Rec'd 12/8/94 & Hugo

CITY OF EMERYVILLE
REDEVELOPMENT AGENCY
2200 POWELL STREET, SUITE 1200
EMERYVILLE, CALIFORNIA 94608
(510) 596-4350

December 7, 1994

Susan L. Hugo
ALAMEDA COUNTY HEALTH AGENCY
Division of Environmental Protection
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

RE: 5531 Vallejo Street, Emeryville, CA.

Dear Ms. Hugo:

Enclosed are two environmental reports prepared for a vacant lot located at 5531 Vallejo Street in Emeryville. The property is in the middle of a residential street and is approximately 4,300 square feet.

A few years ago, the Redevelopment Agency was interested in acquiring this property for the purpose of developing affordable housing. However, upon learning the level of contamination on the site, the Agency had to concentrate its efforts on other properties for development that were more economically feasible. After some time, the Agency again revisited the site to conduct additional testing to further determine the extent of contamination. While the second round of results were quite positive, the Agency again had to pursue other housing opportunities that were of higher priority.

However, the Agency is now prepared to acquire this property, and it seems that the present owners are at the same time very interested in selling the lot to the Agency.

The results of the investigations are as follows.

JUNE 1991

Four surface soil samples were taken. A composite of soil samples 1 through 4 were analyzed for a wide variety of contaminants. On the basis of the composite soil sample results, the following additional discrete tests were done on samples 1 through 4; 1) oil & grease, 2) EPA 8010 , 3) EPA 8020, 4) total lead and mercury, and 5) extractable (WET) lead.

The test results indicated high levels of oil and grease, lead, mercury, and volatile organic chemicals in the surface materials on site. Total lead concentrations ranged from 108 to 1,030 ppm and soluble lead concentrations ranged from 4,590 to 36,500 ppb.

JUNE 1992

Two soil samples two feet below ground surface were taken right next to the two "hotspots" from the first investigation. Additional soil samples were collected from a spot at the center of the property at one foot and at two feet. The four samples were tested using the Waste Extraction Test (WET) and the CAM metals.

Total lead concentrations ranged from 12 to 24 ppm, and soluble lead concentrations were all below 1 ppm (or 1,000 ppb). In comparing the two hot spots, there was a dramatic reduction in lead concentrations between the surface and two feet. For example, in one spot total lead concentration decreased from 1,030 ppm in the surface to 24 ppm at two feet, while soluble lead concentration decreased from 36,500 ppb to below 1,000 ppb.

It seems that none of the soil samples from the second round of testing exceeded the regulated levels.

Please review the investigations and let me know how we might find a reasonable resolution to the environmental issue so that we may proceed with the acquisition of the property and the development of affordable housing.

Thank you for your consideration and I look forward to hearing from you.

Sincerely,

Maria B. Bigornia
Projects Coordinator

James P. Bowers, PE
R. William Rudolph, Jr., PE

June 10, 1991
SCI 537.007

Ms. Maria Bigornia
City of Emeryville
Redevelopment Agency
2200 Powell Street, Suite 1200
Emeryville, California 94608

Analytical Test Results
5531 Vallejo Street
Emeryville, California

Dear Ms. Bigornia:

This letter presents the results of analytical tests conducted on surface soils from the property at 5531 Vallejo Street in Emeryville. Our services were conducted in accordance with City of Emeryville contract 48.0491, executed on April 30, 1991.

The subject property is relatively flat and rectangular, with plan dimensions of about 43 by 100 feet. The lot was vacant at the time of our reconnaissance. Grass, ivy, several small fruit trees, and scattered debris exist on-site. We understand that the lot was formerly occupied by a house.

On May 10, 1991, we obtained 5 samples of the surface materials at the locations indicated on the attached Site Plan, Plate 1. The surface samples were retained in 2-inch-diameter brass liners. The ends of the liners were covered with Teflon sheets before capping and sealing the samples with tape. The samples were refrigerated in ice chests on-site and remained so until delivery to the analytical laboratory. The samples were accompanied by Chain-of-Custody documents, copies of which are attached.

Analytical testing was performed by Curtis and Tompkins, Ltd., a California Department of Health Services (DHS) certified analytical laboratory for the tests performed. A composite of soil samples 1 through 4 were analyzed for:

1. Total extractable hydrocarbons (TEH): California DOHS Method/LUFT Manual, October 1989;

2. Oil and Grease (O&G): SMWW 17:5520 E&F

3. Purgeable halocarbons and purgeable aromatics: EPA Methods 8010 and 8020,

4. Title 26 metals: EPA Methods 6010, 7420, 7471 and 7740;

5. Semi-volatile organic compounds with PCB's and chlorinated pesticides: EPA Method 8270; and

6. Total cyanide compounds: EPA Method 335.2 (modified)

Sample 5 consisted of vinyl floor tiles which were analyzed for asbestos by polarized light microscopy. The results of the analytical tests are summarized in the following tables. Analytical test reports are attached.

