

San Francisco Regional Office

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

April 9, 1997

Ms. Juliet Shin
Department of Environmental Health
Alameda County Health Agency
1131 Harbor Bay Parkway, Second Floor
Alameda, California 94502

97 APR 10 PM 4:09
ENVIRONMENTAL
PROTECTION

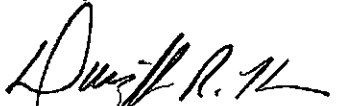
Clayton Project No. 70-97203.00.500

Subject: Report on Grab Groundwater Sampling at Coliseum Way and 50th Avenue
in Oakland, California

Dear Ms. Shin:

Please find enclosed the above-referenced report which describes our field activities and provides the analytical data for the two grab groundwater samples collected off-site and downgradient from the intersection of 50th Avenue and Coliseum Way. Please call me at (510)426-2686 with any comments or questions.

Sincerely,


Dwight R. Hoenig
Vice President/Major Project Development
Environmental Management and Remediation
San Francisco Regional Office

DRH/

cc: Sumadhu Arigala, RWQCB
Tim Colvig, Lempres and Wulfsberg
Patrick Sullivan, Forensic Management Associates
Rick Day, Clayton Environmental
Mike Zimmerman, Clayton Environmental

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Clayton
ENVIRONMENTAL
CONSULTANTS

Report on Grab Groundwater Sampling
Coliseum Way and 50th Avenue
Oakland, California
for
Alameda County Department Of Environmental
Health
Oakland, California

Clayton Project No. 97203.00

April 8, 1997

ENVIRONMENTAL
PROTECTION
97 APR 10 PM 4:09

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1.0 INTRODUCTION

This report provides a summary of grab groundwater sampling conducted by Clayton Environmental Consultants, Inc. on October 11, 1996 at the intersection of Coliseum Way and 50th Avenue in Oakland, California. The site location is shown on Figure 1.

The purpose of collecting the grab groundwater samples was to determine metal concentrations and pH levels in groundwater on the east and west sides of the storm sewer, and south of Coliseum Way. These sample locations were selected specifically to evaluate the extent of heavy metal migration in groundwater in the area located hydraulically downgradient of the heavy metal plume beneath the 5050 Coliseum Way property.

2.0 SCOPE OF WORK

The specific tasks Clayton completed for this project included:

- Obtaining drilling permits;
- Preparing a site-specific health and safety plan;
- Performing a utility clearance survey; and
- Advancing two soil borings and collecting grab groundwater samples.

2.1 PRE-FIELD ACTIVITIES

Prior to performing field activities Clayton obtained a drilling permit from Alameda County Flood Control and Water Management Agency - Zone 7, and an encroachment permit from the City of Oakland. Clayton also contacted Underground Service Alert 48 hours prior to the drilling date. A site-specific health and safety plan was written for these activities.

2.2 FIELD ACTIVITIES


Clayton began field work on October 11, 1996. Clayton retained a professional utility locator to identify underground utilities in the vicinity of the borehole locations. Clayton advanced two boreholes (CBH-1 and CBH-2) and obtained grab groundwater samples from each boring for laboratory analysis. The grab groundwater samples were analyzed for CAM-17 metals by Chromalab, Inc. and for pH by Clayton's analytical laboratory. The two boring locations are shown on Figure 2.

The borings were drilled using a combination of hand excavation through the upper fill material and Geoprobe drilling in the zone of interest. The actual field procedures are described in Appendix A. Observations of samples and field conditions were recorded on the boring logs included as Appendix B to this report.

3.0 RESULTS OF THE INVESTIGATION

The analytical results of the sample analysis are summarized in the following table. Laboratory analytical sheets and chain-of-custody are included as Appendix C.

