SITE CHARACTERIZATION REPORT

5531 Vallejo Street
Emeryville, California

PREPARED FOR:

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NSE Project No. 00-0025C

August 2000

INTRODUCTION

This report summarizes the activities, findings, and conclusions of additional site characterization activities performed by North State Environmental (NSE) in May 2000 at 5531 Vallejo Street in Emeryville, California. The site location is shown in Figure 1. Figure 2 is a site plan of the subject property. The work was performed for Mr. Ronald Henry to provide additional information on the extent and approximate volumes of non-hazardous and hazardous levels of lead-affected soil existing at the subject property.

SITE DESCRIPTION

The site is located in Emeryville, California on the west side of Vallejo Street (between Stanford Avenue and 55th Street), approximately 0.1 mile west of San Pablo Avenue and 0.5 mile east of Interstate 80. Site elevation is approximately 30 feet above mean seal level (Figure 1). The property is approximately 4,300 square feet (0.1 acre) in area with plan dimensions of 100 feet (north-south) by 43 feet (west-east). The property is currently vacant and is owned by Eugene and Mary Hefley (Alameda County Assessor's Parcel No. 49-1312-12). The Hefleys have owned the property since March 1998. The site and adjacent parcels are zoned for residential use. A concrete foundation and adjacent patio/walkways of a former residential structure exist at the eastern quarter of the property.

The site is in the San Francisco Bay Central groundwater basin according to the Water Quality Control Plan prepared by the California Regional Water Quality Control Board (CRWQCB, 1995). Groundwater in this basin is designated beneficial for industrial uses whereas associated surface water is beneficial in support of estuarine and wildlife habitats, fish migration, and preservation of rare and endangered species. Depth to groundwater is approximately 5 to 15 feet below grade (fbg) as measured in groundwater monitoring wells installed at a similar elevation approximately 2 miles to the north of the site. The nearest surface water body is Berkeley Aquatic Park, located approximately 0.5 mile northwest of the site (Figure 1).

According to a geologic map published by the California Department of Conservation (1991), the site is underlain by up to approximately 1,500 feet of Quaternary alluvium. These sediments and rocks are underlain by shales, sandstones, conglomerates, and ultramafic rocks of the Mesozoic Franciscan Complex (thickness not established) and possibly rhyolitic rock of the Coast Range Ophiolite. The map also indicates the site is approximately 3 miles southwest of the Hayward Fault Zone.

PREVIOUS WORK

On May 10, 1991, Subsurface Consultants, Inc. (SCI) of Oakland, California collected five samples from the surface soil (sample depth not reported) at site locations shown in Figure 2. The composite of the first four soil samples (1-4) contained up to 120 mg/kg total oil and grease (TOG), 0.068 mg/kg toluene, 0.016 trichloroethylene (HVOC), 0.4 mg/kg total cyanide compounds, 294 mg/kg TTLC Lead, and 0.40 mg/kg TTLC mercury. The total extractable petroleum hydrocarbons, benzene, ethylbenzene, total xylenes, semi-volatile organic compounds (SVOCs), other HVOCs, as well as the soluble threshold limit concentration (STLC; Title 22 Waste Extraction Test) of mercury were below the respective laboratory reporting limits (see associated laboratory analytical results, Appendix B). Discrete soil samples (1-4) contained up to 120 mg/kg TOG (Sample #4), 0.046 mg/kg toluene, 0.071 mg/kg methylene chloride (HVOC), 1,030 mg/kg TTLC Lead and 36.5 mg/l STLC Lead (Sample #3), and 0.51 mg/kg TTLC Mercury (Sample #3). Benzene, ethylbenzene, total xylenes, and all other HVOCs concentrations were below the laboratory reporting limit. Sample #5, which consisted of vinyl floor tile fragments, contained up to 10-15% chrysotile (Asbestos constituent). Percent amosite and crocidolite were below the laboratory reporting limit, which was not specified in the associated laboratory analytical report (Appendix A). TTLC and STLC Lead concentrations measured in discrete samples 1,3, and 4 exceeded the established threshold levels listed in the California Code of Regulations (CCR 66261.24), Title 22. The associated soil was thus classified as a California hazardous waste. The laboratory results of soil sample TTLC and STLC Lead analyses are summarized in Table 1. The laboratory analytical report and chain-of-custody record are in Appendix A. Additional details and conclusions are in the June 1991 letter report prepared by SCI.