Table 1.
Concentrations of Contaminants in the Composite Soil Sample

Contaminant	Concentration Detected (ppm)[1]
Total Extractable Hydrocarbons	ND[2]
Hydrocarbon Oil and Grease	120
Trichloroethylene (EPA 8010)	0.016
Other EPA 8010 Chemicals	ND
Toluene	0.068
Other EPA 8020 Chemicals	ND
EPA 8270 Chemicals plus Pesticides & PCB's	ND
Total Cyanide Compounds	0.4

[1] ppm = parts per million = mg/kg
[2] ND = None detected, chemicals not present at concentrations above detection limits

Table 2.
Concentrations of Heavy Metals
in the Composite Soil Sample

Metal	Concentration Detected (ppm)[1]
Antimony	ND[2]
Arsenic	4.3
Barium	250
Beryllium	0.43
Cadmium	2.8
Chromium (total)	27.9
Cobalt	9.7
Copper	44.8
Lead	294
Mercury	0.40
Molybdenum	ND
Nickel	33.9
Selenium	ND
Silver	ND
Thallium	ND
Vanadium	34.3
Zinc	256
Soluble Mercury	ND

[1] ppm = parts per million = mg/kg
[2] ND = None detected, chemicals not present at concentrations above detection limits

Table 3.
Asbestos in Tiles from Sample Location 5

	Percent Present
Chrysotile	10-15
Amosite	ND
Crocidolite	ND

On the basis of the composite soil sample results, additional analyses were performed. The analyses included discrete tests on samples 1 through 4 for (1) oil and grease, (2) EPA 8010 chemicals, (3) EPA 8020 chemicals, (4) total lead and mercury, and (5) extractable (WET) lead. The results of the discrete sample analyses are presented in Table 4.

Table 4.
Concentrations of Contaminants in Discrete Soil Samples

Sample	O&G[1] (ppm)[3]	Lead (ppm)	Soluble Lead (ppb)[4]	Mercury (ppm)	Methylene Chloride (ppb)	Toluene (ppb)	EPA 8010[2] Chemicals	EPA 8020[2] Chemicals
1	ND[5]	252	8,430	0.15	ND	ND	ND	ND
2	ND	108	4,590	ND	ND	ND	ND	ND
3	ND	1,030	36,500	0.51	71	46	ND	ND
4	120	280	10,400	0.16	8.1	22	ND	ND

1 O&G = Oil and Grease
2 For a complete list of EPA 8010 and 8020 chemicals refer to analytical test reports
3 ppm = parts per million = mg/kg
4 ppb = parts per billion = ug/kg
5 ND = None detected, chemicals not present at concentrations above detection limits

Conclusions

The analyses indicate that the surface materials on the site contain several contaminants at concentrations that are sufficiently high to warrant further environmental investigation of the property. The significant contaminants detected to date include oil and grease, lead, mercury, several volatile organic chemicals (methylene chloride, toluene, trichloroethylene), and debris (vinyl floor tiles) containing asbestos.

The investigation performed to date is not sufficient to characterize the extent of the contamination or draw conclusions regarding the need for or scope of remediation. However, in our opinion, the data suggests that one or more conditions exist on

site that may warrant remediation. We recommend that more detailed studies be completed to characterize the lateral and vertical extent of contamination, and attempt to identify contamination sources.

The analyses for lead revealed total lead concentrations ranging from 108 to 1,030 ppm and soluble lead concentrations ranging from 4,590 to 36,500 ppb. The total threshold limit concentrations (TTLC) and soluble threshold limit concentrations (STLC) for lead are 1000 ppm and 5,000 ppb, respectively. TTLC and STLC concentrations are used by the California Department of Health Services to classify materials as a hazardous waste. Using this criteria, soil samples 1, 3 and 4 would be classified as a hazardous waste. Consequently, remediation of the lead contamination would likely be required by the regulatory agencies.

If you have any questions regarding our findings, please call.

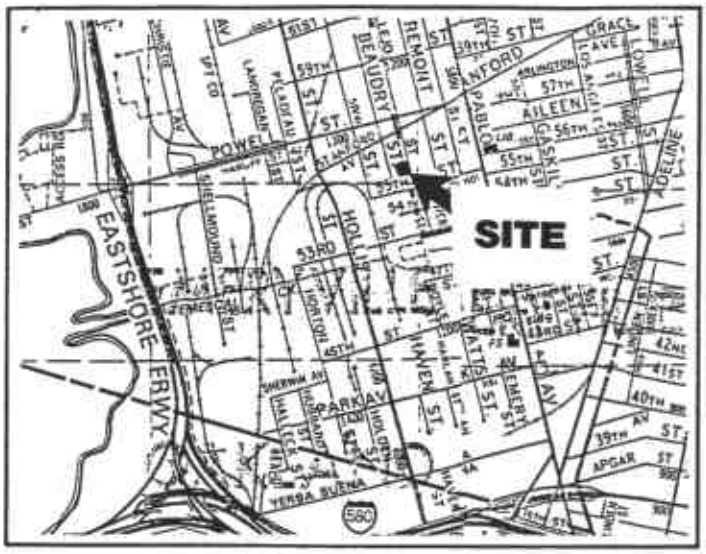
Yours very truly,

Subsurface Consultants, Inc.

