SOIL SAMPLING FOR SAN LEANDRO STREET PROJECT

For The Property Located At
4701 San Leandro Street
Oakland, California

Prepared For:

Mr. Francis Collins
6050 Hollis Street
Emeryville, CA 94608

853-871

Prepared By:

Sequoia Environmental Consulting Services
1111 Aladdin Avenue, Suite B
San Leandro, CA 94577
(510) 614-1900
(510) 614-2923

Sequoia Project Code SLP-01
November 19, 1993

SEQUOIA
ENVIRONMENTAL
Consulting Services

1111 Aladdin Ave.
San Leandro, CA 94577
(510) 614-1900
(510) 614-2923 FAX

November 15, 1993

Mr. Francis Collins
6050 Hollis Street
Emeryville, CA 94608

RE: San Leandro Street Project
4701 San Leandro Street
Oakland, California

Dear Mr. Collins:

This letter-report documents the activities performed at the referenced site. The purpose of the activities was to satisfy the Alameda County Environmental Health Agency's requirements for the final closure of the subject site. The activities performed at the site were the collection of soil samples from the soil pile, and sampling the area between the location of two 10,000-gallon tanks and the immediate building, (see Figure 1 for sampling locations). The samples collected from the soil pile were made into two composite samples under laboratory conditions. The three soil samples were analyzed for petroleum hydrocarbons, chlorinated hydrocarbons and metals. These activities were performed in accordance with the workplan of September 21, 1993. The workplan was approved by the Alameda County Environmental Health Agency.

SOIL SAMPLING

On October 28, 1993, Sequoia Environmental personnel collected eight soil samples from the soil pile (SS-1, SS-2, SS-3, SS-4, SS-5, SS-6, SS-7 and SS-8). The soil pile measures about 25 feet long, 12 feet wide and 7 feet high. The soil samples were collected by hand auguring to a depth of about 3 to 5 feet into the soil pile. The depth of each hole depends on the thickness of the pile. The samples were collected with a core sampler containing a brass sleeve. One soil

sample, SS-C, was also collected from the area between the location of two 10,000-gallon tanks and the immediate building. See Figure 1 for detailed sampling locations. The sample was collected after hand auguring to a depth of about 9 feet below ground surface. All soil samples were collected with a core sampler that contained a brass sleeve. With an attached hammer, the core sampler was driven into the soil pile, or into the ground. After each sampling run the ends of the brass sleeve were covered with a Teflon foil, Teflon caps and sealed with a duct tape. Before each sampling run the core sampler was washed in a solution of sodium triphosphate, and double rinsed in water and distilled water. The soil samples were place on ice while awaiting transportation to a state-certified American Environmental Network, in Pleasant Hill, California. A visual observation of the soil samples indicated no presence of free product, and no hydrocarbon odor.

LABORATORY ANALYSES AND RESULTS

Under laboratory conditions the eight soil samples collected from the soil pile were made into two composite samples, (SS-A and SS-B). The two composite samples, and sample SS-C were analyzed for total petroleum hydrocarbons as gasoline, (TPH-G), and as diesel (TPH-D), oil and grease, halogenated volatile organics, aromatic hydrocarbons as benzene, toluene, ethyl benzene and xylenes (BTEX), and California Code of Regulations metals. All analyses were performed with the appropriate EPA Methods.

Laboratory results showed that there were presence of hydrocarbons in the range of C_{16} to C_{40}. The values were 500, 2,000 and 40 ppm in sample, SS-A, SS-B and SS-C respectively. With the exception of Antimony, Selenium and Thallium, detectable levels of other metals were found in all the samples, (background levels were not known or determined). TPH-D, TPH-G, BTEX, and halogenated volatile organics were non-detect in all the soil samples analyzed. Asummary of the laboratory results are contained in Table 1. Detailed laboratory results are attached

CONCLUSION

The initial presence of halogenated volatile organics in the area between the location of two 10,000-gallon tanks and the immediate building may have been a surface spill. Due to the volatile nature of the compounds they may have volatilized. Due to the non-detection of halogenated volatile organics in the soil pile samples, it appears that the compounds may have been acted upon by native occurring bacteria or may have volatilized due to the lengthy exposure of the soil pile. The presence of heavy oil in the range of C_{16} to C_{40} may due to

TABLE 1

San Leandro Street Project
4701 San Leandro Street
Oakland, California
October 28, 1993

COMPOUND	SAMPLE I.D		
	SS-A	SS-B	SS-C
TPH-D	N/D	N/D	N/D
TPH-G	N/D	N/D	N/D
BTEX	N/D	N/D	N/D
Halogenated Hydrocarbons (CLCH)	N/D	N/D	N/D
C_{16} to C_{40} (Heavy Oil)	500	2,000	40
California Metals			
Silver	0.2	0.3	N/D
Arsenic	25	28	4
Barium	230	300	31
Beryllium	0.2	0.1	N/D
Cadmium	0.7	0.7	N/D
Cobalt	12	13	7.5
Chromium	66	76	33
Copper	42	430	17
Mercury	0.34	0.20	N/D
Molybdenum	0.4	0.4	0.5
Nickel	93	92	28
Lead	2,100	5,800	200
Antimony	N/D	N/D	N/D
Selenium	N/D	N/D	N/D
Thallium	N/D	N/D	N/D
Vanadium	54	58	26
Zinc	150	350	43

All laboratory Results are in ppm.

the combination of mineral oil, and natural oil in the soil such as vegetable and fatty oils. However, during the soil sampling no hydrocabon odor was perceived.

