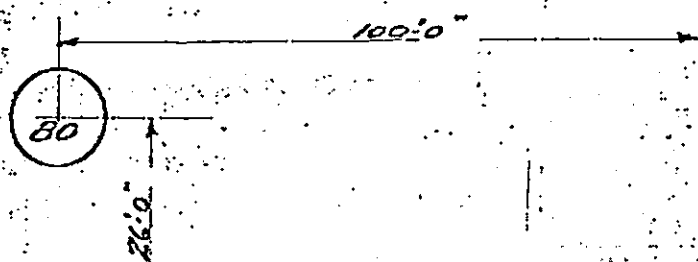
4.081 S.P. SEWER GRADE 7.50'



HORTON STREET

45' WIDE

16'-0" DRIVEWAY

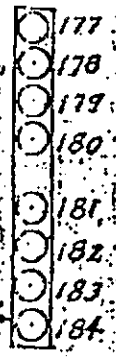


CONCRETE PAVEMENT

YARD A

CONCRETE PAVEMENT

PENT HOUSE

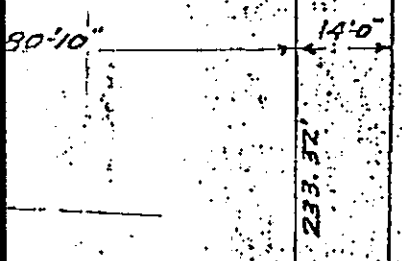
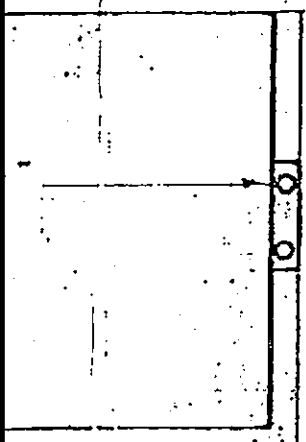


S. W. CO. SPUR TRACK

S. F. RY. CO. DRILL TRACK

RETRACTED GENERAL

No BUILDING INDEX-TAX



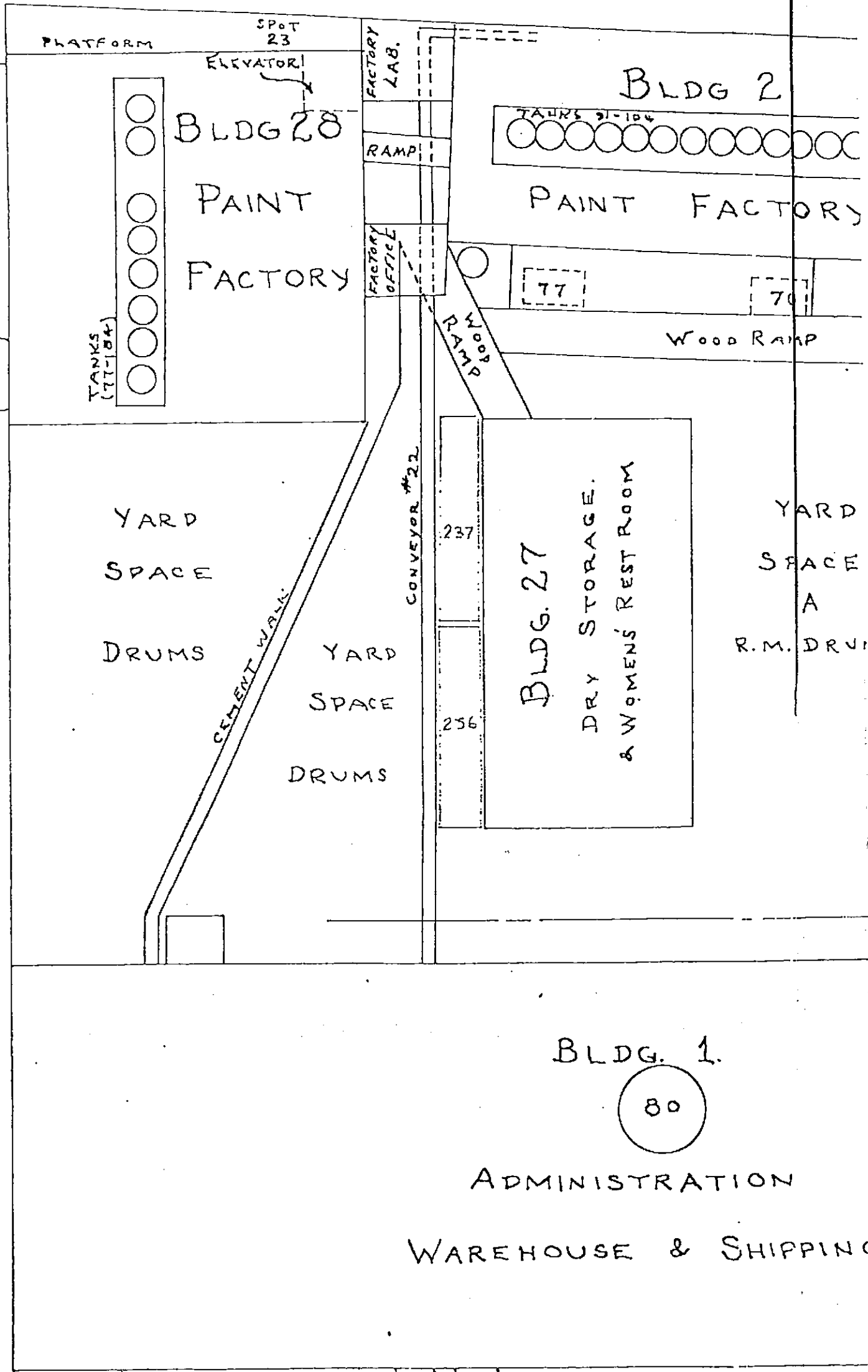
STREET

- 177
- 178
- 179
- 180
- 181
- 182
- 183
- 184

PROPERTY PLAT
 THE SHERWIN WILLIAM
 OAKLAND CALIF.
 SCALE 1" = 30'-0"
 DWG. NO.
 OFFICIAL

REVISIONS	
RETRACED	8-1-29
GENERAL REVISION	SEPT 6, 1958

SHERWIN AVENUE



DOOR 8

TANKS (77-104)

SPOT 23

ELEVATOR

FACTORY LAB.

RAMP

FACTORY OFFICE

CONVEYOR #22

237

256

BLDG 2

TANKS 91-104

PAINT FACTORY

77

70

WOOD RAMP

WOOD RAMP

YARD SPACE

DRUMS

CEMENT WALK

YARD SPACE
DRUMS

BLDG. 27

DRY STORAGE.
A WOMEN'S REST ROOM

YARD SPACE
A
R.M. DRUM

BLDG. 1.

80

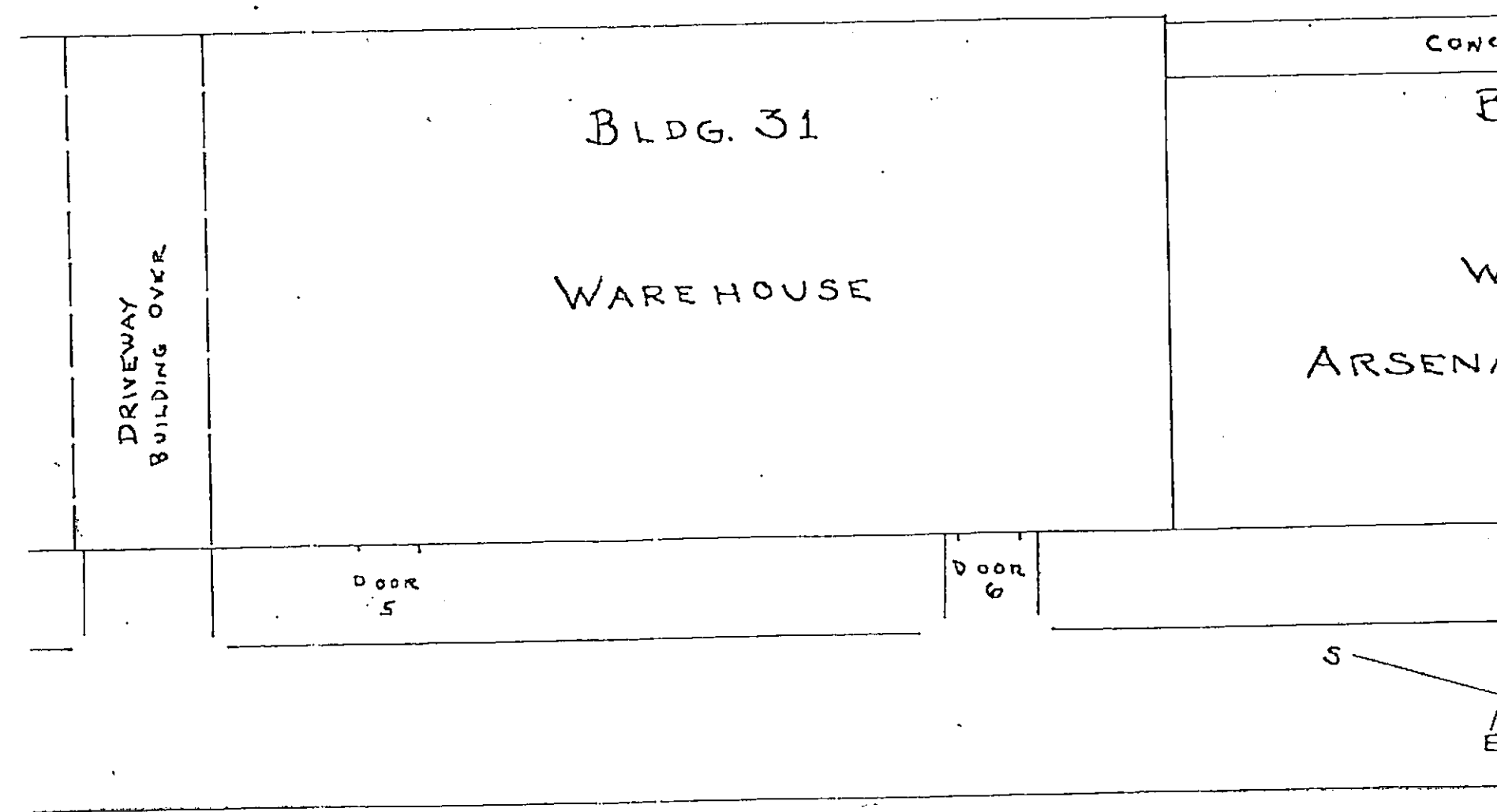
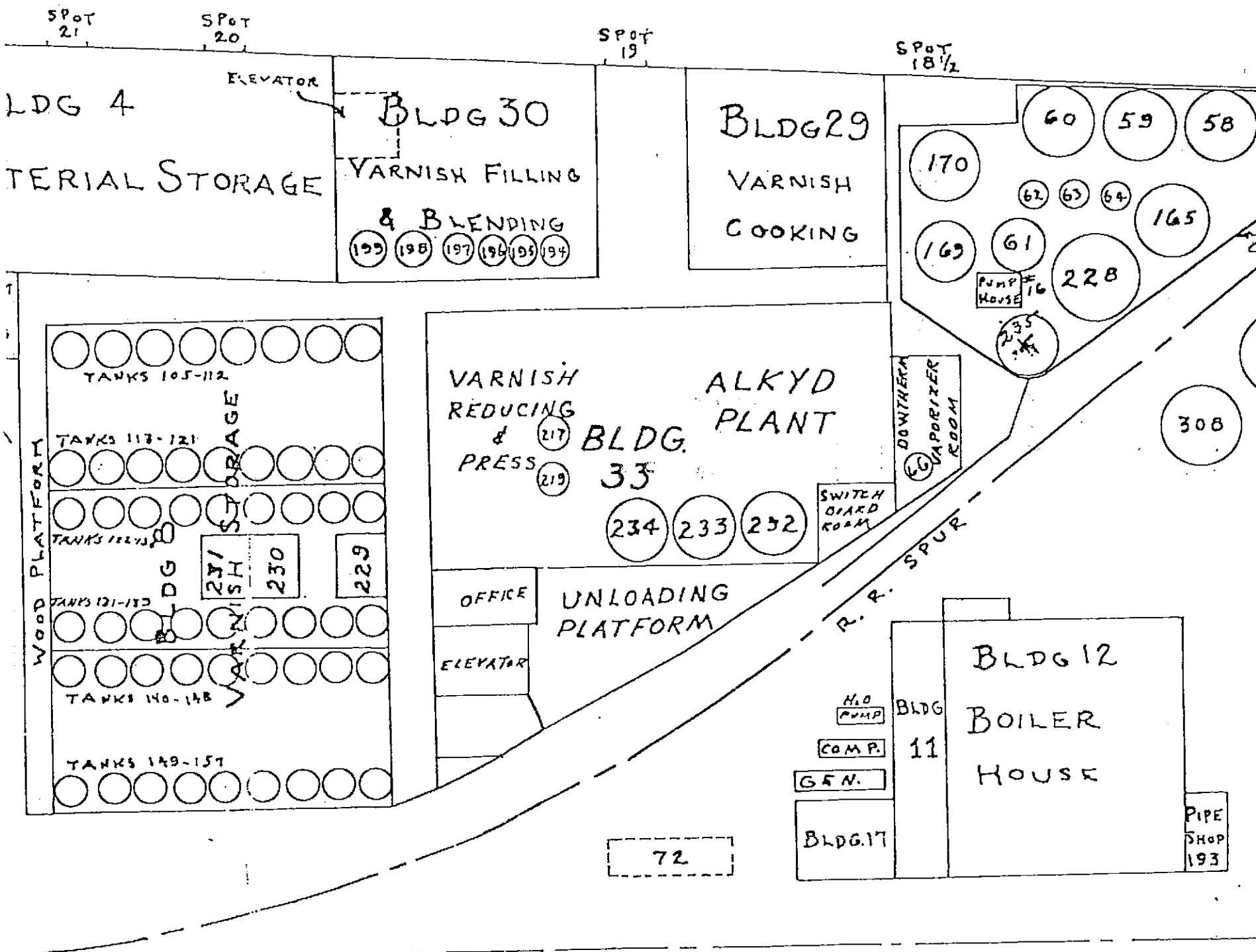
ADMINISTRATION

WAREHOUSE & SHIPPING

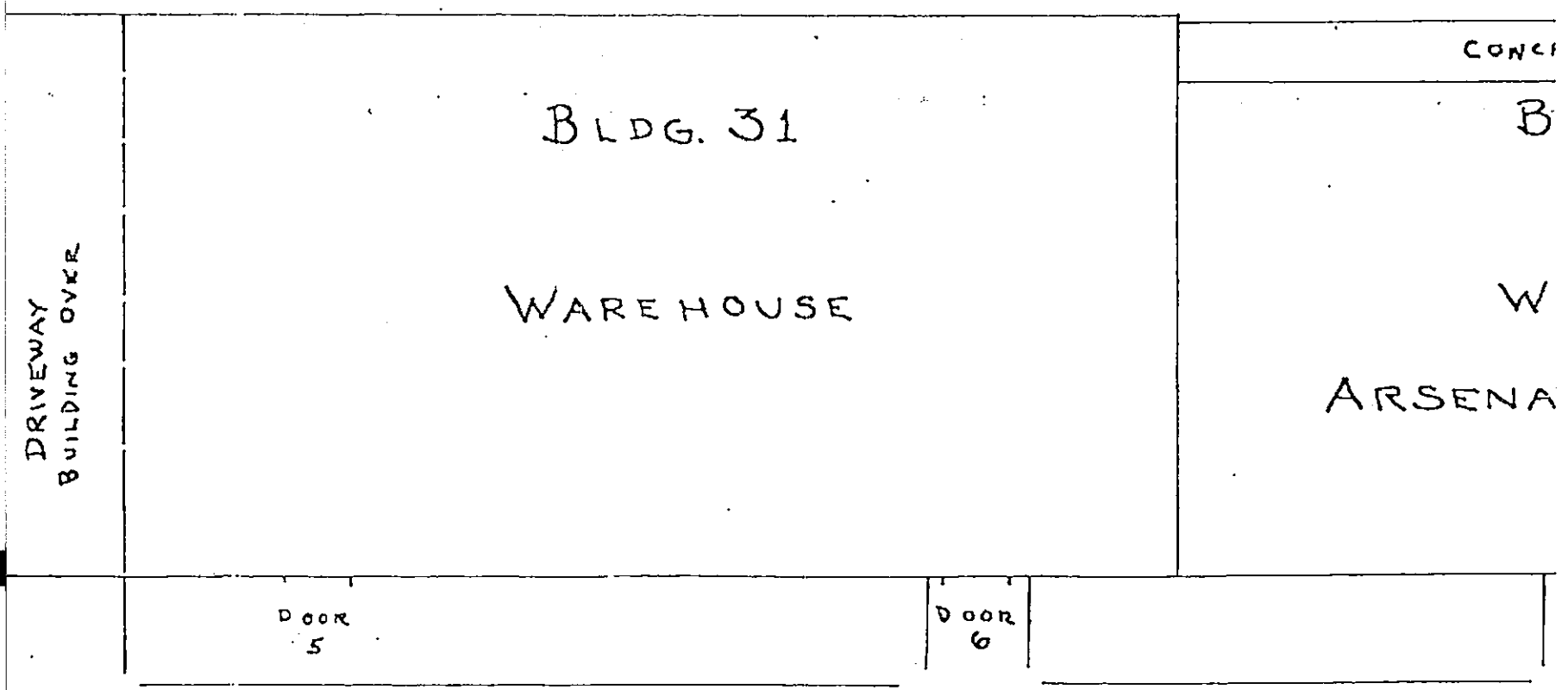
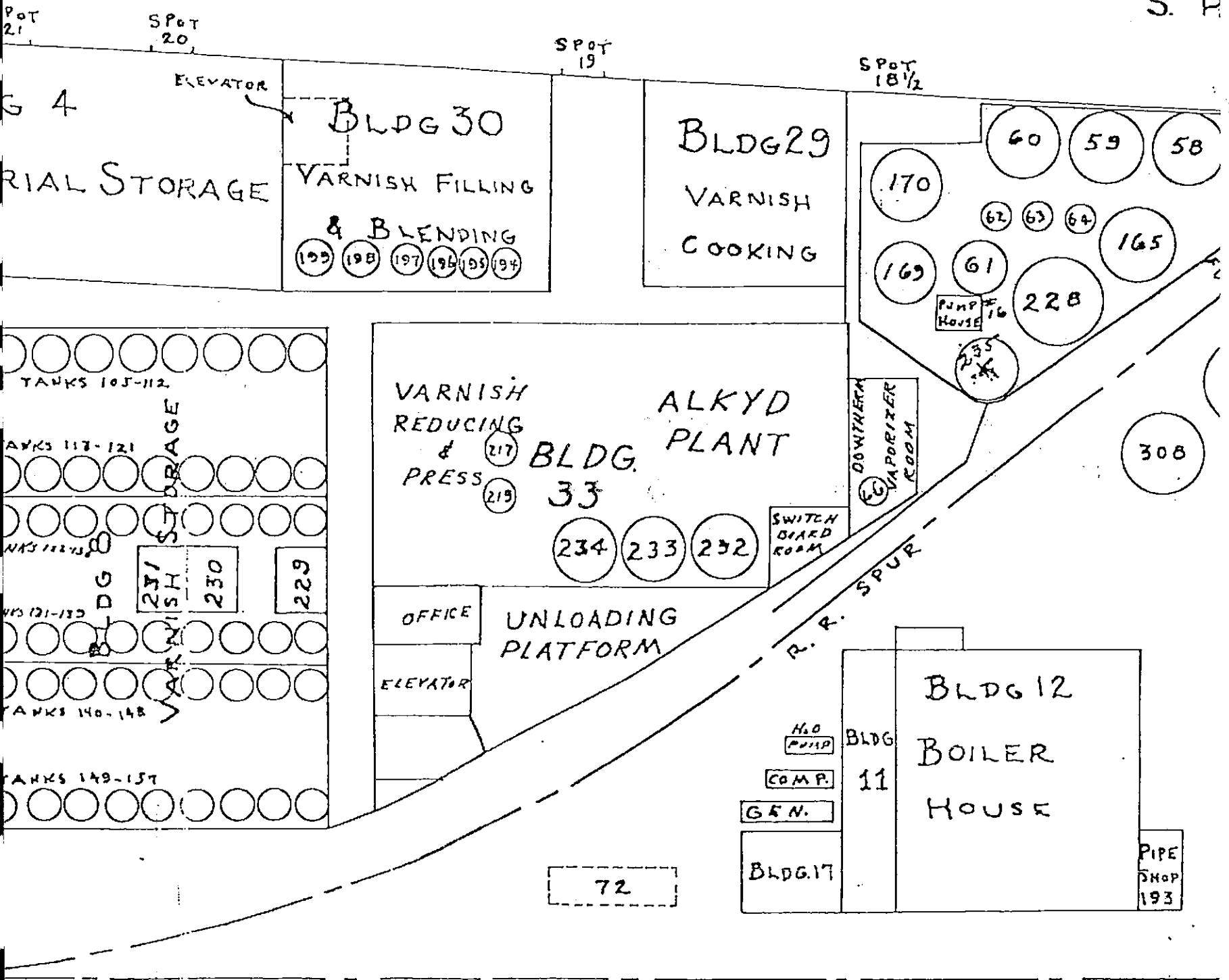
DOOR 1

HOR

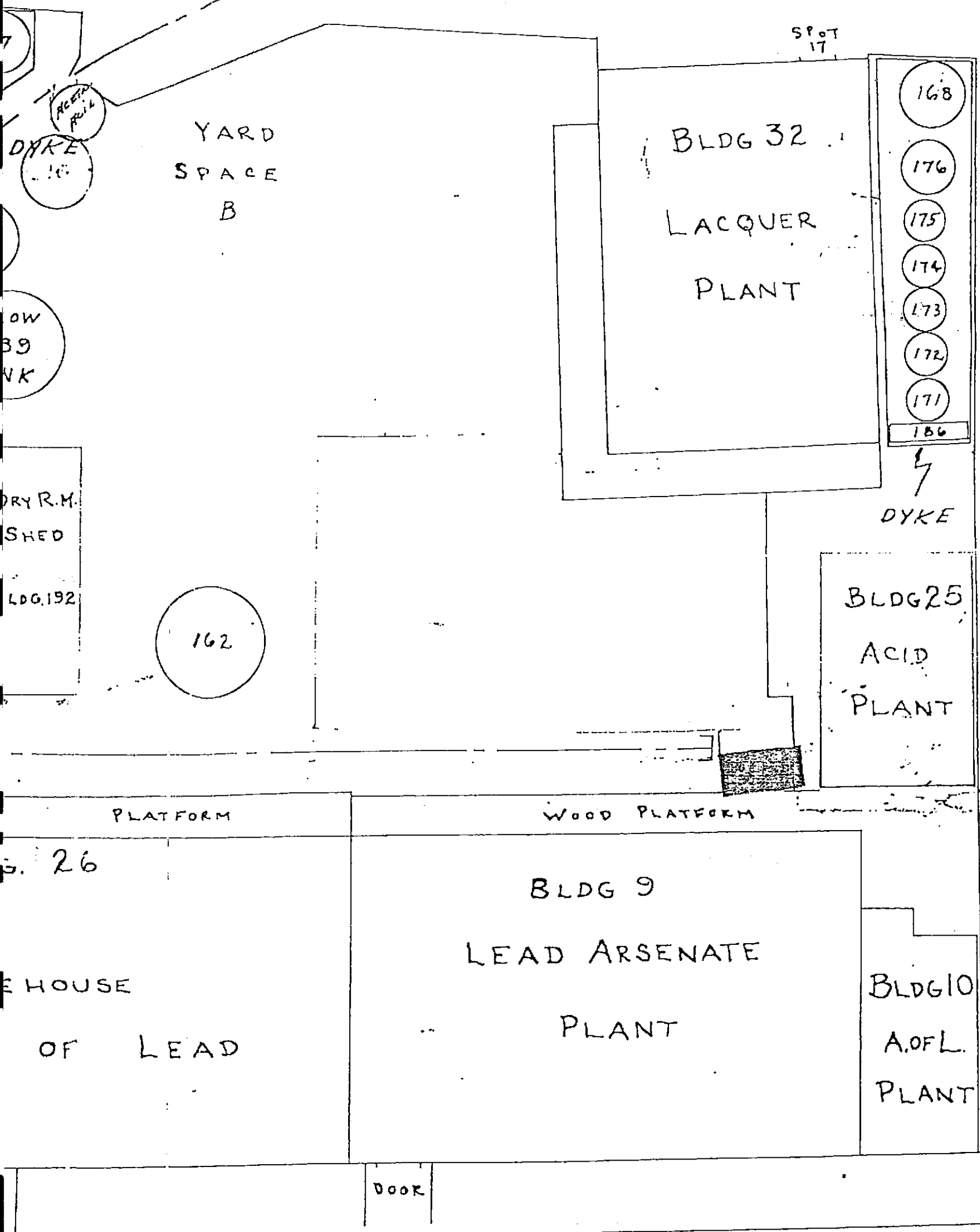
S. P.



S. P.



O. RIGHT OF WAY



PLANT LAYOUT

SHERWIN-WILLIAMS Co, OAKLAND

2/47 SCALE 1"=20' RW H



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588-5127

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

November 7, 1996

RECEIVED

NOV - 8 1996

ERLER & KALINOWSKI, INC.

Mr. Britt von Thaden
Erler & Kalinowski, Inc.
1730 S. Amphlett Boulevard, Suite 320
San Mateo, CA 94402

Dear Mr. von Thaden:

Enclosed is drilling permit 96797 for a contamination investigation at 1450 Sherwin Avenue in Emeryville for Chiron Corporation.

If you have any questions, please contact Wyman Hong at extension 235 or me at extension 240.

Very truly yours,

Craig A. Mayfield

Craig A. Mayfield
Water Resources Engineer III

CM:ab
Enc.



ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588

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

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 1450 SHERWIN AVENUE
EMERYVILLE, CA

PERMIT NUMBER 96797
LOCATION NUMBER _____

CLIENT
Name CHIRON CORPORATION
Address 4560 HORTON ST. Voice 510-601-2484
City EMERYVILLE, CA Zip 94608

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT
Name ERLER & KALINOWSKI, INC.
Address 1730 St. ANTHONY Blvd, Ste 320 Voice 415-578-1172
City SAN MATEO, CA Zip 94402

A. GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

TYPE OF PROJECT

Well Construction	Geotechnical Investigation
Cathodic Protection _____	General _____
Water Supply _____	Contamination <u>X</u>
Monitoring _____	Well Destruction _____

B. WATER WELLS, INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

PROPOSED WATER SUPPLY WELL USE

Domestic _____ Industrial _____ Other _____
Municipal _____ Irrigation _____

DRILLING METHOD:

Mud Rotary _____ Air Rotary _____ Auger _____
Cable _____ Other HAND AXSE / DIRECT PUSH

DRILLER'S LICENSE NO. 636387 (PRECISION SAMPLING)

WELL PROJECTS

Drill Hole Diameter _____ in.	Maximum
Casing Diameter _____ in.	Depth _____ ft.
Surface Seal Depth _____ ft.	Number _____

GEOTECHNICAL PROJECTS

Number of Borings 10 Maximum
Hole Diameter 4 in. Depth 20 ft.

ESTIMATED STARTING DATE 11/12/96
ESTIMATED COMPLETION DATE 11/15/96

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Bruce von Thaden Date 11/4/96

Approved Wyman Hong Date 6 Nov 96
Wyman Hong

APPENDIX C. FIELD METHODS AND PROCEDURES

C.1 Field Sampling Summary

This section presents a description of the field methods conducted by EKI during the soil and groundwater investigations on the Sherwin-Williams Site. Precision Sampling, Inc. ("PSI") of San Rafael, California, performed the field sampling with oversight by an EKI geologist. A total of 12 soil borings were drilled on the Sherwin-Williams Site between 12 and 15 November 1996. Soil samples were collected from eleven of these borings which were designated CH1 through CH10 and CH1B.

One additional boring was drilled next to CH1, however no samples were collected from this boring. This boring was terminated at approximately 2.8 feet bgs due to an obstruction (i.e., concrete a minimum of 2 feet thick). This contact was also encountered at CH1 and CH1B from which shallow ("A") soil samples were collected from the fill above the obstruction. The total thickness of the concrete observed at borings CH1, CH1B, and the terminated boring remains undetermined because drilling at these boring locations was terminated before reaching the bottom of the concrete.

Concrete fragments, up to 6-inches in diameter mixed with soil to depths of 4 feet bgs, were encountered at all boring locations. Solid concrete either in the form of a slab or possible former foundation was encountered (a) at all EKI boring locations, except borings CH2 and CH4, and (b) at depths between 2 and 3 feet bgs, except at boring CH10 where it was encountered at a depth of 4 feet bgs (designated herein as "concrete slab"). At borings CH2 and CH4, solid concrete was not encountered within the total depths of 6 and 5 feet bgs, respectively. At boring CH4, the bentonite-cement slurry wall material was apparently encountered at a depth of approximately 4.5 feet bgs, where the boring was terminated. No groundwater was encountered at this location.

In general, two soil samples were collected at each boring location. One sample was collected from soil above the concrete slab and designated the "-A" sample, and one soil sample was collected from beneath the concrete slab and designated the "-B" sample.

The following field tasks were completed at each boring location:

- (a) core through the existing asphalt cap,
- (b) collect a soil sample from the fill between and asphalt cap and the concrete slab,
- (c) core through the concrete slab, if present,
- (d) collect a sample of soil beneath the concrete slab, and
- (e) drill to approximately two feet below the first encountered groundwater and collect grab groundwater samples from selected borings.

Details of the methods used to complete these tasks are discussed below.

C.2 Asphalt and Concrete Coring and Shallow Soil Sampling

The asphalt cap at each boring location was cored by Precision Sampling, Inc. using a 10-inch outside diameter bit. Hand augering and manual digging were performed to remove soil and debris encountered beneath the asphalt and reach the desired soil sampling depth. A breaker bar was used throughout the hand augering and digging process to break up and loosen chunks of concrete encountered in the borings above the concrete slab. The concrete slab, encountered between approximately 2 and 4 feet bgs, was cored using a 6-inch diameter bit. Small quantities of potable water was used for cooling the core bits during all coring.

Upon reaching the desired sampling depth, soil samples were collected by driving a precleaned sampler containing a precleaned stainless steel liner into the ground with a slide hammer. The sampler was then removed and disassembled into its component parts. The liner containing the soil sample was removed from the sampler and packaged for submittal to the laboratory. The sample liner was covered at both ends with Teflon® sheets and plastic caps, labeled with a unique sample number as well as the date and time of collection, placed in a Ziploc® plastic bag, logged onto a chain-of-custody form, and placed in a chilled ice chest for transport to the laboratory.

Sampling tools, including hand auger blades, shovels, drive sampler, and stainless steel liners, were washed with Alconox and double-rinsed with deionized water between borings.

Soil types and debris encountered during drilling were visually characterized and logged by the EKI geologist. Soils were classified in accordance with the Unified Soil Classification System and Munsell Soil Color Chart and checked in the field to a preliminary degree for the presence of volatile organic chemicals ("VOCs") using an organic vapor meter ("OVM"). OVM measurements are noted on the boring logs. Boring logs are presented in Appendix E.

C.3 Direct Push Continuous Coring

Following completion of shallow soil sampling, four boreholes (CH5, CH6, CH9, and CH10) were extended in depth by Precision Sampling, Inc. using the PSI Enviro-Core® dual-tube sampling system. These borings were extended in depth to collect grab groundwater samples. The Enviro-Core® sampling system consisted of a hydraulically-operated sampling rig that simultaneously drove an outer drive casing and inner sample barrel into the subsurface. The outer casing served as a temporary drive casing and remained in the ground after the sample barrel was removed to prevent the borehole from collapsing. All downhole pieces of the drive-core sampling system were steam-cleaned

prior to their use and between sampling locations. The rinse water during steam-cleaning operations was contained and upon completion, placed in DOT-approved 55-gallon drums.

The sample barrel, measuring 1 and 5/8-inches in diameter and three feet in length, contained six precleaned stainless steel liners that retained soil cores as the sample barrel was driven into the ground. Each borehole was continuously cored to its total depth. After driving, the sample barrel was removed from the ground and disassembled. Soil samples collected with the Enviro-Core® sampling system were used solely for soil descriptive purposes (logging) and qualitatively characterized with the OVM for VOCs.

All drive casings, inner sample barrels, inner rods, and tools were cleaned with a high-pressure, hot water washer between borings. Sample barrels were washed with Alconox and double-rinsed with deionized water between soil samples collected in the same boring.

Waste soil generated during sampling consisted of soil collected in the sample liners from each sample interval. All waste soil was contained in DOT-approved 55-gallon drums.

C.4 Grab Groundwater Sampling Procedures

One-inch diameter Schedule 40 PVC blank and machine-slotted (0.01-inch) casing was inserted through the Enviro-Core® outer drive casing after reaching the total depth of the boring and removing the inner sample barrel. Sections of the PVC casing were threaded together and no solvents or glues were used. The outer drive casing was then pulled back to expose the desired screened interval.

Groundwater samples were collected using either a Teflon® bailer or a peristaltic pump. The bailer was used to collect grab groundwater samples (a) for laboratory analysis of volatile organic compounds and (b) for field analyses of temperature, electrical conductance, and pH. The peristaltic pump was used to collect groundwater samples for laboratory analysis of extractable organic compounds, metals, and pH. Collection of groundwater samples was performed on the basis of sensitivity to volatilization of the parameters (i.e., type of laboratory analysis to be performed). Groundwater samples were collected in the following order at each boring with temporary screens:

- volatile organic compounds
- extractable organic compounds
- pH
- metals

As discussed below, grab groundwater samples for VOC analyses were collected with a Teflon® bailer. The remaining grab groundwater samples were collected with a peristaltic pump.

Water samples to be analyzed for metals were preserved with nitric acid as supplied in the sample bottles provided by the analytical laboratory. Water samples to be analyzed for VOCs were preserved with hydrochloric acid as supplied in the sample bottles provided by the analytical laboratory.

PVC casings were cleaned with a high-pressure, hot water washer between borings. Teflon® bailers were washed with Alconox and double-rinsed with deionized water between borings. Tubing used in the peristaltic pump was disposed of between holes and replaced with new tubing.

C.4.1 Groundwater Sampling with Teflon® Bailer

Groundwater sampling with the bailer was conducted by lowering a clean Teflon® bailer with disposable nylon string down through the PVC casing. Samples of the groundwater that seeped into the PVC casing were collected. After collection, the sample was transferred to the appropriate laboratory-supplied glass containers.

Between sampling locations, the bailer was steam cleaned using potable water and then rinsed with distilled water. The nylon string used to lower the bailer was disposed and replaced with new string between sampling locations. All water used for equipment cleaning was contained and subsequently transferred to a DOT-approved 55-gallon drum for proper disposal.

C.4.2 Groundwater Sampling and Field Filtering with Peristaltic Pump

Groundwater sampling with a peristaltic pump was conducted by installing a one-foot section of laboratory grade Tygon® tubing in the pump head and attaching polyethylene tubing to one end of the Tygon® tubing. The polyethylene tubing was lowered into groundwater through the PVC casing. Following collection of the samples for extractable organic compounds and pH analyses, a 0.45 micron sediment filter was attached to the discharge end of the Tygon® tubing for field filtering the groundwater sample submitted for metals analyses. The discharge end of the filter was directed into a laboratory-supplied plastic bottle containing nitric acid to preserve the sample. New, unused Tygon® and polyethylene tubing and filters were used for collecting groundwater samples at each location.

C.5 Borehole Grouting

All boreholes were sealed upon completion with Type V cement grout containing approximately 5 percent bentonite powder. Approximately 5 gallons of potable water

were used for each 94-pound sack of cement. At shallow boring locations CH1, CH1B, CH2, CH3, CH4, CH7, CH8, and the terminated boring, the grout mixture was poured directly into the dry, open borehole. At borings CH5, CH6, CH9, and CH10, the grout mixture was poured through the PVC casing to seal the borehole from the bottom and displace water from the borehole. All water displaced from the borehole was contained and transferred to a DOT-approved 55-gallon drum. Additional grout was added to the boreholes as necessary to bring the surface of the grout up to the level of the bottom of the asphalt cap. The tops of the boreholes were sealed with cold asphalt patch and covered with plastic sheeting and traffic safety cones until arrangements for hot asphalt patching could be made (see next section).

C.6 Sawcutting and Hot Asphalt Patching

Sawcutting was performed on 19 November 1996. A 20-inch by 20-inch square of asphalt was sawcut around each of the boreholes except CH1 and the nearby terminated boring. At CH1 and the terminated boring, a 20-inch by 34-inch rectangle was sawcut around these borings because of their proximate locations to each other. Potable water was used to cool the saw blade during sawcutting. The tops of the boreholes were covered with plastic sheeting and traffic safety cones until weather conditions were suitable for hot asphalt patching.

On 26 November 1996, hot asphalt patching of the tops of the boreholes was completed. Asphalt cap material within the sawcut areas was removed from around the boreholes. A tack coat consisting of emulsified asphalt was sprayed on edges and surfaces where the hot asphalt would contact the existing asphalt cap and the ground surface. The tack coat was allowed to dry before setting the hot asphalt. Hot 1/2-inch, medium asphalt was placed in two lifts. The first lift was compacted manually using a 8-inch by 8-inch square hand tamping tool and the second lift was compacted using a gasoline-powered vibrating plate tamping machine. Following placement of the hot asphalt, additional emulsified oil was sprayed around the edges of the patch and fine grained sand brushed in. A final tack coat was sprayed over the entire patched surface to thoroughly seal the patch.

C.7 Disposal of Investigation-Derived Wastes

Wastes generated during the recent investigation by EKI include soil from the borings; water from decontamination of the field testing equipment; and used personal protective equipment, PVC casing, and plastic sheeting. All waste materials were placed into DOT-approved 55-gallon drums which were temporarily stored on Chiron Corporation property located at 4525 Horton Street in Emeryville, California. Water from decontamination of field testing equipment was delivered to Sherwin-Williams for treatment at Sherwin-Williams' existing groundwater treatment system, as agreed with Mr. Mike Marsden of Levine-Fricke-Recon (EKI, 1997). Solid wastes were disposed off-site by Chiron Corporation in accordance with applicable state and federal laws.

C.8 Surveying

The 11 completed soil boring locations and six building corners were surveyed by Kister, Savio & Rei Incorporated of Richmond, California. Coordinates were surveyed vertically, to the nearest 0.01 foot relative to mean sea level, and horizontally, to the nearest 0.01 foot relative to the 1927 California Coordinate System, Zone 3. The surveyor's report is included in Appendix E.

Daily Inspection Report No. _____

Sheet: 1 of 3
Date: 11/12/96
Project: CHIRON
EKI Job No.: 930028.02

Contractor: PRECISION SANDERS

EKI Staff On-site: BERT VON THAMER

Weather: partly cloudy to sunny

Temperature: 70 F Max _____ F Min _____

Work Hours: _____ to _____ Memos Issued: _____

Photos: _____

Special Conditions, Delays, Changes: 25 min - air lock on steam cleaner

Accidents, Damage: _____

Sampling, Testing: CH2* Soil samples: CH2-A, CH2-B, CH3-A, CH3-B, CH4-A, CH4-B, CH8-A, CH8-B, CH7-A, CH7-B

Visitors to Site: Kenton Gee (LF), Irene Fanelli (EHC)

Work Report (Work done, Personnel/Equipment working): _____

07:10 Arrive at Sherwin Williams; stopped for ice on way here.

07:25 Complete fit test of respirator and calibrate OVM.

07:30 Meet Irene at site.

07:35 Ric Notari stop by - in front of Sherwin Williams while waiting for PSI.

07:40 Kenton Gee stop by - he will meet us at loading location.

08:00 Craig Storma and Angel Aubrie of PSI arrive.

08:15 Don Winkowski of PSI arrive.

08:50 - Irene and I conduct health and safety meeting. Ask Kenton about leaving holes for water samples open if we get to that point. We would cover hole w/ plastic to prevent anything from entering - he said OK.

- Begin set up of CH2.

09:15 Begin coring asphalt @ CH2.

09:30 - Core thru asphalt @ CH2. Check OVM: 0 ppm.

- Wait for drain sampler to be delivered.

09:35 Drain sampler delivered, get steam clean first before use. Problem w/ air lock in new steam cleaner; will not expel water from tank.

10:00 Connect steam cleaner to hose onsite; steam clean hand cup/slide hammer/stainless steel liners.

10:05 Don informs me that cups were not brought to site; however he will send Angel to pick some up. Found 2 cups in van to use.

Distribution: Project Inspection File (orig)

Project Manager

By: Bert von Thamer

Daily Inspection Report No. _____

Sheet: 2 of 3

Date: 11/12/91

Project: Clinton

EKI Job No.: 930028.02

Contractor: Precision Sampling

10:05 cont. for slurry sample at CH2. wire then leave to cure so we will need
time to cure

10:45 - hand digging CH2; @ 2.5 feet.

- leave leave site.

11:00 OUM reading; probe in hole = 4 ppm @ 5 ft. Does it appear to be a slab here.

11:07 at 5.5 ft. drive slide hammer to collect sample. Auger not back yet of caps; leave sampler in hole.

11:10 move to CH3. Discuss beginning next hole w/ Kenton before starting CH3. He said OK; CH2 densely compacted; will not cure.

11:20 Complete curing of a depth @ CH3. Check w/ OUM = 0 ppm.

11:30 Auger around back of caps.

11:35 Collect CH2-B

11:55 Kenton leave site; going to his office.

12:20 Take OUM readings: Boring CH3 open hole to studs (2.5 ft) 0 ppm; sample CH3-A collected @ 12:00

Boring CH4 open hole to 6 inches : 0 ppm

12:35 Kenton arrive back at site.

12:40 Two holes going at once: CH3 and CH4. Down to 1 ft in CH4; large chunk of concrete slabs progress and a portion of it
still remains in hole. Direct PFI to collect sample of soil in CH4.

12:50 Collect CH4-A

1:00 Collect sample CH3-B

1:45 - Collect sample CH4-B; grayish pasty material - looks like cement but no free, Kenton called his office. Most likely slurry wall
or spill over from slurry wall - One to govt. Kenton said that it may be slurry wall or spill over; not a problem Kenton said

2:00 Driller's begin work: E continue to finish drill logs.

2:15 Driller's end lunch, I begin lunch, Driller's begin moving equipment to set up on CH8

2:30 - End lunch, begin grouting CH2, CH3, CH4.

- Kenton leave site

3:30 OUM check during completion of CH7 and CH8 : CH7 down 12" foot : 0 ppm

CH8 : 3" OUM 0 ppm

3:40 Collect CH8-A

4:00 Excavator concrete slab in CH8 at a depth of 20 inches bgs.

4:25 Excavator ^{excavator} concrete slab in CH7 @ a depth of 21 inches bgs. -

4:35 Collect CH8-B (4-4.5 ft.)

5:00 Collect CH7-B (4-4.5 ft.)

Distribution: Project Inspection File (orig)

Project Manager

By: Don Wilbur

Daily Inspection Report No. _____

Sheet:	3	of	3
Date:	11/12/96		
Project:	Clivia		
EKI Job No.:	930029.p2		

Contractor: Precision Sampling

S:45 - Completed borings CH2, CH3, CH4, CH7, CH8. Grouted borings w/ cement/bentonite grout up to bottom of asphalt.

- Generated one drum of soil cuttings
- Set traffic cones and barricades.

- Leave site. Once again, asked Newton about drilling borings tomorrow and leaving holes open overnight for SW sampling on Thurs. He didn't have a problem w/ it but would check w/ others.

- To meet @ 7:30 tomorrow.