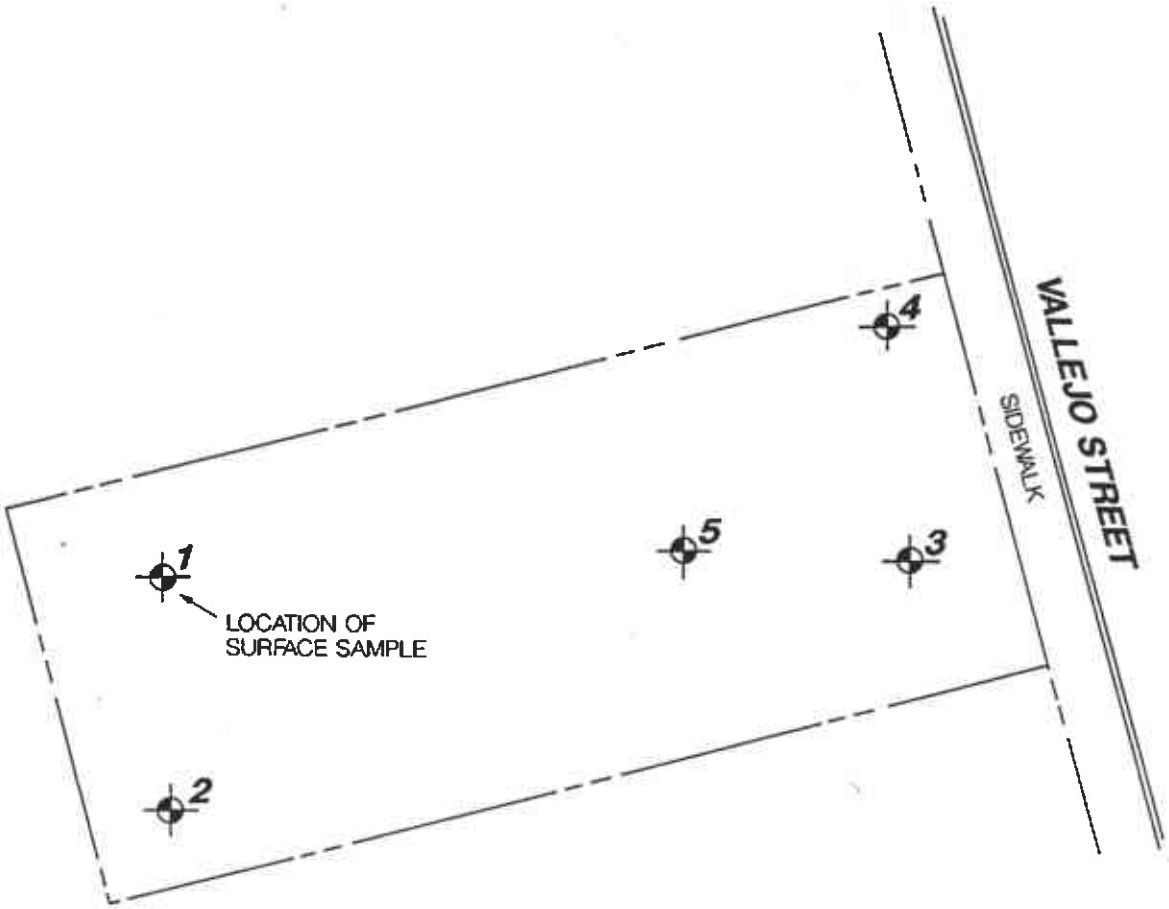
James P. Bowers
Geotechnical Engineer 157 (expires 3/31/95)

JVB:JPB:sld

Attachments: Site Plan - Plate 1
Chain-of-Custody Documents
Analytical Test Reports



VICINITY MAP



APPROXIMATE SCALE (feet)

0 20 40

N

SITE PLAN

Subsurface Consultants

VALLEJO STREET – EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
537.007	5/13/91	

PLATE 1

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 05/10/91
DATE REPORTED: 05/17-22/91

LAB NUMBER: 103763

CLIENT: SUBSURFACE CONSULTANTS

PROJECT ID: 537.007

LOCATION: 5531 VALLEJO STREET

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103763
CLIENT: SUBSURFACE CONSULTANTS, INC.
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET

DATE RECEIVED: 05/10/91
DATE ANALYZED: 05/21/91
DATE REPORTED: 05/22/91

ANALYSIS: CYANIDE
ANALYSIS METHOD: EPA 335.2 (Modified)

LAB ID	COMPOSITE ID	RESULT	UNITS	REPORTING LIMIT
103763-5	1, 2, 3, 4	0.4	mg/Kg	0.3

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	<1
Recovery, %	83

Curtis & Tompkins, Ltd.