Based on the laboratory results of SCI's soil sample analysis, the City of Emeryville Redevelopment Agency (CERA) requested further investigation of the extent of lead-affected soil at the subject property. On May 11, 1992, McLaren Hart of Alameda, California, drilled three hand auger soil borings (A through C) up to 2 feet below grade (fbg). The borehole locations are shown in Figure 2. Soil samples collected in each boring at approximately 2 fbg contained up to 24 mg/kg TTLC Lead and < 1.0 mg/l STLC Lead. An additional sample collected in Boring C at approximately 1 fbg, contained 21 mg/kg TTLC Lead and < 1.0 mg/l STLC Lead. Soil sample concentrations do not exceed the established TTLC and STLC Lead threshold levels listed in CFR Title 22. The laboratory results of these analyses are included in Table 1. Appendix A includes the associated laboratory analytical report and chain-of-custody record. Additional details and conclusions are in McLaren Hart's June 1992 Letter Report of Soil Sampling and Analysis.

Based on the soil sample analytical results and conclusions presented in the aforementioned reports prepared by SCI and McLaren Hart, both Mr. Henry and the CERA have concurred that removal of the lead-affected soil at the subject property is recommended prior to redevelopment of the property for future residential usage. On May 9, 2000, Mr. Henry contracted NSE to conduct additional site characterization activities to evaluate the lateral and vertical extent of the lead-affected soil at the subject property. Such activities were to provide the respective parties with additional information regarding the approximate quantities of California and/or Federal hazardous and non-hazardous waste soil necessary for disposal into respective Class I and Class II disposal facilities. NSE proposed dividing the property into twenty quadrants (20 feet by 10 feet), drilling one hand-auger soil boring in each quadrant, and collecting soil samples in each boring at approximately 0.5, 1.0,

1.5, and 2.0 fbg. Appendix B contains a copy of our General Field Procedures.

FIELD ACTIVITIES

On May 17 2000, NSE manually drilled twenty soil borings (B1 through B20) up to 2 fbg at the subject property using 3.25-inch-diameter hand augers. The soil boring locations are shown in Figure 2. Soil samples were collected in Borings B1 through B10, B12, B14, B16, B19, and B20 at approximately 0.5, 1.0, 1.5, and 2.0 fbg. Due to presence of the foundation and concrete pavement of the former housing structure located on the southeast quarter of the property, NSE collected four discrete soil samples in each of Quadrants 11, 13, 15, 17, and 18 (Figure 2) at approximately 0.5 foot below grade. Samples were collected by transferring soil directly from the bottom portion of the hand auger into a 4 oz. glass jar and sealed with a threaded, plastic cap. Samples were labeled and placed in an ice chest chilled to approximately 4°C.

During soil sample collection, NSE observed a 1-foot deep, circular depression in the center portion of Quadrant 14 (Figure 2). NSE hand-augered an additional soil boring (B21) at this location and collected soil samples at 1.0 and 1.5 fbg. Water saturated soil was observed in each sample. NSE subsequently entered (permission granted by property owner) the rear yard area of the adjacent property to the North at 5541Vallejo Street and drilled an additional soil boring (B22) at the location shown in Figure 2. NSE collected a soil sample in B22 at 2 fbg to provide background information on lead concentrations in surface soil in the vicinity of the subject property. Soil samples were contained in glass jars, labeled, and transferred to an ice chest chilled to approximately 4°C.

Following soil sample collection, NSE backfilled each boring to grade surface with the respective excavated soil. Equipment wash and rinse water were stored in a 30-gallon, steel drum, which was labeled and placed on the northeast corner of the property. NSE collected a sample of the drummed water to characterize the waste for future disposal/recycling.