Distribution: Project Inspection File (orig)
Project Manager

By: Brett van Pelt

Daily Inspection Report No. _____

Sheet:	1	of	3
Date:	11/13/96		
Project:	CUREW - SHERWIN WILLIAMS		
EKI Job No.:	930028.82		

Contractor: Precision Samples

EKI Staff On-site: BURT VAN TILBORG

Weather: Partly to Sunny

Temperature: 70 F Max 55 F Min

Work Hours: to Memos Issued:

Photos:

Special Conditions, Delays, Changes:

Accidents, Damage:

Sampling, Testing: soil samples: CH1-A, CH10-A, CH10-B, CH9-A, CH9-B, CH6-A, CH6-B, CH5-A, CH5-B

Visitors to Site: Kenton Lee (LF), Todd Miller (LF), Dave Gustafson (SW) : Langer (?)

Work Report (Work done, Personnel/Equipment working):

7:00 Arrive at Sherwin Williams

7:05 Craig and Angel of BE arrive.

7:15 Don of PSE arrive.

7:25 Jeff Coit of ESK arrive to set up VOC monitoring

8:10 Call LF Mark Knop learn message about no one here.

8:15 - Kenton and Todd Miller of Leese Prichie arrive

8:20 - Begin of CH1 - Craig and Angel coring asphalt

8:30 Finish coring asphalt of CH1; move to CH5 to core asphalt.

8:40 Finish coring CH5 (asphalt); move to CH6 to core

8:45 Dave Gustafson of Sherwin Williams and Langer? stop by site. They asked about borings - said 5 were completed yesterday. Informed them that concrete was found in 3.

9:00 Complete coring of CH6; move to core asphalt at CH9. Don begin digging at CH1

9:10 Complete coring of CH9; move to CH10

9:25 Collect sample CH1-A (1.5-2.0 ft)

9:30 Complete coring of CH10

9:40 OVM check @ CH5 (9" @ 10) 0 ppm

9:50 At CH1: at 2' 9" encountered irregular surface concrete: possibly broken slab or large chunk of concrete; will attempt to core through it.

Distribution: Project Inspection File (orig)
Project Manager

By: Burt Van Tilborg

Daily Inspection Report No. _____

Sheet: 2 of 3

Date: Enter 11/13/96

Project: Cherim - Sherwin-Williams

EKI Job No.: 930028.0L

Contractor: Precision Sampling

10:12 Collect sample CH5-A (1.5-2)

10:15 Begin coring concrete at C#1; 2 slabs encountered; first slab 2" thick, second 8" thick.
Check hole using gauge after completion of concrete coring = OVM 0 ppm

10:25 Unable to hand auger in C#1; may be additional concrete. Will attempt to core again

10:35 - Check C#6 (15" bgs) w/ OVM = 0 ppm

- On finish coring @ C#1 remain bit - core stayed in hole.

11:00 - Begin C#1; core to approx. 4' 8" still in concrete; possible foundation (?); PSE has one more extension wire case to bottom of and determine what to do next. After reading bottom. Collect sample CH6-A (1.5-2.0)

11:10 Core concrete another foot @ C#1 - more concrete present; even beyond last core bit extension. Will make off hole to complete remaining holes then possibly come back if fine results. All tests steam cleaned before moving to next hole.

11:25 Call Frances Johnson at OC Jones for patchwork on Sherwin-Williams, discussed w/ placing tack coat and sending 2 guys out to patch holes. No problem - just call Frances when needed.

11:35 - Take w/ Karen G. @ office about running additional lab analyses and conductivity and Eh - No additional field or lab analyses - 1/14 in lab ph.

- Collect sample CH9-A (1.5-2ft)

11:50 Begin lunch

12:20 - End lunch

- Call VAW loan message about C#1 hole.

- CH5 concrete @ ~ 2 ft. not sure if slab bit with core.

1:10 Collect sample CH5-B (4.-4.5 ft bgs); fabric mesh present in bottom of liner when removed from sample hole. Source of fabric not known.

1:25 Don steam clean hand auger, coring bit; begin coring slab in C#6; present at 2ft bgs.

1:40 Collect CH10-A (1.5-2ft); noticed ^{coarse} sand size particles of light bluish green color in sediment

1:45 Collect C#6-B (3.5-4 ft); Begin at C#1 again used diagonally approx 1.5 feet

1:55 - Check OVM reading @ C#9. Max down hole reading = 408 ppm; breathing zone OK; VAW reading at 3.5 ppm but dissipate quickly.

Dilution already in organic vapor/TPH cartridges. Collect bag sample: OVM reading = 1655 ppm max.

- OVM at C#10: 0 ppm

2:15 Collect sample CH9-B (3-3.5 ft) elevated VOCs OVM = 2,200 in sample material (clumpy slt)

3:40 Attempt to collect B sample @ C#10 after encountering much broken up concrete between 2.5 and 4 ft then slab (5" thick @ 4 ft)
attempt sample encountered wood in sampler; not able to penetrate through: OVM in hole = 76 ppm

will attempt to use rig tomorrow to get through wood; wood is soft

3:55 Done approx 3 ft. in new hole adjacent to C#1. Encountered concrete (?) will attempt to core through

4:15 Take w/ VAW and KAS about collecting additional samples from C#6. Dependent upon authorization from Sher. Will. - increase pH, Temp. cond. of water samples.

Distribution: Project Inspection File (orig)

Project Manager

By: Burt Th...

Daily Inspection Report No. _____

Sheet: 3 of 3

Contractor: Precision Sampling

Date: 11/13/96

Project: Cherim - Shed. W.M.

EKI Job No.: 930028.82

4:25 PJI down to approx. 5.5 ft base, still in concrete. NIT able to proceed nor
collected B sample for CHT. Will abandon hole, and original CHT.

4:35 Todd leave site, not here at 7:30 tomorrow.

5:50 Clean up / pack up - LEAVE SITE.

Distribution: Project Inspection File (orig)
Project Manager

By: _____

Daily Inspection Report No. _____

Sheet: 1 of 2
Date: 11/14/96
Project: CH10/11 - STERWIN WILLIAMS
EKI Job No.: 930028.92

Contractor: PRECISION SAMPLING

EKI Staff On-site: BERT VAN THAREN

Weather: PARTLY CLOUDY

Temperature: _____ F Max 55 F Min _____

Work Hours: _____ to _____ Memos Issued: _____

Photos: _____

Special Conditions, Delays, Changes: _____

Accidents, Damage: _____

Sampling, Testing: Water samples CH10, CH9, CH6 (w/dup. CHA); Equip. Rinse blank (CHB), CH5

Visitors to Site: Todd Miller (LF)

Work Report (Work done, Personnel/Equipment working): _____

6:45 Arrive at Sterwin Williams after picking up ice for cooling samples.

7:00 Calibrate OVM - 100 ppm Isobutylene.

7:05 PSE arrive at site.

7:15 Calibrate Hydac pH/Cond/Temp meter - use 4 and 7 pH standards for pH and 1,000 μ S/cm for conductivity.

7:30 Todd Miller & Leslie Pricker arrive.

7:45 On of PSE arrive.

7:50 Conduct data safety meeting for Teds & PSE.

8:15 Set up re CH10; begin drilling; attempt to get thru wood.

9:30 - 8 Boring CH10: TD = 19 ft. Screen 13-18 ft. Run into casing in hole; Begin air monitoring on Craig and BVT.
- move rig to CH9.

9:45 Start drilling CH9 w/ rig.

10:15 Don check of water in CH10 appears 3-4 ft. intake. Set Don up w/ bottles; infuse VOA's first, check for effectiveness of HCl; some bottles if necessary VOA's to be collected at boiler (Erlor), w/ flow of peristaltic pump.

10:30 - Collect samples from CH10; 4 pres. VOA's; 2 amber liters, 1 plastic liter (not pres.); 1 plastic liter (pres. HNO₃) - filtered before pres.
- Field measurements: pH temp: 66.3°F; Conductivity: 3,420 μ hos/cm; pH: 6.14
- Rig move to CH6.

10:50 Revisit rig location - move back to CH10 to put casing and great hole. Hole grouted thru PVC and steel casing.

Distribution: Project Inspection File (orig)
Project Manager

By: Bert Van Tharen

Daily Inspection Report No. _____

Sheet: 2 of 2

Date: 11/14/96

Project: Chlorine - Sherwin Williams

EKI Job No.: 930028,82

Contractor: Precision Sampling

10:50 cont. - I still logging ~~conting~~ samples from CHT9

11:20 - Call VHW to discuss status

- Complete grouting of CHT10; move rig back to CHT6.

11:25 Sequoia arrive to pick up soil samples.

11:30 - Transfer soil samples to Sequoia.

- Start CHT6 w/ rig.

12:00 - Collect water samples from CHT9; 4 pres. VOA's; 2 amber liters; 1 - non pres. plastic liter; 1 - preserved H₂O₂ plastic liter (field filtered)

- Conduct field measurements: Temp: 68.8°F Cond: 3,760 μ mhos/cm pH: 5.62

12:25 - Complete CHT6; set casing ~~up~~ w/ screen 10-16 ft.

- move rig back to CHT9 to remove casing/grout.

12:30 - Driller's begin lunch

- But continue to pick catch up on logging.

1:00 - Complete logging of CHT6 samples. Begin lunch

- Driller's end lunch

~~1:45 Complete~~

1:30 End lunch

1:45 Complete Grouting of CHT9; move rig to CHT5.

2:45 Collect water samples from boring CHT6 (w/ duplicate labeled CHTA) - Begin collection; slow to recharge

Field measurements: Temp: 65.1°F Cond: 3,100 μ mhos/cm pH: 4.31

3:15 Begin shutdown of personal air monitoring. Remove GAC and cap ends.

3:45 - Take w/ SAT about asphalt patching - to contact Greg w/ OCTones tomorrow 510-524-7254

- Discuss re-trying again at CHT1, more south (w/ VHW)

4:15 Complete collection of amber liters, plastic liters from CHT6 - slow to yield.

4:25 Collect equipment wise blank - piece of steel casing w/ section at PUL screen and boiler inside. Labeled CHTB, 3 VOA, 2 AM, 2-1.

4:35 Collect samples from CHT5 - 4 pres. VOA's

Field measurements: Temp: 61°F, Cond: 3790 μ mhos/cm; pH: 5.77

5:35 Todd leave site - made arrangements for SA start time tomorrow to try CHT1 again.

5:45 PSF leave site.

6:00 Complete paperwork (COC's in) LEAVE SITE.

6:55 Stop by Ione's at Env. Health Cons. to drop off personal air monitoring pumps/GAC

7:25 Deliver water samples to Sequoia. Pick up bottles for tomorrow.

Distribution: Project Inspection File (orig)

Project Manager

By: Dave Wilbur

Daily Inspection Report No. _____

Sheet	1	of	2
Date:	11/15/96		
Project:	CHILLOW - SHERWIN WILLIAMS		
EKI Job No.:	930028.82		

Contractor: PRECISION SURVEYING

EKI Staff On-site: BART VON THAMER

Weather: SUNNY

Temperature: _____ F Max _____ F Min

Work Hours: _____ to _____ Memos Issued: _____

Photos: _____

Special Conditions, Delays, Changes: _____

Accidents, Damage: _____

Sampling, Testing: Soil samples: CH1B-A

Visitors to Site: Todd Miller (UP), Gregg Korman (OC Jones)

Work Report (Work done, Personnel/Equipment working): _____

7:45 Arrive at Sherwin Williams. Picked up ice for samples.

Jobs and Craig of PSE onsite.

7:55-Todd Miller & Lennie Pruett arrive

- Set up Craig on new CH1 location ^(CH1B) - approximately 5 ft south of original location. He will start asphalt coring.

8:00 Amy of PSE arrive.

8:10 Begin asphalt coring @ CH1B.

8:20 Call SAT @ office - discuss asphalt bit patching - make sure tack coat is used.

- Rain expected this weekend - cold patch holes to prevent water from entering holes.

8:35-Cam Gray & OC Jones - leave message w/ receipt.

- Jacobs were rig to CH5 to grant and pull casing. Received OK from Todd to leave in overnight.

8:45 Calibrate OVA - 100 ppm Hydrogen.

8:50 Don of PSE arrive.

9:00 Don leave him to run extend.

9:10 Concrete encountered @ 2' 9" in CH1B.

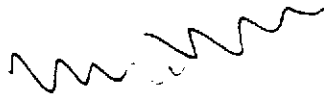
9:25 Complete removal of casing from CH5. Hole grouted thru PVC first then thru steel drive casing during removal.

9:55 Core appox. 1.5 ft through concrete @ CH1B. Still in concrete. Continuation of foundation & building (former); Begin cleanup

11:35 Begin moving drums/truck to Refkin

Distribution: Project Inspection File (orig)
Project Manager

By: Bart - Thal



Daily Inspection Report No. _____

Sheet:	2	of	2
Date:	11/15/96		
Project:	Curran-Sherrin Wk.		
EKI Job No.:	930028.82		

Contractor: _____

- 12:35 Complete unloading drums to R. Pflin
- 5 - 55 GAL DRUMS DECON WATER
- 3 - 55 GAL DRUM OF SOIL CUTTINGS
- 7 - BAGS TRASH

Left on way along NORTH WALK at 4525 RFLIN; inside building - driven back to site to expect patch borings and finish cleanup.

12:45 Receive call from Greg at OC Jones; he will meet me in front of 4525 Horton.

1:00 Greg arrives.

1:15 Show Greg location on Sherrin Millenia. Discuss saw cutting 18 inch square around existing borings, placing tack coat and sealing top. Greg indicated it would be best to saw cut one day and come back the next to patch; need moisture from saw cutting to dry. Greg would provide estimate this afternoon (probably have Frances work up it)

Informed Greg of possible hazardous conditions - arsenic and lead and that dust shouldn't be a problem w/ wet cutting.

Discussed saw cutting on Monday and patching on Tuesday. Greg would provide hgt. supervisor to oversee job.

Provided Greg w/ drawing (by SH) indicating Caltrans spec. and general requirements for patching.

Greg leave.

2:20 Finishing cleanup - Todd leave site.

2:30 Leave site. Patched all borings w/ cold asphalt patch and covered w/ plastic and safety cone.

2:35 Drop off Pflin Key @ main reception area for George - left George message.

Distribution: Project Inspection File (orig)
 Project Manager

By: Britt W. Pflin

SITE SAFETY MEETING/TRAINING LOG

Project Name Chiron/Shevin Wn
 Project No. _____

Date 11/12/96
 Page 1 of 1

PRINT NAME	SIGNATURE	COMPANY
DON WINGUENICA	<i>[Signature]</i>	PRECISION SAMPLING
Angel Ambriz	<i>[Signature]</i>	
Craig Stormo	<i>[Signature]</i>	PSI
Kenton Gee	<i>[Signature]</i>	LFR
Irene Fanelli	<i>[Signature]</i>	EHCI
Britt von Thaden	<i>[Signature]</i>	EHCI
Tom Miller	<i>[Signature]</i> 11/13/96	LFR
JACOB FRIIS	<i>[Signature]</i> 11/14/96	PSI

TOPICS COVERED:

1. Site HSP, protection levels
2. _____
3. _____
4. _____
5. _____

[Signature]
 (Instructor's Signature)

Sheet:	1	of	1
Date:	11/26/96		
Project:	Chiron		
EKI Job No.:	930028.93		

Contractor: OC Jones / Kister Sawie : ReiEKI Staff On-site: Britt von ThadenWeather: SunnyTemperature: 70 F Max 50 F MinWork Hours: to Memos Issued: Photos: Special Conditions, Delays, Changes: Accidents, Damage: Sampling, Testing: Visitors to Site: Kenton Gee (LF)Work Report (Work done, Personnel/Equipment working):

7:10A Arrive at site

7:25 Doug Smith and two laborers of OC Jones arrive.

7:45 - Wall site, discuss patching and health : safety issues. Laborers only to remove asphalt; no dirt.

- Doug leave site

8:00 Pat and Rod of Kister Sawie : Rei arrive at site.

8:40 Complete removal of asphalt, laborers leave site to get hot asphalt.

8:45 Kenton Gee of LFC arrive at site; marked for sampling locations for on Riffin wall. To collect bronze samples.

Took pictures of Steven Williams backholes (LF) after saw cut and removal of asphalt.

8:55 Kenton leave.

9:20 Laborer from OC Jones arrive back at site to place tank coat on patches.

9:25 Pat and Rod complete wrapping of backholes, body corners. Survey see body corners. Riffin wall (SE: SW) Shop wall (NE and NW) and warehouse wall (NE: NW); leave site.

10:45 Second laborer back at hot asphalt. Tank coat placed on all patches. areas for patching.

10:00 Place asphalt in two lifts - whopper attempted first but patch not big enough. Hand compact (w/ 8" x 8" hand compaction tool) first lift.

12:10 Complete patching of wrongs. On all patches; 1st asphalt lift hand compacted. Second lift with vibrating parking & sled. Edges sealed of emulsified oil and sandal, then whole surface sprayed of emulsified oil.

12:25 Leave site.

Distribution: Project Inspection File (orig)

Project Manager

By: Britt von Thaden

Daily Inspection Report No. _____

FILE

Erler &
Kalinowski, Inc.

Contractor: RUDOLPH'S SECTION

Sheet: 1 of 1

Date: 1/16/96

Project: CHRON

EKI Job No.: 930028.83

6:50 Arrive at Rifkin

7:25 R's personnel arrive w/ lift gate truck

7:50 Transferred 5-55 gal drums of Dacron water from Sherwin Williams drums in Nov. 1996 to Sherwin Williams.

Met Steve of Lemie Probe Reson and left drums on ramp area where Steve suggested.

Leave site.

Distribution: Project Inspection File (orig)
Project Manager

By: Brett Phil

Boring & Well Construction Log

BORING LOCATION 1450 Sherwin Street Emeryville, CA			Boring/Well Name: CHIB		
DRILLING COMPANY Precision Sampling, Inc.			Project Name: Chiron		
DRILLING METHOD(S) Hand Auger			Project Number: 930028.83		
ISOLATION CASING			FROM	TO	FT
BLANK CASING			FROM	TO	FT
PERFORATED CASING			FROM	TO	FT
SIZE AND TYPE OF FILTER PACK			FROM	TO	FT
SEAL			FROM	TO	FT
GROUT Type V Cement/Bentonite (Hot Asphalt at Surface)			FROM	TO	FT
			0	4.8	
			ELEVATION AND DATUM 19.61 ft. above MSL		TOTAL DEPTH 4.5 Feet
			DATE STARTED 11/15/96		DATE COMPLETED 11/15/96
			STATIC DEPTH TO WATER NA		
			LOGGED BY/CHECKED BY Britt von Thaden/Beth Lamb, C.E.G.		
			SAMPLING METHODS Slide Hammer		WELL COMPLETION <input type="checkbox"/> Surface Housing <input type="checkbox"/> Stand Pipe ft.

SAMPLES			WELL CONSTRUCTION			USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS
Type Number	Recovery (feet)	Blows/6 in.	DEPTH (feet)							
			1		FILL			Asphalt: 3 inches, sand base: 1 inch.		
	5		2		FILL (ML)		10YR 2/1	CLAYEY SILT (FILL), very dark brown (10YR 2/1), fine to medium grained sand (10-20%), fine to coarse gravel (5%), concrete chunks (to 3 inches), moist.	Sample #CHIB-A OVM=0 ppm	
			3	Cement/Bentonite Grout				CONCRETE. Total thickness of concrete uncertain.		
			4							
			5					Bottom of boring = 4.5 feet.	Cored to approx. 4+ feet.	
			6							
			7							
			8							
			9							
			10							
			11							
			12							
			13							

Boring & Well Construction Log

BORING LOCATION 1450 Sherwin Street Emeryville, CA		DRILLER Don Winglewich		Boring/Well Name: CH2	
DRILLING COMPANY Precision Sampling, Inc.		DRILL BIT AND SIZE 3.5 inches		Project Name: Chiron	
DRILLING METHOD(S) Hand Auger		ISOLATION CASING		Project Number: 930028.83	
BLANK CASING		FROM	TO	FT	ELEVATION AND DATUM 19.33 ft. above MSL
PERFORATED CASING		FROM	TO	FT	DATE STARTED 11/12/96
SIZE AND TYPE OF FILTER PACK		FROM	TO	FT	DATE COMPLETED 11/12/96
SEAL		FROM	TO	FT	STATIC DEPTH TO WATER NA
GROUT Type V Cement/Bentonite (Hot Asphalt at Surface)		FROM	TO	FT	LOGGED BY/CHECKED BY Britt von Thaden/Beth Lamb, C.E.G.
		FROM	TO	FT	SAMPLING METHODS Slide Hammer
		FROM	TO	FT	WELL COMPLETION <input type="checkbox"/> Surface Housing <input type="checkbox"/> Stand Pipe ft.

SAMPLES			DEPTH (feet)	WELL CONSTRUCTION	USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS	
Type Number	Recovery (feet)	Blows/6 in.								
			1		FILL			Asphalt: 3 inches, baserock: 3 inches.	OVM=0 ppm in hole	
	5		2		FILL (CL)	10YR 3/1		<u>SILTY CLAY WITH GRAVEL (FILL)</u> very dark gray (10YR 3/1), fine to coarse angular gravel to 1 inch diameter (10-20%), fragments of concrete (10%) up to 3 inch diameter, stiff, moist.	Sample #CH2-A OVM=5.6 ppm in hole	
			3			10YR 5/4		<u>SILT WITH SAND</u> , yellowish brown (10YR 5/4), sand (15-25%), rounded gravel (5%), low plasticity, moist.		
			4			ML				
			5			10YR 2/2 and 10YR 3/4		<u>SILT</u> , very dark brown (10YR 2/2) mottled with dark yellowish brown (10YR 3/4), fine grained sand (3-5%), moist.	OVM=4 ppm in hole	
	5		6					Bottom of Boring = 6 feet.	Sample #CH2-B	
			7							
			8							
			9							
			10							
			11							
			12							
			13							

Boring & Well Construction Log

BORING LOCATION 1450 Sherwin Street Emeryville, CA		Boring/Well Name: CH3	
DRILLING COMPANY Precision Sampling, Inc.		Project Name: Chiron	
DRILLING METHOD(S) Hand Auger		Project Number: 930028.83	
ISOLATION CASING		FROM TO FT	ELEVATION AND DATUM 19.21 ft. above MSL
BLANK CASING		FROM TO FT	TOTAL DEPTH 4.5 Feet
PERFORATED CASING		FROM TO FT	DATE STARTED 11/12/96
SIZE AND TYPE OF FILTER PACK		FROM TO FT	DATE COMPLETED 11/12/96
SEAL		FROM TO FT	STATIC DEPTH TO WATER NA
GROUT Type V Cement/Bentonite (Hot Asphalt at Surface)		FROM TO FT	LOGGED BY/CHECKED BY Britt von Thaden/Beth Lamb, C.E.G.
		FROM TO FT	SAMPLING METHODS Slide Hammer
		FROM TO FT	WELL COMPLETION <input type="checkbox"/> Surface Housing <input type="checkbox"/> Stand Pipe ft.
		0 4.5	

SAMPLES			DEPTH (feet)	WELL CONSTRUCTION	USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS
Type Number	Recovery (feet)	Blows/ 6 in.							
			1		FILL	Asphalt		Asphalt: 3.5 inches, baserock: 4 inches.	Sample #CH3-A
	5		2		FILL (CL)	(5Y 3/1)	SILTY CLAY (FILL) very dark gray (5Y 3/1), fine to medium, angular rounded gravel (5-10%), fine to coarse grained sand (3-5%), concrete fragments (5-15%) up to 4 inches diameter, stiff, moist.		
			3				CONCRETE, slab approximately 5.5 inches thick.	OVM=0 ppm	
			4		ML	(10YR 2/2)	SILT, very dark brown (10YR 2/2), caliche (5-15%), fine grained sand (3-5%), damp to moist.	Cored through concrete.	
	5		4.5					Sample #CH3-B	
			5					Bottom of Boring = 4.5 feet.	
			6						
			7						
			8						
			9						
			10						
			11						
			12						
			13						

Boring & Well Construction Log

BORING LOCATION 1450 Sherwin Street Emeryville, CA			Boring/Well Name: CH4		
DRILLING COMPANY Precision Sampling, Inc.			DRILLER Don Windlewich		
DRILLING METHOD(S) Hand Auger			DRILL BIT AND SIZE 3.5 inches		
ISOLATION CASING			FROM	TO	FT
BLANK CASING			FROM	TO	FT
PERFORATED CASING			FROM	TO	FT
SIZE AND TYPE OF FILTER PACK			FROM	TO	FT
SEAL			FROM	TO	FT
GROUT Type V Cement/Bentonite (Hot Asphalt at Surface)			FROM	TO	FT
			0	5	
			ELEVATION AND DATUM 19.03 ft. above MSL		TOTAL DEPTH 5 Feet
			DATE STARTED 11/12/96		DATE COMPLETED 11/12/96
			STATIC DEPTH TO WATER NA		
			LOGGED BY/CHECKED BY Britt von Thaden/Beth Lamb, C.E.G.		
			SAMPLING METHODS Slide Hammer		WELL COMPLETION <input type="checkbox"/> Surface Housing <input type="checkbox"/> Stand Pipe ft.

SAMPLES			DEPTH (feet)	WELL CONSTRUCTION	USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS
Type Number	Recovery (feet)	Blows/6 in.							
	5		1		FILL		Asphalt: 2.5 inches, sand base: 5.5 inches.	OVM=0 ppm in hole Sample #CH4-A	
			2		FILL (CL)	5Y 4/2	SILTY CLAY (FILL), olive gray (5Y 4/2), fine gravel (5-10%), caliche (fizzes in acid) (5-7%), trace brick fragments, stiff, damp to moist.		
			3		FILL (CL-ML)	10YR 4/2	SILTY CLAY/CLAYEY SILT (FILL), dark yellowish brown (10YR 4/4), fine to medium grained sand (3-5%), many fragments of broken-up concrete, stiff, moist.		
	5		5				At 4.5 feet, thin layer of cement (fizzes in acid) At 4.5 feet to 5 feet, light gray solid, texture similar to cement but doesn't fizz, likely to be top of slurry wall.		
			6				Bottom of Boring = 5 feet.		
			7						
			8						
			9						
			10						
			11						
			12						
			13						

Boring & Well Construction Log

BORING LOCATION 1450 Sherwin Street Emeryville, CA			Boring/Well Name: CH5		
DRILLING COMPANY Precision Sampling, Inc.			DRILLER Jacob Fries		
DRILLING METHOD(S) Hand Auger (to 4.5'), Direct push coring (to 19')			DRILL BIT AND SIZE 3 inches		
ISOLATION CASING			FROM	TO	FT
BLANK CASING			FROM	TO	FT
PERFORATED CASING			FROM	TO	FT
SIZE AND TYPE OF FILTER PACK			FROM	TO	FT
SEAL			FROM	TO	FT
GROUT Type V Cement/Bentonite (Hot Asphalt at Surface)			FROM	TO	FT
			ELEVATION AND DATUM 18.77 ft. above MSL		TOTAL DEPTH 19 Feet
			DATE STARTED 11/13/96		DATE COMPLETED 11/14/96
			STATIC DEPTH TO WATER NA		
			LOGGED BY/CHECKED BY Britt von Thaden/Beth Lamb, C.E.G.		
			SAMPLING METHODS Slide Hammer to 4.5' Continuous Core to 19'		WELL COMPLETION <input type="checkbox"/> Surface Housing <input checked="" type="checkbox"/> Stand Pipe ft.

SAMPLES			DEPTH (feet)	WELL CONSTRUCTION	USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS
Type Number	Recovery (feet)	Blows/6 in.							
			0			FILL		Asphalt: 3 inches, sand base: 2 inches, silt matrix with 1" concrete: 6 inches.	
			1			FILL			
	.5		2			FILL (ML)	10YR 2/1	CLAYEY SILT, very dark brown (10YR 2/1), medium sand to coarse gravel (10-20%), fragments of concrete up to 3 inches, moist.	OVM=0 ppm in hole Sample #CH5-A
			3					CONCRETE, not clear if slab or large chunk.	Cored through concrete.
	.5		4			CL	10YR 4/4	SILTY CLAY, dark yellowish brown (10YR 4/4), fabric mesh in sample liner at 4.5 feet, medium to high plasticity, stiff, moist to very moist.	Sample #CH5-B
	0		5			CL			
	0		6					color change to very dark gray (10YR 3/1) mottled with dark yellowish brown (10YR 4/4), increase in silt content at 6 feet.	OVM: S=0
	.1		7						
	.5		8			ML	10YR 4/3	CLAYEY SILT, brown (10YR 4/3), fine to coarse grained sand (3-5%), low plasticity, stiff, moist.	OVM: S=0
	0		9						
	.2		10			GM		SILTY GRAVEL WITH SAND, brown (10YR 4/3), fine to coarse gravel (40-50%), fine to coarse grained sand (20-30%), silt (20-30%), very moist.	
	.5		11			CL	10YR 4/4	SILTY CLAY, dark yellowish brown (10YR 4/4), silt (30-40%), localized coarse sand to fine gravel (5-7%), very moist.	
	.5		12						
	.5		13			GM	2.5Y 5/1	SANDY GRAVEL, gray (2.5Y 5/1), fine (90%) to coarse (10%) gravel (50-60%), fine to coarse grained sand (20-30%), silt (20-30%), poorly sorted, dense, wet.	OVM: S=8 First observed water at 13 feet.
	0								
	0								

Boring & Well Construction Log

(continuation)

Boring/Well Name: CH5
 Project Name: Chiron
 Project Number: 930028.83

SAMPLES			DEPTH (feet)	WELL CONSTRUCTION	USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS
Type Number	Recovery (feet)	Blows/ 6 in.							
	.2								
	.5		15						
	.5		16						
	.5		17		CL		10YR 5/2 with 7.5YR 4/6	<p>SILTY GRAVEL WITH SAND, grayish brown (10YR 5/2) mottled with strong brown (7.5YR 4/6), medium plasticity, very stiff, very moist.</p> <p>At 16.5 feet, 6 inch layer of localized burrows filled with sand, reddish-yellow staining.</p>	<p>Zone between 10 and 19 feet temporarily screened for collecting grab groundwater samples.</p>
	.5		18						
	.5		19					Bottom of Boring = 19 feet.	
	.5		20						
			21						
			22						
			23						
			24						
			25						
			26						
			27						
			28						
			29						

Boring & Well Construction Log

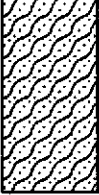
BORING LOCATION 1450 Sherwin Street Emeryville, CA			Boring/Well Name: CH6		
DRILLING COMPANY Precision Sampling, Inc.			DRILLER Jacob Fries		
DRILLING METHOD(S) Hand Auger (to 4'), Direct push coring (to 16')			DRILL BIT AND SIZE 3 inches		
ISOLATION CASING			FROM	TO	FT
BLANK CASING			FROM	TO	FT
PERFORATED CASING			FROM	TO	FT
SIZE AND TYPE OF FILTER PACK			FROM	TO	FT
SEAL			FROM	TO	FT
GROUT Type V Cement/Bentonite (Hot Asphalt at Surface)			FROM	TO	FT
			0	16	
			ELEVATION AND DATUM 18.63 ft. above MSL		TOTAL DEPTH 16 Feet
			DATE STARTED 11/13/96		DATE COMPLETED 11/14/96
			STATIC DEPTH TO WATER NA		
			LOGGED BY/CHECKED BY Britt von Thaden/Beth Lamb, C.E.G.		
			SAMPLING METHODS Slide Hammer to 4' Continuous Core to 16'		WELL COMPLETION <input type="checkbox"/> Surface Housing <input type="checkbox"/> Stand Pipe ft.

SAMPLES			DEPTH (feet)	WELL CONSTRUCTION	USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS
Type Number	Recovery (feet)	Blows/6 in.							
			0			FILL		Asphalt: 2 inches, base: 2 inches.	
			1			FILL (ML)	10YR 2/2	CLAYEY SILT, very dark brown (10YR 2/2) medium grained sand (5-15%), concrete fragments to 1 inch, damp to moist.	
	.5		2					CONCRETE, 4.5 inches thick.	Cored through concrete.
			3					SILT, very dark brown (10YR 2/2), fine to medium grained sand (5-15%), low plasticity, moist.	
	.5		4			ML	10YR 2/2		
	0		5						
	.5		6			CL	5G 3/1	SILTY CLAY, dark greenish gray (5G 3/1), medium plasticity, stiff, damp to moist.	
	.5		6.5					Silt increases with depth, color change toward black (N2.5)	
	.5		7					CLAYEY SILT, black (N2.5) mottled with dark greenish gray (5G 3/1), fine to medium grained sand (5-10%), low dry strength, moist.	OVM: S=17 ppm
	.5		7.5						
	.5		8					color change to very dark gray (10YR 3/1)	
	.5		9			ML	10YR 3/1		
	.5		9.5					Between 9.5 and 10 feet, localized increase in clay content.	
	.5		10					color change to black (N2.5) mottled with dark greenish gray (5G 3/1), very moist.	
	.2		11						
	.5		11.5						
	.5		12			CL	10YR 4/4	SILTY CLAY, dark yellowish brown (10YR 4/4) slightly mottled with strong brown (7.5YR 5/8), fine to coarse grained sand (3-5%), low to medium plasticity, very moist.	OVM: S=2742 ppm
	.5		12.5			ML			
	.5		13			SM	2.5Y 8/2	SANDY SILT, light brownish gray (2.5Y 8/2), fine to medium grained sand (30-40%), no to low plasticity, very moist to wet.	
	0		13.5					At 12.7 feet, sand decreases to 10-20%	
	0		14						

Boring & Well Construction Log

(continuation)

Boring/Well Name: CH6
 Project Name: Chiron
 Project Number: 930028.83

SAMPLES			DEPTH (feet)	WELL CONSTRUCTION	USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS	
Type Number	Recovery (feet)	Blows/ 6 in.								
	2				SM		2.5Y 6/2	At 13.2 feet, <u>SILTY SAND</u> , light brownish gray (2.5Y 6/2), fine to coarse grained (fine: 20%, medium: 50%, coarse: 30%) grained sand (80-90%), fine gravel (5-10%), silt (10-20%), wet.	Zone between 10 and 16 feet temporarily screened for collecting grab groundwater samples.	
	5		15		ML		10YR 6/1	At 14 feet, sand grades finer, no gravel, minor coarse grained sand.		
	5		16					7.5YR 4/4		At 14.3 feet, 2 inch lens of sandy gravel.
	5		17							At 14.5 feet, <u>SANDY SILT</u> , gray (10YR 6/1), fine grained sand (30-40%), low plasticity, wet.
			18				Between 15 and 15.5 feet, yellow staining			
			19				At 15.5 feet, color change to dark gray (5Y 4/1) mottled with brown (7.5YR 4/4)			
			20				Bottom of Boring = 16 feet.			
			21							
			22							
			23							
			24							
			25							
			26							
			27							
			28							
			29							

Boring & Well Construction Log

BORING LOCATION 1450 Sherwin Street Emeryville, CA			Boring/Well Name: CH7	
DRILLING COMPANY Precision Sampling, Inc.			Project Name: Chiron	
DRILLING METHOD(S) Hand Auger			Project Number: 930028.83	
ISOLATION CASING			FROM TO FT	ELEVATION AND DATUM 17.72 ft. above MSL
BLANK CASING			FROM TO FT	TOTAL DEPTH 4.5 Feet
PERFORATED CASING			FROM TO FT	DATE STARTED 11/12/96
SIZE AND TYPE OF FILTER PACK			FROM TO FT	DATE COMPLETED 11/12/96
SEAL			FROM TO FT	STATIC DEPTH TO WATER NA
GROUT Type V Cement/Bentonite (Hot Asphalt at Surface)			FROM TO FT	LOGGED BY/CHECKED BY Britt von Thaden/Beth Lamb, C.E.G.
			FROM TO FT	SAMPLING METHODS Slide Hammer
			FROM TO FT	WELL COMPLETION <input type="checkbox"/> Surface Housing <input type="checkbox"/> Stand Pipe ft.

SAMPLES			DEPTH (feet)	WELL CONSTRUCTION	USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS
Type Number	Recovery (feet)	Blows/6 in.							
	.5		1	<p>Cement/Bentonite Grout →</p>	FILL			Asphalt: 2 inches, base rock: 4 inches.	Sample #CH7-A DVM=0 ppm
			2		FILL (ML)	10YR 4/2		GRAVELLY SILT (FILL), dark grayish brown (10YR 4/2), fine to coarse gravel with concrete fragments (25-35%), non-plastic, damp.	
			3		FILL			Asphalt: 3 inches, concrete: 8 inches	Cored through asphalt and concrete.
			4		FILL (GP)			BASEROCK (GRAVEL)	
	.5		5		ML	7.5YR 2/1		SILT, black (7.5YR 2/1), trace fine grained sand, no to low plasticity, moist.	
			6				Bottom of Boring = 4.5 feet.	Sample #CH7-B	
			7						
			8						
			9						
			10						
			11						
			12						
			13						

Boring & Well Construction Log

BORING LOCATION 1450 Sherwin Street Emeryville, CA			Boring/Well Name: CH8		
DRILLING COMPANY Precision Sampling, Inc.			Project Name: Chiron		
DRILLING METHOD(S) Hand Auger			Project Number: 930028.83		
ISOLATION CASING	FROM	TO	FT	ELEVATION AND DATUM 17.29 ft. above MSL	TOTAL DEPTH 4.5 Feet
BLANK CASING	FROM	TO	FT	DATE STARTED 11/12/96	DATE COMPLETED 11/12/96
PERFORATED CASING	FROM	TO	FT	STATIC DEPTH TO WATER NA	
SIZE AND TYPE OF FILTER PACK	FROM	TO	FT	LOGGED BY/CHECKED BY Britt von Thaden/Beth Lamb, C.E.G.	
SEAL	FROM	TO	FT	SAMPLING METHODS Slide Hammer	WELL COMPLETION <input type="checkbox"/> Surface Housing <input type="checkbox"/> Stand Pipe ft.
GROUT Type V Cement/Bentonite (Hot Asphalt at Surface)	FROM	TO	FT		

SAMPLES			DEPTH (feet)	WELL CONSTRUCTION	USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS
Type Number	Recovery (feet)	Blows/ 6 in.							
			0					Asphalt: 2 inches, base rock: 6 inches.	
	.5		1		FILL			GRAVELLY SILT (FILL) dark grayish brown (10YR 4/2), fine to coarse gravel with concrete fragments (25-35%), minor clay, non-plastic, damp.	Sample #CH8-A OVM=0 ppm
			2		FILL (ML)		10YR 4/2	CONCRETE, slab 5 inches thick.	Cored through concrete.
			3	Cement/Bentonite Grout	SP			SAND (FILL) dark yellowish brown (10YR 4/6), fine to coarse grained (fine: 10%, medium: 50%, coarse: 40%) sand, moist.	
	.5		4		ML		7.5YR 2.5/1 10YR 8/1	SILT black (7.5YR 2.5/1) mottled with white (10YR 8/1), fine to coarse grained sand (5-10%), roots (1-3%), white portion (15%) consisting of calcareous nodules, very moist.	Sample #CH8-B
			5					Bottom of Boring = 4.5 feet.	
			6						
			7						
			8						
			9						
			10						
			11						
			12						
			13						

Boring & Well Construction Log

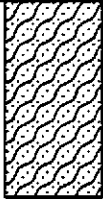
BORING LOCATION 1450 Sherwin Street Emeryville, CA			Boring/Well Name: CH9		
DRILLING COMPANY Precision Sampling, Inc.			DRILLER Jacob Fries		
DRILLING METHOD(S) Hand Auger (to 4.5'), Direct push coring (to 16')			DRILL BIT AND SIZE 3 inches		
ISOLATION CASING			FROM	TO	FT
BLANK CASING			FROM	TO	FT
PERFORATED CASING			FROM	TO	FT
SIZE AND TYPE OF FILTER PACK			FROM	TO	FT
SEAL			FROM	TO	FT
GROUT Type V Cement/Bentonite (Hot Asphalt at Surface)			FROM	TO	FT
			ELEVATION AND DATUM 17.80 ft. above MSL		TOTAL DEPTH 16 Feet
			DATE STARTED 11/13/96		DATE COMPLETED 11/14/96
			STATIC DEPTH TO WATER NA		
			LOGGED BY/CHECKED BY Britt von Thaden/Beth Lamb, C.E.G.		
			SAMPLING METHODS Slide Hammer to 4.5' Continuous Core to 16'		WELL COMPLETION <input type="checkbox"/> Surface Housing <input type="checkbox"/> Stand Pipe ft.

SAMPLES			DEPTH (feet)	WELL CONSTRUCTION	USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS
Type Number	Recovery (feet)	Blows/ 6 in.							
			0					Asphalt: 2 inches, base: 5 inches.	
	.5		1		ML	10YR 2/1		CLAYEY SILT, very dark brown (10YR 2/1), medium sand to coarse gravel (10-20%), fragments of concrete up to 3 inches, dense, moist.	OVM=0 ppm Sample #CH9-A
	.5		2					CONCRETE, slab 5 inches thick.	Cored through concrete.
	.5		3		SM	10YR 4/6		SILTY SAND, dark yellowish brown (10YR 4/6), fine to coarse grained (fine: 30%, medium: 60%, coarse: 10%) sand (80-90%), silt (10-20%), moist.	OVM: S=1655 ppm
	0		4					CLAYEY SILT WITH SAND, very dark brown (10YR 2/2), fine to medium grained sand (15-25%), clay binder, low to moderate plasticity, moist.	
	0		5		ML			localized calcareous nodules.	
	.4		6					SILT, black (10YR 2/1), fine to coarse grained sand (3-5%), minor fine to coarse angular gravel, no to low plasticity, low dry strength, damp to moist.	OVM: S=2200 ppm
	.5		6.5	Cement/Bentonite Grout →				Between 6 and 6.5 feet, increase in clay content.	
	.5		7					color change to dark gray (5Y 4/1)	OVM=2067 ppm
	.5		8		SM	5Y 4/1		SILTY SAND, dark gray (5Y 4/1), fine grained sand (50-60%), fine gravel (5-15%), well sorted, moist to very moist.	
	.5		9		ML			CLAYEY SILT, dark gray (5Y 4/1), coarse grained sand (3-5%), low to moderate plasticity, stiff, moist.	OVM: S=2067 ppm
	.5		10		GW-GM	5Y 3/1		WELL GRADED GRAVEL WITH SILT AND SAND, very dark gray (5Y 3/1), fine to coarse angular gravel up to 1/2" (70-80%), fine to coarse grained sand (20-30%), silt (5-15%), poorly sorted, wet.	First observed water at 10 feet.
	.5		11						
	.5		12		ML	10YR 4/2		SILT WITH SAND, dark grayish brown (10YR 4/2), fine grained sand (10-20%), coarse grained sand (3-5%), root holes (1%), no plasticity, very moist to wet.	
	.5		12.7					yellow staining between 12 and 12.7 feet.	
	.5		13		GW-GM	5Y 6/6		SANDY GRAVEL, olive yellow (5Y 6/6), fine to coarse gravel (70-80%), fine to coarse grained sand (20-30%), silt (5-15%), poorly sorted, dense, wet.	