Summary of Metal and pH Analytical Results [Metal results reported in milligrams per liter (mg/L)]		
Parameter	CBH-1	CBH-2
Antimony	0.012	ND
Arsenic	ND	ND
Barium	0.15	0.039
Beryllium	ND	ND
Cadmium	ND	ND
Chromium	ND	ND
Cobalt	0.034	0.0073
Copper	0.010 = 10 ppb <i>Basin Plan 20</i>	ND
Lead	ND	ND
Molybdenum	0.022	0.063
Nickel	0.067 = 67 ppb	0.022 = 22 ppb
Selenium	0.032	0.068 = 68 ppb
Silver	ND	ND
Thallium	0.0092 = 9.2 ppb	ND
Vanadium	ND	ND
Zinc	ND	0.034 = 34 ppb
Mercury	ND	ND
pH	6.9	7.3

 = Exceeds Nat'l Toxics Rule values for saltwater

4.0 CONCLUSIONS

This limited offsite groundwater investigation provides two data points in the area which is downgradient of the plume of heavy metal/low pH groundwater known to exist beneath the 5050 Coliseum Way property. The analytical results are significant for two specific reasons:

- 1) The pH results indicate that the low pH groundwater condition known to exist at 5050 Coliseum Way is not present at these downgradient offsite locations, a distance of 60 to 100 feet from the northwest corner of the 5050 Coliseum Way Property; and
- 2) The dissolved metal concentrations in these samples are below all known Federal and State water quality criteria for the protection of human health and the environment. *ch TL*

This report prepared by:



Matthew W. Hanko
Project Geologist

This report reviewed by:

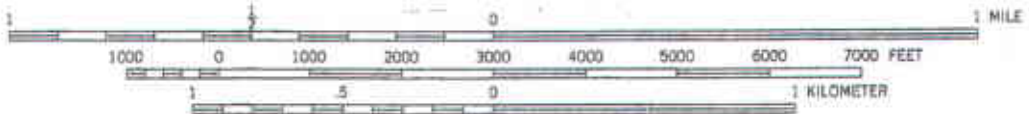
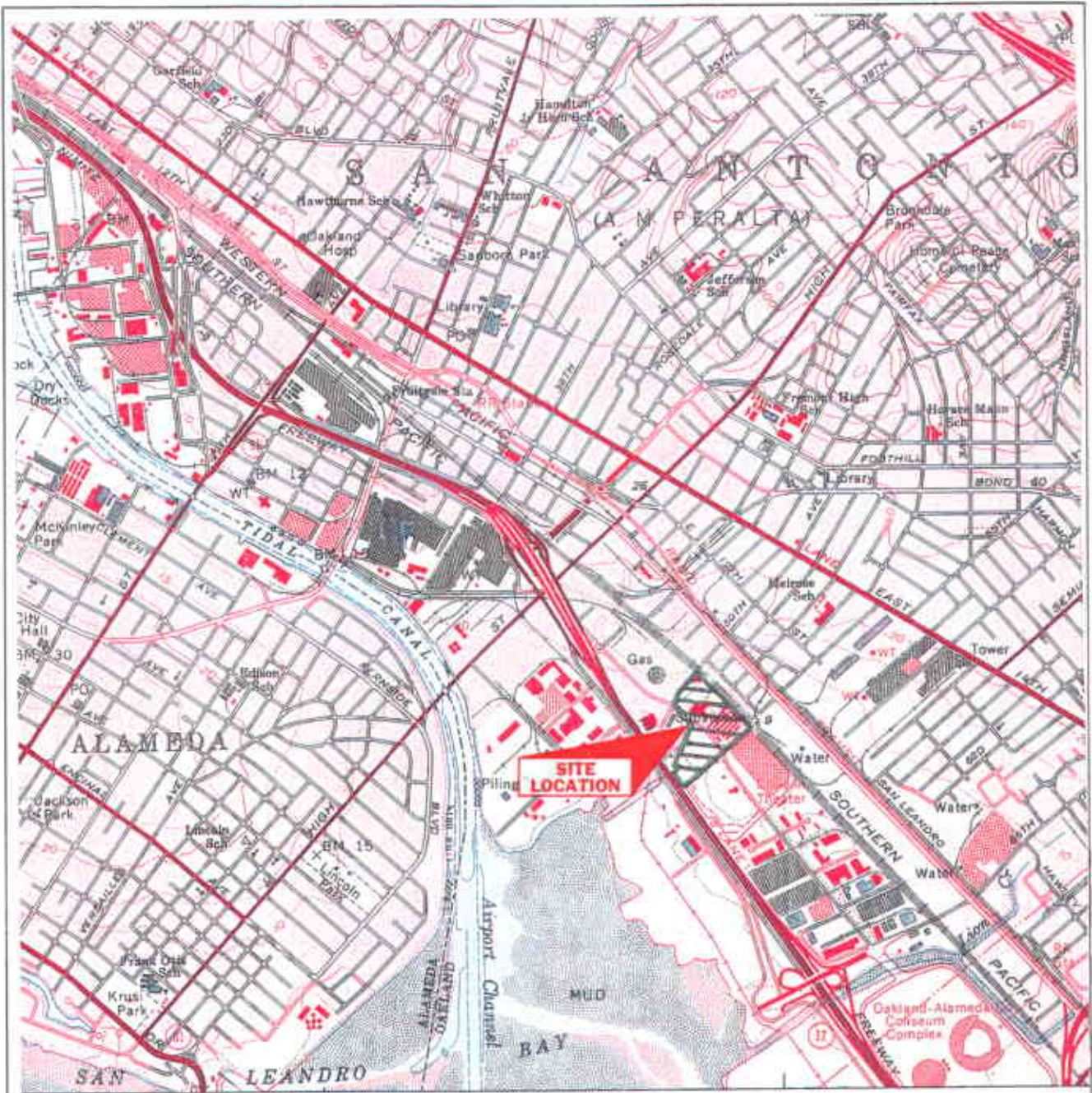