Please fell free to call if you have any questions about the soil sampling activities or the laboratory results. You can reach me at (510) 614 - 1900.

Sincerely,
Sequoia Environmental Consulting Services

Chris 'Wabuzoh
Senior Geologist
REA #02842

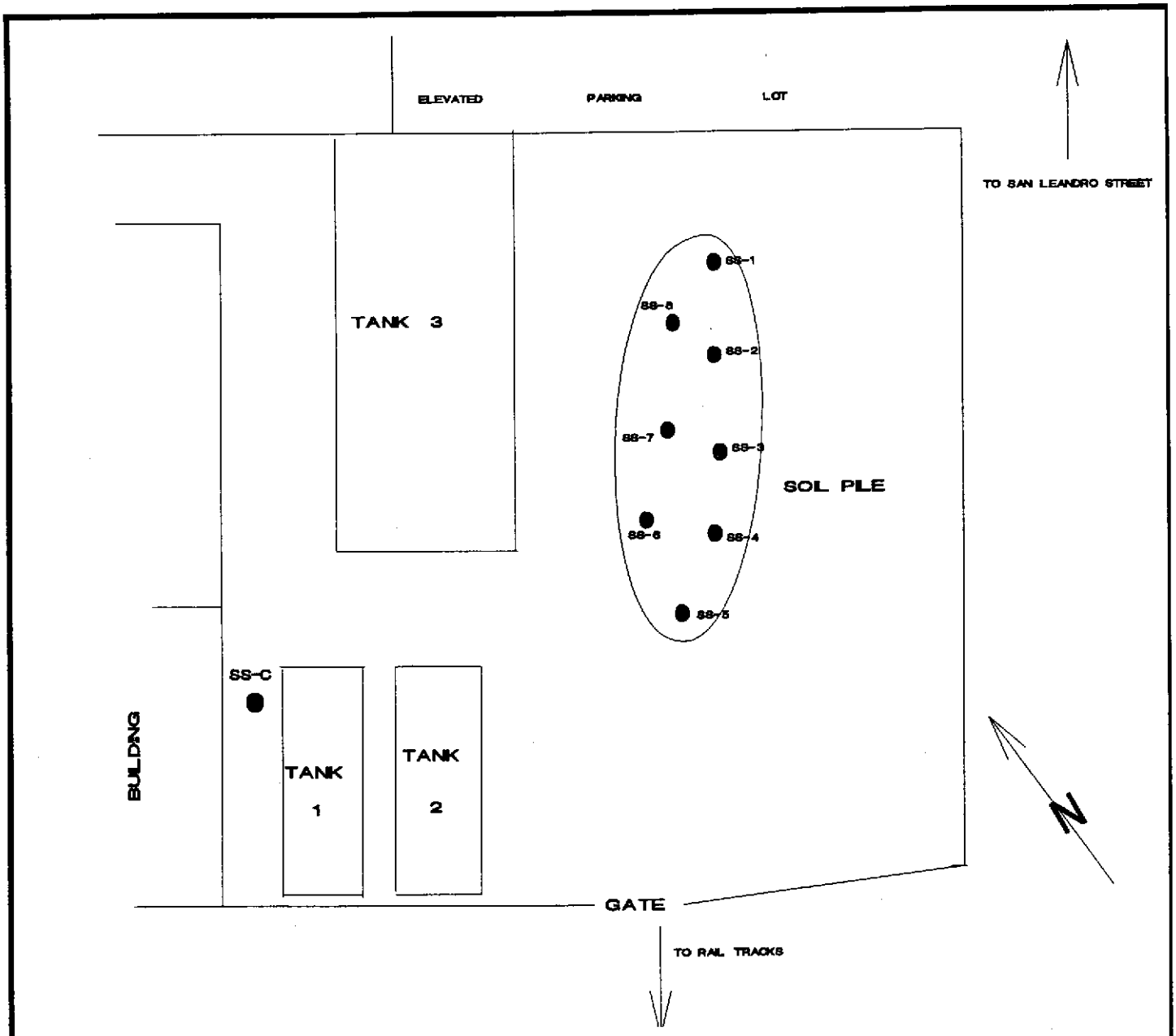

FIGURE 1

MAP TYPE: SITE PLAN	● SAMPLE LOCATION
	SCALE: 1" : 10'
ADDRESS: 4701 San Leandro Street, Oakland, California	JOB CODE: SLPROJ November 15, 1993

SEQUOIA ENVIRONMENTAL CONSULTING SERVICES / SAN LEANDRO, CA / (510) 614-1900

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 94523-001

SEQUOIA ENVIRONMENTAL
1111 ALADDIN AVE. STE. B
SAN LEANDRO, CA 94577

ATTN: CHRIS WABUZOH

CLIENT PROJ. ID: SLPJ-01

REPORT DATE: 11/17/93

DATE SAMPLED: 10/28/93

DATE RECEIVED: 10/29/93

AEN JOB NO: 9310316

PROJECT SUMMARY:

On October 29, 1993, this laboratory received nine (9) soil samples.