Boring & Well Construction Log

(continuation)

Boring/Well Name: CH9
 Project Name: Chiron
 Project Number: 930028.83

SAMPLES			DEPTH (feet)	WELL CONSTRUCTION	USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS
Type Number	Recovery (feet)	Blows/ 6 in.							
	.5		15		ML	SILT	5Y 4/1	SILT, mottled dark gray (5Y 4/1) with brown (7.5YR 4/4), low plasticity, wet.	Zone between 10 and 16 feet temporarily screened for collecting grab groundwater samples.
	.5		15.5						
	.5		16		CL	SILTY CLAY	SILTY CLAY, black (2.5Y 2.5/1) mottled with greenish gray (5G 5/1), medium to coarse grained sand (3-5%), medium plasticity, stiff, very moist.		
	.5		16				Bottom of Boring = 16 feet.		
			17						
			18						
			19						
			20						
			21						
			22						
			23						
			24						
			25						
			26						
			27						
			28						
			29						

Boring & Well Construction Log

BORING LOCATION 1450 Sherwin Street Emeryville, CA		Boring/Well Name: CH10	
DRILLING COMPANY Precision Sampling, Inc.		Project Name: Chiron	
DRILLING METHOD(S) Hand Auger (to 5'), Direct push coring (to 19')		Project Number: 930028.83	
ISOLATION CASING	FROM TO FT	ELEVATION AND DATUM 18.25 ft. above MSL	TOTAL DEPTH 19 Feet
BLANK CASING	FROM TO FT	DATE STARTED 11/13/96	DATE COMPLETED 11/14/96
PERFORATED CASING	FROM TO FT	STATIC DEPTH TO WATER NA	
SIZE AND TYPE OF FILTER PACK	FROM TO FT	LOGGED BY/CHECKED BY Britt von Thaden/Beth Lamb, C.E.G.	
SEAL	FROM TO FT	SAMPLING METHODS Slide Hammer to 5' Continuous Core to 19'	WELL COMPLETION <input type="checkbox"/> Surface Housing <input type="checkbox"/> Stand Pipe ft.
GROUT Type V Cement/Bentonite (Hot Asphalt at Surface)	FROM TO FT		

SAMPLES			DEPTH (feet)	WELL CONSTRUCTION	USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS
Type Number	Recovery (feet)	Blows/6 in.							
			0			FILL		Asphalt: 3 inches, base: 6 inches.	
	.5		1					SILTY CLAY , very dark grayish brown (10YR 3/2), fine gravel to 1/4 inch diameter (5-15%), fine to coarse grained sand (5%), isolated light bluish green particle (coarse sand size), piece of asphalt (3/4 inch diameter), medium plasticity, moist.	OVM=0 ppm Sample #CH10-A
			2			CL	10YR 3/2	large chunks of concrete present to depth of concrete slab.	
			3						
			4						
	0		5					CONCRETE , slab 5 inches thick, 1 to 2 inches sand base under slab.	Cored through concrete.
	0		6					CLAYEY SILT , dark yellowish brown (10YR 3/6), fine to coarse grained sand (5-10%), fine gravel (5-10%), wood fragments, moist.	OVM=76 ppm
	.5		6.5					localized coarse gravel at 6.5 feet.	Sample #CH10-B
	.5		7			ML	10YR 2/1	SILT , black (10YR 2/1), medium plasticity, stiff, very moist.	
	0		8						
	.5		8.5					SILT WITH SAND , very dark grayish brown (2.5Y 3/2), fine to medium grained sand (5-15%), no to low plasticity, very moist.	
	.5		9					At 8.5 feet, color change to brown (10YR 4/3).	
	.5		9.5			GM		SILTY GRAVEL WITH SAND , dark yellowish brown (10YR 4/4), fine to coarse gravel to 1.5 inches (50-60%), fine to coarse grained sand (20-30%), silt (20-30%), poorly sorted, moist.	
	0		10						
	0		11			ML	10YR 3/2 with 7.5YR 4/4	CLAYEY SILT , very dark grayish brown (10YR 3/2) slightly mottled with brown (7.5YR 4/4), fine to medium grained sand (5-15%), medium plasticity, very moist.	OVM: S=1350 ppm
	.5		11.5					SANDY SILT , dark grayish brown (2.5Y 4/2) mottled with brown (7.5YR 4/3), fine grained sand (30-40%), roots (1-3%), low plasticity, very moist.	First observed water at 13 feet.
	.5		12						
	.5		12.5						
	0		13			GM	2.5Y 3/2	SILTY GRAVEL WITH SAND , very dark grayish brown (2.5Y 3/2), fine to coarse gravel (60-70%), fine to coarse grained sand (30-40%), silt	

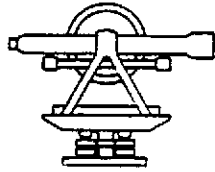
Boring & Well Construction Log

(continuation)

Boring/Well Name: CH10
 Project Name: Chiron
 Project Number: 930028.83

SAMPLES			DEPTH (feet)	WELL CONSTRUCTION	USCS LOG	LITHOLOGY	COLOR	SAMPLE DESCRIPTION	DRILLING REMARKS
Type Number	Recovery (feet)	Blows/ 6 in.							
	.5		15		GM			SANDY SILT, olive (5Y 4/3), stained with yellow (5Y 8/8), fine grained sand (30-40%), wet.	
	.5				ML		5Y 4/3		
	.5		16		GM		5Y 4/3	SILTY GRAVEL WITH SAND, SANDY GRAVEL, greenish black (10GY 2.5/1) to 15.5 feet, olive (5Y 4/3) to 16.6 feet, fine to coarse gravel stained with yellow (50-60%), fine to coarse grained sand (30-40%), silt (20-30%), poorly sorted, wet.	
	.0		17		ML		5Y 4/1 with 7.5YR 4/4	SILT, dark gray (5Y 4/1) mottled with brown (7.5YR 4/4), low plasticity, wet.	
	.5		18		ML		5Y 4/1 with 7.5YR 4/4		
	.5		19	CL			SILTY CLAY, dark gray (5Y 4/1) mottled with brown (7.5YR 4/4), medium to high plasticity, very stiff, moist to very moist.	Zone between 13 and 19 feet temporarily screened for collecting grab groundwater samples.	
	.5		20				Bottom of Boring = 19 feet.		
	.5		21						
	.5		22						
	.5		23						
			24						
			25						
			26						
			27						
			28						
			29						

KISTER, SAVIO & REI INC.



LAND SURVEYORS & CIVIL ENGINEERS

DONALD E. KISTER (1905-1969)

CHARLES J. SAVIO (Retired)

MICHAEL P. REI
REGISTERED CIVIL ENGINEER

FILE

930028, 83

3085 RICHMOND PARKWAY, SUITE 214

RICHMOND, CA 94808

PHONE (510) 222-4020

FAX (510) 222-3718

December 3, 1996

Mr. Britt Von Thaden
Erlar & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402

Re: Soil Boring and Survey Control Location, Chiron - Emeryville
Sherwin Williams Property
Project No: EKI 930028.82
Job No: 16823

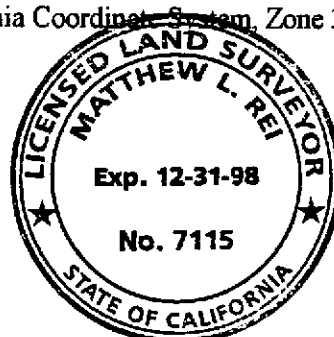
Dear Britt:

Presented are the coordinates and elevations of the soil boring locations in the above named project:

<u>Code</u>	<u>Northing</u>	<u>Easting</u>	<u>Elev.</u>
UN-NAMED	490511.14	1483636.74	19.60
CH-1	490513.28	1483637.83	19.62
CH-1B	490506.96	1483639.32	19.61
CH-2	490478.17	1483634.84	19.33
CH-3	490502.44	1483599.32	19.21
CH-4	490490.70	1483603.53	19.03
CH-5	490478.65	1483572.62	18.77
CH-6	490486.45	1483543.97	18.63
CH-7	490430.41	1483557.50	17.72
CH-8	490416.69	1483529.58	17.29
CH-9	490443.87	1483498.94	17.80
CH-10	490459.68	1483450.69	18.25
COR BLD	490518.38	1483640.70	15.42
COR BLD	490460.97	1483446.08	17.89
COR BLD	490327.37	1483563.81	15.08
COR BLD	490338.96	1483604.18	13.41
COR BLD	490276.76	1483639.68	16.96
COR BLD	490295.56	1483704.89	—

Datum: Mean Seal Level

Coordinates based on 1927 California Coordinate System, Zone 3.



Matthew L. Rei
Matthew L. Rei, L.L.S. 7115
Expires 12-21-98



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron

Lab Proj. ID: 9611847

Sampled: 11/13/96
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 12/03/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611847-01 Sample Desc: SOLID,CH1-A				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	11
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
pH	pH Units	11/15/96	N/A	8.7
Lab No: 9611847-02 Sample Desc: SOLID,CH5-A				
pH	pH Units	11/15/96	N/A	8.2
Lab No: 9611847-03 Sample Desc: SOLID,CH5-B				
pH	pH Units	11/15/96	N/A	9.3
Lab No: 9611847-04 Sample Desc: SOLID,CH6-A				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	4.7
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
pH	pH Units	11/15/96	N/A	8.7
Lab No: 9611847-05 Sample Desc: SOLID,CH6-B				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	0.47
Lead: TCLP Extraction	mg/L	11/22/96	0.10	3.9
pH	pH Units	11/15/96	N/A	7.5
Lab No: 9611847-06 Sample Desc: SOLID,CH9-A				
Lead	mg/Kg	11/21/96	5.0	2900

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Lab Proj. ID: 9611847	Sampled: 11/13/96 Received: 11/14/96 Analyzed: see below Reported: 12/03/96
Attention: Vera Nelson		

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
pH	pH Units	11/15/96	N/A	8.0

Lab No: 9611847-07
Sample Desc : SOLID,CH9-B

Arsenic	mg/Kg	11/21/96	25.0	27000
Lead	mg/Kg	11/21/96	25.0	62000
pH	pH Units	11/15/96	N/A	7.3
Zinc	mg/Kg	11/21/96	2.50	3100

Lab No: 9611847-08
Sample Desc : SOLID,CH10-A

Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	6.8
Lead: TCLP Extraction	mg/L	11/22/96	0.10	0.15
pH	pH Units	11/15/96	N/A	7.9

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron

Lab Proj. ID: 9611847

Sampled:
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 12/03/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611847-09				
Sample Desc : SOLID, Method Blank				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
Lead	mg/Kg	11/21/96	5.0	N.D.
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
pH	pH Units	11/15/96	N/A	NA
Zinc	mg/Kg	11/21/96	0.50	1.9

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH1-A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611847-01

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.



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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH1-A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611847-01

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH1-A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611847-01

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/21/96
Reported: 12/03/96

Attention: Vera Nelson

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg	* Sample Results ug/Kg
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	250	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH1-A
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611847-01

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatle Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	250
Benzo(b)fluoranthene	250	410
Benzo(k)fluoranthene	250	370
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	680
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	570
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.



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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH1-A Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-01	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg	
Di-n-octyl phthalate	250	N.D.	
Fluoranthene	250	280	
Fluorene	250	N.D.	
Hexachlorobenzene	250	N.D.	
Hexachlorobutadiene	250	N.D.	
Hexachlorocyclopentadiene	500	N.D.	
Hexachloroethane	250	N.D.	
Indeno(1,2,3-cd)pyrene	250	280	
Isophorone	250	N.D.	
2-Methylnaphthalene	250	N.D.	
2-Methylphenol	250	N.D.	
4-Methylphenol	250	N.D.	
Naphthalene	250	N.D.	
2-Nitroaniline	500	N.D.	
3-Nitroaniline	500	N.D.	
4-Nitroaniline	500	N.D.	
Nitrobenzene	250	N.D.	
2-Nitrophenol	250	N.D.	
4-Nitrophenol	500	N.D.	
N-Nitrosodiphenylamine	250	N.D.	
N-Nitroso-di-n-propylamine	250	N.D.	
Pentachlorophenol	500	N.D.	
Phenanthrene	250	N.D.	
Phenol	250	N.D.	
Pyrene	250	340	
1,2,4-Trichlorobenzene	250	N.D.	
2,4,5-Trichlorophenol	500	N.D.	
2,4,6-Trichlorophenol	250	N.D.	
Surrogates	Control Limits %	% Recovery	
2-Fluorophenol	25	121	54
Phenol-d5	24	113	69
Nitrobenzene-d5	23	120	51
2-Fluorobiphenyl	30	115	68
2,4,6-Tribromophenol	19	122	61
p-Terphenyl-d14	18	137	53

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH1-A
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611847-01

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/03/96

Attention: Vera Nelson

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatiles Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
BENZENE, DIMETHYL-	130	620
UNKNOWN	130	300
UNKNOWN HYDROCARBON (MAYBE OIL)	130	280000

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erier & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH1-A Matrix: SOLID Analysis Method: Title 22 Lab Number: 9611847-01	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/21/96 Analyzed: 11/21/96 Reported: 12/03/96
Attention: Vera Nelson		


QC Batch Number: ME1121966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	12
Arsenic, As	500	5.0	1500
Barium, Ba	10000	5.0	150
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	3.9
Chromium, Cr	2500	0.50	33
Cobalt, Co	8000	2.5	N.D.
Copper, Cu	2500	0.50	62
Lead, Pb	1000	5.0	2000
Mercury, Hg	20	0.020	0.42
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	38
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	29
Zinc, Zn	5000	0.50	160

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH5-A
Matrix: SOLID
Analysis Method: Title 22
Lab Number: 9611847-02

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/21/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: ME1121966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	12
Arsenic, As	500	5.0	1100
Barium, Ba	10000	5.0	140
Beryllium, Be	75	0.50	0.51
Cadmium, Cd	100	0.50	3.0
Chromium, Cr	2500	0.50	48
Cobalt, Co	8000	2.5	12
Copper, Cu	2500	0.50	57
Lead, Pb	1000	5.0	2800
Mercury, Hg	20	0.020	0.38
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	53
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	34
Zinc, Zn	5000	0.50	160

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Ertler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH5-B Matrix: SOLID Analysis Method: Title 22 Lab Number: 9611847-03	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/21/96 Analyzed: 11/21/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: ME1121966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	7.9
Arsenic, As	500	5.0	42
Barium, Ba	10000	5.0	400
Beryllium, Be	75	0.50	1.0
Cadmium, Cd	100	0.50	N.D.
Chromium, Cr	2500	0.50	16
Cobalt, Co	8000	2.5	23
Copper, Cu	2500	0.50	29
Lead, Pb	1000	5.0	72
Mercury, Hg	20	0.20	1.6
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	38
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	26
Zinc, Zn	5000	0.50	75

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH6-A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611847-04

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.



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Eler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH6-A Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611847-04	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager

Page:





Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH6-A Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611847-04	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	250	N.D.

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST Library.
Positive identification or specification between isomers cannot be made without retention time standards.
* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH6-A
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611847-04

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	1300
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.



Sequoia Analytical

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH6-A
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611847-04

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Hexachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
Hexachlorocyclopentadiene	500	N.D.
Hexachloroethane	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
2-Methylphenol	250	N.D.
4-Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	250	N.D.
Phenol	250	N.D.
Pyrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	250	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	25	121	52
Phenol-d5	24	113	66
Nitrobenzene-d5	23	120	50
2-Fluorobiphenyl	30	115	65
2,4,6-Tribromophenol	19	122	66
p-Terphenyl-d14	18	137	47

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH6-A Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-04	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds


Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
UNKNOWN	130	260
COPAENE	130	630
ELEMENE	130	480
NAPHTHALENE, 1,2,3,5,6,8A-HEXAHYDRO- 4,7-DIMETHYL-1-(1-METHYLETHYL)-	130	740
UNKNOWN HYDROCARBON (MAYBE OIL)	130	230000

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH6-A
Matrix: SOLID
Analysis Method: Title 22
Lab Number: 9611847-04

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/21/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: ME1121966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	8.2
Arsenic, As	500	5.0	1900
Barium, Ba	10000	5.0	220
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	5.5
Chromium, Cr	2500	0.50	33
Cobalt, Co	8000	2.5	11
Copper, Cu	2500	0.50	37
Lead, Pb	1000	5.0	580
Mercury, Hg	20	0.020	0.97
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	36
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	29
Zinc, Zn	5000	0.50	200

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH6-B Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611847-05	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/03/96
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QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.





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Erler & Kalinowski, Inc.
 1730 South Amphlett, Ste 320
 San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
 Sample Descript: CH6-B
 Matrix: SOLID
 Analysis Method: EPA 8240
 Lab Number: 9611847-05

Sampled: 11/13/96
 Received: 11/14/96
 Extracted: 11/20/96
 Analyzed: 11/21/96
 Reported: 12/03/96

QC Batch Number: MS1120968240EXA
 Instrument ID: F3

Analyte

Detection Limit
 ug/Kg

Sample Results
 ug/Kg

Surrogates

Control Limits %

% Recovery

1,2-Dichloroethane-d4
 Toluene-d8
 4-Bromofluorobenzene

70	121
81	117
74	121

90
97
92

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

SEQUOIA ANALYTICAL - ELAP #1210


 Mike Gregory
 Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH6-B
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611847-05

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	250	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH6-B
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611847-05

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.



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Erier & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH6-B Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-05	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1118968270EXA
 Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Hexachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
Hexachlorocyclopentadiene	500	N.D.
Hexachloroethane	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
2-Methylphenol	250	N.D.
4-Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	250	N.D.
Phenol	250	N.D.
Pyrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	250	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	25	121	50
Phenol-d5	24	113	64
Nitrobenzene-d5	23	120	47
2-Fluorobiphenyl	30	115	57
2,4,6-Tribromophenol	19	122	66
p-Terphenyl-d14	18	137	63

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

SEQUOIA ANALYTICAL - ELAP #1210


 Mike Gregory
 Project Manager





Eler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH6-B Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-05	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
BENZENE, DIMETHYL-	130	650
UNKNOWN	130	200
HEXATRIACONTANE	130	450
NONACOSANE	130	210

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST Library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH6-B
Matrix: SOLID
Analysis Method: Title 22
Lab Number: 9611847-05

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/21/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: ME1121966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	25	38
Arsenic, As	500	25	4500
Barium, Ba	10000	25	130
Beryllium, Be	75	2.5	N.D.
Cadmium, Cd	100	2.5	19
Chromium, Cr	2500	2.5	34
Cobalt, Co	8000	13	N.D.
Copper, Cu	2500	2.5	740
Lead, Pb	1000	10	120000
Mercury, Hg	20	0.20	2.4
Molybdenum, Mo	3500	25	N.D.
Nickel, Ni	2000	25	41
Selenium, Se	100	25	N.D.
Silver, Ag	500	2.5	88
Thallium, Tl	700	25	N.D.
Vanadium, V	2400	13	19
Zinc, Zn	5000	2.5	510

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9-A Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611847-06	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/03/96
QC Batch Number: MS1120968240EXA Instrument ID: F3		

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	870
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	130
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.



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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH9-A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611847-06

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte

Detection Limit
ug/Kg

Sample Results
ug/Kg

Surrogates

1,2-Dichloroethane-d4
Toluene-d8
4-Bromofluorobenzene

Control Limits %

70 121
81 117
74 121

% Recovery

103
105
99

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager

Page:

2





Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9-A Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611847-06	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/03/96
---	---	--


QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit * ug/Kg	Sample Results * ug/Kg
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	250	N.D.

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST Library.
Positive identification or specification between isomers cannot be made without retention time standards.
* Estimated

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager





Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9-A Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-06	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.





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Erier & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9-A Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-06	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg	
Di-n-octyl phthalate	250	N.D.	
Fluoranthene	250	N.D.	
Fluorene	250	N.D.	
Hexachlorobenzene	250	N.D.	
Hexachlorobutadiene	250	N.D.	
Hexachlorocyclopentadiene	500	N.D.	
Hexachloroethane	250	N.D.	
Indeno(1,2,3-cd)pyrene	250	N.D.	
Isophorone	250	N.D.	
2-Methylnaphthalene	250	N.D.	
2-Methylphenol	250	N.D.	
4-Methylphenol	250	N.D.	
Naphthalene	250	N.D.	
2-Nitroaniline	500	N.D.	
3-Nitroaniline	500	N.D.	
4-Nitroaniline	500	N.D.	
Nitrobenzene	250	N.D.	
2-Nitrophenol	250	N.D.	
4-Nitrophenol	500	N.D.	
N-Nitrosodiphenylamine	250	N.D.	
N-Nitroso-di-n-propylamine	250	N.D.	
Pentachlorophenol	500	N.D.	
Phenanthrene	250	N.D.	
Phenol	250	N.D.	
Pyrene	250	N.D.	
1,2,4-Trichlorobenzene	250	N.D.	
2,4,5-Trichlorophenol	500	N.D.	
2,4,6-Trichlorophenol	250	N.D.	
Surrogates	Control Limits %	% Recovery	
2-Fluorophenol	25	121	57
Phenol-d5	24	113	71
Nitrobenzene-d5	23	120	53
2-Fluorobiphenyl	30	115	67
2,4,6-Tribromophenol	19	122	60
p-Terphenyl-d14	18	137	54

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9-A Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-06	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg
BENZENE, DIMETHYL-	130	700
UNKNOWN	130	380
UNKNOWN HYDROCARBON (MAYBE OIL)	130	110000

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST Library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager





Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9-B Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611847-07	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/22/96 Reported: 12/03/96
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QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	200000	420000
Benzene	40000	N.D.
Bromodichloromethane	40000	N.D.
Bromoform	40000	N.D.
Bromomethane	40000	N.D.
2-Butanone	200000	N.D.
Carbon disulfide	40000	N.D.
Carbon tetrachloride	40000	N.D.
Chlorobenzene	40000	N.D.
Chloroethane	40000	N.D.
2-Chloroethyl vinyl ether	200000	N.D.
Chloroform	40000	N.D.
Chloromethane	40000	N.D.
Dibromochloromethane	40000	N.D.
1,1-Dichloroethane	40000	N.D.
1,2-Dichloroethane	40000	N.D.
1,1-Dichloroethene	40000	N.D.
cis-1,2-Dichloroethene	40000	N.D.
trans-1,2-Dichloroethene	40000	N.D.
1,2-Dichloropropane	40000	N.D.
cis-1,3-Dichloropropene	40000	N.D.
trans-1,3-Dichloropropene	40000	N.D.
Ethylbenzene	40000	110000
2-Hexanone	200000	N.D.
Methylene chloride	100000	N.D.
4-Methyl-2-pentanone	200000	300000
Styrene	40000	N.D.
1,1,2,2-Tetrachloroethane	40000	N.D.
Tetrachloroethene	40000	N.D.
Toluene	40000	2600000
1,1,1-Trichloroethane	40000	N.D.
1,1,2-Trichloroethane	40000	N.D.
Trichloroethene	40000	N.D.
Trichlorofluoromethane	40000	N.D.
Vinyl acetate	100000	N.D.
Vinyl chloride	40000	N.D.
Total Xylenes	40000	570000





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Erier & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9-B Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611847-07	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/22/96 Reported: 12/03/96
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QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

SEQUOIA ANALYTICAL - ELAP #1210



 Mike Gregory
 Project Manager





Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402 Attention: Vera Nelson	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9-B Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611847-07	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/22/96 Reported: 12/03/96
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QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
HEXANE, 3-METHYL-	100000	270000
CYCLOPENTANE, 1,3-DIMETHYL-, TRANS-	100000	250000
CYCLOPENTANE, 1,2-DIMETHYL-, TRANS-	100000	710000
HEPTANE	100000	560000
CYCLOPENTANE, ETHYL-	100000	150000
CYCLOPENTANE, 1,2,4-TRIMETHYL-	100000	170000
CYCLOPENTANE, 1,2,3-TRIMETHYL-	100000	190000

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Eler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402 Attention: Vera Nelson	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9-B Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-07	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/21/96 Reported: 12/03/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	62000	N.D.
Acenaphthylene	62000	N.D.
Anthracene	62000	N.D.
Benzoic Acid	120000	N.D.
Benzo(a)anthracene	62000	N.D.
Benzo(b)fluoranthene	62000	N.D.
Benzo(k)fluoranthene	62000	N.D.
Benzo(g,h,i)perylene	62000	N.D.
Benzo(a)pyrene	62000	N.D.
Benzyl alcohol	62000	N.D.
Bis(2-chloroethoxy)methane	62000	N.D.
Bis(2-chloroethyl)ether	62000	N.D.
Bis(2-chloroisopropyl)ether	62000	N.D.
Bis(2-ethylhexyl)phthalate	120000	N.D.
4-Bromophenyl phenyl ether	62000	N.D.
Butyl benzyl phthalate	62000	N.D.
4-Chloroaniline	120000	N.D.
2-Chloronaphthalene	62000	N.D.
4-Chloro-3-methylphenol	62000	N.D.
2-Chlorophenol	62000	N.D.
4-Chlorophenyl phenyl ether	62000	N.D.
Chrysene	62000	N.D.
Dibenzo(a,h)anthracene	62000	N.D.
Dibenzofuran	62000	N.D.
Di-n-butyl phthalate	120000	N.D.
1,2-Dichlorobenzene	62000	N.D.
1,3-Dichlorobenzene	62000	N.D.
1,4-Dichlorobenzene	62000	N.D.
3,3-Dichlorobenzidine	120000	N.D.
2,4-Dichlorophenol	62000	N.D.
Diethyl phthalate	62000	N.D.
2,4-Dimethylphenol	62000	N.D.
Dimethyl phthalate	62000	N.D.
4,6-Dinitro-2-methylphenol	120000	N.D.
2,4-Dinitrophenol	120000	N.D.
2,4-Dinitrotoluene	62000	N.D.
2,6-Dinitrotoluene	62000	N.D.





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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH9-B
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611847-07

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Analyte

Detection Limit ug/Kg

Sample Results ug/Kg

Di-n-octyl phthalate	62000	N.D.
Fluoranthene	62000	N.D.
Fluorene	62000	N.D.
Hexachlorobenzene	62000	N.D.
Hexachlorobutadiene	62000	N.D.
Hexachlorocyclopentadiene	120000	N.D.
Hexachloroethane	62000	N.D.
Indeno(1,2,3-cd)pyrene	62000	N.D.
Isophorone	62000	N.D.
2-Methylnaphthalene	62000	N.D.
2-Methylphenol	62000	N.D.
4-Methylphenol	62000	N.D.
Naphthalene	62000	N.D.
2-Nitroaniline	120000	N.D.
3-Nitroaniline	120000	N.D.
4-Nitroaniline	120000	N.D.
Nitrobenzene	62000	N.D.
2-Nitrophenol	62000	N.D.
4-Nitrophenol	120000	N.D.
N-Nitrosodiphenylamine	62000	N.D.
N-Nitroso-di-n-propylamine	62000	N.D.
Pentachlorophenol	120000	N.D.
Phenanthrene	62000	N.D.
Phenol	62000	N.D.
Pyrene	62000	N.D.
1,2,4-Trichlorobenzene	62000	N.D.
2,4,5-Trichlorophenol	120000	N.D.
2,4,6-Trichlorophenol	62000	N.D.

Surrogates

Control Limits %

% Recovery

2-Fluorophenol	25	121	Q
Phenol-d5	24	113	QQ
Nitrobenzene-d5	23	120	QQ
2-Fluorobiphenyl	30	115	QQ
2,4,6-Tribromophenol	19	122	QQ
p-Terphenyl-d14	18	137	Q

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erfer & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9-B Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-07	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/21/96 Reported: 12/17/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit * ug/Kg	Sample Results * ug/Kg
BENZENE, DIMETHYL-	33000	120000
DECANE, 5-PROPYL-	33000	35000
UNKNOWN HYDROCARBON (MAYBE OIL)	33000	45000000

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library.
Positive identification or specification between isomers cannot be made without retention time standards.
* Estimated

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH10-A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611847-08

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.



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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH10-A Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611847-08	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/03/96
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QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

SEQUOIA ANALYTICAL - ELAP #1210



 Mike Gregory
 Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH10-A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611847-08

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/21/96
Reported: 12/03/96

Attention: Vera Nelson

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg	*	Sample Results ug/Kg	*
CYCLOHEXANE, METHYL-	250		550	

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH10-A Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-08	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/21/96 Analyzed: 11/22/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: MS1121968270EXA
Instrument ID: F4

Semivolatle Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	2300
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniiline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.



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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH10-A Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-08	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/21/96 Analyzed: 11/22/96 Reported: 12/03/96
---	--	--

QC Batch Number: MS1121968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Hexachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
Hexachlorocyclopentadiene	500	N.D.
Hexachloroethane	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
2-Methylphenol	250	N.D.
4-Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	250	N.D.
Phenol	250	N.D.
Pyrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	250	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	25	121	58
Phenol-d5	24	113	72
Nitrobenzene-d5	23	120	56
2-Fluorobiphenyl	30	115	59
2,4,6-Tribromophenol	19	122	61
p-Terphenyl-d14	18	137	53

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH10-A Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-08	Sampled: 11/13/96 Received: 11/14/96 Extracted: 11/21/96 Analyzed: 11/22/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: MS1121968270EXA
Instrument ID: F4

Semivolatle Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg	*	Sample Results ug/Kg	*
ACETIC ACID, 1-METHYLETHYL ESTER	130		710	
UNKNOWN HYDROCARBON	130		260000	

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH10-A
Matrix: SOLID
Analysis Method: Title 22
Lab Number: 9611847-08

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/21/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: ME1121966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	N.D.
Arsenic, As	500	5.0	930
Barium, Ba	10000	5.0	200
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	3.0
Chromium, Cr	2500	0.50	11
Cobalt, Co	8000	2.5	3.1
Copper, Cu	2500	0.50	24
Lead, Pb	1000	5.0	380
Mercury, Hg	20	0.020	0.26
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	11
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	9.1
Zinc, Zn	5000	0.50	180

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH10-A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611847-08

Sampled: 11/13/96
Received: 11/14/96
Extracted: 11/15/96
Analyzed: 11/19/96
Reported: 12/03/96

QC Batch Number: MS1118968240H6A
Instrument ID: H6

TCLP Volatiles (EPA 8240)

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Benzene	0.5	0.020	N.D.
Carbon tetrachloride	0.5	0.020	N.D.
Chlorobenzene	100	0.020	N.D.
Chloroform	6.0	0.020	N.D.
1,2-Dichloroethane	0.5	0.020	N.D.
1,1-Dichloroethylene	0.7	0.020	N.D.
Methyl ethyl ketone	200	0.10	N.D.
Tetrachloroethylene	0.7	0.020	N.D.
Trichloroethylene	0.5	0.020	N.D.
Vinyl chloride	0.2	0.020	N.D.
Surrogates		Control Limits %	% Recovery
1,2-Dichloroethane-d4		76	114
Toluene-d8		88	110
4-Bromofluorobenzene		86	115

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: Title 22
Lab Number: 9611847-09

Sampled:
Received: 11/14/96
Extracted: 11/21/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: ME1121966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	N.D.
Arsenic, As	500	5.0	N.D.
Barium, Ba	10000	5.0	N.D.
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	N.D.
Chromium, Cr	2500	0.50	N.D.
Cobalt, Co	8000	2.5	N.D.
Copper, Cu	2500	0.50	N.D.
Lead, Pb	1000	5.0	N.D.
Mercury, Hg	20	0.020	N.D.
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	N.D.
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	N.D.
Zinc, Zn	5000	0.50	1.9

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611847-09

Sampled:
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/20/96
Reported: 12/03/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.





Sequoia Analytical

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611847-09

Sampled:
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/20/96
Reported: 12/03/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte

Detection Limit
ug/Kg

Sample Results
ug/Kg

Surrogates

1,2-Dichloroethane-d4
Toluene-d8
4-Bromofluorobenzene

Control Limits %

70 121
81 117
74 121

% Recovery

90
102
96

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erier & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-09	Sampled: Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatle Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.



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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611847-09

Sampled:
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg	
Di-n-octyl phthalate	250	N.D.	
Fluoranthene	250	N.D.	
Fluorene	250	N.D.	
Hexachlorobenzene	250	N.D.	
Hexachlorobutadiene	250	N.D.	
Hexachlorocyclopentadiene	500	N.D.	
Hexachloroethane	250	N.D.	
Indeno(1,2,3-cd)pyrene	250	N.D.	
Isophorone	250	N.D.	
2-Methylnaphthalene	250	N.D.	
2-Methylphenol	250	N.D.	
4-Methylphenol	250	N.D.	
Naphthalene	250	N.D.	
2-Nitroaniline	500	N.D.	
3-Nitroaniline	500	N.D.	
4-Nitroaniline	500	N.D.	
Nitrobenzene	250	N.D.	
2-Nitrophenol	250	N.D.	
4-Nitrophenol	500	N.D.	
N-Nitrosodiphenylamine	250	N.D.	
N-Nitroso-di-n-propylamine	250	N.D.	
Pentachlorophenol	500	N.D.	
Phenanthrene	250	N.D.	
Phenol	250	N.D.	
Pyrene	250	N.D.	
1,2,4-Trichlorobenzene	250	N.D.	
2,4,5-Trichlorophenol	500	N.D.	
2,4,6-Trichlorophenol	250	N.D.	
Surrogates	Control Limits %	% Recovery	
2-Fluorophenol	25	121	65
Phenol-d5	24	113	80
Nitrobenzene-d5	23	120	61
2-Fluorobiphenyl	30	115	65
2,4,6-Tribromophenol	19	122	75
p-Terphenyl-d14	18	137	81

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611847-09

Sampled:
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/20/96
Reported: 12/03/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	250	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erlor & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611847-09

Sampled:
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
UNKNOWN	130	160

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST Library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Eler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611847-09

Sampled:
Received: 11/14/96
Extracted: 11/15/96
Analyzed: 11/19/96
Reported: 12/03/96

QC Batch Number: MS1118968240H6A
Instrument ID: H6

TCLP Volatiles (EPA 8240)

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Benzene	0.5	0.020	N.D.
Carbon tetrachloride	0.5	0.020	N.D.
Chlorobenzene	100	0.020	N.D.
Chloroform	6.0	0.020	N.D.
1,2-Dichloroethane	0.5	0.020	N.D.
1,1-Dichloroethylene	0.7	0.020	N.D.
Methyl ethyl ketone	200	0.10	N.D.
Tetrachloroethylene	0.7	0.020	N.D.
Trichloroethylene	0.5	0.020	N.D.
Vinyl chloride	0.2	0.020	N.D.
Surrogates		Control Limits %	% Recovery
1,2-Dichloroethane-d4		76 114	94
Toluene-d8		88 110	100
4-Bromofluorobenzene		86 115	98

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611847-09

Sampled:
Received: 11/14/96
Extracted: 11/21/96
Analyzed: 11/22/96
Reported: 12/03/96

QC Batch Number: MS1121968270EXA
Instrument ID: F4

Semivolatle Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.



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

Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611847-09	Sampled: Received: 11/14/96 Extracted: 11/21/96 Analyzed: 11/22/96 Reported: 12/03/96
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QC Batch Number: MS1121968270EXA
 Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Hexachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
Hexachlorocyclopentadiene	500	N.D.
Hexachloroethane	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
2-Methylphenol	250	N.D.
4-Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	250	N.D.
Phenol	250	N.D.
Pyrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	250	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	25	121	66
Phenol-d5	24	113	83
Nitrobenzene-d5	23	120	63
2-Fluorobiphenyl	30	115	68
2,4,6-Tribromophenol	19	122	75
p-Terphenyl-d14	18	137	83

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

SEQUOIA ANALYTICAL - ELAP #1210


 Mike Gregory
 Project Manager



Erlar & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611847-09

Sampled:
Received: 11/14/96
Extracted: 11/21/96
Analyzed: 11/22/96
Reported: 12/03/96

Attention: Vera Nelson

QC Batch Number: MS1121968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
UNKNOWN	130	720

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH3-A
Work Order #: 9611847 01, 04, 05, 06, 07, 09
Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine
QC Batch#:	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611856-03-MSD	9611856-03-MSD	9611856-03-MSD	9611856-03-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	1900	1800	970	1900
MS % Recovery:	58	54	29	58
Dup. Result:	2100	2100	1200	2200
MSD % Recov.:	64	64	36	67
RPD:	10	15	28	15
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2200	2200	1800	2500
LCS % Recov.:	67	67	54	76

MS/MSD	26-90	25-102	28-104	41-126
LCS	26-90	25-102	28-104	41-126
Control Limits				

SEQUOIA ANALYTICAL

Mike Gregory
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.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference



Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
1730 So. Amphlett Blvd., Suite 320 Matrix: SOLID
San Mateo, CA 94402 Sample Descrip: CH3-A
Attention: Vera Nelson Work Order #: 9611847 01, 04, 05, 06, 07, 09 Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,2,4-Trichloro-benzene	4-Chloro-3-Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611856-03-MSD	9611856-03-MSD	9611856-03-MSD	9611856-03-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	1400	1800	1800	1800
MS % Recovery:	42	54	54	54
Dup. Result:	1700	2000	2000	1700
MSD % Recov.:	52	61	61	52
RPD:	19	10	10	5.7
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2100	2200	2100	2100
LCS % Recov.:	64	67	64	64

MS/MSD	38-107	26-103	31-137	11-114
LCS	38-107	26-103	31-137	11-114
Control Limits				

SEQUOIA ANALYTICAL

Mike Gregory
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.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference



Erler & Kallnowski, Inc. Client Project ID: 930028.82/Chiron
1730 So. Amphlett Blvd., Suite 320 Matrix: SOLID
San Mateo, CA 94402 Sample Descrip: CH3-A
Attention: Vera Nelson Work Order #: 9611847 01, 04, 05, 06, 07, 09 Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
QC Batch#:	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611856-03-MSD	9611856-03-MSD	9611856-03-MSD
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	1900	1600	1900
MS % Recovery:	58	49	58
Dup. Result:	2200	1700	2000
MSD % Recov.:	67	52	61
RPD:	15	6.1	5.1
RPD Limit:	0-30	0-30	0-30

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2300	2000	3000
LCS % Recov.:	70	61	91

MS/MSD	28-89	17-109	35-142
LCS	28-89	17-109	35-142
Control Limits			

Please Note:

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** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager



Erler & Kainowski, Inc. Client Project ID: 930028.82/Chiron
1730 So. Amphlett Blvd., Suite 320 Matrix: SOLID
San Mateo, CA 94402 Sample Descrip: CH1B-A
Attention: Vera Nelson Work Order #: 9611847 08, 09 Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro-benzene	N-Nitroso-Di-N-propylamine
QC Batch#:	MS1121968270EXA	MS1121968270EXA	MS1121968270EXA	MS1121968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/22/96	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	1900	1800	1200	2000
MS % Recovery:	58	54	36	61
Dup. Result:	1900	1800	1200	2000
MSD % Recov.:	58	54	36	61
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/22/96	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2100	2200	1700	2400
LCS % Recov.:	64	67	52	73

MS/MSD	26-90	25-102	28-104	41-126
LCS	26-90	25-102	28-104	41-126
Control Limits				

SEQUOIA ANALYTICAL

Mike Gregory
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.

** MS= Matrix Spike, MSD=MS Duplicate, RPD= Relative % Difference



Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
1730 So. Amphlett Blvd., Suite 320 Matrix: SOLID
San Mateo, CA 94402 Sample Descrip: CH1B-A
Attention: Vera Nelson Work Order #: 9611847 08, 09 Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,2,4-Trichloro-benzene	4-Chloro-3-Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS1121968270EXA	MS1121968270EXA	MS1121968270EXA	MS1121968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/22/96	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	1600	1600	2000	2100
MS % Recovery:	48	48	61	64
Dup. Result:	1600	1700	2000	2100
MSD % Recov.:	48	52	61	64
RPD:	0.0	6.1	0.0	0.0
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/22/96	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2100	2100	2200	2100
LCS % Recov.:	64	64	67	64

MS/MSD	38-107	26-103	31-137	11-114
LCS	38-107	26-103	31-137	11-114
Control Limits				

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:

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Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH1B-A
Work Order #: 9611847 08, 09

Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	2,4-Dinitro- toluene	Pentachloro- phenol	Pyrene
QC Batch#:	MS1121968270EXA	MS1121968270EXA	MS1121968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	2100	1200	1700
MS % Recovery:	64	36	52
Dup. Result:	2200	1200	1700
MSD % Recov.:	67	36	52
RPD:	4.6	0.0	0.0
RPD Limit:	0-30	0-30	0-30

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2400	1400	2900
LCS % Recov.:	73	42	88

MS/MSD	28-89	17-109	35-142
LCS	28-89	17-109	35-142
Control Limits			

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:

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Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH1B-A
Work Order #: 9611847 01, 04-09

Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.
Analyst:	L.Zhu	L.Zhu	L.Zhu	L.Zhu	L.Zhu
MS/MSD #:	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg
Result:	2500	2600	2700	2700	2600
MS % Recovery:	100	104	108	108	104
Dup. Result:	2400	2500	2500	2600	2600
MSD % Recov.:	96	100	100	104	104
RPD:	4.1	3.9	7.7	3.8	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:

Prepared Date:
Analyzed Date:
Instrument I.D.#:
Conc. Spiked:

LCS Result:
LCS % Recov.:

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

Please Note:

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** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

9611847.ERL <7>





Erler & Kalinowski, Inc. 1730 So. Amphlett Blvd., Suite 320 San Mateo, CA 94402 Attention: Vera Nelson	Client Project ID: 930028.82/Chiron Matrix: SOLID Sample Descrip: CH1B-A Work Order #: 9611847 01, 04, 05, 09	Reported: Dec 2, 1996
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QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.

Analyst:	L.Zhu	L.Zhu	L.Zhu	L.Zhu	L.Zhu
MS/MSD #:					
Sample Conc.:					
Prepared Date:					
Analyzed Date:					
Instrument I.D.#:					
Conc. Spiked:					

Result:
MS % Recovery:

Dup. Result:
MSD % Recov.:

RPD:
RPD Limit:

LCS #:	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS
Prepared Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg
LCS Result:	2700	2600	2700	2600	2600
LCS % Recov.:	108	104	108	104	104

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

Please Note:

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** MS= Matrix Spike, MSD=MS Duplicate, RPD= Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager



Ertel & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH1B-A
Work Order #: 9611847 06, 08

Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.

Analyst: L.Zhu L.Zhu L.Zhu L.Zhu L.Zhu
MS/MSD #:
Sample Conc.:
Prepared Date:
Analyzed Date:
Instrument I.D.#:
Conc. Spiked:

Result:
MS % Recovery:

Dup. Result:
MSD % Recov.:

RPD:
RPD Limit:

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg
LCS Result:	2700	2700	2900	2700	2800
LCS % Recov.:	108	108	116	108	112

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

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.

** MS= Matrix Spike, MSD= MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager





Erler & Kallnowski, Inc. 1730 So. Amphlett Blvd., Suite 320 San Mateo, CA 94402 Attention: Vera Nelson	Client Project ID: 930028.82/Chiron Matrix: SOLID Sample Descrip: CH1B-A Work Order #: 9611847 07	Reported: Dec 2, 1996
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QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.