Dwight R. Hoenig
Vice President, Major Project Development
San Francisco Regional Office

This report reviewed by:



Richard W. Day, CEG, CHG
Supervisor, Geosciences/Remediation
Environmental Management and Remediation
San Francisco Regional Office



SITE LOCATION MAP

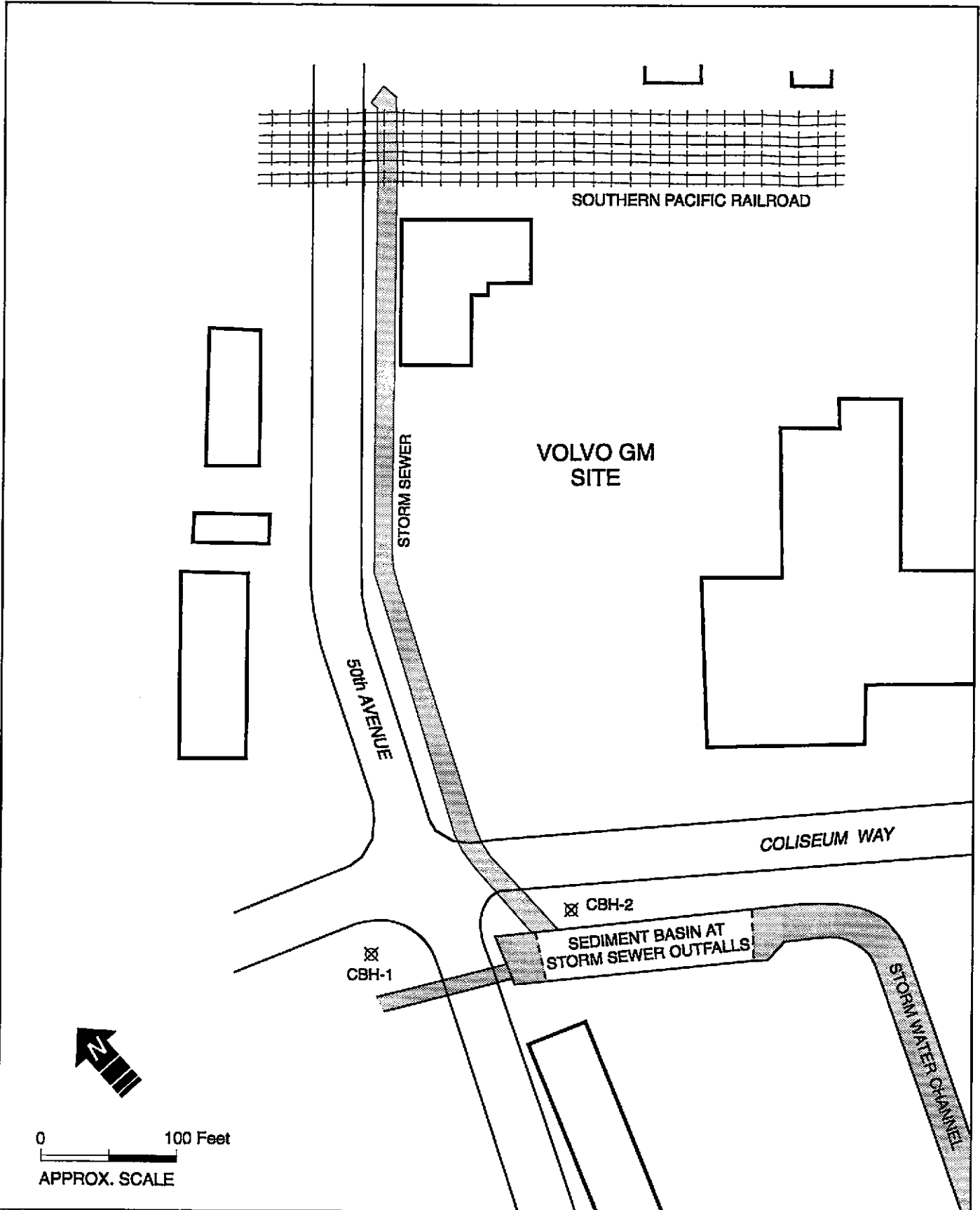
5th AVENUE STORM DRAIN
 OAKLAND, CALIFORNIA
 Clayton Project No. 70-97203.00 500