Client requested one (1) sample be analyzed for CCR 17 Metals and eight samples be composited into two (2) samples and be analyzed for CCR 17 Metals. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.

Andrew Bradeen for
Larry Klein
General Manager

Results FAXed 11/08/93

SEQUOIA ENVIRONMENTAL

SAMPLE ID: SS-A
AEN LAB NO: 9310316-01
AEN WORK ORDER: 9310316
CLIENT PROJ. ID: SLPJ-01

DATE SAMPLED: 10/28/93
DATE RECEIVED: 10/29/93
REPORT DATE: 11/17/93

ANALYTE		METHOD/ CAS#	RESULT		REPORTING LIMIT	UNITS	DATE ANALYZED
CCR 17 Metals in Soil							
Ag	Silver	EPA 6010	0.2	*	0.1	mg/Kg	11/03/93
As	Arsenic	EPA 7060	25	*	1	mg/Kg	11/03/93
Ba	Barium	EPA 6010	230	*	3	mg/Kg	11/03/93
Be	Beryllium	EPA 6010	0.2	*	0.1	mg/Kg	11/03/93
Cd	Cadmium	EPA 6010	0.7	*	0.1	mg/Kg	11/03/93
Co	Cobalt	EPA 6010	12	*	0.3	mg/Kg	11/03/93
Cr	Chromium	EPA 6010	66	*	1	mg/Kg	11/03/93
Cu	Copper	EPA 6010	42	*	0.5	mg/Kg	11/03/93
Hg	Mercury	EPA 7471	0.34	*	0.06	mg/Kg	11/04/93
Mo	Molybdenum	EPA 6010	0.4	*	0.3	mg/Kg	11/03/93
Ni	Nickel	EPA 6010	93	*	1	mg/Kg	11/03/93
Pb	Lead	EPA 6010	2,100	*	1	mg/Kg	11/03/93
Sb	Antimony	EPA 6010	ND		1	mg/Kg	11/03/93
Se	Selenium	EPA 7740	ND		2	mg/Kg	11/03/93
Tl	Thallium	EPA 6010	ND		1	mg/Kg	11/03/93
V	Vanadium	EPA 6010	54	*	1	mg/Kg	11/03/93
Zn	Zinc	EPA 6010	150	*	1	mg/Kg	11/03/93

ND = Not detected
* = Indicates value above reporting limit

SEQUOIA ENVIRONMENTAL

SAMPLE ID: SS-B
AEN LAB NO: 9310316-02
AEN WORK ORDER: 9310316
CLIENT PROJ. ID: SLPJ-01

DATE SAMPLED: 10/28/93
DATE RECEIVED: 10/29/93
REPORT DATE: 11/17/93

ANALYTE		METHOD/ CAS#	RESULT		REPORTING LIMIT	UNITS	DATE ANALYZED
CCR 17 Metals in Soil							
Ag	Silver	EPA 6010	0.3	*	0.1	mg/Kg	11/03/93
As	Arsenic	EPA 7060	28	*	1	mg/Kg	11/03/93
Ba	Barium	EPA 6010	300	*	3	mg/Kg	11/03/93
Be	Beryllium	EPA 6010	0.1	*	0.1	mg/Kg	11/03/93
Cd	Cadmium	EPA 6010	0.7	*	0.1	mg/Kg	11/03/93
Co	Cobalt	EPA 6010	13	*	0.3	mg/Kg	11/03/93
Cr	Chromium	EPA 6010	76	*	1	mg/Kg	11/03/93
Cu	Copper	EPA 6010	430	*	0.5	mg/Kg	11/03/93
Hg	Mercury	EPA 7471	0.28	*	0.06	mg/Kg	11/04/93
Mo	Molybdenum	EPA 6010	0.4	*	0.3	mg/Kg	11/03/93
Ni	Nickel	EPA 6010	92	*	1	mg/Kg	11/03/93
Pb	Lead	EPA 6010	5,800	*	1	mg/Kg	11/03/93
Sb	Antimony	EPA 6010	ND		1	mg/Kg	11/03/93
Se	Selenium	EPA 7740	ND		2	mg/Kg	11/03/93
Tl	Thallium	EPA 6010	ND		1	mg/Kg	11/03/93
V	Vanadium	EPA 6010	58	*	1	mg/Kg	11/03/93
Zn	Zinc	EPA 6010	350	*	1	mg/Kg	11/03/93