Analyst:	L.Zhu	L.Zhu	L.Zhu	L.Zhu	L.Zhu
MS/MSD #:					
Sample Conc.:					
Prepared Date:					
Analyzed Date:					
Instrument I.D.#:					
Conc. Spiked:					

Result:
MS % Recovery:

Dup. Result:
MSD % Recov.:

RPD:
RPD Limit:

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg
LCS Result:	2500	2600	2800	2800	2700
LCS % Recov.:	100	104	112	112	108

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

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.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH3-A
Work Order #: 9611847 01-09

Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1121966010MDE	ME1121966010MDE	ME1121966010MDE	ME1121966010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611860-03-MSD	9611860-03-MSD	9611860-03-MSD	9611860-03-MSD
Sample Conc.:	N.D.	2.5	35	35
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
Result:	83	84	110	110
MS % Recovery:	83	82	75	75
Dup. Result:	86	87	120	120
MSD % Recov.:	86	84	85	85
RPD:	3.6	3.5	8.7	8.7
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
LCS Result:	100	100	100	100
LCS % Recov.:	100	100	100	100

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

SEQUOIA ANALYTICAL

Mike Gregory
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.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9611847.ERL <11>





Erler & Kalinowski, Inc. 1730 So. Amphlett Blvd., Suite 320 San Mateo, CA 94402 Attention: Vera Nelson	Client Project ID: 930028.82/Chiron Matrix: SOLID Sample Descrip: CH3-A Work Order #: 9611847	01-05, 08, 09	Reported: Dec 2, 1996
---	--	---------------	-----------------------

QUALITY CONTROL DATA REPORT

Analyte: Mercury
QC Batch#: ME1121967471M4A
Analy. Method: EPA 7471
Prep. Method: EPA 7471

Analyst: T. Hua
MS/MSD #: 9611856-03-MSD
Sample Conc.: 1.7*
Prepared Date: 11/21/96
Analyzed Date: 11/21/96
Instrument I.D.#: MPE4
Conc. Spiked: 0.40 mg/Kg

Result: 0.55*
MS % Recovery: -

Dup. Result: 0.55*
MSD % Recov.: -

RPD: 0.0*
RPD Limit: 0-20

* Matrix interference

LCS #: LCS112196-LCS

Prepared Date: 11/21/96
Analyzed Date: 11/21/96
Instrument I.D.#: MPE4
Conc. Spiked: 0.80 mg/Kg

LCS Result: 0.75
LCS % Recov.: 94

MS/MSD	75-125
LCS	80-120
Control Limits	

SEQUOIA ANALYTICAL

Mike Gregory
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.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9611847.ERL <12>





Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: LIQUID
Sample Descrip: XSD
Work Order #: 9611847 01, 04, 05, 08, 09

Reported: Dec 2, 1996

**TCLP
QUALITY CONTROL DATA REPORT**

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611A58-01-XSD	9611A58-01-XSD	9611A58-01-XSD	9611A58-01-XSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L

Result:	1.0	1.0	0.99	1.0
MS % Recovery:	100	100	99	100

Dup. Result:	1.0	1.0	1.0	1.0
MSD % Recov.:	100	100	100	100

RPD:	0.0	0.0	1.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.1	1.1	1.1	1.1
LCS % Recov.:	110	110	110	110

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

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.

SEQUOIA ANALYTICAL

[Signature]
Mike Gregory
Project Manager





Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
1730 So. Amphlett Blvd., Suite 320 Matrix: SOLID
San Mateo, CA 94402 Sample Descrip: CH10-B
Attention: Vera Nelson Work Order #: 9611847 01-09 Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte: pH

QC Batch: IN111596904500A

Analy. Method: EPA 9045

Prep Method: N.A.

Analyst: K. Sims

Duplicate

Sample #: 9611860-01-MSD

Prepared Date: 11/15/96

Analyzed Date: 11/15/96

Instrument I.D.#: MANUAL

Sample
Concentration: 12

Dup. Sample
Concentration: 12

RPD: 0.0
RPD Limit: 0-20

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager

** RPD = Relative % Difference

9611847.ERL <14>





Erier & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: LIQUID
Sample Descrip: CH10-A
Work Order #: 9611847 08, 09

Reported: Jan 6, 199

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS1118968240H6A	MS1118968240H6A	MS1118968240H6A	MS1118968240H6A	MS1118968240H6A
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.

Analyst:	L.Zhu	L.Zhu	L.Zhu	L.Zhu	L.Zhu
MS/MSD #:	9611847-08-MSD	9611847-08-MSD	9611847-08-MSD	9611847-08-MSD	9611847-08-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/16/96	11/16/96	11/16/96	11/16/96	11/16/96
Analyzed Date:	11/18/96	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	H6	H6	H6	H6	H6
Conc. Spiked:	500 ug/L	500 ug/L	500 ug/L	500 ug/L	500 ug/L
Result:	450	500	510	510	510
MS % Recovery:	90	100	102	102	102
Dup. Result:	460	500	520	520	510
MSD % Recov.:	92	100	104	104	102
RPD:	2.2	0.0	1.9	1.9	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	LCS111996-LCS	LCS111996-LCS	LCS111996-LCS	LCS111996-LCS	LCS111996-LCS
Prepared Date:	11/19/96	11/19/96	11/19/96	11/19/96	11/16/96
Analyzed Date:	11/19/96	11/19/96	11/19/96	11/19/96	11/18/96
Instrument I.D.#:	H6	H6	H6	H6	H6
Conc. Spiked:	50 ug/L	50 ug/L	50 ug/L	50 ug/L	50 ug/L
LCS Result:	46	51	48	52	52
LCS % Recov.:	92	102	96	104	104

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

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.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron

Received: 11/14/96

Lab Proj. ID: 9611847

Reported: 12/03/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 76 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

8240 Note: Sample -07's surrogates were diluted out.

8270 Note: Sample -07 surrogates were diluted out. The sample extract would not concentrate beyond 5 mls.

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erler & Kalinowski, Inc.
Project Number: 92 930028.82
Project Name: CHIRON CORPORATION
Source of Samples: HAND AUGER
Location: STEPHEN WILLIAMS

Analytical Laboratory: 9611847
Date Sampled: 13 NOVEMBER 1996
Sampled By: BRITT VON THADEN
Report Results To: VERA NELSON
Phone Number: (415) 570-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
01	CH1-A	SOIL	1 - STAINLESS STEEL LUGER	9:25	PERFORM ANALYSES AS INDICATED ON ATTACHED 4-PAGE MEMORANDUM DATED 13 NOVEMBER 1996	SEE ATTACHED
02	CH5-A	SOIL	1 - STAINLESS STEEL LUGER	10:12		MEMO
03	CH5-B	SOIL	1 - STAINLESS STEEL LUGER	1:10		
04	CH6-A	SOIL	1 - STAINLESS STEEL LUGER	11:00		
05	CH6-B	SOIL	1 - STAINLESS STEEL LUGER	1:45		
06	CH9-A	SOIL	1 - STAINLESS STEEL LUGER	11:35		
07	CH9-B	SOIL	1 - STAINLESS STEEL LUGER	2:15		
08	CH10-A	SOIL	1 - STAINLESS STEEL LUGER	1:40		

Special Instructions:

Relinquished By:			Received By:		
Name / Signature / Affiliation	Date	Time	Name / Signature / Affiliation	Date	Time
BRITT VON THADEN <i>Britt von Thaden</i> / EKI	11/14/96	11:30	NELI VAN SLAMBROEK <i>Neli van Slambroek</i>	11/14/96	11:30
NELI VAN SLAMBROEK <i>Neli van Slambroek</i>	11/14/96	1500	VERA NELSON <i>Vera Nelson</i>	11/14/96	1500

13 November 1996

MEMORANDUM

To: Sequoia Analytical

From: Britt von Thaden, Eler & Kalinowski, Inc. BVT

Subject: Laboratory Analyses for Chiron Soil Samples Collected on Sherwin Williams Property on 12 and 13 November 1996 (EKI Project No. 930028.82)

Perform the following individual and composite laboratory analyses on soil samples from borings CH1 through CH10:

TURNAROUND TIMES:

[Handwritten signature]
***5-DAY FOR INDIVIDUAL ARSENIC ON ALL "A" SAMPLES (NOT INCLUDING TCLP)**
***10-DAY FOR ALL OTHER ANALYSES**

EKI Sample ID	Date Collected	Requested Laboratory Analyses
CH1-A	11/13/96	-Title 22 metals by ICP (EPA 6010), where appropriate -TCLP for Arsenic and Lead -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH2-A	11/12/96	-Title 22 metals by ICP (EPA 6010), where appropriate -pH (EPA 9045)
CH2-B	11/12/96	-Title 22 metals by ICP (EPA 6010), where appropriate -pH (EPA 9045)
CH3-A	11/12/96	-Title 22 metals by ICP (EPA 6010), where appropriate -TCLP for Arsenic and Lead -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan

Table continued

Request for laboratory analyses continued:

EKI Sample ID	Date Collected	Requested Laboratory Analyses
CH3-B	11/12/96	-Title 22 metals by ICP (EPA 6010), where appropriate -TCLP for Arsenic and Lead -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH4-A	11/12/96	-Title 22 metals by ICP (EPA 6010), where appropriate -pH (EPA 9045)
CH4-B	11/12/96	-Title 22 metals by ICP (EPA 6010), where appropriate -pH (EPA 9045)
CH5-A	11/13/96	-Title 22 metals by ICP (EPA 6010), where appropriate -pH (EPA 9045)
CH5-B	11/13/96	-Title 22 metals by ICP (EPA 6010), where appropriate -pH (EPA 9045)
CH6-A	11/13/96	-Title 22 metals by ICP (EPA 6010), where appropriate -TCLP for Arsenic and Lead -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH6-B	11/13/96	-Title 22 metals by ICP (EPA 6010), where appropriate -TCLP for Arsenic and Lead -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH7-A	11/12/96	-Arsenic, Total Lead, and Zinc by ICP (EPA 6010) -pH (EPA 9045)
CH7-B	11/12/96	-Arsenic, Total Lead, and Zinc by ICP (EPA 6010) -pH (EPA 9045)

Table continued

Request for laboratory analyses of individual soil samples continued:

EKI Sample ID	Date Collected	Requested Laboratory Analyses
CH8-A	11/12/96	-Arsenic, Total Lead, and Zinc by ICP (EPA 6010) -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH8-B	11/12/96	-Arsenic, Total Lead, and Zinc by ICP (EPA 6010) -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH9-A	11/13/96	-Arsenic, Total Lead, and Zinc by ICP (EPA 6010) -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH9-B	11/13/96	-Arsenic, Total Lead, and Zinc by ICP (EPA 6010) -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH10-A	11/13/96	-Title 22 metals by ICP (EPA 6010), where appropriate -TCLP for Arsenic and Lead -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan -TCLP for Organics using EPA 8240

Analytical request for composite analyses indicated on next page.



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Lab Proj. ID: 9611848	Sampled: 11/13/96 Received: 11/14/96 Analyzed: see below Reported: 11/19/96
Attention: Vera Nelson		

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611848-01 Sample Desc: SOLID,CH9-A				
Arsenic	mg/Kg	11/19/96	5.0	610
Zinc	mg/Kg	11/19/96	0.50	160

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager




Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Lab Proj. ID: 9611848	Sampled: Received: 11/14/96 Analyzed: see below Reported: 11/19/96
Attention: Vera Nelson		

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611848-02 Sample Desc: SOLID, Method Blank				
Arsenic	mg/Kg	11/19/96	5.0	N.D.
Zinc	mg/Kg	11/19/96	0.50	1.0

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Sequoia Analytical

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

Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH10-B
Work Order #: 9611848 -01, 02

Reported: Nov 20, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1118966010MDE	ME1118966010MDE	ME1118966010MDE	ME1118966010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611861-01-MSD	9611861-01-MSD	9611861-01-MSD	9611861-01-MSD
Sample Conc.:	N.D.	N.D.	48	42
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
Result:	94	91	130	130
MS % Recovery:	94	91	82	88
Dup. Result:	92	89	130	130
MSD % Recov.:	92	89	82	88
RPD:	2.2	2.2	0.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
LCS Result:	100	98	99	100
LCS % Recov.:	100	98	99	100

MS/MSD				
LCS	80-120	80-120	80-120	80-120
Control Limits				

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.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9611848.ERL <1>



Sequoia
Analytical

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

Redwood City, CA 94063
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(415) 364-9600
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FAX (510) 988-9673
FAX (916) 921-0100

Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron

Received: 11/14/96

Lab Proj. ID: 9611848

Reported: 11/19/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 5 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

9611848

Erler & Kallnowski, Inc.
Project Number: 92 930028.82
Project Name: CHIRON CORPORATION
Source of Samples: HAND AUGER
Location: STEPHEN WILLIAMS

Analytical Laboratory:
Date Sampled: 13 NOVEMBER 1996
Sampled By: BRITT VON THAMEN
Report Results To: VERA NELSON
Phone Number: (415) 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
	CH1-A	SOIL	1 - STAINLESS STEEL LIDED	9:25	PERFORM ANALYSES AS INDICATED ON ATTACHED 4-PAGE MEMORANDUM DATED 13 NOVEMBER 1996	SEE ATTACHED
	CH5-A	SOIL	1 - STAINLESS STEEL LIDED	10:12		MEMO
	CH5-B	SOIL	1 - STAINLESS STEEL LIDED	1:10		
	CH6-A	SOIL	1 - STAINLESS STEEL LIDED	11:00		
	CH6-B	SOIL	1 - STAINLESS STEEL LIDED	1:45		
01	CH9-A	SOIL	1 - STAINLESS STEEL LIDED	11:35		
	CH9-B	SOIL	1 - STAINLESS STEEL LIDED	2:15		
	CH10-A	SOIL	1 - STAINLESS STEEL LIDED	1:40		

Special Instructions:

Relinquished By:			Received By:		
Name / Signature / Affiliation	Date	Time	Name / Signature / Affiliation	Date	Time
BRITT VON THAMEN <i>Britt von Thamen</i> / EKI	11/14/96	11:30	NEIL VAN SLAMBROOK <i>Neil Van Slambrook</i>	11/14/96	11:36
NEIL VAN SLAMBROOK <i>Neil Van Slambrook</i>	11/14/96	1500	L2 Ute <i>L2 Ute</i>	11/14/96	1500



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Lab Proj. ID: 9611851

Sampled: 11/14/96
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 12/03/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611851-01 Sample Desc: LIQUID,CH10				
pH	pH Units	11/15/96	N/A	6.1
Lab No: 9611851-02 Sample Desc: LIQUID,CH9				
pH	pH Units	11/15/96	N/A	5.3
Lab No: 9611851-03 Sample Desc: LIQUID,CH6				
pH	pH Units	11/15/96	N/A	4.0
Lab No: 9611851-04 Sample Desc: LIQUID,CHB				
pH	pH Units	11/15/96	N/A	7.1
Lab No: 9611851-05 Sample Desc: LIQUID,CHA				
pH	pH Units	11/15/96	N/A	4.0
Lab No: 9611851-06 Sample Desc: LIQUID,CH5				
pH	pH Units	11/15/96	N/A	5.9

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager




Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Lab Proj. ID: 9611851	Sampled: Received: 11/14/96 Analyzed: see below Reported: 12/03/96
Attention: Vera Nelson		

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611851-07 Sample Desc: LIQUID, Method Blank				
pH	pH Units	11/15/96	N/A	NA

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

SEQUOIA ANALYTICAL - ELAP #1210



 Mike Gregory
 Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH10
Matrix: LIQUID
Analysis Method: EPA 8240
Lab Number: 9611851-01

Sampled: 11/14/96
Received: 11/14/96

Analyzed: 11/19/96
Reported: 12/03/96

QC Batch Number: MS1118968240H6A
Instrument ID: H6

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	330	N.D.
Benzene	67	N.D.
Bromodichloromethane	67	N.D.
Bromoform	67	N.D.
Bromomethane	67	N.D.
2-Butanone	330	N.D.
Carbon disulfide	67	N.D.
Carbon tetrachloride	67	N.D.
Chlorobenzene	67	N.D.
Chloroethane	67	N.D.
2-Chloroethyl vinyl ether	330	N.D.
Chloroform	67	N.D.
Chloromethane	67	N.D.
Dibromochloromethane	67	N.D.
1,1-Dichloroethane	67	N.D.
1,2-Dichloroethane	67	N.D.
1,1-Dichloroethene	67	N.D.
cis-1,2-Dichloroethene	67	N.D.
trans-1,2-Dichloroethene	67	N.D.
1,2-Dichloropropane	67	N.D.
cis-1,3-Dichloropropene	67	N.D.
trans-1,3-Dichloropropene	67	N.D.
Ethylbenzene	67	140
2-Hexanone	330	N.D.
Methylene chloride	170	N.D.
4-Methyl-2-pentanone	330	N.D.
Styrene	67	N.D.
1,1,2,2-Tetrachloroethane	67	N.D.
Tetrachloroethene	67	N.D.
Toluene	67	2000
1,1,1-Trichloroethane	67	N.D.
1,1,2-Trichloroethane	67	N.D.
Trichloroethene	67	N.D.
Trichlorofluoromethane	67	N.D.
Vinyl acetate	160	N.D.
Vinyl chloride	67	N.D.
Total Xylenes	67	840



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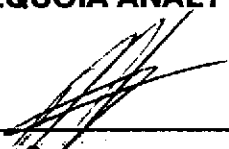
Eler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH10 Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-01	Sampled: 11/14/96 Received: 11/14/96 Analyzed: 11/19/96 Reported: 12/03/96
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QC Batch Number: MS1118968240H6A
Instrument ID: H6

Analyte	Detection Limit ug/L	Sample Results ug/L
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	76	114
Toluene-d8	88	110
4-Bromofluorobenzene	86	115

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

SEQUOIA ANALYTICAL - ELAP #1210



 Mike Gregory
 Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH10 Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-01	Sampled: 11/14/96 Received: 11/14/96 Analyzed: 11/19/96 Reported: 12/03/96
Attention: Vera Nelson		


QC Batch Number: MS1118968240H6A
Instrument ID: H6

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/L *	Sample Results ug/L *
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	5.0	N.D.

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library.
Positive identification or specification between isomers cannot be made without retention time standards.
* Estimated

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH10 Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9611851-01	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/21/96 Reported: 12/03/96
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QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	100	N.D.
Acenaphthylene	100	N.D.
Anthracene	100	N.D.
Benzoic Acid	200	N.D.
Benzo(a)anthracene	100	N.D.
Benzo(b)fluoranthene	100	N.D.
Benzo(k)fluoranthene	100	N.D.
Benzo(g,h,i)perylene	100	N.D.
Benzo(a)pyrene	100	N.D.
Benzyl alcohol	100	N.D.
Bis(2-chloroethoxy)methane	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.
Bis(2-ethylhexyl)phthalate	200	N.D.
4-Bromophenyl phenyl ether	100	N.D.
Butyl benzyl phthalate	100	N.D.
4-Chloroaniline	200	N.D.
2-Chloronaphthalene	100	N.D.
4-Chloro-3-methylphenol	100	N.D.
2-Chlorophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.
Chrysene	100	N.D.
Dibenzo(a,h)anthracene	100	N.D.
Dibenzofuran	100	N.D.
Di-n-butyl phthalate	200	N.D.
1,2-Dichlorobenzene	100	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	200	N.D.
2,4-Dichlorophenol	100	N.D.
Diethyl phthalate	100	N.D.
2,4-Dimethylphenol	100	N.D.
Dimethyl phthalate	100	N.D.
4,6-Dinitro-2-methylphenol	200	N.D.
2,4-Dinitrophenol	200	N.D.
2,4-Dinitrotoluene	100	N.D.
2,6-Dinitrotoluene	100	N.D.



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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH10
Matrix: LIQUID
Analysis Method: EPA 8270
Lab Number: 9611851-01

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Analyte	Detection Limit ug/L	Sample Results ug/L
Di-n-octyl phthalate	100	N.D.
Fluoranthene	100	N.D.
Fluorene	100	N.D.
Hexachlorobenzene	100	N.D.
Hexachlorobutadiene	100	N.D.
Hexachlorocyclopentadiene	200	N.D.
Hexachloroethane	100	N.D.
Indeno(1.2.3-cd)pyrene	100	N.D.
Isophorone	100	N.D.
2-Methylnaphthalene	100	N.D.
2-Methylphenol	100	N.D.
4-Methylphenol	100	N.D.
Naphthalene	100	N.D.
2-Nitroaniline	200	N.D.
3-Nitroaniline	200	N.D.
4-Nitroaniline	200	N.D.
Nitrobenzene	100	N.D.
2-Nitrophenol	100	N.D.
4-Nitrophenol	200	N.D.
n-Nitrosodiphenylamine	100	N.D.
n-Nitroso-di-n-propylamine	100	N.D.
Pentachlorophenol	200	N.D.
Phenanthrene	100	N.D.
Phenol	100	N.D.
Pyrene	100	N.D.
1,2,4-Trichlorobenzene	100	N.D.
2,4,5-Trichlorophenol	200	N.D.
2,4,6-Trichlorophenol	100	N.D.
Surrogates	Control Limits %	% Recovery
2-Fluorophenol	21 110	Q
Phenol-d5	10 110	Q
Nitrobenzene-d5	35 114	Q
2-Fluorobiphenyl	43 116	Q
2,4,6-Tribromophenol	10 123	Q
p-Terphenyl-d14	33 141	Q

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH10 Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9611851-01	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/21/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatile Tentatively Identified Compounds


Analyte	Detection Limit ug/L	* Sample Results ug/L
UNKNOWN	80	4000
UNKNOWN	80	290
UNKNOWN	80	21000

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST Library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH10
Matrix: LIQUID
Analysis Method: Title 22
Lab Number: 9611851-01

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/27/96
Analyzed: 11/27/96
Reported: 12/03/96

QC Batch Number: ME1127966010MDA
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Antimony, Sb	500	0.10	N.D.
Arsenic, As	500	0.10	310
Barium, Ba	10000	0.10	N.D.
Beryllium, Be	75	0.010	N.D.
Cadmium, Cd	100	0.010	1.4
Chromium, Cr	2500	0.010	N.D.
Cobalt, Co	8000	0.050	N.D.
Copper, Cu	2500	0.010	N.D.
Lead, Pb	1000	0.10	N.D.
Mercury, Hg	20	0.00020	N.D.
Molybdenum, Mo	3500	0.050	N.D.
Nickel, Ni	2000	0.050	N.D.
Selenium, Se	100	0.10	N.D.
Silver, Ag	500	0.010	N.D.
Thallium, Tl	700	0.10	N.D.
Vanadium, V	2400	0.050	N.D.
Zinc, Zn	5000	0.010	0.083

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9 Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-02	Sampled: 11/14/96 Received: 11/14/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1120968240H6A
Instrument ID: H6

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	25000	830000
Benzene	5000	N.D.
Bromodichloromethane	5000	N.D.
Bromoform	5000	N.D.
Bromomethane	5000	N.D.
2-Butanone	25000	420000
Carbon disulfide	5000	N.D.
Carbon tetrachloride	5000	N.D.
Chlorobenzene	5000	N.D.
Chloroethane	5000	N.D.
2-Chloroethyl vinyl ether	25000	N.D.
Chloroform	5000	N.D.
Chloromethane	5000	N.D.
Dibromochloromethane	5000	N.D.
1,1-Dichloroethane	5000	N.D.
1,2-Dichloroethane	5000	N.D.
1,1-Dichloroethene	5000	N.D.
cis-1,2-Dichloroethene	5000	N.D.
trans-1,2-Dichloroethene	5000	N.D.
1,2-Dichloropropane	5000	N.D.
cis-1,3-Dichloropropene	5000	N.D.
trans-1,3-Dichloropropene	5000	N.D.
Ethylbenzene	5000	7400
2-Hexanone	25000	N.D.
Methylene chloride	12000	N.D.
4-Methyl-2-pentanone	25000	130000
Styrene	5000	N.D.
1,1,2,2-Tetrachloroethane	5000	N.D.
Tetrachloroethene	5000	N.D.
Toluene	5000	280000
1,1,1-Trichloroethane	5000	N.D.
1,1,2-Trichloroethane	5000	N.D.
Trichloroethene	5000	N.D.
Trichlorofluoromethane	5000	N.D.
Vinyl acetate	12000	N.D.
Vinyl chloride	5000	N.D.
Total Xylenes	5000	36000



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Eler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH9
Matrix: LIQUID
Analysis Method: EPA 8240
Lab Number: 9611851-02

Sampled: 11/14/96
Received: 11/14/96
Analyzed: 11/20/96
Reported: 12/03/96

QC Batch Number: MS1120968240H6A
Instrument ID: H6

Analyte

Detection Limit
ug/L

Sample Results
ug/L

Surrogates

Control Limits %

% Recovery

1,2-Dichloroethane-d4
Toluene-d8
4-Bromofluorobenzene

76	114
88	110
86	115

96
101
100

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9 Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-02	Sampled: 11/14/96 Received: 11/14/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1120968240H6A
Instrument ID: H6

Volatile Tentatively Identified Compounds

Analyte	Detection Limit * ug/L	Sample Results * ug/L
CYCLOHEXANE, METHYL-	13000	19000

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH9
Matrix: LIQUID
Analysis Method: EPA 8270
Lab Number: 9611851-02

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatle Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	100	N.D.
Acenaphthylene	100	N.D.
Anthracene	100	N.D.
Benzoic Acid	200	N.D.
Benzo(a)anthracene	100	N.D.
Benzo(b)fluoranthene	100	N.D.
Benzo(k)fluoranthene	100	N.D.
Benzo(g,h,i)perylene	100	N.D.
Benzo(a)pyrene	100	N.D.
Benzyl alcohol	100	N.D.
Bis(2-chloroethoxy)methane	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.
Bis(2-ethylhexyl)phthalate	200	N.D.
4-Bromophenyl phenyl ether	100	N.D.
Butyl benzyl phthalate	100	N.D.
4-Chloroaniline	200	N.D.
2-Chloronaphthalene	100	N.D.
4-Chloro-3-methylphenol	100	N.D.
2-Chlorophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.
Chrysene	100	N.D.
Dibenzo(a,h)anthracene	100	N.D.
Dibenzofuran	100	N.D.
Di-n-butyl phthalate	200	N.D.
1,2-Dichlorobenzene	100	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	200	N.D.
2,4-Dichlorophenol	100	N.D.
Diethyl phthalate	100	N.D.
2,4-Dimethylphenol	100	N.D.
Dimethyl phthalate	100	N.D.
4,6-Dinitro-2-methylphenol	200	N.D.
2,4-Dinitrophenol	200	N.D.
2,4-Dinitrotoluene	100	N.D.
2,6-Dinitrotoluene	100	N.D.



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Erfer & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9 Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9611851-02	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/21/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Analyte	Detection Limit ug/L	Sample Results ug/L	
Di-n-octyl phthalate	100	N.D.	
Fluoranthene	100	N.D.	
Fluorene	100	N.D.	
Hexachlorobenzene	100	N.D.	
Hexachlorobutadiene	100	N.D.	
Hexachlorocyclopentadiene	200	N.D.	
Hexachloroethane	100	N.D.	
Indeno(1,2,3-cd)pyrene	100	N.D.	
Isophorone	100	N.D.	
2-Methylnaphthalene	100	N.D.	
2-Methylphenol	100	180	
4-Methylphenol	100	160	
Naphthalene	100	N.D.	
2-Nitroaniline	200	N.D.	
3-Nitroaniline	200	N.D.	
4-Nitroaniline	200	N.D.	
Nitrobenzene	100	N.D.	
2-Nitrophenol	100	N.D.	
4-Nitrophenol	200	N.D.	
n-Nitrosodiphenylamine	100	N.D.	
n-Nitroso-di-n-propylamine	100	N.D.	
Pentachlorophenol	200	N.D.	
Phenanthrene	100	N.D.	
Phenol	100	120	
Pyrene	100	N.D.	
1,2,4-Trichlorobenzene	100	N.D.	
2,4,5-Trichlorophenol	200	N.D.	
2,4,6-Trichlorophenol	100	N.D.	
Surrogates	Control Limits %	% Recovery	
2-Fluorophenol	21	110	Q
Phenol-d5	10	110	Q
Nitrobenzene-d5	35	114	Q
2-Fluorobiphenyl	43	116	Q
2,4,6-Tribromophenol	10	123	Q
p-Terphenyl-d14	33	141	Q

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH9
Matrix: LIQUID
Analysis Method: EPA 8270
Lab Number: 9611851-02

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatle Tentatively Identified Compounds

Analyte	Detection Limit ug/L	*	Sample Results ug/L	*
UNKNOWN	80		40000	
UNKNOWN	80		330	
ETHANOL, 2-BUTOXY-	80		18000	
BENZENE, (1-METHYLETHYL)-	80		320	
UNKNOWN	80		690	
BENZENE, PROPYL-	80		270	
BENZENE, 1-ETHYL-3-METHYL-	80		1700	
BENZENE, 1,2,4-TRIMETHYL-	80		870	
BENZENE, 1-ETHYL-2-METHYL-	80		520	
BENZENE, 1,2,3-TRIMETHYL-	80		2500	
NONANE, 2-METHYL-	80		440	
BENZENE, 1-ETHYL-4-METHYL-	80		990	
CYCLOPENTANOL, 2-METHYL-, ACETATE, TRANS	80		210	
UNKNOWN	80		590	
UNDECANE	80		740	
OXIRANE, (BUTOXYMETHYL)-	80		4900	
BENZENE, 1,2,3,5-TETRAMETHYL-	80		220	
HEXANOIC ACID, 2-ETHYL-	80		320	
ETHANOL, 2-(2-BUTOXYETHOXY)-	80		650	
UNKNOWN	80		280	

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library.
Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH9 Matrix: LIQUID Analysis Method: Title 22 Lab Number: 9611851-02	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/27/96 Analyzed: 11/27/96 Reported: 12/03/96
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QC Batch Number: ME1127966010MDA
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Antimony, Sb	500	0.10	N.D.
Arsenic, As	500	0.20	820
Barium, Ba	10000	0.10	N.D.
Beryllium, Be	75	0.010	N.D.
Cadmium, Cd	100	0.010	4.1
Chromium, Cr	2500	0.010	N.D.
Cobalt, Co	8000	0.050	0.29
Copper, Cu	2500	0.010	N.D.
Lead, Pb	1000	0.10	N.D.
Mercury, Hg	20	0.00020	N.D.
Molybdenum, Mo	3500	0.050	N.D.
Nickel, Ni	2000	0.050	0.63
Selenium, Se	100	0.10	N.D.
Silver, Ag	500	0.010	N.D.
Thallium, Tl	700	0.20	N.D.
Vanadium, V	2400	0.050	N.D.
Zinc, Zn	5000	0.010	2.9

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager

Page:





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH6
Matrix: LIQUID
Analysis Method: EPA 8240
Lab Number: 9611851-03

Sampled: 11/14/96
Received: 11/14/96

Analyzed: 11/19/96
Reported: 12/03/96

QC Batch Number: MS1118968240H6A
Instrument ID: H6

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	1700	1800
Benzene	330	N.D.
Bromodichloromethane	330	N.D.
Bromoform	330	N.D.
Bromomethane	330	N.D.
2-Butanone	1700	N.D.
Carbon disulfide	330	N.D.
Carbon tetrachloride	330	N.D.
Chlorobenzene	330	N.D.
Chloroethane	330	N.D.
2-Chloroethyl vinyl ether	1700	N.D.
Chloroform	330	N.D.
Chloromethane	330	N.D.
Dibromochloromethane	330	N.D.
1,1-Dichloroethane	330	N.D.
1,2-Dichloroethane	330	N.D.
1,1-Dichloroethene	330	N.D.
cis-1,2-Dichloroethene	330	N.D.
trans-1,2-Dichloroethene	330	N.D.
1,2-Dichloropropane	330	N.D.
cis-1,3-Dichloropropene	330	N.D.
trans-1,3-Dichloropropene	330	N.D.
Ethylbenzene	330	1500
2-Hexanone	1700	N.D.
Methylene chloride	840	N.D.
4-Methyl-2-pentanone	1700	N.D.
Styrene	330	N.D.
1,1,2,2-Tetrachloroethane	330	N.D.
Tetrachloroethene	330	N.D.
Toluene	330	24000
1,1,1-Trichloroethane	330	N.D.
1,1,2-Trichloroethane	330	N.D.
Trichloroethene	330	N.D.
Trichlorofluoromethane	330	N.D.
Vinyl acetate	840	N.D.
Vinyl chloride	330	N.D.
Total Xylenes	330	6900



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FAX (916) 921-0100

Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH6 Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-03	Sampled: 11/14/96 Received: 11/14/96 Analyzed: 11/19/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: MS1118968240H6A
Instrument ID: H6

Analyte	Detection Limit ug/L	Sample Results ug/L
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	76	114
Toluene-d8	88	110
4-Bromofluorobenzene	86	115

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager

Page:





Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH6 Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-03	Sampled: 11/14/96 Received: 11/14/96 Analyzed: 11/19/96 Reported: 12/03/96
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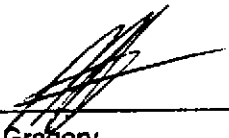
QC Batch Number: MS1118968240H6A
Instrument ID: H6

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/L	Sample Results ug/L
CYCLOHEXANE, METHYL- 1,2,4-TRIMETHYLBENZENE	840 840	1500 1000

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST Library.
Positive identification or specification between isomers cannot be made without retention time standards.
* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kainowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH6 Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9611851-03	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/21/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatle Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	25	N.D.
Acenaphthylene	25	N.D.
Anthracene	25	N.D.
Benzoic Acid	50	120
Benzo(a)anthracene	25	N.D.
Benzo(b)fluoranthene	25	N.D.
Benzo(k)fluoranthene	25	N.D.
Benzo(g,h,i)perylene	25	N.D.
Benzo(a)pyrene	25	N.D.
Benzyl alcohol	25	N.D.
Bis(2-chloroethoxy)methane	25	N.D.
Bis(2-chloroethyl)ether	25	N.D.
Bis(2-chloroisopropyl)ether	25	N.D.
Bis(2-ethylhexyl)phthalate	50	N.D.
4-Bromophenyl phenyl ether	25	N.D.
Butyl benzyl phthalate	25	N.D.
4-Chloroaniline	50	N.D.
2-Chloronaphthalene	25	N.D.
4-Chloro-3-methylphenol	25	N.D.
2-Chlorophenol	25	N.D.
4-Chlorophenyl phenyl ether	25	N.D.
Chrysene	25	N.D.
Dibenzo(a,h)anthracene	25	N.D.
Dibenzofuran	25	N.D.
Di-n-butyl phthalate	50	N.D.
1,2-Dichlorobenzene	25	N.D.
1,3-Dichlorobenzene	25	N.D.
1,4-Dichlorobenzene	25	N.D.
3,3-Dichlorobenzidine	50	N.D.
2,4-Dichlorophenol	25	N.D.
Diethyl phthalate	25	N.D.
2,4-Dimethylphenol	25	N.D.
Dimethyl phthalate	25	N.D.
4,6-Dinitro-2-methylphenol	50	N.D.
2,4-Dinitrophenol	50	N.D.
2,4-Dinitrotoluene	25	N.D.
2,6-Dinitrotoluene	25	N.D.



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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH6
Matrix: LIQUID
Analysis Method: EPA 8270
Lab Number: 9611851-03

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Analyte	Detection Limit ug/L	Sample Results ug/L
Di-n-octyl phthalate	25	N.D.
Fluoranthene	25	N.D.
Fluorene	25	N.D.
Hexachlorobenzene	25	N.D.
Hexachlorobutadiene	25	N.D.
Hexachlorocyclopentadiene	50	N.D.
Hexachloroethane	25	N.D.
Indeno(1,2,3-cd)pyrene	25	N.D.
Isophorone	25	N.D.
2-Methylnaphthalene	25	N.D.
2-Methylphenol	25	N.D.
4-Methylphenol	25	N.D.
Naphthalene	25	N.D.
2-Nitroaniline	50	N.D.
3-Nitroaniline	50	N.D.
4-Nitroaniline	50	N.D.
Nitrobenzene	25	N.D.
2-Nitrophenol	25	N.D.
4-Nitrophenol	50	N.D.
n-Nitrosodiphenylamine	25	N.D.
n-Nitroso-di-n-propylamine	25	N.D.
Pentachlorophenol	50	N.D.
Phenanthrene	25	N.D.
Phenol	25	N.D.
Pyrene	25	N.D.
1,2,4-Trichlorobenzene	25	N.D.
2,4,5-Trichlorophenol	50	N.D.
2,4,6-Trichlorophenol	25	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	21	110	68
Phenol-d5	10	110	91
Nitrobenzene-d5	35	114	80
2-Fluorobiphenyl	43	116	83
2,4,6-Tribromophenol	10	123	108
p-Terphenyl-d14	33	141	27 Q

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Eder & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH6 Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9611851-03	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/21/96 Reported: 12/03/96
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QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/L	*	Sample Results ug/L
2-HEXEN-1-OL, (Z)-	20		420
BENZENE, DIMETHYL-	20		1600
1-BUTANOL, 2-METHYL-, ACETATE	20		51
BUTANOIC ACID, HEPTYL ESTER	20		100
BENZENE, (1-METHYLETHYL)-	20		82
UNKNOWN	20		530
BENZENE, PROPYL-	20		150
BENZENE, 1-ETHYL-3-METHYL-	20		800
BENZENE, 1,3,5-TRIMETHYL-	20		330
BENZENE, 1-ETHYL-2-METHYL-	20		240
BENZENE, 1,2,4-TRIMETHYL-	20		1100
BENZENE, 1,2,3-TRIMETHYL-	20		360
BENZENE, 1,1-(1-ETHENYL-1,3-PROPANEDIYL)			
BIS-	20		60
UNKNOWN	20		2200
UNKNOWN	20		66
BENZENE, (2-METHOXYETHYL)-	20		53
BENZOIC ACID, 3-METHYL-	20		47
BENZOIC ACID, 4-METHYL-	20		70
UNKNOWN	20		52
BENZENEACETIC ACID, .ALPHA.-METHYL-	20		43

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH6
Matrix: LIQUID
Analysis Method: Title 22
Lab Number: 9611851-03

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/27/96
Analyzed: 11/27/96
Reported: 12/03/96

QC Batch Number: ME1127966010MDA
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Antimony, Sb	500	0.10	N.D.
Arsenic, As	500	0.10	6.0
Barium, Ba	10000	0.10	N.D.
Beryllium, Be	75	0.010	N.D.
Cadmium, Cd	100	0.010	0.063
Chromium, Cr	2500	0.010	N.D.
Cobalt, Co	8000	0.050	0.15
Copper, Cu	2500	0.010	N.D.
Lead, Pb	1000	0.10	N.D.
Mercury, Hg	20	0.00020	N.D.
Molybdenum, Mo	3500	0.050	N.D.
Nickel, Ni	2000	0.050	0.57
Selenium, Se	100	0.10	N.D.
Silver, Ag	500	0.010	N.D.
Thallium, Tl	700	0.10	N.D.
Vanadium, V	2400	0.050	N.D.
Zinc, Zn	5000	0.010	12

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CHB
Matrix: LIQUID
Analysis Method: EPA 8240
Lab Number: 9611851-04

Sampled: 11/14/96
Received: 11/14/96

Analyzed: 11/19/96
Reported: 12/03/96

QC Batch Number: MS1118968240H6A
Instrument ID: H6

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	10	18
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis-1,2-Dichloroethene	2.0	N.D.
trans-1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis-1,3-Dichloropropene	2.0	N.D.
trans-1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	5.0	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
Vinyl acetate	5.0	N.D.
Vinyl chloride	2.0	N.D.
Total Xylenes	2.0	N.D.



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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CHB Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-04	Sampled: 11/14/96 Received: 11/14/96 Analyzed: 11/19/96 Reported: 12/03/96
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QC Batch Number: MS1118968240H6A
Instrument ID: H6

Analyte	Detection Limit ug/L	Sample Results ug/L
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	76	114
Toluene-d8	88	110
4-Bromofluorobenzene	86	115

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erier & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CHB Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-04	Sampled: 11/14/96 Received: 11/14/96 Analyzed: 11/19/96 Reported: 12/03/96
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QC Batch Number: MS1118968240H6A
Instrument ID: H6

Volatile Tentatively Identified Compounds


Analyte	Detection Limit ug/L *	Sample Results ug/L *
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	5.0	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager





Ertel & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CHB
Matrix: LIQUID
Analysis Method: EPA 8270
Lab Number: 9611851-04

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	5.0	N.D.
Acenaphthylene	5.0	N.D.
Anthracene	5.0	N.D.
Benzoic Acid	10	N.D.
Benzo(a)anthracene	5.0	N.D.
Benzo(b)fluoranthene	5.0	N.D.
Benzo(k)fluoranthene	5.0	N.D.
Benzo(g,h,i)perylene	5.0	N.D.
Benzo(a)pyrene	5.0	N.D.
Benzyl alcohol	5.0	N.D.
Bis(2-chloroethoxy)methane	5.0	N.D.
Bis(2-chloroethyl)ether	5.0	N.D.
Bis(2-chloroisopropyl)ether	5.0	N.D.
Bis(2-ethylhexyl)phthalate	10	N.D.
4-Bromophenyl phenyl ether	5.0	N.D.
Butyl benzyl phthalate	5.0	N.D.
4-Chloroaniline	10	N.D.
2-Chloronaphthalene	5.0	N.D.
4-Chloro-3-methylphenol	5.0	N.D.
2-Chlorophenol	5.0	N.D.
4-Chlorophenyl phenyl ether	5.0	N.D.
Chrysene	5.0	N.D.
Dibenzo(a,h)anthracene	5.0	N.D.
Dibenzofuran	5.0	N.D.
Di-n-butyl phthalate	10	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
3,3-Dichlorobenzidine	10	N.D.
2,4-Dichlorophenol	5.0	N.D.
Diethyl phthalate	5.0	N.D.
2,4-Dimethylphenol	5.0	N.D.
Dimethyl phthalate	5.0	N.D.
4,6-Dinitro-2-methylphenol	10	N.D.
2,4-Dinitrophenol	10	N.D.
2,4-Dinitrotoluene	5.0	N.D.
2,6-Dinitrotoluene	5.0	N.D.





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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CHB
Matrix: LIQUID
Analysis Method: EPA 8270
Lab Number: 9611851-04

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/21/96
Reported: 12/03/96


QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Analyte	Detection Limit ug/L	Sample Results ug/L
Di-n-octyl phthalate	5.0	N.D.
Fluoranthene	5.0	N.D.
Fluorene	5.0	N.D.
Hexachlorobenzene	5.0	N.D.
Hexachlorobutadiene	5.0	N.D.
Hexachlorocyclopentadiene	10	N.D.
Hexachloroethane	5.0	N.D.
Indeno(1,2,3-cd)pyrene	5.0	N.D.
Isophorone	5.0	N.D.
2-Methylnaphthalene	5.0	N.D.
2-Methylphenol	5.0	N.D.
4-Methylphenol	5.0	N.D.
Naphthalene	5.0	N.D.
2-Nitroaniline	10	N.D.
3-Nitroaniline	10	N.D.
4-Nitroaniline	10	N.D.
Nitrobenzene	5.0	N.D.
2-Nitrophenol	5.0	N.D.
4-Nitrophenol	10	N.D.
n-Nitrosodiphenylamine	5.0	N.D.
n-Nitroso-di-n-propylamine	5.0	N.D.
Pentachlorophenol	10	N.D.
Phenanthrene	5.0	N.D.
Phenol	5.0	N.D.
Pyrene	5.0	N.D.
1,2,4-Trichlorobenzene	5.0	N.D.
2,4,5-Trichlorophenol	10	N.D.
2,4,6-Trichlorophenol	5.0	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	21	110	74
Phenol-d5	10	110	89
Nitrobenzene-d5	35	114	75
2-Fluorobiphenyl	43	116	74
2,4,6-Tribromophenol	10	123	95
p-Terphenyl-d14	33	141	94

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager





Erlar & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CHB Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9611851-04	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/21/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

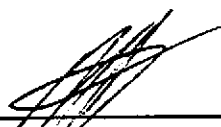
Analyte	Detection Limit ug/L	*	Sample Results ug/L	*
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	4.0		N.D.	