Figure

1

02/27/97
 FIG500.CDR

Clayton
 ENVIRONMENTAL
 CONSULTANTS



LEGEND:	
⊗	Groundwater Grab Sampling Location
CBH-1	

GROUNDWATER GRAB SAMPLE LOCATIONS
 50th AVENUE STORM DRAIN
 OAKLAND, CALIFORNIA
 Clayton Project No.70-97203.00.503

Figure
2
 03/03/97
 VOLVO.CDR

Clayton
 ENVIRONMENTAL CONSULTANTS

APPENDIX A

GEOPROBE SAMPLING PROTOCOLS

**CLAYTON ENVIRONMENTAL CONSULTANTS, INC.
GEOPROBE SAMPLING
FIELD PROTOCOL**

1.0 GEOPROBE SAMPLING PROCEDURES

The borings were drilled using a combination of hand excavation through the upper fill material (2.5 feet) and Geoprobe drilling in the zone of interest. Prior to first use, all sampling equipment was washed with a brush and non-phosphate detergent and rinsed with distilled or de-ionized water. Sampling equipment was also decontaminated between borings

Soil cuttings or samples were examined by a geologist for soil type and visible contamination and classified according to the Uniform Soil Classification System. These observations were recorded on the boring logs.

Groundwater grab samples were obtained by installing a precleaned 3/4"-diameter casing with 0.010" factory slot in the Geoprobe boring and bailing samples from the casing using a precleaned Teflon or stainless steel bailer.

2.0 SAMPLE CONTROL PROCEDURES

Each sample container was labeled with the following information at the time of collection:

- Facility name and location
- Sample number indicating location and depth
- Analytical parameters
- Date of sample collection
- Name of sampler

The sample containers were then labeled and those to be analyzed offsite were packaged for shipment. Samples were placed in coolers for storage and shipment and maintained at about 4° centigrade. The samples were delivered to a State of California-certified laboratory. The chain-of-custody procedures described below were followed.

3.0 CHAIN-OF-CUSTODY

Samples sent offsite for analyses followed proper chain-of-custody procedures to ensure the legal defensibility of each sample. To establish the documentation necessary to trace sample possession from the time of collection, a chain-of-custody record must be completely filled out and, at a minimum, included the following for each sample:

- Sample number
- Date of sampling
- Place and address of collection
- Inclusive dates of possession
- Signature of collector
- Persons involved in the chain of possession
- Waste type

APPENDIX B

BORING LOGS

LOG OF
EXPLORATORY BORING

Project No: 69998.00 Date: 10/11/96
Client: LEMPRES Driller: PLS/RS
Location: LEMPRES
Logged By: PLS

BORING
NO.
CBH-1
Sheet of

Field Location of Boring: WEST CORNER
OF COLASIA WALK AND 50TH
AVE N 12' FROM CURB.

Drilling Method: HAND METHODS
Hole Diameter: SEE LEFT COLUMN

Ground Elevation: Datum:

Casing Installation Data: TEMPORARY 3/4" SCH 40 PVC.