ND = Not detected
* = Indicates value above reporting limit

SEQUOIA ENVIRONMENTAL

SAMPLE ID: SS-C
AEN LAB NO: 9310316-03
AEN WORK ORDER: 9310316
CLIENT PROJ. ID: SLPJ-01

DATE SAMPLED: 10/28/93
DATE RECEIVED: 10/29/93
REPORT DATE: 11/17/93

ANALYTE		METHOD/ CAS#	RESULT		REPORTING LIMIT	UNITS	DATE ANALYZED
CCR 17 Metals in Soil							
Ag	Silver	EPA 6010	ND		0.1	mg/Kg	11/03/93
As	Arsenic	EPA 7060	4	*	1	mg/Kg	11/03/93
Ba	Barium	EPA 6010	31	*	3	mg/Kg	11/03/93
Be	Beryllium	EPA 6010	ND		0.1	mg/Kg	11/03/93
Cd	Cadmium	EPA 6010	ND		0.1	mg/Kg	11/03/93
Co	Cobalt	EPA 6010	7.5	*	0.3	mg/Kg	11/03/93
Cr	Chromium	EPA 6010	33	*	1	mg/Kg	11/03/93
Cu	Copper	EPA 6010	17	*	0.5	mg/Kg	11/03/93
Hg	Mercury	EPA 7471	ND		0.06	mg/Kg	11/04/93
Mo	Molybdenum	EPA 6010	0.5	*	0.3	mg/Kg	11/03/93
Ni	Nickel	EPA 6010	28	*	1	mg/Kg	11/03/93
Pb	Lead	EPA 6010	200	*	1	mg/Kg	11/03/93
Sb	Antimony	EPA 6010	ND		1	mg/Kg	11/03/93
Se	Selenium	EPA 7740	ND		2	mg/Kg	11/03/93
Tl	Thallium	EPA 6010	ND		1	mg/Kg	11/03/93
V	Vanadium	EPA 6010	26	*	1	mg/Kg	11/03/93
Zn	Zinc	EPA 6010	43	*	1	mg/Kg	11/03/93

ND = Not detected
* = Indicates value above reporting limit

QUALITY CONTROL DATA

MATRIX: SOIL

AEN JOB NO: 9310316

CLIENT PROJ. ID: SLPJ-01

SAMPLE SPIKED: SAND

METHOD SPIKE RECOVERY SUMMARY

COMPOUND	INST./ METHOD	SAND BLANK RESULT	TRUE VALUE	OBSERVED RECOVERIES (mg/kg) MS	MSD	% REC.	RPD	QC CONTROL LIMITS % REC. LIMIT	RPD LIMIT
Ag, Silver	ICP/6010	ND	10	6.45	6.56	65	2	50-150	20
As, Arsenic	4000/7060	ND	20	20.2	21.5	104	6	79-122	10
Ba, Barium	ICP/6010	ND	200	194	197	98	2	75-125	20
Cd, Cadmium	ICP/6010	ND	10	9.42	9.49	95	<1	75-125	20
Cr, Chromium	ICP/6010	ND	50	50.2	51.2	101	2	75-125	20
Cu, Copper	ICP/6010	ND	50	49.2	50.0	99	2	75-125	20
Hg, Mercury	Hg/7471	ND	0.4	0.399	0.399	100	<1	80-120	15
Ni, Nickel	ICP/6010	ND	50	49.8	50.7	101	2	75-125	20
Pb, Lead	ICP/6010	ND	50	49.0	50.1	99	2	75-125	20
Se, Selenium	4000/7740	ND	40	38.7	41.5	100	7	73-126	14
Zn, Zinc	ICP/6010	ND	50	49.1	50.0	99	2	75-125	20

MS = Method Spike
MSD = Method Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected
< = Less Than

*** END OF REPORT ***

Reporting Information:

1. Client: Sequoia Environmental
Address: 1111 Aladdin Ave, S-B
San Leandro, CA 94577
Contact: Chris Wabuzoh
Alt. Contact: _____

American Environmental Network
3440 Vincent Road, Pleasant Hill, CA 94523
Phone (510) 930-9090
FAX (510) 930-0256

AEN

Page 1 of 1

REQUEST FOR ANALYSIS / CHAIN OF CUSTODY

Lab Job Number: 9310316
Lab Destination: _____
Date Samples Shipped: _____
Lab Contact: _____
Date Results Required: _____
Date Report Required: _____
Client Phone No.: _____
Client FAX No.: _____

Address Report To:

2. Sequoia Environmental
1111 Aladdin Ave, Suite B
San Leandro, CA 94577

Send Invoice To:

3. Same As 2

Send Report To: (1) or 2 (Circle one)

Please issue separate report.