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CHB Matrix: LIQUID Analysis Method: Title 22 Lab Number: 9611851-04	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/27/96 Analyzed: 11/27/96 Reported: 12/03/96
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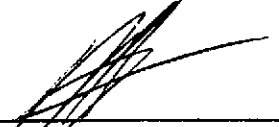
QC Batch Number: ME1127966010MDA
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Antimony, Sb	500	0.10	N.D.
Arsenic, As	500	0.10	N.D.
Barium, Ba	10000	0.10	N.D.
Beryllium, Be	75	0.010	N.D.
Cadmium, Cd	100	0.010	N.D.
Chromium, Cr	2500	0.010	N.D.
Cobalt, Co	8000	0.050	N.D.
Copper, Cu	2500	0.010	N.D.
Lead, Pb	1000	0.10	N.D.
Mercury, Hg	20	0.00020	N.D.
Molybdenum, Mo	3500	0.050	N.D.
Nickel, Ni	2000	0.050	N.D.
Selenium, Se	100	0.10	N.D.
Silver, Ag	500	0.010	N.D.
Thallium, Tl	700	0.10	N.D.
Vanadium, V	2400	0.050	N.D.
Zinc, Zn	5000	0.010	0.019

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CHA Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-05	Sampled: 11/14/96 Received: 11/14/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1120968240H6A
Instrument ID: H6

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	3300	N.D.
Benzene	660	N.D.
Bromodichloromethane	660	N.D.
Bromoform	660	N.D.
Bromomethane	660	N.D.
2-Butanone	3300	N.D.
Carbon disulfide	660	N.D.
Carbon tetrachloride	660	N.D.
Chlorobenzene	660	N.D.
Chloroethane	660	N.D.
2-Chloroethyl vinyl ether	3300	N.D.
Chloroform	660	N.D.
Chloromethane	660	N.D.
Dibromochloromethane	660	N.D.
1,1-Dichloroethane	660	N.D.
1,2-Dichloroethane	660	N.D.
1,1-Dichloroethene	660	N.D.
cis-1,2-Dichloroethene	660	N.D.
trans-1,2-Dichloroethene	660	N.D.
1,2-Dichloropropane	660	N.D.
cis-1,3-Dichloropropene	660	N.D.
trans-1,3-Dichloropropene	660	N.D.
Ethylbenzene	660	1800
2-Hexanone	3300	N.D.
Methylene chloride	1600	N.D.
4-Methyl-2-pentanone	3300	N.D.
Styrene	660	N.D.
1,1,2,2-Tetrachloroethane	660	N.D.
Tetrachloroethene	660	N.D.
Toluene	660	30000
1,1,1-Trichloroethane	660	N.D.
1,1,2-Trichloroethane	660	N.D.
Trichloroethene	660	N.D.
Trichlorofluoromethane	660	N.D.
Vinyl acetate	1600	N.D.
Vinyl chloride	660	N.D.
Total Xylenes	660	8400



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Eler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CHA Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-05	Sampled: 11/14/96 Received: 11/14/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1120968240H6A
Instrument ID: H6

Analyte	Detection Limit ug/L	Sample Results ug/L
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	76	114
Toluene-d8	88	110
4-Bromofluorobenzene	86	115

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

SEQUOIA ANALYTICAL - ELAP #1210



 Mike Gregory
 Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CHA Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-05	Sampled: 11/14/96 Received: 11/14/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1120968240H6A
Instrument ID: H6

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/L	Sample Results ug/L
CYCLOHEXANE, METHYL	1700	1900

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CHA Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9611851-05	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/21/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	100	N.D.
Acenaphthylene	100	N.D.
Anthracene	100	N.D.
Benzoic Acid	200	N.D.
Benzo(a)anthracene	100	N.D.
Benzo(b)fluoranthene	100	N.D.
Benzo(k)fluoranthene	100	N.D.
Benzo(g,h,i)perylene	100	N.D.
Benzo(a)pyrene	100	N.D.
Benzyl alcohol	100	N.D.
Bis(2-chloroethoxy)methane	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.
Bis(2-ethylhexyl)phthalate	200	N.D.
4-Bromophenyl phenyl ether	100	N.D.
Butyl benzyl phthalate	100	N.D.
4-Chloroaniline	200	N.D.
2-Chloronaphthalene	100	N.D.
4-Chloro-3-methylphenol	100	N.D.
2-Chlorophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.
Chrysene	100	N.D.
Dibenzo(a,h)anthracene	100	N.D.
Dibenzofuran	100	N.D.
Di-n-butyl phthalate	200	N.D.
1,2-Dichlorobenzene	100	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	200	N.D.
2,4-Dichlorophenol	100	N.D.
Diethyl phthalate	100	N.D.
2,4-Dimethylphenol	100	N.D.
Dimethyl phthalate	100	N.D.
4,6-Dinitro-2-methylphenol	200	N.D.
2,4-Dinitrophenol	200	N.D.
2,4-Dinitrotoluene	100	N.D.
2,6-Dinitrotoluene	100	N.D.



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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CHA
Matrix: LIQUID
Analysis Method: EPA 8270
Lab Number: 9611851-05

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Analyte	Detection Limit ug/L	Sample Results ug/L	
Di-n-octyl phthalate	100	N.D.	
Fluoranthene	100	N.D.	
Fluorene	100	N.D.	
Hexachlorobenzene	100	N.D.	
Hexachlorobutadiene	100	N.D.	
Hexachlorocyclopentadiene	200	N.D.	
Hexachloroethane	100	N.D.	
Indeno(1,2,3-cd)pyrene	100	N.D.	
Isophorone	100	N.D.	
2-Methylnaphthalene	100	N.D.	
2-Methylphenol	100	N.D.	
4-Methylphenol	100	N.D.	
Naphthalene	100	N.D.	
2-Nitroaniline	200	N.D.	
3-Nitroaniline	200	N.D.	
4-Nitroaniline	200	N.D.	
Nitrobenzene	100	N.D.	
2-Nitrophenol	100	N.D.	
4-Nitrophenol	200	N.D.	
n-Nitrosodiphenylamine	100	N.D.	
n-Nitroso-di-n-propylamine	100	N.D.	
Pentachlorophenol	200	N.D.	
Phenanthrene	100	N.D.	
Phenol	100	N.D.	
Pyrene	100	N.D.	
1,2,4-Trichlorobenzene	100	N.D.	
2,4,5-Trichlorophenol	200	N.D.	
2,4,6-Trichlorophenol	100	N.D.	
Surrogates	Control Limits %	% Recovery	
2-Fluorophenol	21	110	Q
Phenol-d5	10	110	Q
Nitrobenzene-d5	35	114	Q
2-Fluorobiphenyl	43	116	Q
2,4,6-Tribromophenol	10	123	Q
p-Terphenyl-d14	33	141	Q

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CHA Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9611851-05	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/21/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit * ug/L	Sample Results * ug/L
2-HEXEN-1-OL, (Z)-	80	400
BENZENE, DIMETHYL-	80	1800
UNKNOWN	80	310
BENZENE, 1-ETHYL-3-METHYL-	80	680
BENZENE, 1,3,5-TRIMETHYL-	80	240
BENZENE, 1-ETHYL-4-METHYL-	80	200
BENZENE, 1,2,4-TRIMETHYL-	80	1100
BENZENE, 1,2,3-TRIMETHYL-	80	280
OXIRANE, (BUTOXYMETHYL)-	80	2800

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library.
Positive identification or specification between isomers cannot be made without retention time standards.
* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Erler & Kainowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CHA Matrix: LIQUID Analysis Method: Title 22 Lab Number: 9611851-05	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/27/96 Analyzed: 11/27/96 Reported: 12/03/96
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QC Batch Number: ME1127966010MDA
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Antimony, Sb	500	0.10	0.18
Arsenic, As	500	0.10	5.4
Barium, Ba	10000	0.10	N.D.
Beryllium, Be	75	0.010	N.D.
Cadmium, Cd	100	0.010	0.064
Chromium, Cr	2500	0.010	N.D.
Cobalt, Co	8000	0.050	0.16
Copper, Cu	2500	0.010	N.D.
Lead, Pb	1000	0.10	N.D.
Mercury, Hg	20	0.00020	N.D.
Molybdenum, Mo	3500	0.050	N.D.
Nickel, Ni	2000	0.050	0.61
Selenium, Se	100	0.10	N.D.
Silver, Ag	500	0.010	N.D.
Thallium, Tl	700	0.10	N.D.
Vanadium, V	2400	0.050	N.D.
Zinc, Zn	5000	0.010	14

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH5 Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-06	Sampled: 11/14/96 Received: 11/14/96 Analyzed: 11/19/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: MS1118968240H6A
Instrument ID: H6

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	110	8500
Benzene	22	N.D.
Bromodichloromethane	22	N.D.
Bromoform	22	N.D.
Bromomethane	22	N.D.
2-Butanone	110	6500
Carbon disulfide	22	N.D.
Carbon tetrachloride	22	N.D.
Chlorobenzene	22	N.D.
Chloroethane	22	N.D.
2-Chloroethyl vinyl ether	110	N.D.
Chloroform	22	N.D.
Chloromethane	22	N.D.
Dibromochloromethane	22	N.D.
1,1-Dichloroethane	22	N.D.
1,2-Dichloroethane	22	N.D.
1,1-Dichloroethene	22	N.D.
cis-1,2-Dichloroethene	22	N.D.
trans-1,2-Dichloroethene	22	N.D.
1,2-Dichloropropane	22	N.D.
cis-1,3-Dichloropropene	22	N.D.
trans-1,3-Dichloropropene	22	N.D.
Ethylbenzene	22	59
2-Hexanone	110	N.D.
Methylene chloride	56	N.D.
4-Methyl-2-pentanone	110	520
Styrene	22	N.D.
1,1,2,2-Tetrachloroethane	22	N.D.
Tetrachloroethene	22	N.D.
Toluene	22	330
1,1,1-Trichloroethane	22	N.D.
1,1,2-Trichloroethane	22	N.D.
Trichloroethene	22	N.D.
Trichlorofluoromethane	22	N.D.
Vinyl acetate	56	N.D.
Vinyl chloride	22	N.D.
Total Xylenes	22	160





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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH5
Matrix: LIQUID
Analysis Method: EPA 8240
Lab Number: 9611851-06

Sampled: 11/14/96
Received: 11/14/96

Analyzed: 11/19/96
Reported: 12/03/96

QC Batch Number: MS1118968240H6A
Instrument ID: H6

Analyte

**Detection Limit
ug/L**

**Sample Results
ug/L**

Surrogates

1,2-Dichloroethane-d4
Toluene-d8
4-Bromofluorobenzene

Control Limits %

76 114
88 110
86 115

% Recovery

95
98
97

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH5
Matrix: LIQUID
Analysis Method: EPA 8240
Lab Number: 9611851-06

Sampled: 11/14/96
Received: 11/14/96
Analyzed: 11/19/96
Reported: 12/03/96

QC Batch Number: MS1118968240H6A
Instrument ID: H6

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/L	*	Sample Results ug/L
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	55		N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST Library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Ertler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH5
Matrix: LIQUID
Analysis Method: EPA 8270
Lab Number: 9611851-06

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/22/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	5.0	N.D.
Acenaphthylene	5.0	N.D.
Anthracene	5.0	N.D.
Benzoic Acid	10	N.D.
Benzo(a)anthracene	5.0	N.D.
Benzo(b)fluoranthene	5.0	N.D.
Benzo(k)fluoranthene	5.0	N.D.
Benzo(g,h,i)perylene	5.0	N.D.
Benzo(a)pyrene	5.0	N.D.
Benzyl alcohol	5.0	N.D.
Bis(2-chloroethoxy)methane	5.0	N.D.
Bis(2-chloroethyl)ether	5.0	N.D.
Bis(2-chloroisopropyl)ether	5.0	N.D.
Bis(2-ethylhexyl)phthalate	10	N.D.
4-Bromophenyl phenyl ether	5.0	N.D.
Butyl benzyl phthalate	5.0	N.D.
4-Chloroaniline	10	N.D.
2-Chloronaphthalene	5.0	N.D.
4-Chloro-3-methylphenol	5.0	N.D.
2-Chlorophenol	5.0	N.D.
4-Chlorophenyl phenyl ether	5.0	N.D.
Chrysene	5.0	N.D.
Dibenzo(a,h)anthracene	5.0	N.D.
Dibenzofuran	5.0	N.D.
Di-n-butyl phthalate	10	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
3,3-Dichlorobenzidine	10	N.D.
2,4-Dichlorophenol	5.0	N.D.
Diethyl phthalate	5.0	N.D.
2,4-Dimethylphenol	5.0	N.D.
Dimethyl phthalate	5.0	N.D.
4,6-Dinitro-2-methylphenol	10	N.D.
2,4-Dinitrophenol	10	N.D.
2,4-Dinitrotoluene	5.0	N.D.
2,6-Dinitrotoluene	5.0	N.D.



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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH5
Matrix: LIQUID
Analysis Method: EPA 8270
Lab Number: 9611851-06

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/22/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Analyte	Detection Limit ug/L	Sample Results ug/L
Di-n-octyl phthalate	5.0	N.D.
Fluoranthene	5.0	N.D.
Fluorene	5.0	N.D.
Hexachlorobenzene	5.0	N.D.
Hexachlorobutadiene	5.0	N.D.
Hexachlorocyclopentadiene	10	N.D.
Hexachloroethane	5.0	N.D.
Indeno(1,2,3-cd)pyrene	5.0	N.D.
Isophorone	5.0	N.D.
2-Methylnaphthalene	5.0	N.D.
2-Methylphenol	5.0	N.D.
4-Methylphenol	5.0	N.D.
Naphthalene	5.0	N.D.
2-Nitroaniline	10	N.D.
3-Nitroaniline	10	N.D.
4-Nitroaniline	10	N.D.
Nitrobenzene	5.0	N.D.
2-Nitrophenol	5.0	N.D.
4-Nitrophenol	10	N.D.
n-Nitrosodiphenylamine	5.0	N.D.
n-Nitroso-di-n-propylamine	5.0	N.D.
Pentachlorophenol	10	N.D.
Phenanthrene	5.0	N.D.
Phenol	5.0	N.D.
Pyrene	5.0	N.D.
1,2,4-Trichlorobenzene	5.0	N.D.
2,4,5-Trichlorophenol	10	N.D.
2,4,6-Trichlorophenol	5.0	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	21	110	59
Phenol-d5	10	110	82
Nitrobenzene-d5	35	114	75
2-Fluorobiphenyl	43	116	69
2,4,6-Tribromophenol	10	123	82
p-Terphenyl-d14	33	141	23 Q

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH5
Matrix: LIQUID
Analysis Method: EPA 8270
Lab Number: 9611851-06

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/22/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/L	Sample Results ug/L
2-HEXEN-1-OL, (Z)-	4.0	31
CYCLOHEXANONE	4.0	360
ETHANOL, 2-BUTOXY-	4.0	350
UNKNOWN	4.0	71
ETHANE, 1,1'-OXYBIS[2-METHOXY]-	4.0	16
BENZENE, 1-ETHYL-3-METHYL-	4.0	12
BENZENE, 1-ETHYL-2-METHYL-	4.0	21
BENZENE, 1,2,4-TRIMETHYL-	4.0	25
1,2,4-TRITHIOLANE	4.0	30
OXIRANE, (BUTOXYMETHYL)-	4.0	600
1,3,5-TRITHIANE	4.0	15
UNKNOWN	4.0	21

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH5 Matrix: LIQUID Analysis Method: Title 22 Lab Number: 9611851-06	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/27/96 Analyzed: 11/27/96 Reported: 12/03/96
Attention: Vera Nelson		

QC Batch Number: ME1127966010MDA
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Antimony, Sb	500	0.10	0.25
Arsenic, As	500	0.20	650
Barium, Ba	10000	0.10	N.D.
Beryllium, Be	75	0.010	N.D.
Cadmium, Cd	100	0.010	3.4
Chromium, Cr	2500	0.010	N.D.
Cobalt, Co	8000	0.050	0.11
Copper, Cu	2500	0.010	N.D.
Lead, Pb	1000	0.10	N.D.
Mercury, Hg	20	0.00020	N.D.
Molybdenum, Mo	3500	0.050	N.D.
Nickel, Ni	2000	0.050	0.20
Selenium, Se	100	0.10	N.D.
Silver, Ag	500	0.010	N.D.
Thallium, Tl	700	0.10	N.D.
Vanadium, V	2400	0.050	N.D.
Zinc, Zn	5000	0.010	2.3

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
 1730 South Amphlett, Ste 320
 San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
 Sample Descript: Method Blank
 Matrix: LIQUID
 Analysis Method: EPA 8240
 Lab Number: 9611851-07

Sampled:
 Received: 11/14/96
 Analyzed: 11/19/96
 Reported: 12/03/96

QC Batch Number: MS1118968240H6A
 Instrument ID: H6

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	10	N.D.
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis-1,2-Dichloroethene	2.0	N.D.
trans-1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis-1,3-Dichloropropene	2.0	N.D.
trans-1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	5.0	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
Vinyl acetate	5.0	N.D.
Vinyl chloride	2.0	N.D.
Total Xylenes	2.0	N.D.



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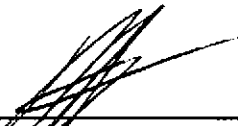
Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-07	Sampled: Received: 11/14/96 Analyzed: 11/19/96 Reported: 12/03/96
---	---	--

QC Batch Number: MS1118968240H6A
Instrument ID: H6

Analyte	Detection Limit ug/L	Sample Results ug/L
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	76 114	96
Toluene-d8	88 110	98
4-Bromofluorobenzene	86 115	98

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: LIQUID
Analysis Method: EPA 8240
Lab Number: 9611851-07

Sampled:
Received: 11/14/96

Analyzed: 11/19/96
Reported: 12/03/96

QC Batch Number: MS1118968240H6A
Instrument ID: H6

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/L	*	Sample Results ug/L	*
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	5.0		N.D.	

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: LIQUID
Analysis Method: EPA 8270
Lab Number: 9611851-07

Sampled:
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatle Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	5.0	N.D.
Acenaphthylene	5.0	N.D.
Anthracene	5.0	N.D.
Benzoic Acid	10	N.D.
Benzo(a)anthracene	5.0	N.D.
Benzo(b)fluoranthene	5.0	N.D.
Benzo(k)fluoranthene	5.0	N.D.
Benzo(g,h,i)perylene	5.0	N.D.
Benzo(a)pyrene	5.0	N.D.
Benzyl alcohol	5.0	N.D.
Bis(2-chloroethoxy)methane	5.0	N.D.
Bis(2-chloroethyl)ether	5.0	N.D.
Bis(2-chloroisopropyl)ether	5.0	N.D.
Bis(2-ethylhexyl)phthalate	10	N.D.
4-Bromophenyl phenyl ether	5.0	N.D.
Butyl benzyl phthalate	5.0	N.D.
4-Chloroaniline	10	N.D.
2-Chloronaphthalene	5.0	N.D.
4-Chloro-3-methylphenol	5.0	N.D.
2-Chlorophenol	5.0	N.D.
4-Chlorophenyl phenyl ether	5.0	N.D.
Chrysene	5.0	N.D.
Dibenzo(a,h)anthracene	5.0	N.D.
Dibenzofuran	5.0	N.D.
Di-n-butyl phthalate	10	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
3,3-Dichlorobenzidine	10	N.D.
2,4-Dichlorophenol	5.0	N.D.
Diethyl phthalate	5.0	N.D.
2,4-Dimethylphenol	5.0	N.D.
Dimethyl phthalate	5.0	N.D.
4,6-Dinitro-2-methylphenol	10	N.D.
2,4-Dinitrophenol	10	N.D.
2,4-Dinitrotoluene	5.0	N.D.
2,6-Dinitrotoluene	5.0	N.D.



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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: LIQUID
Analysis Method: EPA 8270
Lab Number: 9611851-07

Sampled:
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/21/96
Reported: 12/03/96

QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Analyte	Detection Limit ug/L	Sample Results ug/L
Di-n-octyl phthalate	5.0	N.D.
Fluoranthene	5.0	N.D.
Fluorene	5.0	N.D.
Hexachlorobenzene	5.0	N.D.
Hexachlorobutadiene	5.0	N.D.
Hexachlorocyclopentadiene	10	N.D.
Hexachloroethane	5.0	N.D.
Indeno(1,2,3-cd)pyrene	5.0	N.D.
Isophorone	5.0	N.D.
2-Methylnaphthalene	5.0	N.D.
2-Methylphenol	5.0	N.D.
4-Methylphenol	5.0	N.D.
Naphthalene	5.0	N.D.
2-Nitroaniline	10	N.D.
3-Nitroaniline	10	N.D.
4-Nitroaniline	10	N.D.
Nitrobenzene	5.0	N.D.
2-Nitrophenol	5.0	N.D.
4-Nitrophenol	10	N.D.
n-Nitrosodiphenylamine	5.0	N.D.
n-Nitroso-di-n-propylamine	5.0	N.D.
Pentachlorophenol	10	N.D.
Phenanthrene	5.0	N.D.
Phenol	5.0	N.D.
Pyrene	5.0	N.D.
1,2,4-Trichlorobenzene	5.0	N.D.
2,4,5-Trichlorophenol	10	N.D.
2,4,6-Trichlorophenol	5.0	N.D.
Surrogates	Control Limits %	% Recovery
2-Fluorophenol	21 110	72
Phenol-d5	10 110	82
Nitrobenzene-d5	35 114	70
2-Fluorobiphenyl	43 116	70
2,4,6-Tribromophenol	10 123	85
p-Terphenyl-d14	33 141	91

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9611851-07	Sampled: Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/21/96 Reported: 12/03/96
Attention: Vera Nelson		

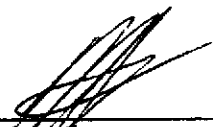
QC Batch Number: MS1118968270EXZ
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/L	*	Sample Results ug/L	*
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	4.0		N.D.	

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA MIST library. Positive identification or specification between isomers cannot be made without retention time standards.
* Estimated

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: LIQUID
Analysis Method: Title 22
Lab Number: 9611851-07

Sampled:
Received: 11/14/96
Extracted: 11/27/96
Analyzed: 11/27/96
Reported: 12/03/96

QC Batch Number: ME1127966010MDA
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Antimony, Sb	500	0.10	N.D.
Arsenic, As	500	0.10	N.D.
Barium, Ba	10000	0.10	N.D.
Beryllium, Be	75	0.010	N.D.
Cadmium, Cd	100	0.010	N.D.
Chromium, Cr	2500	0.010	N.D.
Cobalt, Co	8000	0.050	N.D.
Copper, Cu	2500	0.010	N.D.
Lead, Pb	1000	0.10	N.D.
Mercury, Hg	20	0.00020	N.D.
Molybdenum, Mo	3500	0.050	N.D.
Nickel, Ni	2000	0.050	N.D.
Selenium, Se	100	0.10	N.D.
Silver, Ag	500	0.010	N.D.
Thallium, Tl	700	0.10	N.D.
Vanadium, V	2400	0.050	N.D.
Zinc, Zn	5000	0.010	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Eler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-08	Sampled: Received: 11/14/96 Analyzed: 11/20/96 Reported: 12/03/96
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QC Batch Number: MS1120968240H6A
Instrument ID: H6

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acetone	10	N.D.
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis-1,2-Dichloroethene	2.0	N.D.
trans-1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis-1,3-Dichloropropene	2.0	N.D.
trans-1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	5.0	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
Vinyl acetate	5.0	N.D.
Vinyl chloride	2.0	N.D.
Total Xylenes	2.0	N.D.





Sequoia Analytical

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


Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: LIQUID Analysis Method: EPA 8240 Lab Number: 9611851-08	Sampled: Received: 11/14/96 Analyzed: 11/20/96 Reported: 12/03/96
---	---	--

QC Batch Number: MS1120968240H6A
Instrument ID: H6

Analyte	Detection Limit ug/L	Sample Results ug/L
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	76	114
Toluene-d8	88	110
4-Bromofluorobenzene	86	115

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

SEQUOIA ANALYTICAL - ELAP #1210



 Mike Gregory
 Project Manager



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: LIQUID
Sample Descrip: CH10
Work Order #: 9611851 01-07

Reported: Dec 3, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1127966010MDA	ME1127966010MDA	ME1127966010MDA	ME1127966010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010

Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611851-01-MSD	9611851-01-MSD	9611851-01-MSD	9611851-01-MSD
Sample Conc.:	N.D.	1.4	N.D.	N.D.
Prepared Date:	11/27/96	11/27/96	11/27/96	11/27/96
Analyzed Date:	11/27/96	11/27/96	11/27/96	11/27/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	0.97	2.4	0.96	0.97
MS % Recovery:	97	100	96	97
Dup. Result:	0.99	2.5	0.98	0.98
MSD % Recov.:	99	110	98	98
RPD:	2.0	4.1	2.1	1.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112796-LCS	LCS112796-LCS	LCS112796-LCS	LCS112796-LCS
Prepared Date:	11/27/96	11/27/96	11/27/96	11/27/96
Analyzed Date:	11/27/96	11/27/96	11/27/96	11/27/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.0	0.99	1.0	1.0
LCS % Recov.:	100	99	100	100

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

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.

SEQUOIA ANALYTICAL

Mike Gregory
Mike Gregory
Project Manager

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9611851.ERL <1>



Sequoia Analytical

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Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: LIQUID
Sample Descrip: CH10
Work Order #: 9611851 01-07

Reported: Dec 3, 1996

QUALITY CONTROL DATA REPORT

Analyte: Mercury

QC Batch#: ME1129967470M4A

Analy. Method: EPA 7470

Prep. Method: EPA 7470

Analyst: W. Thant

MS/MSD #: 9611851-01-MSD

Sample Conc.: N.D.

Prepared Date: 11/29/96

Analyzed Date: 12/02/96

Instrument I.D.#: MPE4

Conc. Spiked: 0.0040 mg/L

Result: 0.0033

MS % Recovery: 83

Dup. Result: 0.0032

MSD % Recov.: 80

RPD: 3.1

RPD Limit: 0-20

LCS #: LCS112996-LCS

Prepared Date: 11/29/96

Analyzed Date: 12/02/96

Instrument I.D.#: MPE4

Conc. Spiked: 0.0040 mg/L

LCS Result: 0.0040

LCS % Recov.: 100

MS/MSD 75-125

LCS 80-120

Control Limits

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.

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9611851.ERL <2>



Erlar & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: LIQUID
Sample Descrip: CH10-A
Work Order #: 9611851 01, 03, 04, 06, 07

Reported: Dec 3, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS1118968240H6A	MS1118968240H6A	MS1118968240H6A	MS1118968240H6A	MS1118968240H6A
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.

Analyst:	L Zhu	L Zhu	L Zhu	L Zhu	L Zhu
MS/MSD #:	9611847-08-MSD	9611847-08-MSD	9611847-08-MSD	9611847-08-MSD	9611847-08-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/16/96	11/16/96	11/16/96	11/16/96	11/16/96
Analyzed Date:	11/18/96	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	H6	H6	H6	H6	H6
Conc. Spiked:	500 ug/L	500 ug/L	500 ug/L	500 ug/L	500 ug/L
Result:	450	500	510	510	510
MS % Recovery:	90	100	102	102	102
Dup. Result:	460	500	520	520	510
MSD % Recov.:	92	100	104	104	102
RPD:	2.2	0.0	1.9	1.9	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	LCS111996-LCS	LCS111996-LCS	LCS111996-LCS	LCS111996-LCS	LCS111996-LCS
Prepared Date:	11/19/96	11/19/96	11/19/96	11/19/96	11/19/96
Analyzed Date:	11/19/96	11/19/96	11/19/96	11/19/96	11/19/96
Instrument I.D.#:	H6	H6	H6	H6	H6
Conc. Spiked:	50 ug/L	50 ug/L	50 ug/L	50 ug/L	50 ug/L
LCS Result:	46	51	48	52	52
LCS % Recov.:	92	102	96	104	104

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

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.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: LIQUID
Sample Descrip: CHB
Work Order #: 9611851 02, 05, 08

Reported: Dec 3, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro- benzene
QC Batch#:	MS1120968240H6A	MS1120968240H6A	MS1120968240H6A	MS1120968240H6A	MS1120968240H6A
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.

Analyst:	L. Duong	L. Duong	L. Duong	L. Duong	L. Duong
MS/MSD #:	9611851-04-MSD	9611851-04-MSD	9611851-04-MSD	9611851-04-MSD	9611851-04-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	H6	H6	H6	H6	H6
Conc. Spiked:	50 ug/L	50 ug/L	50 ug/L	50 ug/L	50 ug/L
Result:	44	49	51	51	52
MS % Recovery:	88	98	102	102	104
Dup. Result:	39	46	48	48	49
MSD % Recov.:	78	92	96	96	98
RPD:	12	6.3	6.1	6.1	5.9
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS
Prepared Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	H6	H6	H6	H6	H6
Conc. Spiked:	50 ug/L	50 ug/L	50 ug/L	50 ug/L	50 ug/L
LCS Result:	44	49	47	50	50
LCS % Recov.:	88	98	94	100	100

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

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.

** MS= Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Mike Gregory
Project Manager



Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
 1730 So. Amphlett Blvd., Suite 320 Matrix: LIQUID
 San Mateo, CA 94402 Sample Descrip: CH10
 Attention: Vera Nelson Work Order #: 9611851 01-07 Reported: Dec 3, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro-benzene	N-Nitroso-Di-N-propylamine
QC Batch#:	MS1118968270EXZ	MS1118968270EXZ	MS1118968270EXZ	MS1118968270EXZ
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510	EPA 3510

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611851-01-MSD	9611851-01-MSD	9611851-01-MSD	9611851-01-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	H5	H5	H5	H5
Conc. Spiked:	200 ug/L	200 ug/L	200 ug/L	200 ug/L

Result: MS/MSD DILUTED OUT
 MS % Recovery:

Dup. Result:
 MSD % Recov.:

RPD:
 RPD Limit:

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/22/96	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	H5	H5	H5
Conc. Spiked:	200 ug/L	200 ug/L	200 ug/L	200 ug/L
LCS Result:	150	160	150	170
LCS % Recov.:	75	80	75	85

MS/MSD LCS Control Limits	12-110	27-123	36-97	41-116
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SEQUOIA ANALYTICAL

[Signature]
 Mike Gregory
 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.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: LIQUID
Sample Descrip: CH10
Work Order #: 9611851 01-07

Reported: Dec 3, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS1118968270EXZ	MS1118968270EXZ	MS1118968270EXZ	MS1118968270EXZ
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510	EPA 3510

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611851-01-MSD	9611851-01-MSD	611851-01-MSD	9611851-01-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	H5	H5	H5	H5
Conc. Spiked:	200 ug/L	200 ug/L	200 ug/L	200 ug/L

Result: MS/MSD DILUTED OUT
MS % Recovery:

Dup. Result:
MSD % Recov.:

RPD:
RPD Limit:

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/22/96	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	H5	H5	H5
Conc. Spiked:	200 ug/L	200 ug/L	200 ug/L	200 ug/L
LCS Result:	160	150	150	150
LCS % Recov.:	80	75	75	75

MS/MSD LCS	Control Limits	39-98	23-97	46-118	10 to 80
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SEQUOIA ANALYTICAL

Mike Gregory
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.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference



Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
1730 So. Amphlett Blvd., Suite 320 Matrix: LIQUID
San Mateo, CA 94402 Sample Descrip: CH10
Attention: Vera Nelson Work Order #: 9611851 01-07 Reported: Dec 3, 1996

QUALITY CONTROL DATA REPORT

Analyte:	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
QC Batch#:	MS1118968270EXZ	MS1118968270EXZ	MS1118968270EXZ
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611851-01-MSD	9611851-01-MSD	611851-01-MSD
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	H5	H5	H5
Conc. Spiked:	200 ug/L	200 ug/L	200 ug/L

Result: MS/MSD DILUTED OUT

MS % Recovery:

Dup. Result:

MSD % Recov.:

RPD:

RPD Limit:

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	H5	H5
Conc. Spiked:	200 ug/L	200 ug/L	200 ug/L
LCS Result:	150	170	170
LCS % Recov.:	75	85	85

MS/MSD LCS Control Limits	24-96	9-103	26-127
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Please Note:

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** MS= Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager





**Sequoia
Analytical**

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

Redwood City, CA 94063
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Sacramento, CA 95834

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

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

Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: LIQUID
Sample Descrip: XSD
Work Order #: 9611851 01-07

Reported: Dec 3, 1996

QUALITY CONTROL DATA REPORT

Analyte: pH

QC Batch: IN111596150100A

Analy. Method: EPA 150.1

Prep Method: N.A.

Analyst: K. Sims

**Duplicate
Sample #:** 9611865-01-XSD

Prepared Date: 11/15/96
Analyzed Date: 11/15/96
Instrument I.D.#: MANUAL

**Sample
Concentration:** 8.1

**Dup. Sample
Concentration:** 7.9

RPD: 3.1
RPD Limit: 0-20

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

** RPD = Relative % Difference

9611851.ERL <8>



Eler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron

Received: 11/14/96

Lab Proj. ID: 9611851

Reported: 12/03/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 65 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

8270 Notes: Samples -03 and -06 have one surrogate below QC limit. This is acceptable as long as it is over ten percent.

Surrogates for samples -01 , -02 and -05 were diluted out because of high non-target compounds.

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager



CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

PAGE 1 OF 3

9011851

Erler & Kalinowski, Inc.
 Project Number: 930028.82
 Project Name: CH10W
 Source of Samples: SOIL BORINGS
 Location: SHELWIND WILLIAMS

Analytical Laboratory: SEQUOIA
 Date Sampled: 11/14/96
 Sampled By: BRETT VON THADEN
 Report Results To: VERA NELSON
 Phone Number: (415) 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
01	CH10	WATER	4-PRESERVED VOA	10:30	EPA 8240 w/ OPEN SCAN	10-DAY TAT
↓	CH10	WATER	2-AMBER LITER	10:30	EPA 8270 w/ OPEN SCAN	FOR ALL SAMPLES
↓	CH10	WATER	1-PLASTIC LITER PRESERVED	10:30	TITLE 22 METALS (ICP)	
↓	CH10	WATER	1-PLASTIC LITER	10:30	pH	
02	CH9	WATER	4-PRESERVED VOA	12:00	EPA 8240 w/ OPEN SCAN	
↓	CH9	WATER	2-AMBER LITER	12:00	EPA 8270 w/ OPEN SCAN	
↓	CH9	WATER	1-PRESERVED PLASTIC LITER	12:00	TITLE 22 METALS (ICP)	
↓	CH9	WATER	1-PLASTIC LITER	12:00	pH	

Special Instructions:

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
BRETT VON THADEN Brett von Thaden /EKI	11/14/96	7:30	
	11/14/96		

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

PAGE 2 OF 3

9611851

Erler & Kalinowski, Inc.

Analytical Laboratory: SEA VOIA

Project Number: 930028.82

Date Sampled: 11/14/96

Project Name: CHIRON

Sampled By: BRITT VON THADEN

Source of Samples: SOIL BORINGS

Report Results To: VERA NELSON

Location: SHERWIN WILLIAMS.

Phone Number: (415) 578-1172

Lab Sample ID	Field Sample ID	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
03	CH6	WATER	4-PRESERVED VOA	2:45	EPA 8240 w/ OPEN SCAN	10-DAY TBT
↓	CH6	WATER	2-AMBER LITER	2:45	EPA 8270 w/ OPEN SCAN	FOR ALL SAMPLES
	CH6	WATER	1-PRESERVED PLASTIC LITER	2:45	TITLE 22 METALS (ICP)	
	CH6	WATER	1-PLASTIC LITER	2:45	pH	
04	CHB	WATER	3-PRESERVED VOA	4:25	EPA 8240 w/ OPEN SCAN	
↓	CHB	WATER	2-AMBER LITER	4:25	EPA 8270 w/ OPEN SCAN	
	CHB	WATER	1-PRESERVED PLASTIC LITER	4:25	TITLE 22 METALS (ICP)	
	CHB	WATER	1-PLASTIC LITER	4:25	pH	

Special Instructions:

Relinquished By:

Received By:

Name / Signature / Affiliation

Date Time

Name / Signature / Affiliation

BRITT VON THADEN /EKI	11/14/96	7:30	

11/14/96

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

PAGE 3 OF 3

9611851

Erler & Kalinowski, Inc.
Project Number: 930028.82
Project Name: CHIRON
Source of Samples: SOIL BORINGS
Location: SHERWIN WILLIAMS

Analytical Laboratory: SEQUOIA
Date Sampled: 11/14/96
Sampled By: BRETT VON THADEN
Report Results To: VERA NELSON
Phone Number: (415) 570-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
05	CHA	WATER	4-PRESERVED VOA	2:45	EPA 8240 w/ OPEN SCAN	10-DAY TAT
↓	CHA	WATER	2- AMBER LITER	2:45	EPA 8270 w/ OPEN SCAN	FOR ALL SAMPLES
↓	CHA	WATER	1-PRESERVED PLASTIC LITER	2:45	TITLE 22 METALS (ICP)	
↓	CHA	WATER	1-PLASTIC LITER	2:45	pH	
06	CHS	WATER	4-PRESERVED VOA	4:35	EPA 8240 w/ OPEN SCAN	
↓	CHS	WATER	2- AMBER LITER	4:35	EPA 8270 w/ OPEN SCAN	
↓	CHS	WATER	1- PRESERVED PLASTIC LITER	4:35	TITLE 22 METALS (ICP)	
↓	CHS	WATER	1-PLASTIC LITER	4:35	pH	

Special Instructions:

Relinquished By:			Received By:		
Name / Signature / Affiliation	Date	Time	Name / Signature / Affiliation	Date	Time
BRETT VON THADEN <i>Brett von Thaden</i> /EKI	11/14/96	7:30			
	11/14/96	1930	V. Nelsons / EPA Contractual Services		



Eler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron

Lab Proj. ID: 9611856

Sampled: 11/12/96
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 12/02/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611856-01 Sample Desc: SOLID,CH2-A				
pH	pH Units	11/15/96	N/A	9.0
Lab No: 9611856-02 Sample Desc: SOLID,CH2-B				
pH	pH Units	11/15/96	N/A	7.0
Lab No: 9611856-03 Sample Desc: SOLID,CH3-A				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	13
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
pH	pH Units	11/15/96	N/A	10
Lab No: 9611856-04 Sample Desc: SOLID,CH3-B				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	89
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
pH	pH Units	11/15/96	N/A	5.4
Lab No: 9611856-05 Sample Desc: SOLID,CH4-A				
pH	pH Units	11/15/96	N/A	10
Lab No: 9611856-07 Sample Desc: SOLID,CH8-A				
Lead	mg/Kg	11/21/96	5.0	1100
pH	pH Units	11/15/96	N/A	9.4

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Lab Proj. ID: 9611856

Sampled: 11/12/96
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 12/02/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611856-08 Sample Desc: SOLID,CH8-B				
Arsenic	mg/Kg	11/21/96	5.0	18000
Lead	mg/Kg	11/21/96	10	40000
pH	pH Units	11/15/96	N/A	7.9
Zinc	mg/Kg	11/21/96	0.50	440
Lab No: 9611856-09 Sample Desc: SOLID,CH7-A				
Lead	mg/Kg	11/21/96	5.0	1400
pH	pH Units	11/15/96	N/A	9.1
Lab No: 9611856-10 Sample Desc: SOLID,CH7-B				
Arsenic	mg/Kg	12/01/96	50	56000
Lead	mg/Kg	11/21/96	5.0	1400
pH	pH Units	11/15/96	N/A	6.1
Zinc	mg/Kg	11/21/96	0.50	260

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron

Lab Proj. ID: 9611856

Sampled:
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 12/02/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611856-11				
Sample Desc : SOLID,Method Blank				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
Lead	mg/Kg	11/21/96	5.0	N.D.
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
pH	pH Units	11/15/96	N/A	NA
Zinc	mg/Kg	11/21/96	0.50	1.9

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH2-A Matrix: SOLID Analysis Method: Title 22 Lab Number: 9611856-01	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/21/96 Analyzed: 11/21/96 Reported: 12/02/96
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QC Batch Number: ME1121966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	12
Arsenic, As	500	5.0	750
Barium, Ba	10000	5.0	190
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	2.1
Chromium, Cr	2500	0.50	39
Cobalt, Co	8000	2.5	12
Copper, Cu	2500	0.50	47
Lead, Pb	1000	5.0	1600
Mercury, Hg	20	0.020	0.62
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	50
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	32
Zinc, Zn	5000	0.50	170

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH2-B Matrix: SOLID Analysis Method: Title 22 Lab Number: 9611856-02	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/21/96 Analyzed: 11/21/96 Reported: 12/02/96
Attention: Vera Nelson		

QC Batch Number: ME1121966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	10
Arsenic, As	500	5.0	12
Barium, Ba	10000	5.0	140
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	0.60
Chromium, Cr	2500	0.50	32
Cobalt, Co	8000	2.5	9.3
Copper, Cu	2500	0.50	20
Lead, Pb	1000	5.0	63
Mercury, Hg	20	0.020	0.079
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	39
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	27
Zinc, Zn	5000	0.50	120

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH3-A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611856-03

Sampled: 11/12/96
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/21/96
Reported: 12/02/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.



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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH3-A Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611856-03	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/02/96
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QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH3-A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611856-03

Sampled: 11/12/96
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/21/96
Reported: 12/02/96

Attention: Vera Nelson

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	250	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH3-A Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611856-03	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/02/96
Attention: Vera Nelson		

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.





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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH3-A
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611856-03

Sampled: 11/12/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/02/96

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg	
Di-n-octyl phthalate	250	N.D.	
Fluoranthene	250	N.D.	
Fluorene	250	N.D.	
Hexachlorobenzene	250	N.D.	
Hexachlorobutadiene	250	N.D.	
Hexachlorocyclopentadiene	500	N.D.	
Hexachloroethane	250	N.D.	
Indeno(1,2,3-cd)pyrene	250	N.D.	
Isophorone	250	N.D.	
2-Methylnaphthalene	250	N.D.	
2-Methylphenol	250	N.D.	
4-Methylphenol	250	N.D.	
Naphthalene	250	N.D.	
2-Nitroaniline	500	N.D.	
3-Nitroaniline	500	N.D.	
4-Nitroaniline	500	N.D.	
Nitrobenzene	250	N.D.	
2-Nitrophenol	250	N.D.	
4-Nitrophenol	500	N.D.	
N-Nitrosodiphenylamine	250	N.D.	
N-Nitroso-di-n-propylamine	250	N.D.	
Pentachlorophenol	500	N.D.	
Phenanthrene	250	N.D.	
Phenol	250	N.D.	
Pyrene	250	N.D.	
1,2,4-Trichlorobenzene	250	N.D.	
2,4,5-Trichlorophenol	500	N.D.	
2,4,6-Trichlorophenol	250	N.D.	
Surrogates	Control Limits %	% Recovery	
2-Fluorophenol	25	121	57
Phenol-d5	24	113	70
Nitrobenzene-d5	23	120	53
2-Fluorobiphenyl	30	115	58
2,4,6-Tribromophenol	19	122	50
p-Terphenyl-d14	18	137	58

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH3-A Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611856-03	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/02/96
Attention: Vera Nelson		

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit * ug/Kg	Sample Results * ug/Kg
BENZENE, DIMETHYL-	130	890
3-HEXEN-2-ONE, 5-METHYL-	130	160
UNDECANE	130	180
OCTANE, 2,3,7-TRIMETHYL-	130	150
TRIDECANE	130	280
CYCLOALKANE	130	150
UNKNOWN	130	210
DODECANE, 2,7,10-TRIMETHYL-	130	990
1-NONANOL, 4,8-DIMETHYL-	130	480
PENTATRIACONTANE	130	570
UNKNOWN	130	530
HEPTADECANE, 9-OCTYL-	130	210

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH3-A
Matrix: SOLID
Analysis Method: Title 22
Lab Number: 9611856-03

Sampled: 11/12/96
Received: 11/14/96
Extracted: 11/21/96
Analyzed: 11/21/96
Reported: 12/02/96

QC Batch Number: ME1121966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	6.4
Arsenic, As	500	5.0	920
Barium, Ba	10000	5.0	130
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	2.5
Chromium, Cr	2500	0.50	35
Cobalt, Co	8000	2.5	7.9
Copper, Cu	2500	0.50	33
Lead, Pb	1000	5.0	520
Mercury, Hg	20	0.20	1.7
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	35
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	34
Zinc, Zn	5000	0.50	120

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH3-B Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611856-04	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/02/96
Attention: Vera Nelson		

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.



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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH3-B Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611856-04	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/02/96
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QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH3-B Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611856-04	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/02/96
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QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit * ug/Kg	Sample Results * ug/Kg
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	250	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH3-B
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611856-04

Sampled: 11/12/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/02/96

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.