Client: Subsurface Consultants

Laboratory Login Number: 103763

Project Name: 5531 Vallejo Street
Project Number: 537.007

Report Date: 17 May 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD:** SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
103763-005	COMP 1,2,3 & 4	Soil	10-MAY-91	10-MAY-91	15-MAY-91	120	mg/Kg	50	TR	1453

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

QC Batch Report

Client: Subsurface Consultants
Project Name: 5531 Vallejo Street
Project Number: 537.007

Laboratory Login Number: 103763
Report Date: 17 May 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 1453**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	15-MAY-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	94%	SMWW 17:5520EF	15-MAY-91
BSD	98%	SMWW 17:5520EF	15-MAY-91

		Control Limits
Average Spike Recovery	96%	80% - 120%
Relative Percent Difference	4.8%	< 20%

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103763-5
CLIENT: SUBSURFACE CONSULTANTS
PROJECT #: 537.007
LOCATION: 5531 VALLEJO STREET
SAMPLE ID: COMP 1,2,3, & 4

DATE RECEIVED: 05/10/91
DATE ANALYZED: 05/15/91
DATE REPORTED: 05/17/91

EPA 8020: Volatile Aromatic Hydrocarbons in Soil & Waste

COMPOUND	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Benzene	ND	5.0
Toluene	68	5.0
Ethyl Benzene	ND	5.0
Total Xylenes	ND	5.0
Chlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	93

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103763-5
CLIENT: SUBSURFACE CONSULTANTS
PROJECT #: 537.007
SAMPLE ID: COMP 1,2,3 & 4

DATE RECEIVED: 05/10/91
DATE EXTRACTED: 05/14/91
DATE ANALYZED: 05/15/91
DATE REPORTED: 05/17/91

EPA 8270: Base/Neutral and Acid Extractables in Soils & Wastes
Extraction Method: EPA 3550 Sonication

ACID COMPOUNDS	RESULT ug/kg	REPORTING LIMIT ug/kg
Phenol	ND	330
2-Chlorophenol	ND	330
Benzyl Alcohol	ND	330
2-Methylphenol	ND	330
4-Methylphenol	ND	330
2-Nitrophenol	ND	1650
2,4-Dimethylphenol	ND	330
Benzoic Acid	ND	1650
2,4-Dichlorophenol	ND	330
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	1650
2,4-Dinitrophenol	ND	1650
4-Nitrophenol	ND	1650
4,6-Dinitro-2-methylphenol	ND	1650
Pentachlorophenol	ND	1650
BASE/NEUTRAL COMPOUNDS		
N-Nitrosodimethylamine	ND	330
Aniline	ND	330
Bis(2-chloroethyl)ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
Bis(2-chloroisopropyl)ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
Bis(2-chloroethoxy)methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1650

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103763-5
SAMPLE ID: COMP 1,2,3 & 4

EPA 8270

BASE/NEUTRAL COMPOUNDS	RESULT ug/kg	REPORTING LIMIT ug/kg
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1650
Acenaphthene	ND	330
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1650
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Benzidine	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1650
Benzo (a) anthracene	ND	330
Chrysene	ND	330
Bis (2-ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo (b) fluoranthene	ND	330
Benzo (k) fluoranthene	ND	330
Benzo (a) pyrene	ND	330
Indeno (1,2,3-cd) pyrene	ND	330
Dibenzo (a,h) anthracene	ND	330
Benzo (g,h,i) perylene	ND	330

ND = Not detected at or above reporting limit.

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103763-5
SAMPLE ID: COMP 1,2,3 & 4

EPA 8270

COMPOUND	RESULT ug/kg	REPORTING LIMIT ug/kg
CHLORINATED PESTICIDES		
alpha-BHC	ND	330
beta-BHC	ND	330
gamma-BHC	ND	330
delta-BHC	ND	330
Heptachlor	ND	330
Aldrin	ND	330
Heptachlor Epoxide	ND	330
Endosulfan I	ND	330
4,4'-DDE	ND	330
Dieldrin	ND	330
Endrin	ND	330
Endosulfan II	ND	330
4,4'-DDD	ND	330
Endrin Aldehyde	ND	330
Endosulfan Sulfate	ND	330
4,4'-DDT	ND	330
Chlordane	ND	1650
Toxaphene	ND	1650
Methoxychlor	ND	1650
Aroclor 1016	ND	1650
Aroclor 1221	ND	1650
Aroclor 1232	ND	1650
Aroclor 1242	ND	1650
Aroclor 1248	ND	1650
Aroclor 1254	ND	1650
Aroclor 1260	ND	1650

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Compound	%Recovery	Compound	%Recovery
2-Fluorophenol	84	Nitrobenzene-d5	77
Phenol-d6	95	2-Fluorobiphenyl	71
2,4,6-Tribromophenol	88	Terphenyl-d14	66

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103763-5
CLIENT: SUBSURFACE CONSULTANTS
PROJECT #: 537.007
LOCATION: 5531 VALLEJO STREET
SAMPLE ID: COMP 1,2,3, & 4