Client P.O. No.: _____ Client Project I.D. No.: SLPJ-01

Sample Team Member (s) _____

Lab Number	Client Sample Identification	Air Volume	Date/ Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	ANALYSIS: Cpam-17	Comments / Hazards
01A	SS-1 } Composite		10-28	Soil	Ice	1	HC		Composite Soil
	SS-2		10-28	Soil	Ice	1	HC		Samples SS-1, SS-2
	SS-3 → SS-A		10-28	Soil	Ice	1	HC	✓	SS-3 & SS-4 as
↓	SS-4		10-28	Soil	Ice	1	HC		SS-A
02A	SS-5 } Composite		10-28	Soil	Ice	1	HC		Composite SS-5, SS-6
	SS-6		10-28	Soil	Ice	1	HC		SS-7 & SS-8 As
	SS-7 → SS-B		10-28	Soil	Ice	1	HC	✓	one Sample
↓	SS-8		10-28	Soil	Ice	1	HC		SS-B
03A	SS-C		10-28	Soil	Ice	1	HC	✓	

		DATE	TIME
Relinquished by: (Signature)	Chris Wabuzoh	10/29/93	0810
Relinquished by: (Signature)	Dean Peters	10/29/93	1028
Relinquished by: (Signature)		DATE	TIME
Method of Shipment			

		DATE	TIME
Received by: (Signature)	Dean Peters	10/29/93	0810
Received by: (Signature)	Gina Gillespie	10-29-93	1038
Received by: (Signature)		DATE	TIME
Lab Comments			

*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter
4) PVC filter, diam. _____ pore size _____ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample
10) Other _____ 11) Other _____

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 94523-001

SEQUOIA ENVIRONMENTAL
1111 ALADDIN AVE. STE. B
SAN LEANDRO, CA 94577

ATTN: CHRIS WABUZOH

CLIENT PROJ. ID: SLPJ-01

REPORT DATE: 11/17/93

DATE SAMPLED: 10/28/93

DATE RECEIVED: 10/29/93

AEN JOB NO: 9310316

PROJECT SUMMARY:

On October 29, 1993, this laboratory received nine (9) soil samples.

Client requested one (1) sample be analyzed for organic parameters and eight samples be composited into two (2) samples and be analyzed for organic parameters. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.

Andrew Bradley for
Larry Klein
General Manager

Results FAXed 11/10/93

SEQUOIA ENVIRONMENTAL

SAMPLE ID: SS-A
AEN LAB NO: 9310316-01
AEN WORK ORDER: 9310316
CLIENT PROJ. ID: SLPJ-01

DATE SAMPLED: 10/28/93
DATE RECEIVED: 10/29/93
REPORT DATE: 11/17/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	**EPA 8020**				
Benzene	71-43-2	ND	5	ug/Kg	11/10/93
Toluene	108-88-3	ND	5	ug/Kg	11/10/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	11/10/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	11/10/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	11/10/93
#Extraction for Diesel/Oil	**EPA 3550**	-		Extrn Date	11/01/93
TPH as Diesel	**GC-FID**	ND	1	mg/kg	11/05/93
#Soil Extrn for TOG/HCs	**SM 5520EF**	-		Extrn Date	11/08/93
Hydrocarbons	**SM 5520F**	500 *	10	mg/kg	11/09/93
EPA 8010-Soil/Bulk matrix	**EPA 8010**				
Bromodichloromethane	75-27-4	ND	5	ug/Kg	11/09/93
Bromoform	75-25-2	ND	5	ug/Kg	11/09/93
Bromomethane	74-83-9	ND	5	ug/Kg	11/09/93
Carbon Tetrachloride	56-23-5	ND	5	ug/Kg	11/09/93
Chlorobenzene	108-90-7	ND	5	ug/Kg	11/09/93
Chloroethane	75-00-3	ND	5	ug/Kg	11/09/93
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/Kg	11/09/93
Chloroform	67-66-3	ND	5	ug/Kg	11/09/93
Chloromethane	74-87-3	ND	5	ug/Kg	11/09/93
Dibromochloromethane	124-48-1	ND	5	ug/Kg	11/09/93
1,2-Dichlorobenzene	95-50-1	ND	5	ug/Kg	11/09/93
1,3-Dichlorobenzene	541-73-1	ND	5	ug/Kg	11/09/93
1,4-Dichlorobenzene	106-46-7	ND	5	ug/Kg	11/09/93
Dichlorodifluoromethane	75-71-8	ND	5	ug/Kg	11/09/93
1,1-Dichloroethane	75-34-3	ND	5	ug/Kg	11/09/93
1,2-Dichloroethane	107-06-2	ND	5	ug/Kg	11/09/93
1,1-Dichloroethene	75-35-4	ND	5	ug/Kg	11/09/93
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/Kg	11/09/93
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/Kg	11/09/93
1,2-Dichloropropane	78-87-5	ND	5	ug/Kg	11/09/93
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/Kg	11/09/93
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/Kg	11/09/93
Methylene Chloride	75-09-2	ND	5	ug/Kg	11/09/93
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/Kg	11/09/93
Tetrachloroethene	127-18-4	ND	5	ug/Kg	11/09/93
1,1,1-Trichloroethane	71-55-6	ND	5	ug/Kg	11/09/93