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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH3-B Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611856-04	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/02/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg	
Di-n-octyl phthalate	250	N.D.	
Fluoranthene	250	N.D.	
Fluorene	250	N.D.	
Hexachlorobenzene	250	N.D.	
Hexachlorobutadiene	250	N.D.	
Hexachlorocyclopentadiene	500	N.D.	
Hexachloroethane	250	N.D.	
Indeno(1,2,3-cd)pyrene	250	N.D.	
Isophorone	250	N.D.	
2-Methylnaphthalene	250	N.D.	
2-Methylphenol	250	N.D.	
4-Methylphenol	250	N.D.	
Naphthalene	250	N.D.	
2-Nitroaniline	500	N.D.	
3-Nitroaniline	500	N.D.	
4-Nitroaniline	500	N.D.	
Nitrobenzene	250	N.D.	
2-Nitrophenol	250	N.D.	
4-Nitrophenol	500	N.D.	
N-Nitrosodiphenylamine	250	N.D.	
N-Nitroso-di-n-propylamine	250	N.D.	
Pentachlorophenol	500	N.D.	
Phenanthrene	250	N.D.	
Phenol	250	N.D.	
Pyrene	250	N.D.	
1,2,4-Trichlorobenzene	250	N.D.	
2,4,5-Trichlorophenol	500	N.D.	
2,4,6-Trichlorophenol	250	N.D.	
Surrogates	Control Limits %	% Recovery	
2-Fluorophenol	25	121	58
Phenol-d5	24	113	72
Nitrobenzene-d5	23	120	56
2-Fluorobiphenyl	30	115	71
2,4,6-Tribromophenol	19	122	66
p-Terphenyl-d14	18	137	48

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

SEQUOIA ANALYTICAL - ELAP #1210


 Mike Gregory
 Project Manager





Erter & Kallinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH3-B
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611856-04

Sampled: 11/12/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/02/96

Attention: Vera Nelson

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
BENZENE, DIMETHYL-	130	820
UNKNOWN	130	260
DECANE, 2,6,7-TRIMETHYL-	130	320
UNKNOWN HYDROCARBON (MAYBE OIL)	130	530000

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kallnowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH3-B Matrix: SOLID Analysis Method: Title 22 Lab Number: 9611856-04	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/21/96 Analyzed: 11/21/96 Reported: 12/02/96
Attention: Vera Nelson		

QC Batch Number: ME1121966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	1300
Arsenic, As	500	10	30000
Barium, Ba	10000	5.0	160
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	94
Chromium, Cr	2500	0.50	12
Cobalt, Co	8000	2.5	2.9
Copper, Cu	2500	0.50	450
Lead, Pb	1000	5.0	8900
Mercury, Hg	20	2.0	4.4
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	6.0
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	9.3
Vanadium, V	2400	2.5	5.9
Zinc, Zn	5000	0.50	320

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH4-A
Matrix: SOLID
Analysis Method: Title 22
Lab Number: 9611856-05

Sampled: 11/12/96
Received: 11/14/96
Extracted: 11/21/96
Analyzed: 11/21/96
Reported: 12/02/96

QC Batch Number: ME1121966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	10
Arsenic, As	500	5.0	780
Barium, Ba	10000	5.0	140
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	2.3
Chromium, Cr	2500	0.50	33
Cobalt, Co	8000	2.5	8.7
Copper, Cu	2500	0.50	37
Lead, Pb	1000	5.0	1200
Mercury, Hg	20	0.020	0.28
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	36
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	29
Zinc, Zn	5000	0.50	170

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH8-A Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611856-07	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/02/96
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QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.





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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH8-A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611856-07

Sampled: 11/12/96
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/21/96
Reported: 12/02/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH8-A Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611856-07	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/02/96
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QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg	*	Sample Results ug/Kg
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	250		N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST Library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH8-A
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611856-07

Sampled: 11/12/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/02/96

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	1000
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.



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Erter & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH8-A Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611856-07	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/02/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg	
Di-n-octyl phthalate	250	N.D.	
Fluoranthene	250	N.D.	
Fluorene	250	N.D.	
Hexachlorobenzene	250	N.D.	
Hexachlorobutadiene	250	N.D.	
Hexachlorocyclopentadiene	500	N.D.	
Hexachloroethane	250	N.D.	
Indeno(1,2,3-cd)pyrene	250	N.D.	
Isophorone	250	N.D.	
2-Methylnaphthalene	250	N.D.	
2-Methylphenol	250	N.D.	
4-Methylphenol	250	N.D.	
Naphthalene	250	N.D.	
2-Nitroaniline	500	N.D.	
3-Nitroaniline	500	N.D.	
4-Nitroaniline	500	N.D.	
Nitrobenzene	250	N.D.	
2-Nitrophenol	250	N.D.	
4-Nitrophenol	500	N.D.	
N-Nitrosodiphenylamine	250	N.D.	
N-Nitroso-di-n-propylamine	250	N.D.	
Pentachlorophenol	500	N.D.	
Phenanthrene	250	N.D.	
Phenol	250	N.D.	
Pyrene	250	N.D.	
1,2,4-Trichlorobenzene	250	N.D.	
2,4,5-Trichlorophenol	500	N.D.	
2,4,6-Trichlorophenol	250	N.D.	
Surrogates	Control Limits %	% Recovery	
2-Fluorophenol	25	121	53
Phenol-d5	24	113	67
Nitrobenzene-d5	23	120	49
2-Fluorobiphenyl	30	115	72
2,4,6-Tribromophenol	19	122	55
p-Terphenyl-d14	18	137	47

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager

Page:





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH8-A
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611856-07

Sampled: 11/12/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/02/96

Attention: Vera Nelson

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
BENZENE, DIMETHYL-	130	500
UNKNOWN	130	260
TETRACONTANE, 3,5,24-TRIMETHYL-	130	190
HEXANE, 2,2,5,5-TETRAMETHYL-	130	280
UNDECANE, 5,6-DIMETHYL-	130	130
2-UNDECENE, 4,5-DIMETHYL-	130	150
UNDECANE	130	140
UNKNOWN HYDROCARBON (MAYBE OIL)	130	210000

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA MIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH8-B Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611856-08	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/02/96
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QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.





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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH8-B Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611856-08	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/21/96 Reported: 12/02/96
Attention: Vera Nelson		

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

SEQUOIA ANALYTICAL - ELAP #1210



 Mike Gregory
 Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH8-B
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611856-08

Sampled: 11/12/96
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/21/96
Reported: 12/02/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
CYCLOPENTANE, 1,2-DIMETHYL-	250	380
CYCLOHEXANE, METHYL-	250	510

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH8-B
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611856-08

Sampled: 11/12/96
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/02/96

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatle Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.



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Eler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH8-B Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611856-08	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/02/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg	
Di-n-octyl phthalate	250	N.D.	
Fluoranthene	250	N.D.	
Fluorene	250	N.D.	
Hexachlorobenzene	250	N.D.	
Hexachlorobutadiene	250	N.D.	
Hexachlorocyclopentadiene	500	N.D.	
Hexachloroethane	250	N.D.	
Indeno(1,2,3-cd)pyrene	250	N.D.	
Isophorone	250	N.D.	
2-Methylnaphthalene	250	N.D.	
2-Methylphenol	250	N.D.	
4-Methylphenol	250	N.D.	
Naphthalene	250	N.D.	
2-Nitroaniline	500	N.D.	
3-Nitroaniline	500	N.D.	
4-Nitroaniline	500	N.D.	
Nitrobenzene	250	N.D.	
2-Nitrophenol	250	N.D.	
4-Nitrophenol	500	N.D.	
N-Nitrosodiphenylamine	250	N.D.	
N-Nitroso-di-n-propylamine	250	N.D.	
Pentachlorophenol	500	N.D.	
Phenanthrene	250	N.D.	
Phenol	250	N.D.	
Pyrene	250	N.D.	
1,2,4-Trichlorobenzene	250	N.D.	
2,4,5-Trichlorophenol	500	N.D.	
2,4,6-Trichlorophenol	250	N.D.	
Surrogates	Control Limits %	% Recovery	
2-Fluorophenol	25	121	58
Phenol-d5	24	113	70
Nitrobenzene-d5	23	120	56
2-Fluorobiphenyl	30	115	62
2,4,6-Tribromophenol	19	122	65
p-Terphenyl-d14	18	137	62

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH8-B Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611856-08	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/02/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
BENZENE, DIMETHYL-	130	760
UNKNOWN	130	270
DODECANE, 2,7,10-TRIMETHYL-	130	340
UNKNOWN	130	180
UNKNOWN	130	260
DODECANE, 2,6,10-TRIMETHYL-	130	280
PHENANTHRENE, METHYL-	130	350
PENTATRIACONTANE	130	410
HEPTACOSANE	130	300
UNKNOWN	130	160

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library.
Positive identification or specification between isomers cannot be made without retention time standards.
* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erter & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: SOLID Analysis Method: Title 22 Lab Number: 9611856-11	Sampled: Received: 11/14/96 Extracted: 11/21/96 Analyzed: 11/21/96 Reported: 12/02/96
---	--	---

QC Batch Number: ME1121966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	N.D.
Arsenic, As	500	5.0	N.D.
Barium, Ba	10000	5.0	N.D.
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	N.D.
Chromium, Cr	2500	0.50	N.D.
Cobalt, Co	8000	2.5	N.D.
Copper, Cu	2500	0.50	N.D.
Lead, Pb	1000	5.0	N.D.
Mercury, Hg	20	0.020	N.D.
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	N.D.
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	N.D.
Zinc, Zn	5000	0.50	1.9

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611856-11

Sampled:
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/20/96
Reported: 12/02/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.



Sequoia Analytical

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611856-11

Sampled:
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/20/96
Reported: 12/02/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager

Page:



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611856-11

Sampled:
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/02/96

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.



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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611856-11

Sampled:
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 12/02/96

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg	
Di-n-octyl phthalate	250	N.D.	
Fluoranthene	250	N.D.	
Fluorene	250	N.D.	
Hexachlorobenzene	250	N.D.	
Hexachlorobutadiene	250	N.D.	
Hexachlorocyclopentadiene	500	N.D.	
Hexachloroethane	250	N.D.	
Indeno(1,2,3-cd)pyrene	250	N.D.	
Isophorone	250	N.D.	
2-Methylnaphthalene	250	N.D.	
2-Methylphenol	250	N.D.	
4-Methylphenol	250	N.D.	
Naphthalene	250	N.D.	
2-Nitroaniline	500	N.D.	
3-Nitroaniline	500	N.D.	
4-Nitroaniline	500	N.D.	
Nitrobenzene	250	N.D.	
2-Nitrophenol	250	N.D.	
4-Nitrophenol	500	N.D.	
N-Nitrosodiphenylamine	250	N.D.	
N-Nitroso-di-n-propylamine	250	N.D.	
Pentachlorophenol	500	N.D.	
Phenanthrene	250	N.D.	
Phenol	250	N.D.	
Pyrene	250	N.D.	
1,2,4-Trichlorobenzene	250	N.D.	
2,4,5-Trichlorophenol	500	N.D.	
2,4,6-Trichlorophenol	250	N.D.	
Surrogates	Control Limits %	% Recovery	
2-Fluorophenol	25	121	65
Phenol-d5	24	113	80
Nitrobenzene-d5	23	120	61
2-Fluorobiphenyl	30	115	65
2,4,6-Tribromophenol	19	122	75
p-Terphenyl-d14	18	137	81

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611856-11

Sampled:
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/20/96
Reported: 12/02/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit * ug/Kg	Sample Results * ug/Kg
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	250	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST Library.
Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611856-11	Sampled: Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 12/02/96
Attention: Vera Nelson		

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg
UNKNOWN	130	160

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
 1730 So. Amphlett Blvd., Suite 320 Matrix: SOLID
 San Mateo, CA 94402 Sample Descrip: CH3-A
 Attention: Vera Nelson Work Order #: 9611856 03, 04, 07, 08, 11 Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine
QC Batch#:	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611856-03-MSD	9611856-03-MSD	9611856-03-MSD	9611856-03-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	1900	1800	970	1900
MS % Recovery:	58	54	29	58
Dup. Result:	2100	2100	1200	2200
MSD % Recov.:	64	64	36	67
RPD:	10	15	28	15
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2200	2200	1800	2500
LCS % Recov.:	67	67	54	76

MS/MSD	26-90	25-102	28-104	41-126
LCS	26-90	25-102	28-104	41-126
Control Limits				

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.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
 Project Manager



Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
1730 So. Amphlett Blvd., Suite 320 Matrix: SOLID
San Mateo, CA 94402 Sample Descrip: CH3-A
Attention: Vera Nelson Work Order #: 9611856 03, 04, 07, 08, 11 Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,2,4-Trichloro-benzene	4-Chloro-3-Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611856-03-MSD	9611856-03-MSD	9611856-03-MSD	9611856-03-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	1400	1800	1800	1800
MS % Recovery:	42	54	54	54
Dup. Result:	1700	2000	2000	1700
MSD % Recov.:	52	61	61	52
RPD:	19	10	10	5.7
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2100	2200	2100	2100
LCS % Recov.:	64	67	64	64

MS/MSD	38-107	26-103	31-137	11-114
LCS	38-107	26-103	31-137	11-114
Control Limits				

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.

** MS= Matrix Spike, MSD= MS Duplicate, RPD= Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH3-A
Work Order #: 9611856 03, 04, 07, 08, 11

Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
QC Batch#:	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611856-03-MSD	9611856-03-MSD	9611856-03-MSD
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	1900	1600	1900
MS % Recovery:	58	49	58
Dup. Result:	2200	1700	2000
MSD % Recov.:	67	52	61
RPD:	15	6.1	5.1
RPD Limit:	0-30	0-30	0-30

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2300	2000	3000
LCS % Recov.:	70	61	91

MS/MSD	28-89	17-109	35-142
LCS	28-89	17-109	35-142
Control Limits			

SEQUOIA ANALYTICAL

Mike Gregory
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.

** MS= Matrix Spike, MSD=MS Duplicate, RPD= Relative % Difference



Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
1730 So. Amphlett Blvd., Suite 320 Matrix: SOLID
San Mateo, CA 94402 Sample Descrip: CH1B-A
Attention: Vera Nelson Work Order #: 9611856 03, 04, 07, 08, 11 Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.
Analyst:	L.Zhu	L.Zhu	L.Zhu	L.Zhu	L.Zhu
MS/MSD #:	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg
Result:	2500	2600	2700	2700	2600
MS % Recovery:	100	104	108	108	104
Dup. Result:	2400	2500	2500	2600	2600
MSD % Recov.:	96	100	100	104	104
RPD:	4.1	3.9	7.7	3.8	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:

Prepared Date:
Analyzed Date:
Instrument I.D.#:
Conc. Spiked:

LCS Result:
LCS % Recov.:

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

Please Note:

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** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 So. Amphlett Blvd., Suite 320 San Mateo, CA 94402 Attention: Vera Nelson	Client Project ID: 930028.82/Chiron Matrix: SOLID Sample Descrip: CH1B-A Work Order #: 9611856 11	Reported: Dec 2, 1996
---	--	-----------------------

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro- benzene
QC Batch#:	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.

Analyst:	L.Zhu	L.Zhu	L.Zhu	L.Zhu	L.Zhu
MS/MSD #:					
Sample Conc.:					
Prepared Date:					
Analyzed Date:					
Instrument I.D.#:					
Conc. Spiked:					

Result:
MS % Recovery:

Dup. Result:
MSD % Recov.:

RPD:
RPD Limit:

LCS #:	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS
Prepared Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg
LCS Result:	2700	2600	2700	2600	2600
LCS % Recov.:	108	104	108	104	104

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

Please Note:

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** MS= Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH1B-A
Work Order #: 9611856 03, 04, 07, 08

Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro- benzene
QC Batch#:	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.

Analyst:	L.Zhu	L.Zhu	L.Zhu	L.Zhu	L.Zhu
MS/MSD #:					
Sample Conc.:					
Prepared Date:					
Analyzed Date:					
Instrument I.D.#:					
Conc. Spiked:					

Result:
MS % Recovery:

Dup. Result:
MSD % Recov.:

RPD:
RPD Limit:

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg
LCS Result:	2500	2600	2800	2800	2700
LCS % Recov.:	100	104	112	112	108

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

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.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager





Erler & Kalinowski, Inc.	Client Project ID: 930028.82/Chiron
1730 So. Amphlett Blvd., Suite 320	Matrix: SOLID
San Mateo, CA 94402	Sample Descrip: CH3-A
Attention: Vera Nelson	Work Order #: 9611856 01-11
	Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1121966010MDE	ME1121966010MDE	ME1121966010MDE	ME1121966010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyt:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611860-03-MSD	9611860-03-MSD	9611860-03-MSD	9611860-03-MSD
Sample Conc.:	N.D.	2.5	35	35
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
Result:	83	84	110	110
MS % Recovery:	83	82	75	75
Dup. Result:	86	87	120	120
MSD % Recov.:	86	84	85	85
RPD:	3.6	3.5	8.7	8.7
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
LCS Result:	100	100	100	100
LCS % Recov.:	100	100	100	100

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

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.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH3-A
Work Order #: 9611856 01-05, 11

Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte: Mercury
QC Batch#: ME1121967471M4A
Analy. Method: EPA 7471
Prep. Method: EPA 7471

Analyst: T. Hua
MS/MSD #: 9611856-03-MSD
Sample Conc.: 1.7*
Prepared Date: 11/21/96
Analyzed Date: 11/21/96
Instrument I.D.#: MPE4
Conc. Spiked: 0.40 mg/Kg

Result: 0.55*
MS % Recovery: -

Dup. Result: 0.55*
MSD % Recov.: -

RPD: 0.0*
RPD Limit: 0-20

* Matrix interference

LCS #: LCS112196-LCS

Prepared Date: 11/21/96
Analyzed Date: 11/21/96
Instrument I.D.#: MPE4
Conc. Spiked: 0.80 mg/Kg

LCS Result: 0.75
LCS % Recov.: 94

MS/MSD 75-125
LCS 80-120
Control Limits

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.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

** MS= Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9611856.ERL <8>





Erler & Kalinowski, Inc. 1730 So. Amphlett Blvd., Suite 320 San Mateo, CA 94402 Attention: Vera Nelson	Client Project ID: 930028.82/Chiron Matrix: LIQUID Sample Descrip: XSD Work Order #: 9611856 03, 04, 11	Reported: Dec 2, 1996
---	--	-----------------------

**TCLP
QUALITY CONTROL DATA REPORT**

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyt:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611A58-01-XSD	9611A58-01-XSD	9611A58-01-XSD	9611A58-01-XSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.0	1.0	0.99	1.0
MS % Recovery:	100	100	99	100
Dup. Result:	1.0	1.0	1.0	1.0
MSD % Recov.:	100	100	100	100
RPD:	0.0	0.0	1.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.1	1.1	1.1	1.1
LCS % Recov.:	110	110	110	110

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

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.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9611856.ERL <9>



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH10-B
Work Order #: 9611856 01-11

Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	pH
QC Batch:	IN111596904500A
Analy. Method:	EPA 9045
Prep Method:	N.A.

Analyst: K. Sims

**Duplicate
Sample #:** 9611860-01-MSD

Prepared Date: 11/15/96
Analyzed Date: 11/15/96
Instrument I.D.#: MANUAL

**Sample
Concentration:** 12

**Dup. Sample
Concentration:** 12

RPD: 0.0
RPD Limit: 0-20

SEQUOIA ANALYTICAL

[Signature]
Mike Gregory
Project Manager

** RPD=Relative % Difference

9611856.ERL <10>





**Sequoia
Analytical**

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

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Walnut Creek, CA 94598
Sacramento, CA 95834

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

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

Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron

Received: 11/14/96

Lab Proj. ID: 9611856

Reported: 12/02/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 54 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

9611856

Erler & Kallnowski, Inc.

Analytical Laboratory: SEQUOIA

Project Number: 930028.82

Date Sampled: 12 NOVEMBER 1996

Project Name: CHRON CORPORATION

Sampled By: BURT VON THADEN

Source of Samples: HAND AUGER

Report Results To: VERA NELSON

Location: SHERWIN WILLIAMS

Phone Number: (415) 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
01	CH2-A	SOIL	1 - STAINLESS STEEL LINER	10:30 11/12/96	PERFORM ANALYSES AS INDICATED ON	SEE ATTACHED
02	CH2-B	SOIL	1 - STAINLESS STEEL LINER	11:35 11/12/96	ATTACHED 4-PAGE MEMORANDUM DATED	MEMO
03	CH3-A	SOIL	1 - STAINLESS STEEL LINER	12:00 11/12/96	13 NOVEMBER 1996.	↓
04	CH3-B	SOIL	1 - STAINLESS STEEL LINER	1:20 11/12/96		
05	CH4-A	SOIL	1 - STAINLESS STEEL LINER	12:50 11/12/96		
06	CH4-B	SOIL	1 - STAINLESS STEEL LINER	1:45 11/12/96		
07	CH8-A	SOIL	1 - STAINLESS STEEL LINER	3:40 11/12/96		
08	CH8-B	SOIL	1 - STAINLESS STEEL LINER	4:35 11/12/96		
09	CH7-A	SOIL	1 - STAINLESS STEEL LINER	3:53 11/12/96		
10	CH7-B	SOIL	1 - STAINLESS STEEL LINER	5:00 11/12/96		

Special Instructions:

Relinquished By:			Received By:		
Name / Signature / Affiliation	Date	Time	Name / Signature / Affiliation	Date	Time
BURT VON THADEN <i>Burt von Thaden</i> / EKI	11/14/96	11:30	NOEL VAN STANBROEK <i>Noel Van Stanbroek</i> S.O.L.	11/14/96	11:30
<i>NOEL VAN STANBROEK</i>	11/14/96	1:00			

13 November 1996

MEMORANDUM

To: Sequoia Analytical

From: Britt von Thaden, Eriar & Kalinowski, Inc. BVT

Subject: Laboratory Analyses for Chiron Soil Samples Collected on Sherwin Williams Property on 12 and 13 November 1996
(EKI Project No. 930028.82)

Perform the following individual and composite laboratory analyses on soil samples from borings CH1 through CH10:

TURNAROUND TIMES:

~~*5-DAY FOR INDIVIDUAL ARSENIC ON ALL "A" SAMPLES (NOT INCLUDING TCLP)~~

*10-DAY FOR ALL OTHER ANALYSES

EKI Sample ID	Date Collected	Requested Laboratory Analyses
CH1-A	11/13/96	-Title 22 metals by ICP (EPA 6010), where appropriate -TCLP for Arsenic and Lead -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH2-A	11/12/96	-Title 22 metals by ICP (EPA 6010), where appropriate -pH (EPA 9045)
CH2-B	11/12/96	-Title 22 metals by ICP (EPA 6010), where appropriate -pH (EPA 9045)
CH3-A	11/12/96	-Title 22 metals by ICP (EPA 6010), where appropriate -TCLP for Arsenic and Lead -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan

Table continued

Request for laboratory analyses continued:

EKI Sample ID	Date Collected	Requested Laboratory Analyses
CH3-B	11/12/96	-Title 22 metals by ICP (EPA 6010), where appropriate -TCLP for Arsenic and Lead -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH4-A	11/12/96	-Title 22 metals by ICP (EPA 6010), where appropriate -pH (EPA 9045)
CH4-B	11/12/96	-Title 22 metals by ICP (EPA 6010), where appropriate -pH (EPA 9045)
CH5-A	11/13/96	-Title 22 metals by ICP (EPA 6010), where appropriate -pH (EPA 9045)
CH5-B	11/13/96	-Title 22 metals by ICP (EPA 6010), where appropriate -pH (EPA 9045)
CH6-A	11/13/96	-Title 22 metals by ICP (EPA 6010), where appropriate -TCLP for Arsenic and Lead -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH6-B	11/13/96	-Title 22 metals by ICP (EPA 6010), where appropriate -TCLP for Arsenic and Lead -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH7-A	11/12/96	-Arsenic, Total Lead, and Zinc by ICP (EPA 6010) -pH (EPA 9045)
CH7-B	11/12/96	-Arsenic, Total Lead, and Zinc by ICP (EPA 6010) -pH (EPA 9045)

Table continued

Request for laboratory analyses of individual soil samples continued:

EKI Sample ID	Date Collected	Requested Laboratory Analyses
CH8-A	11/12/96	-Arsenic, Total Lead, and Zinc by ICP (EPA 6010) -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH8-B	11/12/96	-Arsenic, Total Lead, and Zinc by ICP (EPA 6010) -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH9-A	11/13/96	-Arsenic, Total Lead, and Zinc by ICP (EPA 6010) -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH9-B	11/13/96	-Arsenic, Total Lead, and Zinc by ICP (EPA 6010) -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan
CH10-A	11/13/96	-Title 22 metals by ICP (EPA 6010), where appropriate -TCLP for Arsenic and Lead -pH (EPA 9045) -EPA 8240 w/ open scan -EPA 8270 w/ open scan -TCLP for Organics using EPA 8240

Analytical request for composite analyses indicated on next page.




Eler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Lab Proj. ID: 9611858	Sampled: 11/12/96 Received: 11/14/96 Analyzed: see below Reported: 11/21/96
Attention: Vera Nelson		

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611858-01 Sample Desc: SOLID,CH8-A				
Arsenic	mg/Kg	11/20/96	5.0	700
Zinc	mg/Kg	11/20/96	0.50	180
Lab No: 9611858-02 Sample Desc: SOLID,CH7-A				
Arsenic	mg/Kg	11/20/96	5.0	580
Zinc	mg/Kg	11/20/96	0.50	230

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Eler & Kalinowski, Inc.
 1730 South Amphlett, Ste 320
 San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
 Lab Proj. ID: 9611858

Sampled:
 Received: 11/14/96
 Analyzed: see below

Attention: Vera Nelson

Reported: 11/21/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
---------	-------	---------------	-----------------	----------------

Lab No: 9611858-03
 Sample Desc : SOLID,Method Blank

Arsenic	mg/Kg	11/20/96	5.0	N.D.
Zinc	mg/Kg	11/20/96	0.50	1.1

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

SEQUOIA ANALYTICAL - ELAP #1210



Sequoia Analytical

680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233
 404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673
 819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
 1730 So. Amphlett Blvd., Suite 320 Matrix: SOLID
 San Mateo, CA 94402 Sample Descrip: CH8-A
 Attention: Vera Nelson Work Order #: 9611858 -01-03 Reported: Nov 21, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1120966010MDE	ME1120966010MDE	ME1120966010MDE	ME1120966010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611858-01-MSD	9611858-01-MSD	9611858-01-MSD	9611858-01-MSD
Sample Conc.:	N.D.	3.1	34	35
Prepared Date:	11/20/96	11/20/96	11/20/96	11/20/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
Result:	98	94	130	130
MS % Recovery:	98	91	96	95
Dup. Result:	94	89	120	120
MSD % Recov.:	94	86	86	85
RPD:	4.2	5.5	8.0	8.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS
Prepared Date:	11/20/96	11/20/96	11/20/96	11/20/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
LCS Result:	100	96	100	99
LCS % Recov.:	100	96	100	99

MS/MSD LCS Control Limits	80-120	80-120	80-120	80-120
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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.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9611858.ERL <1>



Sequoia
Analytical

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

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

Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron

Lab Proj. ID: 9611858

Received: 11/14/96

Reported: 11/21/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 5 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

9611858

Erler & Kallnowski, Inc.

Analytical Laboratory: SEQUOIA

Project Number: 930028.82

Date Sampled: 12 NOVEMBER 1996

Project Name: CHIRON CORPORATION

Sampled By: BRITT VON THADEN

Source of Samples: HAND ANVIL

Report Results To: VERA NELSON

Location: SHEPARD WILLIAMS

Phone Number: (415) 570-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
	CH2-A	SOIL	1 - STAINLESS STEEL LINER	10:30 11/12/96	PERFORM ANALYSES AS INDICATED ON ATTACHED 4-PAGE MEMORANDUM DATED 13 NOVEMBER 1996.	SEE ATTACHED
	CH2-B	SOIL	1 - STAINLESS STEEL LINER	11:35 11/12/96		MEMO
	CH3-A	SOIL	1 - STAINLESS STEEL LINER	12:00 11/12/96		
	CH3-B	SOIL	1 - STAINLESS STEEL LINER	1:20 11/12/96		
	CH4-A	SOIL	1 - STAINLESS STEEL LINER	12:50 11/12/96		
	CH4-B	SOIL	1 - STAINLESS STEEL LINER	1:45 11/12/96		
01	CH8-A	SOIL	1 - STAINLESS STEEL LINER	3:40 11/12/96		
	CH8-B	SOIL	1 - STAINLESS STEEL LINER	4:25 11/12/96		
02	CH7-A	SOIL	1 - STAINLESS STEEL LINER	3:53 11/12/96		
	CH7-B	SOIL	1 - STAINLESS STEEL LINER	5:00 11/12/96		

Special Instructions:

Relinquished By:			Received By:		
Name / Signature / Affiliation	Date	Time	Name / Signature / Affiliation	Date	Time
BRITT VON THADEN <i>Britt von Thaden</i> / EKI	11/14/96	11:30	VERA NELSON <i>Vera Nelson</i> / S.D.L.	11/14/96	11:30
NEIL VAN SLAMBERG <i>Neil Van Slambrock</i>	11/14/96	1:00			
			W. H. ... / SEQUOIA	11/14/96	1:00



Erter & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Lab Proj. ID: 9611860

Sampled: 11/14/96
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 11/27/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611860-01				
Sample Desc : SOLID,CH10-B				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	1.8
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
pH	pH Units	11/15/96	N/A	12

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Lab Proj. ID: 9611860

Sampled:
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 11/27/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611860-02				
Sample Desc : SOLID,Method Blank				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
 1730 South Amphlett, Ste 320
 San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
 Sample Descript: CH10-B
 Matrix: SOLID
 Analysis Method: EPA 8240
 Lab Number: 9611860-01

Sampled: 11/14/96
 Received: 11/14/96
 Extracted: 11/20/96
 Analyzed: 11/22/96
 Reported: 11/27/96

QC Batch Number: MS1120968240EXA
 Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	13000
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	1700
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	930
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	150
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	200



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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH10-B Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611860-01	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/22/96 Reported: 11/27/96
Attention: Vera Nelson		

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager





Eler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH10-B
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611860-01

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/22/96
Reported: 11/27/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
1-PROPANOL, 2-METHYL- 2-HEXANOL	250 250	660 440

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH10-B Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611860-01	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/23/96 Reported: 11/27/96
Attention: Vera Nelson		

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatle Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	2500	N.D.
Acenaphthylene	2500	N.D.
Anthracene	2500	N.D.
Benzoic Acid	5000	N.D.
Benzo(a)anthracene	2500	N.D.
Benzo(b)fluoranthene	2500	N.D.
Benzo(k)fluoranthene	2500	N.D.
Benzo(g,h,i)perylene	2500	N.D.
Benzo(a)pyrene	2500	N.D.
Benzyl alcohol	2500	N.D.
Bis(2-chloroethoxy)methane	2500	N.D.
Bis(2-chloroethyl)ether	2500	N.D.
Bis(2-chloroisopropyl)ether	2500	N.D.
Bis(2-ethylhexyl)phthalate	5000	N.D.
4-Bromophenyl phenyl ether	2500	N.D.
Butyl benzyl phthalate	2500	N.D.
4-Chloroaniline	5000	N.D.
2-Chloronaphthalene	2500	N.D.
4-Chloro-3-methylphenol	2500	N.D.
2-Chlorophenol	2500	N.D.
4-Chlorophenyl phenyl ether	2500	N.D.
Chrysene	2500	N.D.
Dibenzo(a,h)anthracene	2500	N.D.
Dibenzofuran	2500	N.D.
Di-n-butyl phthalate	5000	N.D.
1,2-Dichlorobenzene	2500	N.D.
1,3-Dichlorobenzene	2500	N.D.
1,4-Dichlorobenzene	2500	N.D.
3,3-Dichlorobenzidine	5000	N.D.
2,4-Dichlorophenol	2500	N.D.
Diethyl phthalate	2500	N.D.
2,4-Dimethylphenol	2500	N.D.
Dimethyl phthalate	2500	N.D.
4,6-Dinitro-2-methylphenol	5000	N.D.
2,4-Dinitrophenol	5000	N.D.
2,4-Dinitrotoluene	2500	N.D.
2,6-Dinitrotoluene	2500	N.D.





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Eler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH10-B Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611860-01	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/23/96 Reported: 11/27/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Di-n-octyl phthalate	2500	N.D.
Fluoranthene	2500	N.D.
Fluorene	2500	N.D.
Hexachlorobenzene	2500	N.D.
Hexachlorobutadiene	2500	N.D.
Hexachlorocyclopentadiene	5000	N.D.
Hexachloroethane	2500	N.D.
Indeno(1,2,3-cd)pyrene	2500	N.D.
Isophorone	2500	N.D.
2-Methylnaphthalene	2500	N.D.
2-Methylphenol	2500	N.D.
4-Methylphenol	2500	N.D.
Naphthalene	2500	N.D.
2-Nitroaniline	5000	N.D.
3-Nitroaniline	5000	N.D.
4-Nitroaniline	5000	N.D.
Nitrobenzene	2500	N.D.
2-Nitrophenol	2500	N.D.
4-Nitrophenol	5000	N.D.
N-Nitrosodiphenylamine	2500	N.D.
N-Nitroso-di-n-propylamine	2500	N.D.
Pentachlorophenol	5000	N.D.
Phenanthrene	2500	N.D.
Phenol	2500	N.D.
Pyrene	2500	N.D.
1,2,4-Trichlorobenzene	2500	N.D.
2,4,5-Trichlorophenol	5000	N.D.
2,4,6-Trichlorophenol	2500	N.D.
Surrogates	Control Limits %	% Recovery
2-Fluorophenol	25	121
Phenol-d5	24	113
Nitrobenzene-d5	23	120
2-Fluorobiphenyl	30	115
2,4,6-Tribromophenol	19	122
p-Terphenyl-d14	18	137
		6.2 Q
		41
		49
		78
		2.9 Q
		82

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH10-B Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611860-01	Sampled: 11/14/96 Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/23/96 Reported: 11/27/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
ETHANOL, 2-BUTOXY-	1300	22000
UNKNOWN	1300	2200
UNKNOWN	1300	5400
UNKNOWN	1300	1400

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH10-B
Matrix: SOLID
Analysis Method: Title 22
Lab Number: 9611860-01

Sampled: 11/14/96
Received: 11/14/96
Extracted: 11/21/96
Analyzed: 11/22/96
Reported: 11/27/96

QC Batch Number: ME1121966010MDF
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	10
Arsenic, As	500	5.0	22
Barium, Ba	10000	5.0	100
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	N.D.
Chromium, Cr	2500	0.50	42
Cobalt, Co	8000	2.5	9.6
Copper, Cu	2500	0.50	16
Lead, Pb	1000	5.0	23
Mercury, Hg	20	0.020	0.040
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	48
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	26
Zinc, Zn	5000	0.50	35

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: SOLID Analysis Method: Title 22 Lab Number: 9611860-02	Sampled: Received: 11/14/96 Extracted: 11/21/96 Analyzed: 11/21/96 Reported: 11/27/96
Attention: Vera Nelson		


QC Batch Number: ME1121966010MDF
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	N.D.
Arsenic, As	500	5.0	N.D.
Barium, Ba	10000	5.0	N.D.
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	N.D.
Chromium, Cr	2500	0.50	N.D.
Cobalt, Co	8000	2.5	N.D.
Copper, Cu	2500	0.50	N.D.
Lead, Pb	1000	5.0	N.D.
Mercury, Hg	20	0.020	N.D.
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	N.D.
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	N.D.
Zinc, Zn	5000	0.50	1.6

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611860-02

Sampled:
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/22/96
Reported: 11/27/96

Attention: Vera Nelson

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.





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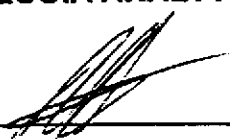
Erlar & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611860-02	Sampled: Received: 11/14/96 Extracted: 11/20/96 Analyzed: 11/22/96 Reported: 11/27/96
Attention: Vera Nelson		

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

SEQUOIA ANALYTICAL - ELAP #1210



 Mike Gregory
 Project Manager





Erler & Kainowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611860-02

Sampled:
Received: 11/14/96
Extracted: 11/18/96
Analyzed: 11/20/96
Reported: 11/27/96

Attention: Vera Nelson

QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.



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Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611860-02	Sampled: Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 11/27/96
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QC Batch Number: MS1118968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Hexachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
Hexachlorocyclopentadiene	500	N.D.
Hexachloroethane	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
2-Methylphenol	250	N.D.
4-Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	250	N.D.
Phenol	250	N.D.
Pyrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	250	N.D.
Surrogates	Control Limits %	% Recovery
2-Fluorophenol	25 121	65
Phenol-d5	24 113	80
Nitrobenzene-d5	23 120	64
2-Fluorobiphenyl	30 115	65
2,4,6-Tribromophenol	19 122	75
p-Terphenyl-d14	18 137	81

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erlor & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611860-02

Sampled:
Received: 11/14/96
Extracted: 11/20/96
Analyzed: 11/22/96
Reported: 11/27/96

Attention: Vera Nelson

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	250	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kallnowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9611860-02	Sampled: Received: 11/14/96 Extracted: 11/18/96 Analyzed: 11/20/96 Reported: 11/27/96
Attention: Vera Nelson		


QC Batch Number: MS1118968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg
UNKNOWN	130	160

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST Library.
Positive identification or specification between isomers cannot be made without retention time standards.
* Estimated

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager





Erler & Kalinowski, Inc. 1730 So. Amphlett Blvd., Suite 320 San Mateo, CA 94402 Attention: Vera Nelson	Client Project ID: 930028.82/Chiron Matrix: SOLID Sample Descrip: CH3-A Work Order #: 9611860 01, 02	Reported: Dec 2, 1996
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QUALITY CONTROL DATA REPORT

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine
QC Batch#:	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611856-03-MSD	9611856-03-MSD	9611856-03-MSD	9611856-03-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	1900	1800	970	1900
MS % Recovery:	58	54	29	58
Dup. Result:	2100	2100	1200	2200
MSD % Recov.:	64	64	36	67
RPD:	10	15	28	15
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2200	2200	1800	2500
LCS % Recov.:	67	67	54	76

MS/MSD	28-90	25-102	28-104	41-126
LCS	28-90	25-102	28-104	41-126
Control Limits				

SEQUOIA ANALYTICAL

Mike Gregory
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.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH3-A
Work Order #: 9611860 01, 02

Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,2,4-Trichloro-benzene	4-Chloro-3-Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611856-03-MSD	9611856-03-MSD	611856-03-MSD	9611856-03-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	1400	1800	1800	1800
MS % Recovery:	42	54	54	54
Dup. Result:	1700	2000	2000	1700
MSD % Recov.:	52	61	61	52
RPD:	19	10	10	5.7
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2100	2200	2100	2100
LCS % Recov.:	64	67	64	64

MS/MSD	38-107	26-103	31-137	11-114
LCS	38-107	26-103	31-137	11-114
Control Limits				

SEQUOIA ANALYTICAL

[Signature]
Mike Gregory
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.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference





Erler & Kalinowski, Inc. 1730 So. Amphlett Blvd., Suite 320 San Mateo, CA 94402 Attention: Vera Nelson	Client Project ID: 930028.82/Chiron Matrix: SOLID Sample Descrip: CH3-A Work Order #: 9611860 01, 02	Reported: Dec 2, 1996
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QUALITY CONTROL DATA REPORT

Analyte:	2,4-Dinitro- toluene	Pentachloro- phenol	Pyrene
QC Batch#:	MS1118968270EXA	MS1118968270EXA	MS1118968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611856-03-MSD	9611856-03-MSD	611856-03-MSD
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg

Result:	1900	1600	1900
MS % Recovery:	58	49	58

Dup. Result:	2200	1700	2000
MSD % Recov.:	67	52	61

RPD:	15	6.1	5.1
RPD Limit:	0-30	0-30	0-30

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2300	2000	3000
LCS % Recov.:	70	61	91

MS/MSD	28-89	17-109	35-142
LCS	28-89	17-109	35-142
Control Limits			

SEQUOIA ANALYTICAL

[Signature]
Mike Gregory
Project Manager

Please Note:

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** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference



Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
1730 So. Amphlett Blvd., Suite 320 Matrix: SOLID
San Mateo, CA 94402 Sample Descrip: CH1B-A
Attention: Vera Nelson Work Order #: 9611860 01, 02 Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.

Analyst:	L.Zhu	L.Zhu	L.Zhu	L.Zhu	L.Zhu
MS/MSD #:	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg
Result:	2500	2600	2700	2700	2600
MS % Recovery:	100	104	108	108	104
Dup. Result:	2400	2500	2500	2600	2600
MSD % Recov.:	96	100	100	104	104
RPD:	4.1	3.9	7.7	3.8	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg	2500 ug/Kg
LCS Result:	2700	2700	2900	2700	2800
LCS % Recov.:	108	108	116	108	112

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

Please Note:

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** MS= Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Mike Gregory
Project Manager





Erler & Kalinowski, Inc. 1730 So. Amphlett Blvd., Suite 320 San Mateo, CA 94402 Attention: Vera Nelson	Client Project ID: 930028.82/Chiron Matrix: SOLID Sample Descrip: CH10-B Work Order #: 9611860 01, 02	Reported: Dec 2, 1996
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QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1121966010MDF	ME1121966010MDF	ME1121966010MDF	ME1121966010MDF
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611860-01-MSD	9611860-01-MSD	611860-01-MSD	9611860-01-MSD
Sample Conc.:	N.D.	N.D.	42	48
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
Result:	96	99	140	140
MS % Recovery:	96	99	98	92
Dup. Result:	97	100	140	150
MSD % Recov.:	97	100	98	102
RPD:	1.0	1.0	0.0	6.9
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
LCS Result:	100	100	110	110
LCS % Recov.:	100	100	110	110

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

Please Note:

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SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9611860.ERL <5>





Erier & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
1730 So. Amphlett Blvd., Suite 320 Matrix: SOLID
San Mateo, CA 94402 Sample Descrip: CH3-A
Attention: Vera Nelson Work Order #: 9611860 01, 02 Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte: Mercury
QC Batch#: ME1121967471M4A
Analy. Method: EPA 7471
Prep. Method: EPA 7471

Analyst: T. Hua
MS/MSD #: 9611856-03-MSD
Sample Conc.: 1.7*
Prepared Date: 11/21/96
Analyzed Date: 11/21/96
Instrument I.D.#: MPE4
Conc. Spiked: 0.40 mg/Kg

Result: 0.55*
MS % Recovery: -

Dup. Result: 0.55*
MSD % Recov.: -

RPD: 0.0*
RPD Limit: 0-20

* Matrix interference

LCS #: LCS112196-LCS
Prepared Date: 11/21/96
Analyzed Date: 11/21/96
Instrument I.D.#: MPE4
Conc. Spiked: 0.80 mg/Kg
LCS Result: 0.75
LCS % Recov.: 94

MS/MSD 75-125
LCS 80-120
Control Limits

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:

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9611860.ERL <6>





Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: LIQUID
Sample Descrip: XSD
Work Order #: 9611860 01, 02

Reported: Dec 2, 1996

**TCLP
QUALITY CONTROL DATA REPORT**

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611A58-01-XSD	9611A58-01-XSD	611A58-01-XSD	9611A58-01-XSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.0	1.0	0.99	1.0
MS % Recovery:	100	100	99	100
Dup. Result:	1.0	1.0	1.0	1.0
MSD % Recov.:	100	100	100	100
RPD:	0.0	0.0	1.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.1	1.1	1.1	1.1
LCS % Recov.:	110	110	110	110

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:

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** MS= Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9611860.ERL <7>



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH10-B
Work Order #: 9611860 01, 02

Reported: Dec 2, 1996

QUALITY CONTROL DATA REPORT

Analyte:	pH
QC Batch:	IN111596904500A
Analy. Method:	EPA 9045
Prep Method:	N.A.