Samples were submitted to NSE's state-certified analytical laboratory located in South San Francisco, California. NSE Lab composited the four discrete soil samples collected in each of Quadrants 11, 13, 15, 17, and 18, and analyzed the composite samples (denoted by Boring # followed by "C"), the remaining boring samples collected at approximately 0.5 fbg, and the soil samples collected in B21 and B22 for analysis of TTLC Lead by EPA Method 7420. In addition, NSE analyzed the rinse water sample for TTLC Lead. Soil samples collected at 0.5 fbg were *not* analyzed for STLC Lead, as recommended by NSE.

Based on the analytical results of the soil samples collected at 0.5 fbg in Borings B1 through B10, B12, B16, and B20, NSE Lab analyzed the samples collected at 1.0 fbg in the respective borings for TTLC Lead to further assess the vertical extent of lead-affected soil at these locations. On August 7, 2000, NSE composited the soil samples collected in B4, B9, B12, and B16 at approximately 1.5 fbg and analyzed the composite sample (Sample ID, Soil Comp) for TTLC and STLC Lead to evaluate the potential for soil waste disposal into a Class II facility. Table 1 includes a summary of the laboratory results of NSE soil boring sample analyses. The associated laboratory report and chain of custody record are in Appendix A.

WASTE MANAGEMENT

In August 2000, NSE will remove the drummed waste water from the site and transport it to Filter Recycling Services in Rialto, California for recycling/disposal. Following receipt of the associated non-hazardous waste manifest, NSE will forward a copy to the CERA.

FINDINGS

- The site is in the San Francisco Bay Central groundwater basin. Groundwater in this basin is designated beneficial for industrial uses. Surface water in this basin is supportive of estuarine and wildlife habitats, fish migration, and preservation of rare and endangered species. Depth to groundwater is approximately 5 to 15 feet below grade as measured in groundwater monitoring wells installed at a similar elevation approximately 2 miles to the north of the site.

- Soil lithology observed in Quadrants 1-11, 12, 14, 15, 17, 18, and 20 up to approximately 2 fbg was predominantly a dusky yellowish brown (10YR 2/2) silt with trace sand and fine gravel. Mounded, imported fill material above grade was observed in Quadrants 11-14 and 16, and consisted primarily of pale yellowish to dark yellowish brown (10YR 6/2, 4/2), fine-grained sandy silt / silty sand mixed with gravel and exterior stucco fragments. Soil observed in B19 at approximately 2.5 fbg (eastern edge of foundation) consisted of moderate to dark yellowish brown (10YR 5/4, 4/2), silty clay.

- Soil boring samples collected in Quadrants 1-20 at approximately 0.5 fbg contained concentrations up to 710 mg/kg TTLC Lead (B17). Soil Boring samples collected at approximately 1.0 fbg in Quadrants 1-10, 12, 16, and 20 contained up to 420 mg/kg TTLC Lead (B12), except in Quadrant 16 (B16 @ 840 mg/kg TTLC Lead).

- The soil boring sample (B21) collected in Quadrant 14 at approximately 1.0 and 1.5 fbg contained 230 mg/kg and 22 mg/kg TTLC Lead, respectively. The TTLC Lead concentration measured in B22 (background soil lead information) was 140 mg/kg.

- The composite soil sample (for evaluation of waste disposal options) contained 222 mg/kg TTLC Lead and 11.5 mg/l STLC Lead. The STLC concentration for this particular composite sample exceeds the **California Title 22 maximum threshold contaminant concentration (5 mg/l for STLC Lead; See Table 1)** for acceptance into a Class II Landfill facility.

- TTLC Lead concentrations measured in samples collected at the subject property between approximately 0.5 and 1.5 fbg do not exceed the **California Title 22 maximum threshold contaminant concentration (1,000 mg/kg for TTLC Lead; See Table 1).** However, samples collected in Quadrants 1-6, 8-12, 17, 18, and 20 at approximately 0.5 fbg and in Quadrants 2, 4, 12, 14, and 20 at approximately 1.0 fbg exceed the California-Modified Preliminary Remediation Goal for lead in residential soil (130 mg/kg) issued by the Environmental Protection Agency (Region 9).