DATE RECEIVED: 05/10/91
DATE ANALYZED: 05/15/91
DATE REPORTED: 05/17/91

EPA 8010
Purgeable Halocarbons in Soil & Waste

Compound	Result ug/Kg	REPORTING LIMIT ug/Kg
chloromethane	ND	10
bromomethane	ND	10
vinyl chloride	ND	10
chloroethane	ND	10
methylene chloride	ND	5.0
trichlorofluoromethane	ND	5.0
1,1-dichloroethene	ND	5.0
1,1-dichloroethane	ND	5.0
cis-1,2-dichloroethene	ND	5.0
trans-1,2-dichloroethene	ND	5.0
chloroform	ND	5.0
freon 113	ND	5.0
1,2-dichloroethane	ND	5.0
1,1,1-trichloroethane	ND	5.0
carbon tetrachloride	ND	5.0
bromodichloromethane	ND	5.0
1,2-dichloropropane	ND	5.0
cis-1,3-dichloropropene	ND	5.0
trichloroethylene	16	5.0
1,1,2-trichloroethane	ND	5.0
trans-1,3-dichloropropene	ND	5.0
dibromochloromethane	ND	5.0
2-chloroethylvinyl ether	ND	10
bromoform	ND	5.0
tetrachloroethene	ND	5.0
1,1,2,2-tetrachloroethane	ND	5.0
chlorobenzene	ND	5.0
1,3-dichlorobenzene	ND	5.0
1,2-dichlorobenzene	ND	5.0
1,4-dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	97

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103763-6
CLIENT: SUBSURFACE CONSULTANTS
PROJECT #: 537.007
SAMPLE ID: 5
GROSS DESCRIPTION: 2 TILES WITH MASTIC & 1 WITH MASTIC AND PLASTER AGGREGATE

DATE RECEIVED: 05/10/91
DATE ANALYZED: 05/14/91
DATE REPORTED: 05/17/91

ANALYSIS: ASBESTOS
METHOD: POLARIZED LIGHT MICROSCOPY (PLM)
REFERENCE: 40 CFR 763, SUBPART F, APPENDIX A (AHERA)

MICROSCOPIC DESCRIPTION	RESULTS, %
TOTAL ASBESTOS PRESENT:	
Chrysotile	10-15
Amosite	ND
Crocidolite	ND
TOTAL NON-ASBESTOS FIBROUS MATERIAL PRESENT:	
Cellulose	1-5
Fibrous Glass	5-10
TOTAL NON-ASBESTOS NON-FIBROUS MATERIAL PRESENT:	
Unspecified Particulates	70-75

Green tile analyzed only.

ND = Not detected at or above reporting limit.

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103763
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET

DATE RECEIVED: 05/10/91
DATE EXTRACTED: 05/10/91
DATE ANALYZED: 05/11/91
DATE REPORTED: 05/17/91

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	GASOLINE RANGE (mg/Kg)	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
103763-5	COMP 1,2,3 & 4	ND	ND	ND	10

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	10
RECOVERY, %	93

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103763-5
CLIENT: SUBSURFACE CONSULTANTS
LOCATION: 5531 VALLEJO STREET
SAMPLE ID: COMP 1,2,3 & 4

DATE RECEIVED: 05/10/91
DATE ANALYZED: 05/13/91
DATE REPORTED: 05/17/91

Title 26 Metals in Soils & Wastes
Digestion Method: EPA 3050

METAL	RESULT mg/Kg	REPORTING LIMIT mg/Kg	METHOD
Antimony	ND	3.0	EPA 6010
Arsenic	4.3	2.5	EPA 7060
Barium	250	0.25	EPA 6010
Beryllium	0.43	0.10	EPA 6010
Cadmium	2.8	0.25	EPA 6010
Chromium (total)	27.9	0.50	EPA 6010
Cobalt	9.7	0.89	EPA 6010
Copper	44.8	0.50	EPA 6010
Lead	294	3.0	EPA 7420
Mercury	0.40	0.09	EPA 7471
Molybdenum	ND	0.69	EPA 6010
Nickel	33.9	2.0	EPA 6010
Selenium	ND	3.5	EPA 7740
Silver	ND	0.50	EPA 6010
Thallium	ND	6.2	EPA 6010
Vanadium	34.3	0.50	EPA 6010
Zinc	256	0.50	EPA 6010

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

	RPD,%	RECOVERY,%		RPD,%	RECOVERY,%
Antimony	<1	90	Mercury	<1	97
Arsenic	3	92	Molybdenum	<1	96
Barium	<1	99	Nickel	4	94
Beryllium	<1	102	Selenium	<1	89
Cadmium	1	96	Silver	<1	80
Chromium	3	91	Thallium	4	82
Cobalt	3	91	Vanadium	<1	94
Copper	4	99	Zinc	<1	94
Lead	5	95			

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 05/10/91
DATE REQUESTED: 05/20,22/91
DATE REPORTED: 06/04/91

LAB NUMBER: 103848

CLIENT: SUBSURFACE CONSULTANTS

PROJECT ID: 537.007

LOCATION: 5531 VALLEJO STREET

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd.