Analyst: K. Sims

**Duplicate
Sample #:** 9611860-01-MSD

Prepared Date: 11/15/96
Analyzed Date: 11/15/96
Instrument I.D.#: MANUAL

**Sample
Concentration:** 12

**Dup. Sample
Concentration:** 12

RPD: 0.0
RPD Limit: 0-20

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

** RPD=Relative % Difference





Eder & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron

Received: 11/14/96

Lab Proj. ID: 9611860

Reported: 11/27/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 26 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

8270 Note: Sample -01 have two acid surrogate recoveries below QC limits. This sample was re-extracted and re-analyzed, but the same acid surrogates failed low again. This is a matrix interference problem and the results should be considered as estimates. This sample was also diluted because of high non-target compound.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

* MAKE COPIES & FAX TO BRIT

Erler & Kallnowski, Inc.

Analytical Laboratory: SEQUOIA 9611860

Project Number: CHIRON 930028.82

Date Sampled: 11/14/96

Project Name: CHIRON

Sampled By: BRITT VON THADEN

Source of Samples: DIRECT PUSH

Report Results To: VERA NELSON

Location: SHERWIN WILLIAMS

Phone Number: (415) 578-1172

Lab Sample ID	Field Sample ID	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
01	CH10-B	SOIL	1 - STAINLESS STEEL LUGER	8:25	TITLE 22 METALS BY TCLP (EPA 6010)	5-DAY FOR ARSENIC
					TCLP FOR ARSENIC AND LEAD	(NOT TCLP)
					pH (EPA 9045)	10-DAY FOR ALL
					EPA 8210 w/ OPEN SCAN	OTHER ANALYSES
					EPA 8270 w/ OPEN SCAN	

Special Instructions:

Relinquished By:			Received By:		
Name / Signature / Affiliation	Date	Time	Name / Signature / Affiliation	Date	Time
BRITT VON THADEN Britt von Thaden EKI	11/14/96	11:30	VERA NELSON VERA NELSON	11/14/96	11:30
VERA NELSON VERA NELSON	11/14/96	1:00			



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron

Lab Proj. ID: 9611861

Sampled: 11/14/96
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 11/19/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
---------	-------	---------------	-----------------	----------------

Lab No: 9611861-01
Sample Desc : SOLID,CH10-B

Arsenic	mg/Kg	11/18/96	5.0	42
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Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager




Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Lab Proj. ID: 9611861	Sampled: Received: 11/14/96 Analyzed: see below Reported: 11/19/96
Attention: Vera Nelson		

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611861-02 Sample Desc : SOLID,Method Blank				
Arsenic	mg/Kg	11/18/96	5.0	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH10-B
Work Order #: 9611861 -01, 02

Reported: Nov 21, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1118966010MDE	ME1118966010MDE	ME1118966010MDE	ME1118966010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611861-01-MSD	9611861-01-MSD	9611861-01-MSD	9611861-01-MSD
Sample Conc.:	N.D.	N.D.	48	42
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
Result:	94	91	130	130
MS % Recovery:	94	91	82	88
Dup. Result:	92	89	130	130
MSD % Recov.:	92	89	82	88
RPD:	2.2	2.2	0.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS	LCS111896-LCS
Prepared Date:	11/18/96	11/18/96	11/18/96	11/18/96
Analyzed Date:	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
LCS Result:	100	98	99	100
LCS % Recov.:	100	98	99	100

MS/MSD LCS Control Limits	80-120	80-120	80-120	80-120
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Please Note:

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SEQUOIA ANALYTICAL

[Signature]
Mike Gregory
Project Manager

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9611861.ERL <1>



Sequoia
Analytical

680 Chesapeake Drive
404 N. Wiget Lane
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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

Eler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Lab Proj. ID: 9611861

Received: 11/14/96
Reported: 11/19/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 5 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erler & Kalinowski, Inc.

Analytical Laboratory: *SEQUOIA* 9611861

Project Number: *CHIRAN 930028.82*

Date Sampled: 11/14/96

Project Name: *CHIRAN*

Sampled By: *BRITT VON THADEN*

Source of Samples: *DIRECT RUBB*

Report Results To: *VERA NELSON*

Location: *SHERWIN WILLIAMS*

Phone Number: (415) 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
01	CH10-B	SOIL	1 - STAINLESS STEEL LUGER	8:25	TITLE 22 METALS BY ICP (EPA 6010) TCLP FOR ARSENIC AND LEAD PH (EPA 9045) EPA 8210 w/ OPEN SCAN EPA 8270 w/ OPEN SCAN	5-DAY FOR ARSENIC (NOT TCLP) 10-DAY FOR ALL OTHER ANALYSES
 						
 						
 						
 						
 						
 						
 						
 						
 						

Special Instructions:

Relinquished By:			Received By:		
Name / Signature / Affiliation	Date	Time	Name / Signature / Affiliation	Date	Time
<i>BRITT VON THADEN</i> <i>Britt von Thaden</i> / EKI	11/14/96	11:30	<i>VERA NELSON</i> <i>VERA NELSON</i> / SAL	11/14/96	11:30
<i>VERA NELSON</i> <i>VERA NELSON</i> / SAL	11/14/96	1:00			



Ertler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron

Lab Proj. ID: 9611862

Sampled: 11/12/96
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 11/25/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611862-01				
Sample Desc: SOLID,(CH2-A,CH4-A,CH5-A) comp				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	6.2
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Lab Proj. ID: 9611862

Sampled:
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 11/25/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611862-02				
Sample Desc : SOLID,Method Blank				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
 1730 So. Amphlett Blvd., Suite 320 Matrix: LIQUID
 San Mateo, CA 94402 Sample Descrip: XSD
 Attention: Vera Nelson Work Order #: 9611862 -01, 02 Reported: Nov 25, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010

Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611A58-01-XSD	9611A58-01-XSD	9611A58-01-XSD	9611A58-01-XSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L

Result:	1.0	1.0	0.99	1.0
MS % Recovery:	100	100	99	100
Dup. Result:	1.0	1.0	1.0	1.0
MSD % Recov.:	100	100	100	100
RPD:	0.0	0.0	1.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.1	1.1	1.1	1.1
LCS % Recov.:	110	110	110	110

MS/MSD				
LCS	80-120	80-120	80-120	80-120
Control Limits				

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.

SEQUOIA ANALYTICAL

Mike Gregory
 Mike Gregory
 Project Manager



Sequoia
Analytical

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

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

Eler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron

Received: 11/14/96

Lab Proj. ID: 9611862

Reported: 11/25/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 6 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erler & Kallnowski, Inc.

Analytical Laboratory: SEQUOIA

9611858

Project Number: 930028.82

Date Sampled: 12 NOVEMBER 1996

9611862

Project Name: CHRON CORPORATION

Sampled By: BRITT VON THADEN

Source of Samples: HAND ADDED

Report Results To: VERA NELSON

Location: SHERWIN WILLIAMS

Phone Number: (415) 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
01	CH2-A	SOIL	1 - STAINLESS STEEL LINER	10:30 11/12/96	PERFORM ANALYSES AS INDICATED ON	SEE ATTACHED
	CH2-B	SOIL	1 - STAINLESS STEEL LINER	11:35 11/12/96	ATTACHED 4-PAGE MEMORANDUM DATED	MEMO
	CH3-A	SOIL	1 - STAINLESS STEEL LINER	12:00 11/12/96	13 NOVEMBER 1996.	
	CH3-B	SOIL	1 - STAINLESS STEEL LINER	1:20 11/12/96		
02	CH4-A	SOIL	1 - STAINLESS STEEL LINER	12:50 11/12/96		
	CH4-B	SOIL	1 - STAINLESS STEEL LINER	1:45 11/12/96		
P.L.	CH8-A	SOIL	1 - STAINLESS STEEL LINER	3:40 11/12/96		
	CH8-B	SOIL	1 - STAINLESS STEEL LINER	4:25 11/12/96		
P.L.	CH7-A	SOIL	1 - STAINLESS STEEL LINER	3:53 11/12/96		
	CH7-B	SOIL	1 - STAINLESS STEEL LINER	5:00 11/12/96		

Special Instructions:

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
BRITT VON THADEN <i>Britt von Thaden</i> / EKI	11/14/96	11:30	VERA NELSON <i>Vera Nelson</i> / S.D.L. 11/14/96 11:30
DELLA VON STAMBRUCK <i>Della von Stambrock</i>	11/14/96	1:00	
			<i>W. H. ...</i> / SEQUOIA 11/14/96 1:00

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

9611848

Eler & Kallnowski, Inc.

Analytical Laboratory:

Project Number: 92 930028.02

Date Sampled: 13 NOVEMBER 1996 9611862

Project Name: CHIRON CORPORATION

Sampled By: BRITT VON TILDEW

Source of Samples: HAND AUGER

Report Results To: VERA NELSON

Location: STEWART WILSONS

Phone Number: (415) 570-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
	CH1-A	SOIL	1 - STAINLESS STEEL LUGER	9:25	PERFORM ANALYSES AS INDICATED ON ATTACHED 4-PAGE MEMORANDUM DATED 13 NOVEMBER 1996	SEE ATTACHED
B	CH5-A	SOIL	1 - STAINLESS STEEL LUGER	10:12		MEMO
	CH5-B	SOIL	1 - STAINLESS STEEL LUGER	1:10		
	CH6-A	SOIL	1 - STAINLESS STEEL LUGER	11:00		
	CH6-B	SOIL	1 - STAINLESS STEEL LUGER	1:45		
H.P.L.	CH9-A	SOIL	1 - STAINLESS STEEL LUGER	11:35		
	CH9-B	SOIL	1 - STAINLESS STEEL LUGER	2:15		
	CH10-A	SOIL	1 - STAINLESS STEEL LUGER	1:40		

Special Instructions:

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
BRITT VON TILDEW <i>Britt von Tildew</i> / EKI	11/14/96	11:30	NELI VAN SLAMBROEK <i>Neli van Slambroek</i> 11/14/96 11:30
NELI VAN SLAMBROEK <i>Neli van Slambroek</i>	11/14/96	1500	W. H. Lee / <i>W. H. Lee</i> / SEQ001A 11/14/96 1500



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Lab Proj. ID: 9611864	Sampled: 11/12/96 Received: 11/14/96 Analyzed: see below Reported: 11/25/96
Attention: Vera Nelson		

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611864-01				
Sample Desc : SOLID,(CH2-B,CH4-B,CH5-B) comp				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	0.19
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager




Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Lab Proj. ID: 9611864	Sampled: Received: 11/14/96 Analyzed: see below Reported: 11/25/96
Attention: Vera Nelson		

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611864-02 Sample Desc : SOLID,Method Blank				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Sequoia
Analytical

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

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

Eler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron

Lab Proj. ID: 9611864

Received: 11/14/96

Reported: 11/25/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 6 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
 1730 So. Amphlett Blvd., Suite 320 Matrix: LIQUID
 San Mateo, CA 94402 Sample Descrip: XSD
 Attention: Vera Nelson Work Order #: 9611864 -01, 02 Reported: Nov 25, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010

Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611A58-01-XSD	9611A58-01-XSD	9611A58-01-XSD	9611A58-01-XSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.0	1.0	0.99	1.0
MS % Recovery:	100	100	99	100
Dup. Result:	1.0	1.0	1.0	1.0
MSD % Recov.:	100	100	100	100
RPD:	0.0	0.0	1.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.1	1.1	1.1	1.1
LCS % Recov.:	110	110	110	110

MS/MSD				
LCS	80-120	80-120	80-120	80-120
Control Limits				

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.

SEQUOIA ANALYTICAL

Mike Gregory
 Mike Gregory
 Project Manager

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Eriar & Kallnowski, Inc.
Project Number: 930028.82
Project Name: CHIRON CORPORATION
Source of Samples: HAND AUGER
Location: STEPHEN WILLIAMS

9611858
Analytical Laboratory: SEQUOIA
Date Sampled: 12 NOVEMBER 1996 9611864
Sampled By: BRITT VON THADEN
Report Results To: VERA NELSON
Phone Number: (415) 570-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
	CH2-A	SOIL	1 - STAINLESS STEEL LINER	10:30 11/12/96	PERFORM ANALYSES AS INDICATED ON ATTACHED 4-PAGE MEMORANDUM DATED 13 NOVEMBER 1996.	SEE ATTACHED
01	CH2-B	SOIL	1 - STAINLESS STEEL LINER	11:35 11/12/96		MEMO
	CH3-A	SOIL	1 - STAINLESS STEEL LINER	12:00 11/12/96		
	CH3-B	SOIL	1 - STAINLESS STEEL LINER	1:20 11/12/96		
	CH4-A	SOIL	1 - STAINLESS STEEL LINER	12:50 11/12/96		
02	CH4-B	SOIL	1 - STAINLESS STEEL LINER	1:45 11/12/96		
P.L.	CH8-A	SOIL	1 - STAINLESS STEEL LINER	3:40 11/12/96		
	CH8-B	SOIL	1 - STAINLESS STEEL LINER	4:35 11/12/96		
P.L.	CH7-A	SOIL	1 - STAINLESS STEEL LINER	3:53 11/12/96		
	CH7-B	SOIL	1 - STAINLESS STEEL LINER	5:00 11/12/96		

Special Instructions:

Relinquished By:			Received By:		
Name / Signature / Affiliation	Date	Time	Name / Signature / Affiliation	Date	Time
BRITT VON THADEN <i>Britt von Thaden</i> / ERI	11/14/96	11:30	NOEL VAN SLAMBERG <i>Noel Van Slambroek</i> / SEQUOIA	11/14/96	11:30
NOEL VAN SLAMBERG <i>Noel Van Slambroek</i> / ERI	11/14/96	1500			
			VERA NELSON <i>Vera Nelson</i> / SEQUOIA	11/14/96	1500

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

9611848 P.C.

Eiler & Kallnowski, Inc.
 Project Number: 92 930028.82
 Project Name: CHIRON CORPORATION
 Source of Samples: HAND AUGER
 Location: STEPHEN WILLIAMS

Analytical Laboratory:
 Date Sampled: 13 NOVEMBER 1996 9611864
 Sampled By: BRITT VON TIMMON
 Report Results To: VERA NELSON
 Phone Number: (415) 570-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
	CH1-A	SOIL	1 - STAINLESS STEEL LUGER	9:25	PERFORM ANALYSES AS INDICATED ON	SEE ATTACHED
	CH5-A	SOIL	1 - STAINLESS STEEL LUGER	10:12	ATTACHED 4-PAGE MEMORANDUM DATED	MEMO:
(B)	CH5-B	SOIL	1 - STAINLESS STEEL LUGER	1:10	13 NOVEMBER 1996	↓
	CH6-A	SOIL	1 - STAINLESS STEEL LUGER	11:00		
	CH6-B	SOIL	1 - STAINLESS STEEL LUGER	1:45		
H.P.L.	CH9-A	SOIL	1 - STAINLESS STEEL LUGER	11:35		
	CH9-B	SOIL	1 - STAINLESS STEEL LUGER	2:15		
	CH10-A	SOIL	1 - STAINLESS STEEL LUGER	1:40		

Special Instructions:

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
BRITT VON TIMMON <i>Britt von Timmon</i> / EKI	11/14/96	11:30	NELI VAN SLAMBRACK <i>Neli van Slambroek</i> 11/14/96 11 36
NELI VAN SLAMBRACK <i>Neli van Slambroek</i>	11/14/96	1500	
			V. Nelson / SEQUOIA 11/14/96 1500



Erlor & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Lab Proj. ID: 9611866

Sampled: 11/12/96
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 11/26/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611866-01				
Sample Desc : SOLID,(CH7-A,CH8-A,CH9-A) comp				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	4.3
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron

Lab Proj. ID: 9611866

Sampled:
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 11/26/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611866-02				
Sample Desc : SOLID,Method Blank				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Eler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: (CH7-A,CH8-A,CH9-A) comp Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611866-01	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/16/96 Analyzed: 11/19/96 Reported: 11/26/96
--	--	--

QC Batch Number: MS1118968240H6A
Instrument ID: H6

TCLP Volatiles (EPA 8240)

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Benzene	0.5	0.020	N.D.
Carbon tetrachloride	0.5	0.020	N.D.
Chlorobenzene	100	0.020	N.D.
Chloroform	6.0	0.020	N.D.
1,2-Dichloroethane	0.5	0.020	N.D.
1,1-Dichloroethylene	0.7	0.020	N.D.
Methyl ethyl ketone	200	0.10	N.D.
Tetrachloroethylene	0.7	0.020	N.D.
Trichloroethylene	0.5	0.020	N.D.
Vinyl chloride	0.2	0.020	N.D.
Surrogates		Control Limits %	% Recovery
1,2-Dichloroethane-d4		76	114
Toluene-d8		88	110
4-Bromofluorobenzene		86	115

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611866-02	Sampled: Received: 11/14/96 Extracted: 11/15/96 Analyzed: 11/19/96 Reported: 11/26/96
Attention: Vera Nelson		

QC Batch Number: MS1118968240H6A
Instrument ID: H6

TCLP Volatiles (EPA 8240)

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Benzene	0.5	0.020	N.D.
Carbon tetrachloride	0.5	0.020	N.D.
Chlorobenzene	100	0.020	N.D.
Chloroform	6.0	0.020	N.D.
1,2-Dichloroethane	0.5	0.020	N.D.
1,1-Dichloroethylene	0.7	0.020	N.D.
Methyl ethyl ketone	200	0.10	N.D.
Tetrachloroethylene	0.7	0.020	N.D.
Trichloroethylene	0.5	0.020	N.D.
Vinyl chloride	0.2	0.020	N.D.
Surrogates		Control Limits %	% Recovery
1,2-Dichloroethane-d4		76	114
Toluene-d8		88	110
4-Bromofluorobenzene		86	115

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/ Chiron
Matrix: LIQUID
Sample Descrip: CH10-A
Work Order #: 9611866 -01, 02

Reported: Nov 26, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS1118968240H6A	MS1118968240H6A	MS1118968240H6A	MS1118968240H6A	MS1118968240H6A
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.

Analyst:	L Zhu	L Zhu	L Zhu	L Zhu	L Zhu
MS/MSD #:	9611847-08-MSD	9611847-08-MSD	9611847-08-MSD	9611847-08-MSD	9611847-08-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/16/96	11/16/96	11/16/96	11/16/96	11/16/96
Analyzed Date:	11/18/96	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	H6	H6	H6	H6	H6
Conc. Spiked:	500 µg/L	500 µg/L	500 µg/L	500 µg/L	500 µg/L
Result:	450	500	510	510	510
MS % Recovery:	90	100	102	102	102
Dup. Result:	460	500	520	520	510
MSD % Recov.:	92	100	104	104	102
RPD:	2.2	0.0	1.9	1.9	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	LCS11896-LCS	LCS11896-LCS	LCS11896-LCS	LCS11896-LCS	LCS11896-LCS
Prepared Date:	11/18/96	11/16/96	11/16/96	11/16/96	11/16/96
Analyzed Date:	11/18/96	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	H6	H6	H6	H6	H6
Conc. Spiked:	50 µg/L	50 µg/L	50 µg/L	50 µg/L	50 µg/L
LCS Result:	47	50	51	51	51
LCS % Recov.:	94	100	102	102	102

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

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.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager



Eter & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/ Chiron
Matrix: LIQUID
Sample Descrip: XSD
Work Order #: 9611866 -01, 02

Reported: Nov 26, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010

Analyte:	Beryllium	Cadmium	Chromium	Nickel
Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611A58-01-XSD	9611A58-01-XSD	9611A58-01-XSD	9611A58-01-XSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.0	1.0	0.99	1.0
MS % Recovery:	100	100	99	100
Dup. Result:	1.0	1.0	1.0	1.0
MSD % Recov.:	100	100	100	100
RPD:	0.0	0.0	1.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.1	1.1	1.1	1.1
LCS % Recov.:	110	110	110	110

MS/MSD LCS Control Limits	80-120	80-120	80-120	80-120
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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.

SEQUOIA ANALYTICAL

Mike Gregory
Mike Gregory
Project Manager



Erfert & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron

Lab Proj. ID: 9611866

Received: 11/14/96

Reported: 11/26/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 9 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager



CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

9611858

Erler & Kallnowski, Inc.
 Project Number: 930028.82
 Project Name: CHIRON CORPORATION
 Source of Samples: HAND AUGER
 Location: STEPHEN WILLIAMS

Analytical Laboratory: SEQUOIA
 Date Sampled: 12 NOVEMBER 1996
 Sampled By: BRITT VON THADEN
 Report Results To: VERA NELSON
 Phone Number: (415) 570-1172

9611866

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
	CH2-A	SOIL	1 - STAINLESS STEEL LINER	10:30 11/12/96	PERFORM ANALYSES AS INDICATED ON	SEE ATTACHED
	CH2-B	SOIL	1 - STAINLESS STEEL LINER	11:35 11/12/96	ATTACHED 4-PAGE MEMORANDUM DATED	MEMO
	CH3-A	SOIL	1 - STAINLESS STEEL LINER	12:00 11/12/96	13 NOVEMBER 1996	
	CH3-B	SOIL	1 - STAINLESS STEEL LINER	1:20 11/12/96		
	CH4-A	SOIL	1 - STAINLESS STEEL LINER	12:50 11/12/96		
	CH4-B	SOIL	1 - STAINLESS STEEL LINER	1:45 11/12/96		
P.L. # 02	CH8-A	SOIL	1 - STAINLESS STEEL LINER	3:40 11/12/96		
	CH8-B	SOIL	1 - STAINLESS STEEL LINER	4:35 11/12/96		
P.L. # 01	CH7-A	SOIL	1 - STAINLESS STEEL LINER	3:53 11/12/96		
	CH7-B	SOIL	1 - STAINLESS STEEL LINER	5:00 11/12/96		

Special Instructions:

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
BRITT VON THADEN <i>Britt von Thaden</i> / ERK	11/14/96	11:30	NOEL VAN SLAMBECK <i>Noel Van Slambrock</i> / S.A.L. 11/14/96 11:30
NOEL VAN SLAMBECK <i>Noel Van Slambrock</i>	11/14/96	1:50	
			W. Hule <i>W. Hule</i> / SEQUOIA 11/14/96 1:50

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erler & Kallnowski, Inc.
Project Number: 92² 930028.82
Project Name: CHIRON CORPORATION
Source of Samples: HAND AXES
Location: Sequoia Williams

Analytical Laboratory: 9611898
Date Sampled: 13 NOVEMBER 1996 9611866
Sampled By: BRETT VAN TILNEN
Report Results To: VERA NELSON
Phone Number: (415) 578-1172

Lab Sample ID	Field Sample ID	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
	CH1-A	SOIL	1 - STAINLESS STEEL LUGER	9:25	PERFORM ANALYSES AS INDICATED ON ATTACHED 4-PAGE MEMORANDUM DATED 13 NOVEMBER 1996	SEE ATTACHED
	CH5-A	SOIL	1 - STAINLESS STEEL LUGER	10:12		MEMO
	CH5-B	SOIL	1 - STAINLESS STEEL LUGER	1:10		
	CH6-A	SOIL	1 - STAINLESS STEEL LUGER	11:00		
	CH6-B	SOIL	1 - STAINLESS STEEL LUGER	1:45		
APL B	CH9-A	SOIL	1 - STAINLESS STEEL LUGER	11:35		
	CH9-B	SOIL	1 - STAINLESS STEEL LUGER	2:15		
	CH10-A	SOIL	1 - STAINLESS STEEL LUGER	1:40		

Special Instructions:

Relinquished By:			Received By:		
Name / Signature / Affiliation	Date	Time	Name / Signature / Affiliation	Date	Time
BRETT VAN TILNEN <i>Brett van Tilnen</i> / ERI	11/14/96	11:30	ALICE VAN SLAMBROOK <i>[Signature]</i>	11/14/96	11:30
ALICE VAN SLAMBROOK <i>[Signature]</i>	11/14/96	1500	VERA NELSON <i>[Signature]</i>	11/14/96	1500
			W. M. Nelson <i>[Signature]</i> / SEQUOIA	11/14/96	1500



Eler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron

Lab Proj. ID: 9611867

Sampled: 11/12/96
Received: 11/14/96
Analyzed: see below

Attention: Vera Nelson

Reported: 11/25/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611867-01				
Sample Desc : SOLID,(CH7-B,CH8-B,CH9-B) comp				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	97
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Lab Proj. ID: 9611867	Sampled: Received: 11/14/96 Analyzed: see below Reported: 11/25/96
Attention: Vera Nelson		

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611867-02 Sample Desc: SOLID, Method Blank				
Arsenic: TCLP Extraction	mg/L	11/22/96	0.10	N.D.
Lead: TCLP Extraction	mg/L	11/22/96	0.10	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory
Project Manager



Eler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: (CH7-B,CH8-B,CH9-B) comp Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611867-01	Sampled: 11/12/96 Received: 11/14/96 Extracted: 11/15/96 Analyzed: 11/19/96 Reported: 11/25/96
Attention: Vera Nelson		

QC Batch Number: MS1118968240H6A
 Instrument ID: H6

TCLP Volatiles (EPA 8240)

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Benzene	0.5	0.20	0.26
Carbon tetrachloride	0.5	0.20	N.D.
Chlorobenzene	100	0.20	N.D.
Chloroform	6.0	0.20	N.D.
1,2-Dichloroethane	0.5	0.20	N.D.
1,1-Dichloroethylene	0.7	0.20	N.D.
Methyl ethyl ketone	200	1.0	2.8
Tetrachloroethylene	0.7	0.20	N.D.
Trichloroethylene	0.5	0.20	N.D.
Vinyl chloride	0.2	0.20	N.D.
Surrogates		Control Limits %	% Recovery
1,2-Dichloroethane-d4		76 114	94
Toluene-d8		88 110	99
4-Bromofluorobenzene		86 115	97

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

SEQUOIA ANALYTICAL - ELAP #1210


 Mike Gregory
 Project Manager



Erier & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611867-02

Sampled:
Received: 11/14/96
Extracted: 11/15/96
Analyzed: 11/19/96
Reported: 11/25/96

QC Batch Number: MS1118968240H6A
Instrument ID: H6

TCLP Volatiles (EPA 8240)

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Benzene	0.5	0.020	N.D.
Carbon tetrachloride	0.5	0.020	N.D.
Chlorobenzene	100	0.020	N.D.
Chloroform	6.0	0.020	N.D.
1,2-Dichloroethane	0.5	0.020	N.D.
1,1-Dichloroethylene	0.7	0.020	N.D.
Methyl ethyl ketone	200	0.10	N.D.
Tetrachloroethylene	0.7	0.020	N.D.
Trichloroethylene	0.5	0.020	N.D.
Vinyl chloride	0.2	0.020	N.D.
Surrogates		Control Limits %	% Recovery
1,2-Dichloroethane-d4		76	114
Toluene-d8		88	110
4-Bromofluorobenzene		86	115

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/ Chiron
Matrix: LIQUID
Sample Descrip: CH10-A
Work Order #: 9611867 -01, 02

Reported: Nov 25, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS1118968240H6A	MS1118968240H6A	MS1118968240H6A	MS1118968240H6A	MS1118968240H6A
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.

Analyst:	L. Zhu	L. Zhu	L. Zhu	L. Zhu	L. Zhu
MS/MSD #:	9611847-08-MSD	9611847-08-MSD	9611847-08-MSD	9611847-08-MSD	9611847-08-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/16/96	11/16/96	11/16/96	11/16/96	11/16/96
Analyzed Date:	11/18/96	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	H6	H6	H6	H6	H6
Conc. Spiked:	500 µg/L	500 µg/L	500 µg/L	500 µg/L	500 µg/L
Result:	450	500	510	510	510
MS % Recovery:	90	100	102	102	102
Dup. Result:	460	500	520	520	510
MSD % Recov.:	92	100	104	104	102
RPD:	2.2	0.0	1.9	1.9	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	LCS111996-LCS	LCS111996-LCS	LCS111996-LCS	LCS111996-LCS	LCS111996-LCS
Analyst:	L. Duong	L. Duong	L. Duong	L. Duong	L. Duong
Prepared Date:	-	-	-	-	-
Analyzed Date:	11/19/96	11/19/96	11/19/96	11/19/96	11/19/96
Instrument I.D.#:	H6A	H6A	H6A	H6A	H6A
Conc. Spiked:	50 µg/L	50 µg/L	50 µg/L	50 µg/L	50 µg/L
LCS Result:	46	51	48	52	52
LCS % Recov.:	92	102	96	104	104

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

SEQUOIA ANALYTICAL

Mike Gregory
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.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/ Chiron
Matrix: LIQUID
Sample Descrip: XSD
Work Order #: 9611867 -01, 02

Reported: Nov 25, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA	ME1121966010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010

Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611A58-01-XSD	9611A58-01-XSD	9611A58-01-XSD	9611A58-01-XSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.0	1.0	0.99	1.0
MS % Recovery:	100	100	99	100
Dup. Result:	1.0	1.0	1.0	1.0
MSD % Recov.:	100	100	100	100
RPD:	0.0	0.0	1.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.1	1.1	1.1	1.1
LCS % Recov.:	110	110	110	110

MS/MSD				
LCS	80-120	80-120	80-120	80-120
Control Limits				

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.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9611867.ERL <2>



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron

Received: 11/14/96

Lab Proj. ID: 9611867


Reported: 11/25/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 9 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TCLPVS Note: Sample -01 was diluted because of high non-target compounds.

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager



CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erier & Kallnowski, Inc.
Project Number: 930028.82
Project Name: CHIRON CORPORATION
Source of Samples: HAND AUGER
Location: STEPHEN WILLIAMS

9611858
Analytical Laboratory: SEQUOIA
Date Sampled: 12 NOVEMBER 1996 9611867
Sampled By: BRITT VON THADEN
Report Results To: VERA NELSON
Phone Number: (415) 570-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
	CH2-A	SOIL	1 - STAINLESS STEEL LINER	10:30 11/12/96	PERFORM ANALYSES AS INDICATED ON ATTACHED 4-PAGE MEMORANDUM DATED 13 NOVEMBER 1996.	SEE ATTACHED
	CH2-B	SOIL	1 - STAINLESS STEEL LINER	11:35 11/12/96		MEMO
	CH3-A	SOIL	1 - STAINLESS STEEL LINER	12:00 11/12/96		
	CH3-B	SOIL	1 - STAINLESS STEEL LINER	1:20 11/12/96		
	CH4-A	SOIL	1 - STAINLESS STEEL LINER	12:50 11/12/96		
	CH4-B	SOIL	1 - STAINLESS STEEL LINER	1:45 11/12/96		
	CH8-A	SOIL	1 - STAINLESS STEEL LINER	3:40 11/12/96		
	CH8-B	SOIL	1 - STAINLESS STEEL LINER	4:35 11/12/96		
	CH7-A	SOIL	1 - STAINLESS STEEL LINER	3:53 11/12/96		
	CH7-B	SOIL	1 - STAINLESS STEEL LINER	5:00 11/12/96		

Special Instructions:

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
BRITT VON THADEN <i>Britt von Thaden</i> / EKI	11/14/96	11:30	NOEL VAN SLAMBEK <i>Noel Van Slambek</i> S.A.L. 11/14/96 11:30
NOEL VAN SLAMBEK <i>Noel Van Slambek</i>	11/14/96	1:00	W. HUBER <i>W. Huber</i> / SEQUOIA 11/14/96 1:00

9611898

Erlor & Kallnowski, Inc.

Analytical Laboratory: 9611867

Project Number: 927 930028.02

Date Sampled: 13 NOVEMBER 1996

Project Name: CHIRON CORPORATION

Sampled By: BRIT VAN TILDEW

Source of Samples: HAND AUGER

Report Results To: VERA NELSON

Location: STEWART WILLIAMS

Phone Number: (415) 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
	CH1-A	SOIL	1 - STAINLESS STEEL LIDED	9:25	PERFORM ANALYSES AS INDICATED ON ATTACHED 4-PAGE MEMORANDUM DATED 13 NOVEMBER 1996	SEE ATTACHED
	CH5-A	SOIL	1 - STAINLESS STEEL LIDED	10:12		MEMO
	CH5-B	SOIL	1 - STAINLESS STEEL LIDED	1:10		
	CH6-A	SOIL	1 - STAINLESS STEEL LIDED	11:00		
	CH6-B	SOIL	1 - STAINLESS STEEL LIDED	1:45		
A.P.L.	CH9-A	SOIL	1 - STAINLESS STEEL LIDED	11:35		
OB	CH9-B	SOIL	1 - STAINLESS STEEL LIDED	2:15		
	CH10-A	SOIL	1 - STAINLESS STEEL LIDED	1:40		

Special Instructions:

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
BRIT VAN TILDEW <i>Brit van Tildew</i> / EKI	11/14/96	11:30	NELI VAN SLAMBROEK <i>Neli van Slambroek</i> 11/14/96 11:30
NELI VAN SLAMBROEK <i>Neli van Slambroek</i>	11/14/96	1500	W. H. Lee / W. H. Lee / SEQUOIA 11/14/96 1500



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron

Lab Proj. ID: 9611973

Sampled: 11/15/96
Received: 11/16/96
Analyzed: see below

Attention: Vera Nelson

Reported: 11/22/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611973-01				
Sample Desc: SOLID,CH1B-A				
Arsenic	mg/Kg	11/22/96	5.0	1100

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Eler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron

Lab Proj. ID: 9611973

Sampled:
Received: 11/16/96
Analyzed: see below

Attention: Vera Nelson


Reported: 11/22/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611973-02				
Sample Desc: SOLID, Method Blank				
Arsenic	mg/Kg	11/22/96	5.0	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH10-B
Work Order #: 9611973 -01, 02

Reported: Nov 25, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1121966010MDF	ME1121966010MDF	ME1121966010MDF	ME1121966010MDF
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9611860-01- MSD	9611860-01- MSD	9611860-01- MSD	9611860-01- MSD
Sample Conc.:	N.D.	N.D.	42	48
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
Result:	96	99	140	140
MS % Recovery:	96	99	98	92
Dup. Result:	97	100	140	150
MSD % Recov.:	97	100	98	102
RPD:	1.0	1.0	0.0	6.9
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
LCS Result:	100	100	110	110
LCS % Recov.:	100	100	110	110

MS/MSD LCS Control Limits	80-120	80-120	80-120	80-120
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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.

SEQUOIA ANALYTICAL

[Signature]
Mike Gregory
Project Manager

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9611973.ERL <1>





Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH1B-A
Work Order #: 9611974 -01, 02

Reported: Nov 27, 1996

QUALITY CONTROL DATA REPORT

Analyte:	2,4-Dinitro- toluene	Pentachloro- phenol	Pyrene
QC Batch#:	MS1121968270EXA	MS1121968270EXA	MS1121968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	2100	1200	1700
MS % Recovery:	64	36	52
Dup. Result:	2200	1200	1700
MSD % Recov.:	67	36	52
RPD:	4.6	1.7	0.0
RPD Limit:	0-40	0-40	0-40

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2400	1400	2900
LCS % Recov.:	73	42	88

MS/MSD LCS			
Control Limits	28-89	17-109	35-142

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.

** MS= Matrix Spike, MSD= MS Duplicate, RPD= Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH1B-A
Work Order #: 9611974 -01, 02

Reported: Nov 27, 1996

QUALITY CONTROL DATA REPORT

Analyte: pH

QC Batch: IN111896904500A

Analy. Method: EPA 9045

Prep Method: N.A.

Analyst: C. Hirotsu

Duplicate

Sample #: 9611974-01-MSD

Prepared Date: 11/18/96

Analyzed Date: 11/18/96

Instrument I.D.#: Manual

Sample
Concentration: 8.5

Dup. Sample
Concentration: 8.6

RPD: 1.2
RPD Limit: 0-20

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager

** RPD=Relative % Difference

9611974.ERL <5>



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH1B-A
Work Order #: 9611974 -01, 02

Reported: Nov 27, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1125966010MDE	ME1125966010MDE	ME1125966010MDE	ME1125966010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	C. Medefesse	C. Medefesse	C. Medefesse	C. Medefesse
MS/MSD #:	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD
Sample Conc.:	N.D.	4.1	41	44
Prepared Date:	11/25/96	11/25/96	11/25/96	11/25/96
Analyzed Date:	11/26/96	11/26/96	11/26/96	11/26/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
Result:	92	92	130	140
MS % Recovery:	92	88	89	96
Dup. Result:	95	98	140	140
MSD % Recov.:	95	94	99	96
RPD:	3.2	6.3	7.4	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS112596-LCS	LCS112596-LCS	LCS112596-LCS	LCS112596-LCS
Prepared Date:	11/25/96	11/25/96	11/25/96	11/25/96
Analyzed Date:	11/26/96	11/26/96	11/26/96	11/26/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
LCS Result:	93	94	94	97
LCS % Recov.:	93	94	94	97

MS/MSD LCS Control Limits	80-120	80-120	80-120	80-120
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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.

SEQUOIA ANALYTICAL

[Signature]
Mike Gregory
Project Manager

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9611974.ERL <6>





Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH1B-A
Work Order #: 9611974 -01, 02

Reported: Nov 27, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Mercury
QC Batch#:	ME1125967471M4A
Analy. Method:	EPA 7471
Prep. Method:	EPA 7471

Analyst: W. T.
MS/MSD #: 9611974-01-MSD
Sample Conc.: 0.37
Prepared Date: 11/25/96
Analyzed Date: 11/25/96
Instrument I.D.#: MPE4
Conc. Spiked: 0.40 mg/Kg

Result: 0.59
MS % Recovery: 55

Dup. Result: 0.47
MSD % Recov.: 25

RPD: 23
RPD Limit: 0-20

LCS #: LCS112596-LCS

Prepared Date: 11/25/96
Analyzed Date: 11/25/96
Instrument I.D.#: MPE4
Conc. Spiked: 0.40 mg/Kg

LCS Result: 0.34
LCS % Recov.: 85

MS/MSD	75-125
LCS	80-120
Control Limits	

SEQUOIA ANALYTICAL

Mike Gregory
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.



Eler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron

Received: 11/16/96

Lab Proj. ID: 9611974

Reported: 11/27/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 22 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

8240 Note: Sample -01's chloromethane reporting limit was raised from 100 to 250 ug/Kg because of high background level.

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager



CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

9611974

Erler & Kalinowski, Inc.

Analytical Laboratory: SEQUOIA

Project Number: 930028.82

Date Sampled: 11/15/96

Project Name: CHIRON

Sampled By: BRITT VON THADEN

Source of Samples: HAND AUGER / SOIL BORINGS

Report Results To: VERA NELSON

Location: SHERWIN WILLIAMS

Phone Number: (415) 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
01	CHIB-A	SOIL	1 - STAINLESS STEEL LINER	8:55	TITE 22 METALS BY ICP (EPA 6010)	5-DAY TAT
					PH (EPA 9045)	FOR ARSENIC;
					EPA 8240 w/ OPEN SCAN	10-DAY TAT
					EPA 8270 w/ OPEN SCAN	FOR ALL OTHER ANALYSES

Special Instructions: METALS: ANTIMONY, ARSENIC, BARIUM, BERYLLIUM, CADMIUM, TOTAL CHROMIUM, COBALT, COPPER, TOTAL LEAD, MERCURY, MOLYBDENUM, NICKEL, SELENIUM, SILVER, THALLIUM, VANADIUM, AND ZINC.

Relinquished By:			Received By:		
Name / Signature / Affiliation	Date	Time	Name / Signature / Affiliation		
BRITT VON THADEN / EKI	11/16/96	14:00			



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Proj. ID: 930028.82/Chiron
Lab Proj. ID: 9611973

Received: 11/16/96
Reported: 11/22/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 5 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL


Mike Gregory
Project Manager

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

9611973

Erler & Kalinowski, Inc.

Analytical Laboratory: SEQUOIA

Project Number: 930028.82

Date Sampled: 11/15/96

Project Name: CHIRON

Sampled By: BRITT VON THADEN

Source of Samples: HAND AUGER / SOIL BORINGS

Report Results To: VERA NELSON

Location: SHERWIN WILLIAMS

Phone Number: (415) 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
01	CHIB-A	SOIL	1-STAINLESS STEEL LINER	8:55	TITE 22 METALS BY ICP (EPA 6010)	5-DAY TAT
					PH (EPA 9045)	FOR ARSENIC
					EPA 8240 w/ OPEN SCAN	10-DAY TAT
					EPA 8270 w/ OPEN SCAN	FOR ALL OTHER ANALYSES

Special Instructions: METALS: ANTIMONY, ARSENIC, BARIUM, BERYLLIUM, CADMIUM, TOTAL CHROMIUM, COBALT, COPPER, TOTAL LEAD, MERCURY, MOLYBDENUM, NICKEL, SELENIUM, SILVER, THALLIUM, VANADIUM, AND ZINC.

Relinquished By:			Received By:		
Name / Signature / Affiliation	Date	Time	Name / Signature / Affiliation	Date	Time
BRITT VON THADEN /EKI	11/16/96	14:00			



Erlar & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Lab Proj. ID: 9611974

Sampled: 11/15/96
Received: 11/16/96
Analyzed: see below

Attention: Vera Nelson

Reported: 11/27/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9611974-01 Sample Desc: SOLID,CH1B-A				
pH	pH Units	11/18/96	N/A	8.5

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH1B-A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611974-01

Sampled: 11/15/96
Received: 11/16/96
Extracted: 11/20/96
Analyzed: 11/20/96
Reported: 11/27/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	*250	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.



Sequoia Analytical

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404 N. Wiget Lane
819 Striker Avenue, Suite 8

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

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

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


Erter & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH1B-A Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611974-01	Sampled: 11/15/96 Received: 11/16/96 Extracted: 11/20/96 Analyzed: 11/20/96 Reported: 11/27/96
---	--	--

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

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

SEQUOIA ANALYTICAL - ELAP #1210



 Mike Gregory
 Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH1B-A
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9611974-01

Sampled: 11/15/96
Received: 11/16/96
Extracted: 11/20/96
Analyzed: 11/20/96
Reported: 11/27/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Tentatively Identified Compounds

Analyte	Detection Limit * ug/Kg	Sample Results * ug/Kg
NO TENTATIVELY IDENTIFIED COMPOUND FOUND	250	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH1B-A
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611974-01

Sampled: 11/15/96
Received: 11/16/96
Extracted: 11/21/96
Analyzed: 11/23/96
Reported: 11/27/96

QC Batch Number: MS1121968270EXA
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.



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FAX (916) 921-0100

Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH1B-A
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611974-01

Sampled: 11/15/96
Received: 11/16/96
Extracted: 11/21/96
Analyzed: 11/23/96
Reported: 11/27/96

QC Batch Number: MS1121968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Hexachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
Hexachlorocyclopentadiene	500	N.D.
Hexachloroethane	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
2-Methylphenol	250	N.D.
4-Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	250	N.D.
Phenol	250	N.D.
Pyrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	250	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	25	121	60
Phenol-d5	24	113	74
Nitrobenzene-d5	23	120	53
2-Fluorobiphenyl	30	115	69
2,4,6-Tribromophenol	19	122	64
p-Terphenyl-d14	18	137	56

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402
Attention: Vera Nelson

Client Project ID: 930028.82/Chiron
Matrix: SOLID
Sample Descrip: CH1B-A
Work Order #: 9611974 -01, 02

Reported: Nov 27, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine
QC Batch#:	MS1121968270EXA	MS1121968270EXA	MS1121968270EXA	MS1121968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/22/96	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	1900	1800	1200	2000
MS % Recovery:	58	54	36	61
Dup. Result:	1900	1800	1200	2000
MSD % Recov.:	58	54	36	61
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-40	0-40	0-40	0-40

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/22/96	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2100	2200	1700	2400
LCS % Recov.:	64	67	52	73

MS/MSD LCS	Control Limits	26-90	25-102	28-104	28-104
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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.