CONCLUSIONS

- The vertical extent of lead-affected soil at the subject property, in our opinion, has been adequately assessed based on the laboratory analysis of soil samples collected from soil borings B1 through B21 (Quadrants 1 through 20) and from previous sampling activities conducted at the site. Lead-affected soil with TTLC concentrations $\leq$ 600 mg/kg appears to be limited to a depth of approximately 0.5 fbg, and $\leq$ 100 mg/kg TTLC Lead in soil appears to be limited to a depth of 1.0 fbg, except in B16 (840 mg/kg). The highest soil TTLC Lead concentrations were measured in samples collected in Quadrants 8, 12, 16, and 17, located at the eastern two-thirds of the property.

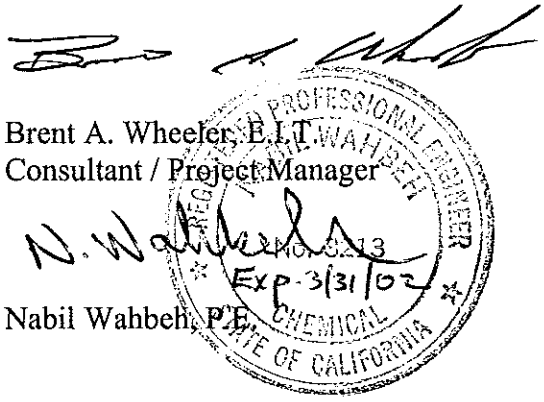
- The source of the lead-affected soil at the subject property is unknown at this time. However, based on conversation with the current site owner and on elevated TTLC lead concentrations measured in soil located at the site and the adjacent property to the north-northwest, it appears that the lead present in the soil may be from imported fill material historically placed onsite and in the immediate vicinity of the subject property.

LIMITATIONS AND CERTIFICATION

This report has been prepared in accordance with generally accepted environmental practices exercised by professional geologists, scientists, and engineers. No warranty, either expressed or implied, is made as to the professional advice presented herein. The findings and conclusions contained in this report are based upon information contained in previous reports of soil assessment activities performed at the subject property and based upon site conditions as they existed at the time of the investigation, and are subject to change.

The conclusions presented in this report are professional opinions based solely upon visual observations of the subject property and vicinity, and interpretation of available information as described in this report. The scope of services conducted in execution of this investigation may not be appropriate to satisfy the needs of other users and any use or reuse of this document and any of its information presented herein is at the sole risk of said user.

North State Environmental



Brent A. Wheeler, E.I.T.
Consultant / Project Manager

Nabil Wahbeh, P.E.

REFERENCES

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California Department of Conservation, Division of Mines and Geology, 1991. Geologic Map of the San Francisco-San Jose Quadrangle by Wagner, D.L., Bortugno, E.J., and McJunkin, R.D.