Client: Subsurface Consultants

Laboratory Login Number: 103848

Project Name: 5531 Vallejo Street
Project Number: 537.007

Report Date: 29 May 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD:** SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
103848-001	1	Soil	10-MAY-91	10-MAY-91	21-MAY-91	ND	mg/Kg	50	TR	1483
103848-002	2	Soil	10-MAY-91	10-MAY-91	21-MAY-91	ND	mg/Kg	50	TR	1483
103848-003	3	Soil	10-MAY-91	10-MAY-91	21-MAY-91	ND	mg/Kg	50	TR	1483
103848-004	4	Soil	10-MAY-91	10-MAY-91	21-MAY-91	120	mg/Kg	50	TR	1483

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

QC Batch Report

Client: Subsurface Consultants
Project Name: 5531 Vallejo Street
Project Number: 537.007

Laboratory Login Number: 103848
Report Date: 29 May 91

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 1483**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	21-MAY-91

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	81%	SMWW 17:5520EF	21-MAY-91
BSD	81%	SMWW 17:5520EF	21-MAY-91

		Control Limits
Average Spike Recovery	81%	80% - 120%
Relative Percent Difference	.1%	< 20%

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103848
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET

DATE RECEIVED: 05/10/91
DATE REQUESTED: 05/20/91
DATE ANALYZED: 05/21/91
DATE REPORTED: 05/29/91

ANALYSIS: LEAD
ANALYSIS METHOD: EPA 7420

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
103848-1	1	252	mg/Kg	3.0
103848-2	2	108	mg/Kg	3.0
103848-3	3	1,030	mg/Kg	6.0
103848-4	4	280	mg/Kg	3.0

QA/QC SUMMARY

RPD, %	6
Recovery, %	90

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103848
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET

DATE RECEIVED: 05/10/91
DATE REQUESTED: 05/20/91
DATE ANALYZED: 05/20/91
DATE REPORTED: 05/29/91

ANALYSIS: MERCURY
ANALYSIS METHOD: EPA 7471

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
103848-1	1	0.15	mg/Kg	0.10
103848-2	2	ND	mg/Kg	0.10
103848-3	3	0.51	mg/Kg	0.10
103848-4	4	0.16	mg/Kg	0.10

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	8
Recovery, %	87

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103848
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET

DATE RECEIVED: 05/10/91
DATE ANALYZED: 06/03/91
DATE REPORTED: 06/04/91

ANALYSIS: SOLUBLE LEAD
EXTRACTION BY WASTE EXTRACTION TEST: CCR TITLE 26 SECTION 22-66700
ANALYSIS METHOD: EPA 7420

LAB ID	CLIENT ID	RESULT	UNITS	REPORTING LIMIT
103848-1	1	8,430	ug/L	60.0
103848-2	2	4,590	ug/L	60.0
103848-3	3	36,500	ug/L	300
103848-4	4	10,400	ug/L	60.0

QA/QC SUMMARY

RPD, %	<1
RECOVERY, %	97

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103848
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET

DATE RECEIVED: 05/10/91
DATE ANALYZED: 05/29/91
DATE REPORTED: 06/04/91

ANALYSIS: SOLUBLE MERCURY
EXTRACTION BY WASTE EXTRACTION TEST: CCR TITLE 26 SECTION 22-66700
ANALYSIS METHOD: EPA 7470

LAB ID	CLIENT ID	RESULT	UNITS	REPORTING LIMIT
103848-5	COMPOSITE 1,2,3 & 4	ND	ug/L	2.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	87

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103848-1
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET
SAMPLE ID: 1

DATE RECEIVED: 05/10/91
DATE REQUESTED: 05/20/91
DATE ANALYZED: 05/24/91
DATE REPORTED: 05/29/91

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
chloromethane	ND	10
bromomethane	ND	10
vinyl chloride	ND	10
chloroethane	ND	10
methylene chloride	ND	5.0
trichlorofluoromethane	ND	5.0
1,1-dichloroethene	ND	5.0
1,1-dichloroethane	ND	5.0
cis-1,2-dichloroethene	ND	5.0
trans-1,2-dichloroethene	ND	5.0
chloroform	ND	5.0
freon 113	ND	5.0
1,2-dichloroethane	ND	5.0
1,1,1-trichloroethane	ND	5.0
carbon tetrachloride	ND	5.0
bromodichloromethane	ND	5.0
1,2-dichloropropane	ND	5.0
cis-1,3-dichloropropene	ND	5.0
trichloroethylene	ND	5.0
1,1,2-trichloroethane	ND	5.0
trans-1,3-dichloropropene	ND	5.0
dibromochloromethane	ND	5.0
2-chloroethylvinyl ether	ND	10
bromoform	ND	5.0
tetrachloroethylene	ND	5.0
1,1,2,2-tetrachloroethane	ND	5.0
chlorobenzene	ND	5.0
1,3-dichlorobenzene	ND	5.0
1,2-dichlorobenzene	ND	5.0
1,4-dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Duplicate: Relative % Difference	26
Spike: Average % Recovery	100