** MS= Matrix Spike, MSD=MS Duplicate, RPD= Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager



Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
 1730 So. Amphlett Blvd., Suite 320 Matrix: SOLID
 San Mateo, CA 94402 Sample Descrip: CH1B-A
 Attention: Vera Nelson Work Order #: 9611974 -01, 02 Reported: Nov 27, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,2,4-Trichloro-benzene	4-Chloro-3-Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS1121968270EXA	MS1121968270EXA	MS1121968270EXA	MS1121968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/22/96	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	1600	1600	2000	2100
MS % Recovery:	48	48	61	64
Dup. Result:	1600	1700	2000	2100
MSD % Recov.:	48	52	61	64
RPD:	0.0	6.0	0.0	0.0
RPD Limit:	0-40	0-40	0-40	0-40

LCS #:	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS	LCS112196-LCS
Prepared Date:	11/21/96	11/21/96	11/21/96	11/21/96
Analyzed Date:	11/22/96	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2100	2100	2200	2100
LCS % Recov.:	64	64	67	64

MS/MSD LCS Control Limits	38-107	26-103	31-137	11-114
--	--------	--------	--------	--------

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.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
 Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: CH1B-A
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611974-01

Sampled: 11/15/96
Received: 11/16/96
Extracted: 11/21/96
Analyzed: 11/23/96
Reported: 11/27/96

QC Batch Number: MS1121968270EXA
Instrument ID: F4

Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit ug/Kg *	Sample Results ug/Kg *
UNKNOWN	130	704
UNKNOWN HYDROCARBON (MAYBE OIL)	130	160000

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library. Positive identification or specification between isomers cannot be made without retention time standards.

* Estimated

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: CH1B-A Matrix: SOLID Analysis Method: Title 22 Lab Number: 9611974-01	Sampled: 11/15/96 Received: 11/16/96 Extracted: 11/25/96 Analyzed: 11/26/96 Reported: 11/27/96
---	--	--

QC Batch Number: ME1125966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	8.8
Arsenic, As	500	5.0	960
Barium, Ba	10000	5.0	150
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	4.1
Chromium, Cr	2500	0.50	41
Cobalt, Co	8000	2.5	9.9
Copper, Cu	2500	0.50	48
Lead, Pb	1000	5.0	2300
Mercury, Hg	20	0.020	0.37
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	44
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	37
Zinc, Zn	5000	0.50	150

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager



Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: Title 22
Lab Number: 9611974-02

Sampled:
Received: 11/16/96
Extracted: 11/25/96
Analyzed: 11/26/96
Reported: 11/27/96

QC Batch Number: ME1125966010MDE
Instrument ID: MTJA-2

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	N.D.
Arsenic, As	500	5.0	N.D.
Barium, Ba	10000	5.0	N.D.
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	N.D.
Chromium, Cr	2500	0.50	N.D.
Cobalt, Co	8000	2.5	N.D.
Copper, Cu	2500	0.50	N.D.
Lead, Pb	1000	5.0	N.D.
Mercury, Hg	20	0.020	N.D.
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	N.D.
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	N.D.
Zinc, Zn	5000	0.50	2.0

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager



Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402	Client Proj. ID: 930028.82/Chiron Sample Descript: Method Blank Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9611974-02	Sampled: Received: 11/16/96 Extracted: 11/20/96 Analyzed: 11/20/96 Reported: 11/27/96
---	--	---

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.



Sequoia Analytical

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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrx: SOLID
Analysis Method: EPA 8240
Lab Number: 9611974-02

Sampled:
Received: 11/16/96
Extracted: 11/20/96
Analyzed: 11/20/96
Reported: 11/27/96

QC Batch Number: MS1120968240EXA
Instrument ID: F3

Analyte

Detection Limit
ug/Kg

Sample Results
ug/Kg

Surrogates

Control Limits %

% Recovery

1,2-Dichloroethane-d4
Toluene-d8
4-Bromofluorobenzene

70	121
81	117
74	121

90
102
96

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erter & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611974-02

Sampled:
Received: 11/16/96
Extracted: 11/21/96
Analyzed: 11/23/96
Reported: 11/27/96

QC Batch Number: MS1121968270EXA
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.





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Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Client Proj. ID: 930028.82/Chiron
Sample Descript: Method Blank
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9611974-02

Sampled:
Received: 11/16/96
Extracted: 11/21/96
Analyzed: 11/23/96
Reported: 11/27/96

QC Batch Number: MS1121968270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Hexachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
Hexachlorocyclopentadiene	500	N.D.
Hexachloroethane	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
2-Methylphenol	250	N.D.
4-Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	250	N.D.
Phenol	250	N.D.
Pyrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	250	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	25	121	68
Phenol-d5	24	113	83
Nitrobenzene-d5	23	120	62
2-Fluorobiphenyl	30	115	67
2,4,6-Tribromophenol	19	122	73
p-Terphenyl-d14	18	137	86

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

SEQUOIA ANALYTICAL - ELAP #1210


Mike Gregory
Project Manager





Erler & Kalinowski, Inc. Client Project ID: 930028.82/Chiron
 1730 So. Amphlett Blvd., Suite 320 Matrix: SOLID
 San Mateo, CA 94402 Sample Descrip: CH1B-A
 Attention: Vera Nelson Work Order #: 9611974 -01, 02 Reported: Nov 27, 1996

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro- benzene
QC Batch#:	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA	MS1120968240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.

Analyst:	L. Zhu	L. Zhu	L. Zhu	L. Zhu	L. Zhu
MS/MSD #:	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD	9611974-01-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg
Result:	2500	2600	2700	2700	2600
MS % Recovery:	100	104	108	108	104
Dup. Result:	2400	2500	2500	2600	2600
MSD % Recov.:	96	100	100	104	104
RPD:	5.2	3.9	7.7	3.8	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS	LCS112096-LCS
Analyst:	L. Duong	L. Duong	L. Duong	L. Duong	L. Duong
Prepared Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Analyzed Date:	11/20/96	11/20/96	11/20/96	11/20/96	11/20/96
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg
LCS Result:	2700	2600	2700	2600	2600
LCS % Recov.:	108	104	108	104	104

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

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.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
 Mike Gregory
 Project Manager

APPENDIX H

Quality Assurance/Quality Control

APPENDIX H. QUALITY ASSURANCE/QUALITY CONTROL

H.1 Soil and Groundwater Sampling Quality Control Measures

Laboratory quality assurance and quality control ("QA/QC") procedures followed during the recent sampling on the Sherwin-Williams Site are described in this Appendix.

This discussion is based on three types of laboratory control samples (spikes, spike duplicates, and blanks) for groundwater and soil samples. In addition to laboratory checks, field QC checks of groundwater sample analyses included collection and analysis of an equipment rinsate blank and collection and analysis of a duplicate groundwater sample from boring CH6. Using currently accepted soil sampling procedures, there are no accurate methods to obtain or produce consistent blanks of soil samples in the field. Therefore, no field soil blanks were collected. Also due to the heterogeneous nature of soil properties and matrix effects, a true soil duplicate cannot be collected in the field. Thus, duplicate soil samples for laboratory analysis were not collected.

Soil samples were analyzed by EPA Method 6010 for Title 22 metals, by EPA Method 7471 for mercury, by EPA Method 8240 with open scan for volatile organic chemicals ("VOCs"), by EPA Method 8270 with open scan for semivolatile organic chemicals ("SVOCs"), and by EPA Method 9045 for pH. Soil samples and composite samples were also extracted using the toxicity threshold characteristic leaching procedure ("TCLP") and the extracts analyzed by EPA Method 6010 for arsenic and lead, and extracts of selected samples were analyzed by EPA Method 8240 for VOCs.

Groundwater samples were analyzed by EPA Method 6010 for Title 22 metals, by EPA Method 7470 for mercury, by EPA Method 8240 with open scan for VOCs, by EPA Method 8270 with open scan for SVOCs, and by EPA Method 150.1 for pH. Field personnel also measured groundwater pH at the time of groundwater collection (see Field Notes in Appendix D.)

H.2 Results of Laboratory Quality Control Measures

Review of the laboratory analytical reports indicates that soil and groundwater samples collected during the recent investigation were analyzed within the holding times specified by the EPA, with the exception of pH analyses for groundwater samples. Laboratory analysis of pH in soil and groundwater samples is supposed to occur at the time of sample collection. The laboratory performed pH analyses two to three days after collection of soil samples and one day after collection of groundwater samples. As noted above, the pH of grab groundwater samples was also analyzed in the field using a pH probe. The

field and laboratory pH results are reported in Table 7. The field and laboratory results agree to within approximately 0.3 pH units.

Laboratory QC for soil and groundwater samples included procedures for determining the accuracy and precision of the analytical methods performed on the samples. In accordance with the procedures specified by the employed EPA methods, surrogate spike, matrix spike ("MS"), matrix spike duplicate ("MSD") and laboratory control spike ("LCS") samples were used to assess laboratory accuracy for EPA Methods 8240 and 8270. MS and MSD samples were also used to assess laboratory precision. In accordance with EPA methodology: (1) no surrogate spikes were used for EPA Methods 6010, 7470, and 7471, and (2) no MS, MSD, LCS, or surrogate standards were used for EPA Methods 150.1 and 9045.

H.2.1 Laboratory Method Accuracy

The accuracy of laboratory analyses were assessed based on the spike recoveries of surrogate, MS/MSD, and LCS analyses performed by Sequoia Analytical Laboratory ("Sequoia"). The percent recovery of the surrogate, MS, and MSD spikes are compared to accuracy goals established internally in the laboratory. These goals, as well as the compounds used for MS/MSD, LCS, and surrogate spiking are detailed in Table H-1.

For Method 6010, a total of 7 MS/MSD analyses and 7 LCS analyses were performed for seven analytical batches of soil, groundwater, and TCLP extract samples (Table H-2). Surrogate recovery analyses were not required by EPA Method 6010. All 7 of the MS/MSD recovery analyses were within the laboratory acceptance limits. All of the LCS recovery values were within the acceptance limits established by the laboratory.

For Method 7470, a total of one MS/MSD analysis and one LCS analysis were performed for one analytical batch of groundwater samples (Table H-3). Surrogate recovery analyses were not required by EPA Method 7470. The MS/MSD recovery analysis was within the laboratory acceptance limits. The LCS recovery value was within the acceptance limits established by the laboratory.

For Method 7471, a total of 2 MS/MSD analyses and 2 LCS analysis were performed for two analytical batches of soil samples (Table H-3). Surrogate recovery analyses were not required by EPA Method 7471. One of the 2 MS/MSD recovery analyses was within the laboratory acceptance limits. MS/MSD recovery was low due to matrix interference, as reported by the laboratory. Both of the LCS recovery values were within the acceptance limits established by the laboratory, thereby validating the data.

For Method 150.1, one duplicate analysis was performed for the one analytical batch (Table H-4). For Method 9045, a total of 2 duplicate analyses were performed for two analytical batches of soil samples (Table H-4).

For Method 8240, a total of 24 surrogate recovery analyses, 3 MS/MSD analyses and 5 LCS analyses were performed for three analytical batches of soil, groundwater, and TCLP extract samples (Table H-5). Twenty-two of the surrogate recovery analyses and all of the 3 MS/MSD recovery analyses were within the acceptance limits. The laboratory indicated that surrogate recoveries were low in cases where elevated VOC concentrations created conditions where the surrogates were diluted out. All 5 of the LCS recovery values were within the acceptance limits established by the laboratory, thereby validating the data.

For Method 8270, a total of 21 surrogate recovery analyses, 3 MS/MSD analyses and 3 LCS analyses were performed for three analytical batches of soil and groundwater samples (Table H-6). Sixteen of the surrogate recovery analyses and 2 of the MS/MSD recovery analyses were within the acceptance limits. The laboratory indicated that surrogate recoveries were low in cases where elevated SVOC concentrations created conditions where the surrogates were diluted out. The laboratory indicated that MS/MSD recoveries were low in the case where elevated SVOC concentrations created conditions where the added spikes were diluted out. All 3 of the LCS recovery values were within the acceptance limits established by the laboratory, thereby validating the data.

H.2.2 Laboratory Method Precision

The precision of laboratory analyses was assessed based on the relative percent differences ("RPDs") of MSDs. The RPDs of MSDs are compared to the calculated and designated precision goals established internally in the laboratory. RPDs of MSDs for the seven Method 6010 analytical batches were within the acceptance limits established in the laboratory (Table H-2).

The RPD of MSDs for the Method 7470 analytical batch was within the acceptance limits established in the laboratory (Table H-3). One of the two RPDs of MSDs for the Method 7471 analytical batches was within the acceptance limits established in the laboratory (Table H-3). RPD of duplicate analyses for the one Method 150.1 analytical batch was within the acceptance limits established in the laboratory (Table H-4). RPDs of duplicate analyses for the two Method 9045 analytical batches were within the acceptance limits established in the laboratory (Table H-4). RPDs of MSDs for the three Method 8240 analytical batches were within the acceptance limits established in the laboratory (Table H-5). RPDs of MSDs for the three Method 8270 analytical batches were within the acceptance limits established in the laboratory (Table H-6).

The laboratory precision goal was not met for one Method 7471 batch because the MS/MSD recovery was low due to matrix interference, as reported by the laboratory.

H.2.3 Laboratory Method Blanks

Laboratory method blank samples were analyzed together with environmental samples to assess quality control within the laboratory. A total of seven method blank analyses for

Method 6010, one method blank analysis for Method 7470, two method blank analyses for Method 7471, five method blank analyses for Method 8240, and four method blank analyses for Method 8270 were performed during the recent investigation. No compounds were detected at or above laboratory detection limits in the method blank samples with the exception of zinc and a tentatively identified SVOC.

Zinc was detected at concentrations ranging from 1.0 to 2.0 mg/kg in four of the five soil matrix method blank samples analyzed for metals. Zinc concentrations in soil samples exceeded 35 mg/kg in all of the soil samples analyzed for metals, thus the detected zinc concentrations in method blanks did not significantly affect the sample results. However, the zinc concentrations in soil may be considered estimated values.

A tentatively identified SVOC classified as "unknown" was detected at concentrations of 0.16 and 0.72 mg/kg in the two soil matrix method blank samples analyzed for SVOCs. Because the identity of the tentatively identified SVOC is unknown and not a target analyte, this result is not expected to significantly affect the sample results for target analytes.

H.3 Results of Field Quality Control Measures

Field QC checks of groundwater sample analyses included an equipment blank and duplicate groundwater samples.

H.3.1 Duplicate Analysis

On 14 November 1996 two grab groundwater samples were collected from boring CH6. These two field groundwater duplicate samples were analyzed for metals by Method 6010 and 7470, pH by Method 150.1, VOCs by Method 8240 and SVOCs by Method 8270. The results are compared in Table H-7. RPDs calculated for metals ranged between 2% and 15%. RPD calculated for pH was 0%. RPDs calculated for VOCs ranged between 18% and 24%. RPDs calculated for SVOCs ranged between 0% and 32%. RPDs for these field duplicates are greater than RPDs for laboratory precision calculated using MS/MSD recovery but generally still within the goals specified for laboratory duplicates.

H.3.2 Field Equipment Blanks

Field equipment blanks were submitted to the laboratory for each day of groundwater sampling. Equipment blank results are summarized on Tables 7 through 9. On 14 November 1996, field equipment blanks contained low, but detectable concentrations of acetone as analyzed by Method 8240 and zinc as analyzed by Method 6010. Zinc concentrations in all grab groundwater samples, except sample CH10, were significantly greater than zinc concentrations detected in the equipment rinseate blank. Therefore, the zinc concentration detected in sample CH10 is considered an estimated value. Acetone concentrations in each of the five environmental samples were below detection limits or

were significantly greater than the acetone concentration detected in the field equipment blank. Therefore, the detected acetone concentration in the field equipment blank does not significantly affect the environmental sample results.

H.4 Summary and Conclusions

As described above, laboratory QC for soil and groundwater samples included procedures for determining the accuracy and precision of the analytical methods performed on the samples. In general, MS/MSDs and RPDs met laboratory established goals for EPA Methods 6010, 7470, 7471, 150.1, 9045, 8240 and 8270. In certain samples, matrix interferences or elevated concentrations of target analytes created conditions where goals were not met. However, all LCS samples met laboratory goals.

Table H-1
Quality Control Criteria of MS/MSD, LCS, and Surrogate Compounds
for Solid and Liquid Matrices

Chiron Corporation, Emeryville, California

EPA Method (Matrix)	Compound	MS/MSD Goal (%)	RPD Goal (%)	LCS Goal (%)	Compound	Surrogate Goal (%)
6010 (Liquid, Solid, TCLP)	Beryllium	80-120	0-20	NA	NA (1)	NA
	Cadmium	80-120	0-20	NA		
	Chromium	80-120	0-20	NA		
	Nickel	80-120	0-20	NA		
150.1 (Liquid)	pH	NA	0-20	NA	NA	NA
9045 (Solid)	pH	NA	0-20	NA	NA	NA
7470 (Liquid)	Mercury	75-125	0-20	80-120	NA	NA
7471 (Solid)	Mercury	75-125	0-20	80-120	NA	NA
8240 (Solid)	1,1-Dichloroethene	60-140	0-25	65-135	1,2-Dichloroethane-d4	70-121
	Benzene	60-140	0-25	70-130	4-Bromofluorobenzene	74-121
	Chlorobenzene	60-140	0-25	70-130	Toluene-d8	81-117
	Toluene	60-140	0-25	70-130		
	Trichloroethene	60-140	0-25	70-130		
8240 (Liquid, TCLP)	1,1-Dichloroethene	60-140	0-25	65-135	1,2-Dichloroethane-d4	76-114
	Benzene	60-140	0-25	70-130	4-Bromofluorobenzene	86-115
	Chlorobenzene	60-140	0-25	70-130	Toluene-d8	88-110
	Toluene	60-140	0-25	70-130		
	Trichloroethene	60-140	0-25	70-130		

Table H-1
Quality Control Criteria of MS/MSD, LCS, and Surrogate Compounds
for Solid and Liquid Matrices

Chiron Corporation, Emeryville, California

EPA Method (Matrix)	Compound	MS/MSD Goal (%)	RPD Goal (%)	LCS Goal (%)	Compound	Surrogate Goal (%)
8270 (Solid)	1,2,4-Trichlorobenzene	38-107	0-30	38-107	2,4,6-Tribromophenol	19-122
	1,4-Dichlorobenzene	28-104	0-30	28-104	2-Fluorobiphenyl	30-115
	2,4-Dinitrotoluene	28-89	0-30	28-89	2-Fluorophenol	25-121
	2-Chlorophenol	25-102	0-30	25-102	Nitrobenzene-d5	23-120
	4-Chloro-3-methylphenol	26-103	0-30	26-103	Phenol-d5	24-113
	4-Nitrophenol	11-114	0-30	11-114	p-Terphenyl-d14	18-137
	Acenaphthene	31-137	0-30	31-137		
	N-Nitroso-di-n-propylamine	41-126	0-30	41-126		
	Pentachlorophenol	17-109	0-30	17-109		
	Phenol	26-90	0-30	26-90		
	Pyrene	35-142	0-30	35-142		
8270 (Liquid)	1,2,4-Trichlorobenzene	39-98	0-30	38-107	2,4,6-Tribromophenol	10-123
	1,4-Dichlorobenzene	36-97	0-30	28-104	2-Fluorobiphenyl	43-116
	2,4-Dinitrotoluene	24-96	0-30	28-89	2-Fluorophenol	21-110
	2-Chlorophenol	27-123	0-30	25-102	Nitrobenzene-d5	35-114
	4-Chloro-3-methylphenol	23-97	0-30	26-103	Phenol-d5	10-110
	4-Nitrophenol	10-80	0-30	11-114	p-Terphenyl-d14	33-141
	Acenaphthene	46-118	0-30	31-137		
	N-Nitroso-di-n-propylamine	41-116	0-30	41-126		
	Pentachlorophenol	9-103	0-30	17-109		
	Phenol	12-110	0-30	26-90		
	Pyrene	26-127	0-30	35-142		

Notes:

(1) Not applicable ("NA") because this quality control parameter is not required in the referenced method.

Table H-2
Quality Control Summary for EPA Method 6010 for Soil and Groundwater Samples

Chiron Corporation, Emeryville, California

Quality Control Batch Number	Number of Samples in Batch	Matrix	Compound	Matrix Spike (%)	Matrix Spike Duplicate (%)	Relative Percent Difference (%)
Laboratory Goals			Beryllium	80-120	80-120	0-20
			Cadmium	80-120	80-120	0-20
			Chromium	80-120	80-120	0-20
			Nickel	80-120	80-120	0-20
ME1118966010MDE	3	Soil	Beryllium	94	92	2.2
			Cadmium	91	89	2.2
			Chromium	82	82	0.0
			Nickel	88	88	0.0
ME1120966010MDE	3	Soil	Beryllium	98	94	4.2
			Cadmium	91	86	5.5
			Chromium	96	86	8.0
			Nickel	95	85	8.0
ME1121966010MDA	12	TCLP (1)	Beryllium	100	100	0.0
			Cadmium	100	100	0.0
			Chromium	99	100	1.0
			Nickel	100	100	0.0
ME1121966010MDE	18	Soil	Beryllium	83	86	3.6
			Cadmium	82	84	3.5
			Chromium	75	85	8.7
			Nickel	75	85	8.7

Table H-2
Quality Control Summary for EPA Method 6010 for Soil and Groundwater Samples

Chiron Corporation, Emeryville, California

Quality Control Batch Number	Number of Samples in Batch	Matrix	Compound	Matrix Spike (%)	Matrix Spike Duplicate (%)	Relative Percent Difference (%)
ME1121966010MDF	3	Soil	Beryllium	96	97	1.0
			Cadmium	99	100	1.0
			Chromium	98	98	0.0
			Nickel	92	102	6.9
ME1125966010MDE	2	Soil	Beryllium	92	95	3.2
			Cadmium	88	94	6.3
			Chromium	89	99	7.4
			Nickel	96	96	0.0
ME1127966010MDA	7	Groundwater	Beryllium	97	99	2.0
			Cadmium	100	110	4.1
			Chromium	96	98	2.1
			Nickel	97	98	1.0

Notes:

(1) Liquid extract from Toxicity Characteristic Leaching Procedure ("TCLP") performed on soil samples.

Table H-3
Quality Control Summary for EPA Methods 7471 and 7470
for Soil and Groundwater Samples

Chiron Corporation, Emeryville, California

Quality Control Batch Number	Number of Samples in Batch	Matrix	Compound	Matrix Spike (%)	Matrix Spike Duplicate (%)	Relative Percent Difference (%)
Laboratory Goals			Mercury	75-125	75-125	0-20
ME1121967471M4A	13	Soil	Mercury	0.0	0.0	0.0
ME1125967471M4A	2	Soil	Mercury	55	25	23
ME1129967470M4A	7	Groundwater	Mercury	83	80	3.1

Table H-4
Quality Control Summary for EPA Methods 9045 and 150.1
for Soil and Groundwater Samples

Chiron Corporation, Emeryville, California

Quality Control Batch Number	Number of Samples in Batch	Matrix	Compound	Sample Measurement (pH)	Sample Measurement Duplicate (pH)	Relative Percent Difference (%)
Laboratory Goals			pH			0-20
IN111596150100A	7	Groundwater	pH	8.1	7.9	3.1
IN111596904500A	19	Soil	pH	12	12	0.0
IN111896904500A	2	Soil	pH	8.5	8.6	1.2

Table H-5
Quality Control Summary for EPA Method 8240 for Soil and Groundwater Samples

Chiron Corporation, Emeryville, California

Quality Control Batch Number	Number of Samples in Batch	Surrogate Recovery (number within goals)	Matrix	Compound	Matrix Spike (%)	Matrix Spike Duplicate (%)	Relative Percent Difference (%)
Laboratory Goals				1,1-DCE	60-140	60-140	0-25
				Benzene	60-140	60-140	0-25
				Chlorobenzene	60-140	60-140	0-25
				Toluene	60-140	60-140	0-25
				TCE	60-140	60-140	0-25
MS1118968240H6A	8	7	Groundwater, TCLP (1)	1,1-DCE	90	92	2.2
				Benzene	102	104	1.9
				Chlorobenzene	102	102	0
				Toluene	102	104	1.9
				TCE	100	100	0
MS1120968240EXA	13	12	Soil	1,1-DCE	100	96	4.1
				Benzene	108	100	7.7
				Chlorobenzene	104	104	0
				Toluene	108	104	3.8
				TCE	104	100	3.9
MS1120968240H6A	3	3	Groundwater	1,1-DCE	88	78	12
				Benzene	102	96	6.1
				Chlorobenzene	104	98	5.9
				Toluene	102	96	6.1
				TCE	98	92	6.3

Table H-6
Quality Control Summary for EPA Method 8270 for Soil and Groundwater Samples

Chiron Corporation, Emeryville, California

Quality Control Batch Number	Number of Samples in Batch	Surrogate Recovery (number within goals)	Matrix	Compound	Matrix Spike (%)	Matrix Spike Duplicate (%)	Relative Percent Difference (%)
Laboratory Goals				1,2,4-Trichlorobenzene	38-107	38-107	0-30
				1,4-Dichlorobenzene	28-104	28-104	0-30
				2,4-Dinitrotoluene	28-89	28-89	0-30
				2-Chlorophenol	25-102	25-102	0-30
				4-Chloro-3-methylphenol	26-103	26-103	0-30
				4-Nitrophenol	11-114	11-114	0-30
				Acenaphthene	31-137	31-137	0-30
				N-Nitroso-di-n-propylamine	41-126	41-126	0-30
				Pentachlorophenol	17-109	17-109	0-30
				Phenol	26-90	26-90	0-30
				Pyrene	35-142	35-142	0-30
MS1118968270EXA	11	9	Soil	1,2,4-Trichlorobenzene	42	52	19
				1,4-Dichlorobenzene	29	36	28
				2,4-Dinitrotoluene	58	67	15
				2-Chlorophenol	54	64	15
				4-Chloro-3-methylphenol	54	61	10
				4-Nitrophenol	54	52	5.7
				Acenaphthene	54	61	10
				N-Nitroso-di-n-propylamine	58	67	10
				Pentachlorophenol	49	52	6.1
				Phenol	58	64	10
				Pyrene	58	61	5.1

Table H-6
Quality Control Summary for EPA Method 8270 for Soil and Groundwater Samples

Chiron Corporation, Emeryville, California

Quality Control Batch Number	Number of Samples in Batch	Surrogate Recovery (number within goals)	Matrix	Compound	Matrix Spike (%)	Matrix Spike Duplicate (%)	Relative Percent Difference (%)
MS1118968270EXZ	7	4	Groundwater	1,2,4-Trichlorobenzene	0	0	0
				1,4-Dichlorobenzene	0	0	0
				2,4-Dinitrotoluene	0	0	0
				2-Chlorophenol	0	0	0
				4-Chloro-3-methylphenol	0	0	0
				4-Nitrophenol	0	0	0
				Acenaphthene	0	0	0
				N-Nitroso-di-n-propylamine	0	0	0
				Pentachlorophenol	0	0	0
				Phenol	0	0	0
				Pyrene	0	0	0
MS1121968270EXA	3	3	Soil	1,2,4-Trichlorobenzene	48	48	0
				1,4-Dichlorobenzene	36	36	0
				2,4-Dinitrotoluene	64	67	4.6
				2-Chlorophenol	54	54	0
				4-Chloro-3-methylphenol	48	52	6.1
				4-Nitrophenol	64	64	0
				Acenaphthene	61	61	0
				N-Nitroso-di-n-propylamine	61	61	0
				Pentachlorophenol	6	36	0
				Phenol	58	58	0
				Pyrene	52	52	0

Table H-7
Results of Duplicate Grab Groundwater Sample Analyses

Chiron Corporation, Emeryville, California

Compound (a)	Sample CH6 (ug/L)	Dup. Sample CH6 (ug/L)	RPD (b) (%)
Antimony	<100 (c)	180	NC (d)
Arsenic	6,000	5,400	11%
Cadmium	63	64	1.6%
Cobalt	150	160	6.5%
Nickel	570	610	6.8%
Zinc	12,000	14,000	15%
pH	4.0	4.0	0%
pH in field (e)	4.31	NA (f)	NC
Acetone	1,800	<3,300	NC
Ethylbenzene	1,500	1,800	18%
Toluene	24,000	30,000	22%
Xylenes	6,900	8,400	20%
Cyclohexane, methyl	1,500	1,900	24%
1,2,4-Trimethylbenzene	1,000	<1,700	NC
Benzoic Acid	120	<200	NC
2-Hexen-1-ol, (z)-	420	400	4.9%
Benzene, (1-methylethyl)-	82	<80	NC
Benzene, (2-methoxyethyl)-	53	<80	NC
Benzene, 1,1-(1-ethenyl-1,3-propanediyl) bis-	60	<80	NC
Benzene, 1,2,3-trimethyl-	360	280	25%
Benzene, 1,2,4-trimethyl-	1,100	1,100	0%
Benzene, 1,3,5-trimethyl	330	240	32%
Benzene, 1-ethyl-2-methyl-	240	<80	NC
Benzene, 1-ethyl-3-methyl-	800	680	16%
Benzene, 1-ethyl-4-methyl-	<20	200	NC
Benzene, dimethyl-	1,600	1,800	12%
Benzene, propyl-	150	<80	NC
Benzeneacetic acid, alpha,-methyl-	43	<80	NC
Benzoic acid, 3-methyl-	47	<80	NC
Benzoic acid, 4-methyl-	70	<80	NC
Butanoic acid, heptylester	100	<80	NC
1-Butanol, 2-methyl-, acetate	51	<80	NC
Oxirane, (butoxymethyl)-	<20	2,800	NC
Unknowns	2200; 530 66; 52	310	NC NC

Notes:

- (a) Samples collected on 15 November 1996. Only those chemicals detected above laboratory method detection limits in grab groundwater samples collected from boring CH6 are shown.
- (b) Relative percent difference ("RPD") calculated as: $RPD = [(X1-X2) \times 100] / X$, where X1 and X2 = greater and lesser concentrations measured in samples, respectively, and X = average concentration.
- (c) Less than symbol (" $<$ ") indicates concentration less than laboratory method detection limit shown.
- (d) RPD not calculated ("NC") because one value is below laboratory method detection limit.
- (e) pH value measured in the field by EKI personnel at time of sample collection.
- (f) Not analyzed ("NA").

APPENDIX I

Results of Personal Air Monitoring



Environmental Health Consultants

P.O. Box 117910 Burlingame, CA 94011-7910

(415) 347-9205

January 22, 1997

Ms. Vera Nelson
Erler & Kalinowski, Inc.
1730 So. Amphlett Blvd., Suite 320
San Mateo, CA 94402

Personal Exposure Air Sampling
During Field Investigation
At the Sherwin Williams Property
Emeryville, California

Dear Ms. Nelson:

Enclosed are the analytical results for the personal exposure air samples collected for airborne lead, arsenic, and organic vapors during field investigation at the Sherwin Williams property in Emeryville, California on November 12 and 13, 1996. The personal exposure results must be communicated to the site workers. To this end, a sample memo is included that may be used to communicate these results to the employees involved with the project.

The workers monitored were Britt von Thaden of Erler & Kalinowski, Inc. and Craig Stormo of Precision Sampling, Inc., who were both actively involved with soil sample collection and handling. As such, their exposures may be considered representative of general exposures on site. All of the samples were run for approximately a full work shift, thus representing time-weighted average results.

Lead & Arsenic Samples

Two samples for lead and arsenic were collected on November 12, 1996. The samples were collected and analyzed by NIOSH Method 7300. The results from the samples were below the detection limit of 0.001 milligrams of per cubic meter of air (mg/m^3) for both analytes, which is well below the Cal/OSHA Permissible Exposure Limits of $0.05 \text{ mg}/\text{m}^3$ for lead and $0.01 \text{ mg}/\text{m}^3$ for arsenic.

Organic Vapors

Two samples for organic vapors were collected on November 13, 1996. These samples were collected during soil sampling activities in areas with the highest suspected solvent contamination. The air samples were collected and analyzed by NIOSH Methods 1300, 1501, and 1003. The samples were analyzed by Clayton Environmental

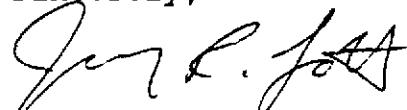
Consultants, a laboratory accredited by the American Industrial Hygiene Association. The method detection limits for each compound and their respective Cal/OSHA Permissible Exposure Limits (PELs) are listed below:

Compound	Detection Limit (ppm)	Cal/OSHA PEL (ppm)
2-Hexanone	0.01	5
Acetone	0.03	750
Benzene	0.02	1
Ethylbenzene	0.01	100
Methyl ethyl ketone	0.04	200
Methyl isobutyl ketone	0.03	50
Perchloroethylene	0.01	25
Toluene	0.01	50
Xylenes	0.02	100

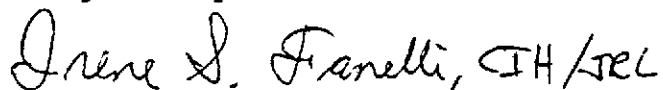
The results from the samples were below the detection limits for all of the analytes, with the exception of toluene in sample number SW-1113-P1, which was detected at 0.01 parts per million (ppm). The detected level of toluene, as well as the detection limits for the other non-detected compounds, were well below their respective Cal/OSHA PELs.

Copies of all of the analytical reports are attached. If you have any questions regarding this report, please feel free to call.

Sincerely,

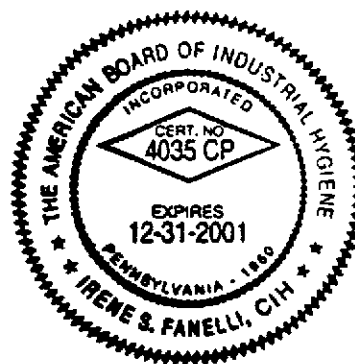


Jeffrey R. Lott
Project Supervisor



Irene S. Fanelli, CIH
President

Attachments



1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

November 14, 1996

Mr. Jeff Lott
ENVIRONMENTAL HEALTH CONSULTANTS, INC.
P.O. Box 117910
Burlingame, CA 94011-7910

Client Ref.: 961560
Clayton Project No.: 96111.76

Dear Mr. Lott:

Attached is our analytical laboratory report for the samples received on November 13, 1996. Also enclosed is a copy of the Chain-of-Custody record acknowledging receipt of these samples.

Please note that any unused portion of the samples will be discarded after December 14, 1996, unless you have requested otherwise.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact Suzanne Haus, Client Services Supervisor, at (510) 426-2657.

Sincerely,



Harriotte A. Hurley, CIH
Director, Laboratory Services
San Francisco Regional Office

HAH/tjb

Attachments

Analytical Results
for
Environmental Health Consultants, Inc.
Client Reference: 961560
Clayton Project No. 96111.76

Sample Identification: See Below
Lab Number: 9611176
Sample Matrix/Media: FILTER
Digestion Method: NIOSH 7300
Method Reference: NIOSH 7300

Date Sampled: 11/12/96
Date Received: 11/13/96
Date Digested: 11/13/96
Date Analyzed: 11/14/96

Lab Number	Sample Identification	Date Sampled	Volume (liters)	Arsenic (mg)	Arsenic (mg/m3)	Method Detection Limit (mg)
-01	EKI-1112-1	11/12/96	819	<0.001	<0.001	0.001
-02	EKI-1112-2	11/12/96	829	<0.001	<0.001	0.001
-03	EKI-1112-BLANK	11/12/96	--	<0.001	--	0.001

ND: Not detected at or above limit of detection

--: Information not available or not applicable

Metal results have been corrected using laboratory derived recovery coefficients

Analytical Results
 for
 Environmental Health Consultants, Inc.
 Client Reference: 961560
 Clayton Project No. 96111.76

Sample Identification: See Below
 Lab Number: 9611176
 Sample Matrix/Media: FILTER
 Digestion Method: NIOSH 7300
 Method Reference: NIOSH 7300

Date Sampled: 11/12/96
 Date Received: 11/13/96
 Date Digested: 11/13/96
 Date Analyzed: 11/14/96

Lab Number	Sample Identification	Date Sampled	Volume (liters)	Lead (mg)	Lead (mg/m3)	Method Detection Limit (mg)
-01	EKI-1112-1	11/12/96	819	<0.001	<0.001	0.001
-02	EKI-1112-2	11/12/96	829	<0.001	<0.001	0.001
-03	EKI-1112-BLANK	11/12/96	--	<0.001	--	0.001

ND: Not detected at or above limit of detection
 ---: Information not available or not applicable

Metal results have been corrected using laboratory derived recovery coefficients

REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only Page 1 of 1

Project No. _____
 Batch No. **9611178**
 Client No. _____
 Date Logged In **11/13** By **ck**

REPORT RESULTS TO Name **Jeff Lott** Title _____
 Company **EHCT** Dept. _____
 Mailing Address **P.O. Box 117910**
 City, State, Zip **Burlingame CA 94011-7910**
 Telephone No. **415-347-9205** Telefax No. **415-347-1526**

Purchase Order No. _____ Client Job No. **961560**
 Name _____
 Company **SAME** Dept. _____
 Address _____
 City, State, Zip _____

Date Results Required: **11/14/96** Rush Charges Authorized? Yes No
 Phone Results Fax
 Special Instructions: (method, limit of detection, etc.) _____
 * Explanation of Preservative: _____

ANALYSIS REQUESTED
 (Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added.)

Number of Containers	/										FOR LAB USE ONLY
	ICP-Lead ICP-Arsenic										

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	MATRIX/MEDIA	AIR VOLUME (specify units)
EKI-1112-1	11/12/96	MCEF	819 L
EKI-1112-2	↓	↓	829 L
EKI-1112-Blank	↓	↓	-

CHAIN OF CUSTODY
 Relinquished by: **Jerry R. Felt** Date/Time **11/13/96-12:00**
 Relinquished by: _____ Date/Time _____
 Method of Shipment: **NCM Courier**
 Authorized by: **Jerry R. Felt** Date **11/13/96**
 (Client Signature Must Accompany Request)

Received by: _____ Date/Time _____
 Received at Lab by: **Muller** Date/Time **11/13/96 1:25 PM**
 Sample Condition Upon Receipt: Acceptable Other (explain)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

- 22345 Roethel Drive, Novi, MI 48376 (313) 344-1770
- Raritan Center, 100 Fieldcroft Ave., Edison, NJ 08837 (201) 225-6040
- 400 Chastain Center Blvd., N.W., Suite 400, Kennesaw, GA 30144 (404) 499-7500
- 1252 Quarry Lane, Pleasanton, CA 94500 (415) 426-2600

DISTRIBUTION:
 WHITE - Clayton Laboratory
 YELLOW - Clayton Accounting
 PINK - Client Copy

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

November 26, 1996

Ms. Irene Fanelli
ENVIRON. HEALTH CONS., INC.
1050 Edwards Road
P.O. Box 117910
Burlingame, CA 94011-7910

Client Ref.: 961560
Clayton Project No.: 96112.15

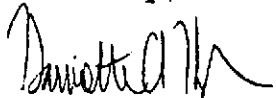
Dear Ms. Fanelli:

Attached is our analytical laboratory report for the samples received on November 15, 1996. Also enclosed is a copy of the Chain-of-Custody record acknowledging receipt of these samples.

Please note that any unused portion of the samples will be discarded after December 26, 1996, unless you have requested otherwise.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact Suzanne Haus, Client Services Supervisor, at (510) 426-2657.

Sincerely,



Harriotte A. Hurley, CIH
Director, Laboratory Services
San Francisco Regional Office

HAH/ses

Attachments

Analytical Results
for
Environmental Health Consultants, Inc.
Client Reference: 961560
Clayton Project No. 96112.15

Sample Identification: See Below
Lab Number: 9611215
Sample Matrix/Media: SM_CHAR_TUBE

Date Sampled: 11/13/96
Date Received: 11/15/96
Date Analyzed: 11/25/96
Analyst: FRK

Lab No.	Sample I.D.	Sample Volume (liters)	Compound	Front (mg)	Back (mg)	Total (mg)	Concentration (ng/m ³) (ppm)	Method Detection Limit (mg)	
-01	SW1113-P1	38.5	2-Hexanone	<0.002	<0.002	<0.002	<0.15	<0.01	0.002
			Acetone	<0.003	<0.003	<0.003	<0.18	<0.03	0.003
			Benzene	<0.002	<0.002	<0.002	<0.15	<0.02	0.002
			Ethyl benzene	<0.002	<0.002	<0.002	<0.15	<0.01	0.002
			Methyl ethyl ketone	<0.004	<0.004	<0.004	<0.1	<0.04	0.004
			Methyl isobutyl ketone	<0.004	<0.004	<0.004	<0.1	<0.03	0.004
			Perchloroethylene	<0.003	<0.003	<0.003	<0.18	<0.01	0.003
			Toluene	0.002	<0.002	0.002	0.15	0.01	0.002
			Xylene	<0.004	<0.004	<0.004	<0.1	<0.02	0.004
-02	SW1113-P2	37.9	2-Hexanone	<0.002	<0.002	<0.002	<0.15	<0.01	0.002
			Acetone	<0.003	<0.003	<0.003	<0.18	<0.03	0.003
			Benzene	<0.002	<0.002	<0.002	<0.15	<0.02	0.002
			Ethyl benzene	<0.002	<0.002	<0.002	<0.15	<0.01	0.002
			Methyl ethyl ketone	<0.004	<0.004	<0.004	<0.1	<0.04	0.004
			Methyl isobutyl ketone	<0.004	<0.004	<0.004	<0.1	<0.03	0.004
			Perchloroethylene	<0.003	<0.003	<0.003	<0.18	<0.01	0.003
			Toluene	<0.002	<0.002	<0.002	<0.15	<0.01	0.002
			Xylene	<0.004	<0.004	<0.004	<0.1	<0.02	0.004

Analytical Results
for
Environmental Health Consultants, Inc.
Client Reference: 961560
Clayton Project No. 96112.15

Sample Identification: See Below
Lab Number: 9611215
Sample Matrix/Media: SM_CHAR_TUBE

Date Sampled: 11/13/96
Date Received: 11/15/96
Date Analyzed: 11/25/96
Analyst: FEK

Lab No.	Sample I.D.	Sample Volume (liters)	Compound	Front (mg)	Back (mg)	Total (mg)	Concentration (mg/m3) (ppm)	Method Detection Limit (mg)
-03	SW1113-BLANK	--	2-Hexanone	<0.002	<0.002	<0.002	--	0.002
			Acetone	<0.003	<0.003	<0.003	--	0.003
			Benzene	<0.002	<0.002	<0.002	--	0.002
			Ethyl benzene	<0.002	<0.002	<0.002	--	0.002
			Methyl ethyl ketone	<0.004	<0.004	<0.004	--	0.004
			Methyl isobutyl ketone	<0.004	<0.004	<0.004	--	0.004
			Perchloroethylene	<0.003	<0.003	<0.003	--	0.003
			Toluene	<0.002	<0.002	<0.002	--	0.002
			Xylene	<0.004	<0.004	<0.004	--	0.004

ND: Not detected at or above limit of detection

--: Information not available or not applicable

Airborne concentrations are based on the air volumes provided

Results have been corrected using laboratory-derived desorption efficiencies

Compound	Method Reference
2-Hexanone	NIOSH 1300
Acetone	NIOSH 1300
Benzene	NIOSH 1501
Ethyl benzene	NIOSH 1501
Methyl ethyl ketone	NIOSH 1501
Methyl isobutyl ketone	NIOSH 1501
Perchloroethylene	NIOSH 1003
Toluene	NIOSH 1501
Xylene	NIOSH 1501