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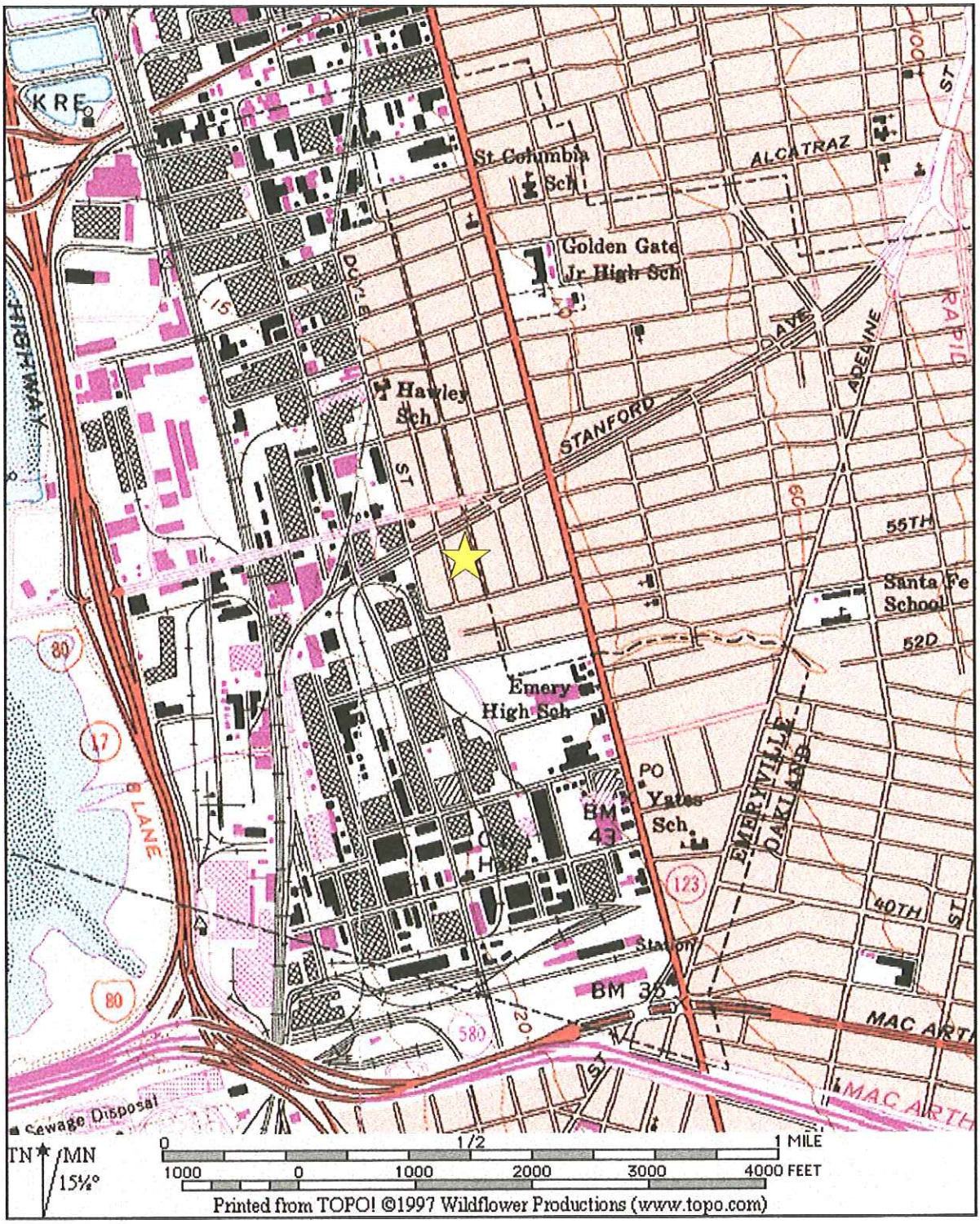
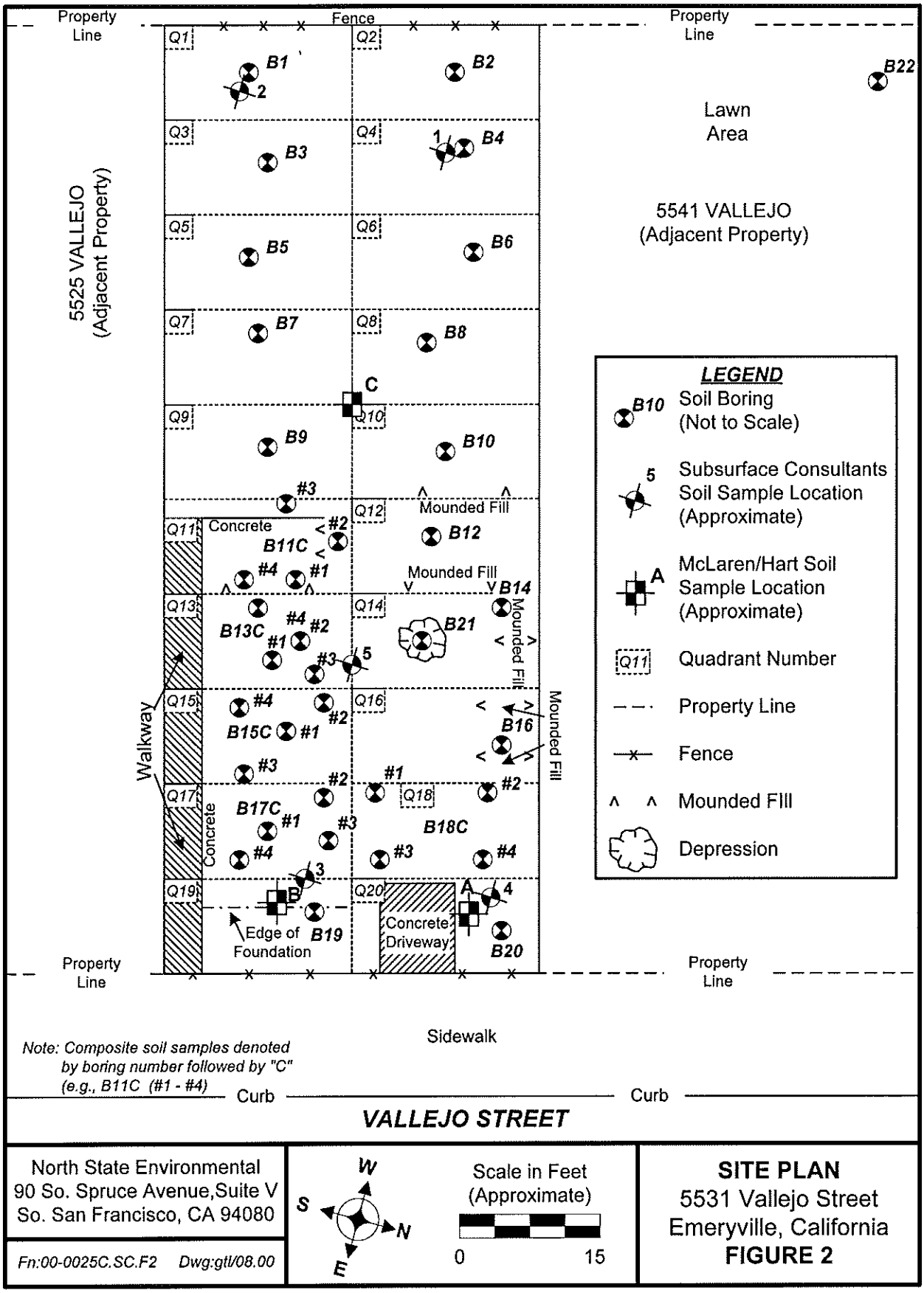
McLaren Hart, 1992; Letter Report of Results of Soil Sampling and Analysis, 5531 Vallejo Street, Emeryville, California. June 1992.