SEQUOIA ENVIRONMENTAL

SAMPLE ID: SS-A
AEN LAB NO: 9310316-01
AEN WORK ORDER: 9310316
CLIENT PROJ. ID: SLPJ-01

DATE SAMPLED: 10/28/93
DATE RECEIVED: 10/29/93
REPORT DATE: 11/17/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
1,1,2-Trichloroethane	79-00-5	ND	5	ug/Kg	11/09/93
Trichloroethene	79-01-6	ND	5	ug/Kg	11/09/93
Trichlorofluoromethane	75-69-4	ND	5	ug/Kg	11/09/93
1,1,2Trichlorotrifluoroethane	76-13-1	ND	5	ug/Kg	11/09/93
Vinyl Chloride	75-01-4	ND	5	ug/Kg	11/09/93

Hydrocarbons detected by EPA Method 3550 GCFID in the C16-C40+ range.

ND = Not detected
* = Indicates value above reporting limit

SEQUOIA ENVIRONMENTAL

SAMPLE ID: SS-B
AEN LAB NO: 9310316-02
AEN WORK ORDER: 9310316
CLIENT PROJ. ID: SLPJ-01

DATE SAMPLED: 10/28/93
DATE RECEIVED: 10/29/93
REPORT DATE: 11/17/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	**EPA 8020**				
Benzene	71-43-2	ND	5	ug/Kg	11/10/93
Toluene	108-88-3	ND	5	ug/Kg	11/10/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	11/10/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	11/10/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	11/10/93
#Extraction for Diesel/Oil	**EPA 3550**	-		Extrn Date	11/01/93
TPH as Diesel	**GC-FID**	ND	1	mg/kg	11/05/93
#Soil Extrn for TOG/HCs	**SM 5520EF**	-		Extrn Date	11/08/93
Hydrocarbons	**SM 5520F**	2,000 *	10	mg/kg	11/09/93
EPA 8010-Soil/Bulk matrix	**EPA 8010**				
Bromodichloromethane	75-27-4	ND	5	ug/Kg	11/09/93
Bromoform	75-25-2	ND	5	ug/Kg	11/09/93
Bromomethane	74-83-9	ND	5	ug/Kg	11/09/93
Carbon Tetrachloride	56-23-5	ND	5	ug/Kg	11/09/93
Chlorobenzene	108-90-7	ND	5	ug/Kg	11/09/93
Chloroethane	75-00-3	ND	5	ug/Kg	11/09/93
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/Kg	11/09/93
Chloroform	67-66-3	ND	5	ug/Kg	11/09/93
Chloromethane	74-87-3	ND	5	ug/Kg	11/09/93
Dibromochloromethane	124-48-1	ND	5	ug/Kg	11/09/93
1,2-Dichlorobenzene	95-50-1	ND	5	ug/Kg	11/09/93
1,3-Dichlorobenzene	541-73-1	ND	5	ug/Kg	11/09/93
1,4-Dichlorobenzene	106-46-7	ND	5	ug/Kg	11/09/93
Dichlorodifluoromethane	75-71-8	ND	5	ug/Kg	11/09/93
1,1-Dichloroethane	75-34-3	ND	5	ug/Kg	11/09/93
1,2-Dichloroethane	107-06-2	ND	5	ug/Kg	11/09/93
1,1-Dichloroethene	75-35-4	ND	5	ug/Kg	11/09/93
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/Kg	11/09/93
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/Kg	11/09/93
1,2-Dichloropropane	78-87-5	ND	5	ug/Kg	11/09/93
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/Kg	11/09/93
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/Kg	11/09/93
Methylene Chloride	75-09-2	ND	5	ug/Kg	11/09/93
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/Kg	11/09/93
Tetrachloroethene	127-18-4	ND	5	ug/Kg	11/09/93
1,1,1-Trichloroethane	71-55-6	ND	5	ug/Kg	11/09/93

SEQUOIA ENVIRONMENTAL

SAMPLE ID: SS-B
AEN LAB NO: 9310316-02
AEN WORK ORDER: 9310316
CLIENT PROJ. ID: SLPJ-01

DATE SAMPLED: 10/28/93
DATE RECEIVED: 10/29/93
REPORT DATE: 11/17/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
1,1,2-Trichloroethane	79-00-5	ND	5	ug/Kg	11/09/93
Trichloroethene	79-01-6	ND	5	ug/Kg	11/09/93
Trichlorofluoromethane	75-69-4	ND	5	ug/Kg	11/09/93
1,1,2Trichlorotrifluoroethane	76-13-1	ND	5	ug/Kg	11/09/93
Vinyl Chloride	75-01-4	ND	5	ug/Kg	11/09/93

Hydrocarbons detected by EPA Method 3550 GCFID in the C16-C40+ range.