BACK + SHOVEL
(12" DIA)
HAND
POWER
UGER
CHASED BY
HAND
AUGER
(2 1/2" DIA)
HAND
AUGER
(2" DIA)
HAND
AUGER
(1" DIA)

Drilling Rate (ft/min)	Drilling Method	DEPTH (ft)	SAMPLE	Soil Group Symbol (USCS)	Lithographic Symbol	DESCRIPTION
		1				SANDY SILT; BROWN WITH VARIABLE AMOUNTS OF GRAVEL, SOME GRAVEL LAYERS (AGGREGATE BASE ROCK?) DRY
		2				
		3				
		4				
		5				SLIGHTLY MOIST.
		6				NO CUTTINGS
		7				
		8				
		9				SILTY CLAY; DARK GRAY BROWN, MOIST
		10	X			CLAY; DARK OLIVE BROWN, OIL GRAVEL AND COARSE GRAIN SAND, PLASTIC, WET MOIST
		11	X			
		12	X			SAND, BROWN TO DARK REDDISH BROWN, WET, FINE TO MEDIUM GRAIN
		13	X			
		14	X			CLAY; DARK OLIVE BROWN; PLASTIC, WET
		15	X			
		16		TD=15'		3/4" TEMPORARY WELL INSTALLED USING NEW 0.010 FACTORY SLOT SCH 40 FLUSH THREAD CASING, SCREEN 10-15' BLANK 0-10'. WELL CASING REMOVED AFTER GROUNDWATER GRAB SAMPLING AND BOREHOLE WAS TRIMMED FULL OF NEAT GROUT. GW SAMPLE WAS OBTAINED
		17				
		18				

LOG ASSEMBLED FROM NOTES AND SAMPLES ON 11/5/96 WITH A COMPLETELY NEW Teflon GAILER.

LOG OF EXPLORATORY BORING

Project No: **699018**
 Client: **LEWIS & WATSON**
 Location: **10/11/96**
 Logged By: **PLS**
 Date: **10/11/96**
 Driller: **PLS/RS**

BORING NO. **CBH-2**
 Sheet of

Field Location of Boring: **SOUTH CORNER OF COLASINA WAY AND 50th AVE ~ 12' FROM CURB.**

Drilling Method: **HAND METHODS**
 Hole Diameter: **SEE LEFT COLUMN**

Ground Elevation: Datum:

Casing Installation Data: **TEMPORARY 3/4" SCH 40 PVC.**

SHOVEL (12" DIA)
 HAND POWER
 CASED BY
 HAND AUGER (1 1/2" DIA)
 WIRE AUGER (2" DIA)
 SHOVEL (1" DIA)

Drilling Rate (ft/min)	Soil Group Symbol (use)	Lithographic Symbol	DEPTH (ft)	SAMPLE	DESCRIPTION
			1		SANDY SILT; BROWN WITH VARIABLE AMOUNTS OF GRAVEL, SOME GRAVEL LAYERS (AGGREGATE BASE ROCK?) DRY
			2		
			3		
			4		
			5		SLIGHTLY MOIST.
			6		NO CORINGS
			7		
			8		
			9		
			10		CLAY; DARK OLIVE BROWN, OIL. GRAVEL AND COARSE GRAIN SAND, PLASTIC, VERY MOIST
			11		
			12		SAND; DARK BROWN, FINE TO MEDIUM GRAIN WET
			13		SILTY CLAY; DARK GRAY BROWN, WET, SOME GRAVEL
			14		CLAY; DARK OLIVE GRAY, PLASTIC, DRY
			15		SILTY CLAY; DARK GRAY BROWN, WET, SOME GRAVEL
			16	TD=15'	3/4" TEMPORARY WALL INSTALLED USING NEW O. DID FACTORY SLOT SCH 40 FLUSH TREAD CASING, SCREEN 15-15' BLANK 0-10'. THE CASING REMOVED AFTER GROUNDWATER GRAB SAMPLING AND BOREHOLE WAS TRIMMED FULL OF NEAT GROUT. GW SAMPLE WAS OBTAINED
			17		
			18		

APPENDIX C

**LABORATORY ANALYTICAL REPORT AND CHAIN-OF-
CUSTODY DOCUMENTATION**

CHROMALAB, INC.

Environmental Services (SDB)

October 12, 1996

Submission #: 9610153

CLAYTON ENVIRONMENTAL CONSULT.