Subsurface Consultants, Inc., 1991; Letter Report of Results of Soil Sampling and Analysis, 5531 Vallejo Street, Emeryville, California. June 1991.



North State Environmental 90 So. Spruce Avenue, Ste V So. San Francisco, CA 94080	★ *SITE LOCATION*	**SITE VICINITY MAP** *5531 Vallejo Street* *Emeryville, California* **FIGURE 1**
Fn:0025C.sc.F1 Dwg:baw/8.00		



North State Environmental 90 So. Spruce Avenue,Suite V So. San Francisco, CA 94080	W, S, N, E Scale in Feet (Approximate) 0 15	**SITE PLAN** 5531 Vallejo Street Emeryville, California **FIGURE 2**
Fn:00-0025C.SC.F2 Dwg:gtl/08.00		

Table 1

Laboratory Results of Soil Sample Analyses

5531 Vallejo Street, Emeryville, California

Boring Location/ Sample ID	*Sample Depth (fbg)*	*Sample Date*	*TTLC Lead (mg/kg)*	*STLC Lead (mg/l)*
SCI-1	Surface Soil	5/10/91	252	8.43
SCI-2	Surface Soil		108	4.59
SCI-3	Surface Soil		1,030	36.5
SCI-4	Surface Soil		280	10.4
SCI-Composite	NA		294	--
MH-A	2	5/11/92	15	< 1.0
MH-B	2		24	< 1.0
MH-C	1		21	< 1.0
	2		12	< 1.0
B1	0.5	5/17/00	160	--
	1.0		91	--
B2	0.5		340	--
	1.0		154	--
B3	0.5		340	--
	1.0		56	--
B4	0.5		230	--
	1.0		240	--