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103848-1
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET
SAMPLE ID: 1

DATE RECEIVED: 05/10/91
DATE REQUESTED: 05/20/91
DATE ANALYZED: 05/24/91
DATE REPORTED: 05/29/91

EPA 8020: Volatile Aromatic Hydrocarbons in Soils & Wastes
Extraction Method: EPA 5030 - Purge & Trap

COMPOUND	Result ug/Kg	Reporting Limit ug/Kg
Benzene	ND	5.0
Toluene	ND	5.0
Ethyl Benzene	ND	5.0
Total Xylenes	ND	5.0
Chlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	114

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103848-2
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET
SAMPLE ID: 2

DATE RECEIVED: 05/10/91
DATE REQUESTED: 05/20/91
DATE ANALYZED: 05/24/91
DATE REPORTED: 05/29/91

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
chloromethane	ND	10
bromomethane	ND	10
vinyl chloride	ND	10
chloroethane	ND	10
methylene chloride	ND	5.0
trichlorofluoromethane	ND	5.0
1,1-dichloroethene	ND	5.0
1,1-dichloroethane	ND	5.0
cis-1,2-dichloroethene	ND	5.0
trans-1,2-dichloroethene	ND	5.0
chloroform	ND	5.0
freon 113	ND	5.0
1,2-dichloroethane	ND	5.0
1,1,1-trichloroethane	ND	5.0
carbon tetrachloride	ND	5.0
bromodichloromethane	ND	5.0
1,2-dichloropropane	ND	5.0
cis-1,3-dichloropropene	ND	5.0
trichloroethylene	ND	5.0
1,1,2-trichloroethane	ND	5.0
trans-1,3-dichloropropene	ND	5.0
dibromochloromethane	ND	5.0
2-chloroethylvinyl ether	ND	10
bromoform	ND	5.0
tetrachloroethylene	ND	5.0
1,1,2,2-tetrachloroethane	ND	5.0
chlorobenzene	ND	5.0
1,3-dichlorobenzene	ND	5.0
1,2-dichlorobenzene	ND	5.0
1,4-dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Duplicate: Relative % Difference	26
Spike: Average % Recovery	100

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103848-2
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET
SAMPLE ID: 2

DATE RECEIVED: 05/10/91
DATE REQUESTED: 05/20/91
DATE ANALYZED: 05/24/91
DATE REPORTED: 05/29/91

EPA 8020: Volatile Aromatic Hydrocarbons in Soils & Wastes
Extraction Method: EPA 5030 - Purge & Trap

COMPOUND	Result ug/Kg	Reporting Limit ug/Kg
Benzene	ND	5.0
Toluene	ND	5.0
Ethyl Benzene	ND	5.0
Total Xylenes	ND	5.0
Chlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	114

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103848-3
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET
SAMPLE ID: 3

DATE RECEIVED: 05/10/91
DATE REQUESTED: 05/20/91
DATE ANALYZED: 05/24/91
DATE REPORTED: 05/29/91

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
chloromethane	ND	10
bromomethane	ND	10
vinyl chloride	ND	10
chloroethane	ND	10
methylene chloride	71	5.0
trichlorofluoromethane	ND	5.0
1,1-dichloroethene	ND	5.0
1,1-dichloroethane	ND	5.0
cis-1,2-dichloroethene	ND	5.0
trans-1,2-dichloroethene	ND	5.0
chloroform	ND	5.0
freon 113	ND	5.0
1,2-dichloroethane	ND	5.0
1,1,1-trichloroethane	ND	5.0
carbon tetrachloride	ND	5.0
bromodichloromethane	ND	5.0
1,2-dichloropropane	ND	5.0
cis-1,3-dichloropropene	ND	5.0
trichloroethylene	ND	5.0
1,1,2-trichloroethane	ND	5.0
trans-1,3-dichloropropene	ND	5.0
dibromochloromethane	ND	5.0
2-chloroethylvinyl ether	ND	10
bromoform	ND	5.0
tetrachloroethylene	ND	5.0
1,1,2,2-tetrachloroethane	ND	5.0
chlorobenzene	ND	5.0
1,3-dichlorobenzene	ND	5.0
1,2-dichlorobenzene	ND	5.0
1,4-dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Duplicate: Relative % Difference	26
Spike: Average % Recovery	100

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103848-3
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET
SAMPLE ID: 3

DATE RECEIVED: 05/10/91
DATE REQUESTED: 05/20/91
DATE ANALYZED: 05/24/91
DATE REPORTED: 05/29/91

EPA 8020: Volatile Aromatic Hydrocarbons in Soils & Wastes
Extraction Method: EPA 5030 - Purge & Trap

COMPOUND	Result ug/Kg	Reporting Limit ug/Kg
Benzene	ND	5.0
Toluene	46	5.0
Ethyl Benzene	ND	5.0
Total Xylenes	ND	5.0
Chlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	114

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103848-4
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET
SAMPLE ID: 4