ND = Not detected
* = Indicates value above reporting limit

SEQUOIA ENVIRONMENTAL

SAMPLE ID: SS-C
AEN LAB NO: 9310316-03
AEN WORK ORDER: 9310316
CLIENT PROJ. ID: SLPJ-01

DATE SAMPLED: 10/28/93
DATE RECEIVED: 10/29/93
REPORT DATE: 11/17/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	**EPA 8020**				
Benzene	71-43-2	ND	5	ug/Kg	11/10/93
Toluene	108-88-3	ND	5	ug/Kg	11/10/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	11/10/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	11/10/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	11/10/93
#Extraction for Diesel/Oil	**EPA 3550**	-		Extrn Date	11/01/93
TPH as Diesel	**GC-FID**	ND	1	mg/kg	11/05/93
#Soil Extrn for TOG/HCs	**SM 5520EF**	-		Extrn Date	11/08/93
Hydrocarbons	**SM 5520F**	40 *	10	mg/kg	11/09/93
EPA 8010-Soil/Bulk matrix	**EPA 8010**				
Bromodichloromethane	75-27-4	ND	5	ug/Kg	11/09/93
Bromoform	75-25-2	ND	5	ug/Kg	11/09/93
Bromomethane	74-83-9	ND	5	ug/Kg	11/09/93
Carbon Tetrachloride	56-23-5	ND	5	ug/Kg	11/09/93
Chlorobenzene	108-90-7	ND	5	ug/Kg	11/09/93
Chloroethane	75-00-3	ND	5	ug/Kg	11/09/93
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/Kg	11/09/93
Chloroform	67-66-3	ND	5	ug/Kg	11/09/93
Chloromethane	74-87-3	ND	5	ug/Kg	11/09/93
Dibromochloromethane	124-48-1	ND	5	ug/Kg	11/09/93
1,2-Dichlorobenzene	95-50-1	ND	5	ug/Kg	11/09/93
1,3-Dichlorobenzene	541-73-1	ND	5	ug/Kg	11/09/93
1,4-Dichlorobenzene	106-46-7	ND	5	ug/Kg	11/09/93
Dichlorodifluoromethane	75-71-8	ND	5	ug/Kg	11/09/93
1,1-Dichloroethane	75-34-3	ND	5	ug/Kg	11/09/93
1,2-Dichloroethane	107-06-2	ND	5	ug/Kg	11/09/93
1,1-Dichloroethene	75-35-4	ND	5	ug/Kg	11/09/93
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/Kg	11/09/93
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/Kg	11/09/93
1,2-Dichloropropane	78-87-5	ND	5	ug/Kg	11/09/93
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/Kg	11/09/93
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/Kg	11/09/93
Methylene Chloride	75-09-2	ND	5	ug/Kg	11/09/93
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/Kg	11/09/93
Tetrachloroethene	127-18-4	ND	5	ug/Kg	11/09/93
1,1,1-Trichloroethane	71-55-6	ND	5	ug/Kg	11/09/93

SEQUOIA ENVIRONMENTAL

SAMPLE ID: SS-C
AEN LAB NO: 9310316-03
AEN WORK ORDER: 9310316
CLIENT PROJ. ID: SLPJ-01

DATE SAMPLED: 10/28/93
DATE RECEIVED: 10/29/93
REPORT DATE: 11/17/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
1,1,2-Trichloroethane	79-00-5	ND	5	ug/Kg	11/09/93
Trichloroethene	79-01-6	ND	5	ug/Kg	11/09/93
Trichlorofluoromethane	75-69-4	ND	5	ug/Kg	11/09/93
1,1,2Trichlorotrifluoroethane	76-13-1	ND	5	ug/Kg	11/09/93
Vinyl Chloride	75-01-4	ND	5	ug/Kg	11/09/93

Hydrocarbons detected by EPA Method 3550 GCFID in the C16-C40+ range.

ND = Not detected
* = Indicates value above reporting limit

QUALITY CONTROL DATA

DATE EXTRACTED: 11/12/93
DATE ANALYZED: 11/12/93
CLIENT PROJ. ID: SLPJ-01

AEN JOB NO: 9310316
SAMPLE SPIKED: 9310338-21
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS
METHOD SPIKE RECOVERY SUMMARY
(SOIL MATRIX)

ANALYTE	MS Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Oil	212	ND	197	197	92.9	0.0

CURRENT QC LIMITS (Revised 10/25/93)

Analyte	Percent Recovery	RPD
Oil	(70-118)	18

MS = Method Spike
MSD = Method Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

QUALITY CONTROL DATA

DATE EXTRACTED: 11/03/93
DATE ANALYZED: 11/04/93
CLIENT PROJ. ID: SLPJ-01

AEN JOB NO: 9310316
SAMPLE SPIKED: 9310236-22
INSTRUMENT: C

MATRIX SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE SOIL
METHOD: EPA 3550 GCFID

ANALYTE	Spike Conc. (mg/kg)	Sample Result (mg/kg)	MS Result (mg/kg)	MSD Result (mg/kg)	Average Percent Recovery	RPD
Diesel	40.8	ND	28.1	27.1	67.6	3.6

CURRENT QC LIMITS (Revised 10/25/93)