Table 1 (Cont'd)
Laboratory Results of Soil Sample Analyses
5531 Vallejo Street, Emeryville, California

Boring Location/ Sample ID	*Sample Depth (fbg)*	*Sample Date*	*TTLC Lead (mg/kg)*	*STLC Lead (mg/l)*
B5	0.5	5/17/00	200	--
	1.0		36	--
B6	0.5		290	--
	1.0		100	--
B7	0.5		100	--
	1.0		36	--
B8	0.5		600	--
	1.0		71	--
B9	0.5		380	--
	1.0		54	--
B10	0.5		340	--
	1.0		94	--
B11C (1-4)	0.5		280	--
B12	0.5		590	--
	1.0		420	--
B13C (1-4)	0.5		78	--
B14	0.5		35	--

Table 1 (Cont'd)

Laboratory Results of Soil Sample Analyses

5531 Vallejo Street, Emeryville, California

Boring Location/ Sample ID	*Sample Depth (fbg)*	*Sample Date*	*TTLC Lead (mg/kg)*	*STLC Lead (mg/l)*
B15C (1-4)	0.5	5/17/00	95	--
B16	0.5		120	--
	1.0		840	--
B17C (1-4)	0.5		710	--
B18C (1-4)	0.5		340	--
B19	0.5		10	--
B20	0.5		280	--
	1.0		250	--
B21 (Quadrant 14)	1.0		230	--
	1.5		22	--
B22	2.0		140	--
Soil Comp	1.5		222	11.5
Laboratory Reporting Limit			1.0	0.05
California Title 22 Maximum Contaminant Concentration for Toxicity			1,000	5.0

LEGEND: TTLC Lead = total threshold limit concentration of Lead (EPA Method 7420)
STLC Lead = soluble threshold limit concentration of Lead by the California Waste Extraction Test
fbg = feet below grade; mg/kg = milligrams per kilogram; mg/l = milligrams per liter
SCI-1, -2, -3, -4, -Composite = samples collected by Subsurface Consultants, Inc. (May 1991)
MH-A, -B, -C = samples collected by McLaren Hart (May 1992)
B1 through B22, Soil Comp = Borehole soil samples collected by North State Environmental (May 2000)
B11C (1-4) = quadrant composite sample collected by NSE; -- = sample not analyzed for this constituent

APPENDIX A

LABORATORY REPORTS
AND CHAIN-OF-CUSTODY RECORDS
(May 1991 - May 2000)

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: 337.007
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 Valleio Street

Report Date: 17 May 91

Project Number: 537.007

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.

Q C B a t c h R e p o r t

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 #: 557.007
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: 105705-5

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: 3331 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 Valleio Street

Report Date: 29 May 91

Project Number: 537.007

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.

Q C B a t c h R e p o r t

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: SCI

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 SM10/8020	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: SCI - Valley St DATE: 5/22

REQUESTED BY: John Fuson TIME: (am) pm

RECORDED BY: DJW

Current Lab ID (Previous Lab ID)	Client ID	Circle matrix	Specify (add) or cancel	Analysis	Due date
Alias 103763-1,2,3,4 (newlogin = (103848))	1,2,3,4	(soil) water other		WET Pb WET Hg	ASAP (5/28)
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			

Added to LIMS

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 Gozetta)

Sample ID	Sample Type[1]	Container Type[2]	Sampling Date	Hold	Analysis	Analytical Method
Composite 1, 2, 3 & 4	S	T	5/10/91		8270 w/ PCB & Pesticides, 8010, 8020 SMWW 5520, TEH w/ Gas distinction, CA Title 26 metals	
						← Repeat 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					4 Individual sample analyses are requested for any elevated metal concentration (see list). For individual metals analysis, run total and soluble tests (WET	

* * * * * *

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

Released by: _____ Received by: _____ Date: _____

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

Released by Laboratory: _____ Date: _____

Released by: _____ Date: _____

Sample Type: W = Water, S = Soil, O = Other (specify)
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

McLaren™ Hart

Date: May 22, 1992
LP #: 5942

Chris Alger
McLaren/Hart
1135 Atlantic Avenue
Alameda, CA 94501

Dear Mr. Alger:

Enclosed are the laboratory results for the four samples submitted by you to the McLaren Analytical Laboratory on May 13, 1992, for the project *5531 Vallejo St.*

The analyses you requested are:

CAM Title 22 Metals (STLC) (Lead only) (4 - Soil)
CAM Metals (TTLC) (Lead only) (4 - Soil)

The report consists of the following sections:

1. A copy of the chain of custody
2. Quality Control Definitions and Report
3. Comments
4. Analytical results
5. Copy of final billing submitted to accounting.