DATE RECEIVED: 05/10/91
DATE REQUESTED: 05/20/91
DATE ANALYZED: 05/24/91
DATE REPORTED: 05/29/91

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
chloromethane	ND	10
bromomethane	ND	10
vinyl chloride	ND	10
chloroethane	ND	10
methylene chloride	8.1	5.0
trichlorofluoromethane	ND	5.0
1,1-dichloroethene	ND	5.0
1,1-dichloroethane	ND	5.0
cis-1,2-dichloroethene	ND	5.0
trans-1,2-dichloroethene	ND	5.0
chloroform	ND	5.0
freon 113	ND	5.0
1,2-dichloroethane	ND	5.0
1,1,1-trichloroethane	ND	5.0
carbon tetrachloride	ND	5.0
bromodichloromethane	ND	5.0
1,2-dichloropropane	ND	5.0
cis-1,3-dichloropropene	ND	5.0
trichloroethylene	ND	5.0
1,1,2-trichloroethane	ND	5.0
trans-1,3-dichloropropene	ND	5.0
dibromochloromethane	ND	5.0
2-chloroethylvinyl ether	ND	10
bromoform	ND	5.0
tetrachloroethylene	ND	5.0
1,1,2,2-tetrachloroethane	ND	5.0
chlorobenzene	ND	5.0
1,3-dichlorobenzene	ND	5.0
1,2-dichlorobenzene	ND	5.0
1,4-dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Duplicate: Relative % Difference	26
Spike: Average % Recovery	100

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 103848-4
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 537.007
LOCATION: 5531 VALLEJO STREET
SAMPLE ID: 4

DATE RECEIVED: 05/10/91
DATE REQUESTED: 05/20/91
DATE ANALYZED: 05/24/91
DATE REPORTED: 05/29/91

EPA 8020: Volatile Aromatic Hydrocarbons in Soils & Wastes
Extraction Method: EPA 5030 - Purge & Trap

COMPOUND	Result ug/Kg	Reporting Limit ug/Kg
Benzene	ND	5.0
Toluene	22	5.0
Ethyl Benzene	ND	5.0
Total Xylenes	ND	5.0
Chlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	114

Curtis & Tompkins, Ltd.

VERBAL ADDITIONS / CANCELLATIONS TO ANALYSIS REQUEST SHEET

CLIENT: SCL DATE: 5/20

REQUESTED BY: John Bosche TIME: (am) pm

RECORDED BY: NJW

Current Lab ID (Previous Lab ID)	Client ID	Circle matrix	Specify (add) or cancel	Analysis	Due date
103763 → 103848-1,2,3,4	1,2,3,4	(soil) water other		Pb, Hg, O&G SM 5520/8020	5/28
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			

Original in job jacket. Copies to analytical departments.

Curtis & Tompkins, Ltd.

VERBAL ADDITIONS / CANCELLATIONS TO ANALYSIS REQUEST SHEET

CLIENT: SCL - Valley St DATE: 5/22

REQUESTED BY: John Bosco TIME: (am) pm

RECORDED BY: NLW

Current Lab ID (Previous Lab ID)	Client ID	Circle matrix	Specify (add) or cancel	Analysis	Due date
Alias 103763-1,2,3,4 (new login = (R103848))	1,2,3,4	(soil) water other		WET Pb WET Hg	ASAP (5/28)
(-)		soil water other			
(-)		soil water other	Added to LIMS		
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			

Original in job jacket. Copies to analytical departments.

Subsurface Consultants

CHAIN OF CUSTODY RECORD
& ANALYTICAL TEST REQUEST

Project Name: 5531 Vallejo Street

SCI Job Number: 537.007

Project Contact at SCI: John Bosche

Sampled By: John Wolfe

Analytical Laboratory: Curtis & Tompkins

Analytical Turnaround: 2 Weeks (all results - See John Goyette)

Sample ID	Sample Type[1]	Container Type[2]	Sampling Date	Hold	Analysis	Analytical Method
composite 1, 2, 3 & 4	S	T	5/10/91		B270 w/ PCB & Pesticides, 8010, 8020 SMWW 5520, TEH w/ Gas distinction, CAM Title 26 metals	
						Report these first
5	S	P	5/10/91		Asbestos	then possible analysis
1	S	T	5/10/91		4 Individual sample analyses are requested for any organic chemical present above detection limits in the composite sample	
2						
3					4 Individual sample analyses are requested for any elevated metal concentration (see list). For individual metals analysis, run total and soluble tests (WET)	
4						
*	*	*	*	*		*

Released by: John Wolfe Received by: _____ Date: 5/10/91

Released by: _____ Received by: _____ Date: _____

Received by Laboratory: Nancy Wu Date: 5/10/91

Released by Laboratory: _____ Date: _____

Released by: _____ Date: _____

[1] Sample Type: W = Water, S = Soil, O = Other (specify)
[2] Container Type: V = VOA, P = Plastic, G = Glass, T = Brass Tube, O = Other (specify)

NOTES TO LABORATORY:
- Notify SCI if there are any anomalous peaks on GC or other scans
- Questions/clarifications - Contact SCI at (415) 268-0461