Analyte	Percent Recovery	RPD
Diesel	(44-105)	18

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

QUALITY CONTROL DATA

INSTRUMENT: G

AEN JOB NO: 9310316

CLIENT PROJ. ID: SLPJ-01

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8010
(SOIL MATRIX)

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)	
Date Analyzed	Sample Id.	Lab Id.	Bromochloro-methane	1-Bromo-2-chloro-propane
11/09/93	SS-A	01	95.1	116.3
11/09/93	SS-B	02	96.9	117.2
11/09/93	SS-C	03	97.7	118.1

CURRENT QC LIMITS (Revised 06/22/92)

ANALYTE	PERCENT RECOVERY
Bromochloromethane	(71-127)
1-Bromo-2-chloropropane	(70-137)

QUALITY CONTROL DATA

DATE ANALYZED: 11/09/93

CLIENT PROJ. ID: SLPJ-01

AEN JOB NO: 9310316
SAMPLE SPIKED: 9311093-16
INSTRUMENT: G

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 8010
(SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
1,1-Dichloroethene	500	ND	328	319	64.7	2.8
Trichloroethene	500	ND	425	408	83.3	4.1
Chlorobenzene	500	ND	361	342	70.3	5.4

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
1,1-Dichloroethene	(35-127)	13
Trichloroethene	(71-127)	8
Chlorobenzene	(68-117)	10

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

QUALITY CONTROL DATA

CLIENT PROJ. ID: SLPJ-01

AEN JOB NO: 9310316

INSTRUMENT: H

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8020
(SOIL MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION Client Id.	Lab Id.	SURROGATE RECOVERY (PERCENT) Fluorobenzene
11/10/93	SS-A	01	97.6
11/10/93	SS-B	02	98.8
11/10/93	SS-C	03	111.1

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

DATE ANALYZED: 11/09/93
SAMPLE SPIKED: 9310252-14
CLIENT PROJ. ID: SLPJ-01

AEN JOB NO: 9310316
INSTRUMENT: H

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Benzene	16.0	ND	15.4	16.6	100.1	7.5
Toluene	63.8	ND	61.1	66.4	100.0	8.3
Hydrocarbons as Gasoline	1000	ND	848	961	90.5	12.5

CURRENT QC LIMITS (Revised 05/14/92)

Analyte	Percent Recovery	RPD
Benzene	(79.4-125.2)	9.8
Toluene	(84.4-116.8)	10.0
Gasoline	(53.7-124.2)	15.1

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

*** END OF REPORT ***

Reporting Information:

1. Client: Sequoia Environmental
Address: 1111 Aladdin Ave, Suite B
San Leandro, CA 94577
Contact: Chris 'Wabuzoh
Alt. Contact:

American Environmental Network
3440 Vincent Road, Pleasant Hill, CA 94523
Phone (510) 930-9090
FAX (510) 930-0256

AEN

Page 1 of 1

REQUEST FOR ANALYSIS / CHAIN OF CUSTODY

Lab Job Number: 9310316
Lab Destination:
Date Samples Shipped:
Lab Contact:
Date Results Required:
Date Report Required:
Client Phone No.: (510) 614-1900
Client FAX No.: (510) 614-2923

Address Report To:

2. Sequoia Environmental
1111 Aladdin Ave, Suite B
San Leandro, CA 94577

Send Invoice To:

3. Sequoia Environmental

Send Report To: (1) or 2 (Circle one)

Client P.O. No.: Client Project I.D. No.: SLPJ-01

Sample Team Member (s) Chris 'Wabuzoh

please issue Separate report.

Lab Number	Client Sample Identification	Air Volume	Date/ Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	ANALYSIS: TPH-G	TPH-D	Oil & Grease	Cl-HC-Solid	BTEX	Comments / Hazards
01A	SS-1 } Composite		10-28	Soil	Ice	1	HC						Composite SS-1, SS-2
	SS-2 }		10-28	Soil	Ice	1	HC						SS-3 & SS-4 As
	SS-3 } SS-A		10-28	Soil	Ice	1	HC	✓	✓	✓	✓	✓	one Sample SS-A
	SS-4 }		10-28	Soil	Ice	1	HC						
02A	SS-5 } Composite		10-28	Soil	Ice	1	HC						Composite SS-5
	SS-6 }		10-28	Soil	Ice	1	HC						SS-6, SS-7, SS-8
	SS-7 } SS-B		10-28	Soil	Ice	1	HC	✓	✓	✓	✓	✓	as one Sample
	SS-8 }		10-28	Soil	Ice	1	HC						SS-B
					*								
03A	SS-C		10-28	Soil	Ice	1	HC	✓	✓	✓	✓	✓	* 5520F - Oil & Grease

Relinquished by: (Signature) Chris 'Wabuzoh	DATE 10/29/93	TIME 0810	Received by: (Signature) Dean Peters
Relinquished by: (Signature) Dean Peters	DATE 10/29/93	TIME 1038	Received by: (Signature) Gina Gillespie
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)

Method of Shipment

Lab Comments

*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter
4) PVC filter, diam. ____ pore size ____ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample
10) Other ____ 11) Other ____