Atten: Dwight Hoenig

Project: Not provided
Received: October 11, 1996

Project#: 69998.00

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.
Method: EPA 3005A/6010A/7470A

Client Sample ID: CBH-1

Spl#: 103449

Matrix: WATER

Extracted: October 11, 1996

Sampled: October 11, 1996

Run#: 3568

Analyzed: October 11, 1996

ANALYTE	RESULT (mg/L)	REPORTING LIMIT (mg/L)	BLANK RESULT (mg/L)	BLANK SPIKE (%)	DILUTION FACTOR
ANTIMONY	0.012	0.0050	N.D.	108	1
ARSENIC	N.D.	0.0050	N.D.	108	1
BARIUM	0.15	0.0050	N.D.	107	1
BERYLLIUM	N.D.	0.0050	N.D.	106	1
CADMIUM	N.D.	0.0020	N.D.	106	1
CHROMIUM	N.D.	0.0050	N.D.	108	1
COBALT	0.034	0.0050	N.D.	107	1
COPPER	0.010	0.0050	N.D.	106	1
LEAD	N.D.	0.0050	N.D.	108	1
MOLYBDEMUM	0.022	0.0050	N.D.	107	1
NICKEL	0.067	0.0050	N.D.	108	1
SELENIUM	0.032	0.0050	N.D.	108	1
SILVER	N.D.	0.0050	N.D.	106	1
THALLIUM	0.0092	0.0050	N.D.	109	1
VANADIUM	N.D.	0.0050	N.D.	105	1
ZINC	N.D.	0.010	N.D.	107	1
MERCURY	N.D.	0.00050	N.D.	91.5	1

Mercury extracted on October 11, 1996 and analyzed on October 11, 1996.


Shafi Barezkai
Chemist


John S. Labash
Inorganics Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 12, 1996

Submission #: 9610153

CLAYTON ENVIRONMENTAL CONSULT.

Atten: Dwight Hoenig

Project: Not provided
Received: October 11, 1996

Project#: 69998.00

re: One sample for Soluble Miscellaneous Metals with Mercury analysis.
Method: EPA 3005A/6010A/7470A

Client Sample ID: CBH-2

Spl#: 103450

Matrix: WATER

Extracted: October 11, 1996

Sampled: October 11, 1996

Run#: 3568

Analyzed: October 11, 1996

ANALYTE	RESULT (mg/L)	REPORTING LIMIT (mg/L)	BLANK RESULT (mg/L)	BLANK SPIKE (%)	DILUTION FACTOR
ANTIMONY	N.D.	0.0050	N.D.	108	1
ARSENIC	N.D.	0.0050	N.D.	108	1
BARIUM	0.039	0.0050	N.D.	107	1
BERYLLIUM	N.D.	0.0050	N.D.	106	1
CADMIUM	N.D.	0.0020	N.D.	106	1
CHROMIUM	N.D.	0.0050	N.D.	108	1
COBALT	0.0073	0.0050	N.D.	107	1
COPPER	N.D.	0.0050	N.D.	106	1
LEAD	N.D.	0.0050	N.D.	108	1
MOLYBDENUM	0.063	0.0050	N.D.	107	1
NICKEL	0.022	0.0050	N.D.	108	1
SELENIUM	0.068	0.0050	N.D.	108	1
SILVER	N.D.	0.0050	N.D.	106	1
THALLIUM	N.D.	0.0050	N.D.	109	1
VANADIUM	N.D.	0.0050	N.D.	105	1
ZINC	0.034	0.010	N.D.	107	1
MERCURY	N.D.	0.00050	N.D.	91.5	1

Mercury extracted on October 11, 1996 and analyzed on October 11, 1996.


Shafi Barezai
Chemist


John S. Labash
Inorganics Supervisor

CHROMALAB, INC.
SAMPLE RECEIPT CHECKLIST

Client Name CLAYTON

Date/Time Received 10/11/96 1700

Project 6998.08

Received by C Rowley Date / Time

Reference/Subm # 30189/9610153

Carrier name _____

Checklist completed by: C Rowley 10/14/96
Signature Date

Logged in by CR 10/11/96
Matrix H2O Initials / Date

- Shipping container in good condition? NA Yes No
- Custody seals present on shipping container? Intact Broken Yes No
- Custody seals on sample bottles? Intact Broken Yes No
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Samples intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- VOA vials have zero headspace? NA Yes No
- Trip Blank received? NA Yes No
- All samples received within holding time? Yes No
- Container temperature? 18.5°C
- pH upon receipt _____ pH adjusted _____ Check performed by: _____ NA

Any NO response must be detailed in the comments section below. If items are not applicable, they should be marked NA.

Client contacted? _____ Date contacted? _____

Person contacted? _____ Contacted by? _____

Regarding? _____

Comments: _____

Corrective Action: _____

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

October 15, 1996

Mr. Dwight Hoenig
CLAYTON ENVIRONMENTAL CONS.
1252 Quarry Lane
Pleasanton, CA 94566

Client Ref.: 69998.00
Clayton Project No.: 96101.80

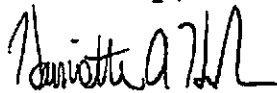
Dear Mr. Hoenig:

Attached is our analytical laboratory report for the samples received on October 11, 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 November 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
Clayton Environmental Consultants, Inc.
Client Reference: 69998.00
Clayton Project No. 96101.80

Sample Identification: See Below
 Lab Number: 9610180
 Sample Matrix/Media: WATER
 Method Reference: EPA 150.1
 Date Received: 10/11/96
 Date Analyzed: 10/11/96

Lab Number	Sample Identification	Date Sampled	pH (S.U.)	Method Detection Limit (S.U.)
-01	CBH-1	10/11/96	6.9	--
-02	CBH-2	10/11/96	7.3	--

ND: Not detected at or above limit of detection
 --: Information not available or not applicable

155/103447-103450

**REQUEST FOR LABORATORY
ANALYTICAL SERVICES**



IMPORTANT

Date Results Requested: 10/12/96
 Rush Charges Authorized? Yes No
 Phone or Fax Results

Page ___ of ___

For Clayton Use Only
Clayton Lab Project No.

REPORT RESULTS TO	Name <u>DWIGHT HOENIG</u>	Client Job No. <u>69998.00</u>	Purchase Order No. <u>69998.00</u>
	Company <u>CLAYTON</u>	Dept.	Name
	Mailing Address <u>12 1/2 QUARRY</u>		Company <u>CLAYTON</u>
	City, State, Zip <u>PLACAS CA</u>		Address
Telephone No. <u>510 426-2600</u>	FAX No. <u>(510) 881-8802</u>	City, State, Zip <u>PLACAS.</u>	

Special Instructions and/or specific regulatory requirements:
 (method, limit of detection, etc.)
FILTER PRIOR TO ANALYSIS. FAX RESULTS TO DWIGHT HOENIG @ (510) 881-8802

Samples are: (check if applicable)
 Drinking Water
 Groundwater
 Wastewater

* 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
----------------------	------------------

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX/MEDIA	ANAL VOLUME (specify units)
<u>CBH-1</u>	<u>10/4/96</u>	<u>1500</u>	<u>WATER</u>	<u>500ml</u>
<u>CBH-2</u>	<u>10/4/96</u>	<u>1530</u>		<u>↓</u>

SUBM #: 9610153 REP: MV
 CLIENT: CLAYTON
 DUE: 10/14/96
 REF #: 30189

RUSH

CHAIN OF CUSTODY	Collected by: <u>PETER SCHARFER</u> (print)	Collector's Signature:
	Relinquished by: <u>[Signature]</u>	Date/Time <u>10/11/96 1700</u>
	Relinquished by:	Date/Time
	Method of Shipment:	Date/Time <u>10/11/96 1700</u>
Authorized by: _____ Date _____	Sample Condition Upon Receipt: <input type="checkbox"/> Acceptable <input type="checkbox"/> Other (explain)	

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

Detroit Regional Lab 22345 Roethel Drive Novi, MI 48375 (800) 806-5887 (810) 344-1770 FAX (810) 344-2655	Atlanta Regional Lab 400 Chastain Center Blvd., N.W., Suite 490 Kennesaw, GA 30144 (800) 252-9919 (770) 499-7500 FAX (770) 423-4990	San Francisco Regional Lab 1252 Quarry Lane Pleasanton, CA 94566 (800) 294-1755 (510) 426-2657 FAX (510) 426-0108	Seattle Regional Lab 4836 E. Marginal Way S., Suite 215 Seattle, WA 98134 (800) 568-7755 (208) 763-7364 FAX (208) 763-4189
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DISTRIBUTION:
 White = Clayton Laboratory
 Yellow = Clayton Accounting
 Pink = Client Copy