Unless otherwise instructed by you, samples will be disposed of two weeks from the date of this letter.

Thank you for choosing McLaren Analytical Laboratory. We are looking forward to serving you in the future. Should you have any questions concerning this analytical report or the analytical methods employed, please do not hesitate to call.

Sincerely,

Anthony S. Wong

Anthony S. Wong, Ph.D.
Director, Laboratory/Managing Principal

3083 Gold Canal Drive, Rancho Cordova, CA 95670 (916) 852-6600 FAX (916) 852-7292

CAM TITLE 22 METALS (a)
SOLUBLE THRESHOLD LIMIT CONCENTRATION (STLC)

Preparation Method: Title 22 Waste Extraction Test (WET)

Project Name: 5531 Vallejo St

Project Number: 04.0600140.0(

Sample Description: Soil

Lab Project-ID Number: 5942-001

Sample Number: 54216 05-11-A

Date Sampled: 05/11/92

Date Received: 05/13/92

Date Extracted: 05/13/92

Batch Number: 920513-1101

METAL (SYMBOL)/EPA METHOD	DATE ANALYZED	CONCENTRATION mg/L (ppm)	REPORTING LIMIT mg/L (ppm)
Lead (Pb)/6010	05/18/92	BRL	1.0

Dilution: None

Comments: (a) Only the requested analyte is reported.

Approved By: Nancy McDonald for CM Date: 5-22-92

Cheryl Matterson, Associate Chemist

The cover letter and attachments are integral parts of this report.

102891MTL6

McLaren Hart

CAM TITLE 22 METALS (a)
SOLUBLE THRESHOLD LIMIT CONCENTRATION (STLC)

Preparation Method: Title 22 Waste Extraction Test (WET)

Project Name: 5521 Vallejo St

Project Number: 04.0600140.0(

Sample Description: Soil

Lab Project-ID Number: 5942-002

Sample Number: 54217 05-11-B

Date Sampled: 05/11/92

Date Received: 05/13/92

Date Extracted: 05/13/92

Batch Number: 920513-1101

METAL (SYMBOL)/EPA METHOD	DATE ANALYZED	CONCENTRATION mg/L (ppm)	REPORTING LIMIT mg/L (ppm)
Lead (Pb)/6010	05/18/92	BRL	1.0

Dilution: None

Comments: (a) Only the requested analyte is reported.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 5-22-92

The cover letter and attachments are integral parts of this report.

102891MTL6

McLaren Hart

CAM TITLE 22 METALS (a)
SOLUBLE THRESHOLD LIMIT CONCENTRATION (STLC)

Preparation Method: Title 22 Waste Extraction Test (WET)

Project Name: 5531 Vallejo St.

Project Number: 04.0600140.0(

Sample Description: Soil

Lab Project-ID Number: 5942-003

Sample Number: 54218 05-11-C1

Date Sampled: 05/11/92

Date Received: 05/13/92

Date Extracted: 05/13/92

Batch Number: 920513-1101

METAL (SYMBOL)/EPA METHOD	DATE ANALYZED	CONCENTRATION mg/L (ppm)	REPORTING LIMIT mg/L (ppm)
Lead (Pb)/6010	05/18/92	BRL	1.0

Dilution: None

Comments: (a) Only the requested analyte is reported.

Approved By: Nancy McDonald for CM Date: 5-22-92

Cheryl Matterson, Associate Chemist

The cover letter and attachments are integral parts of this report.

102891MTL6

McLaren Hart

CAM TITLE 22 METALS (a)
SOLUBLE THRESHOLD LIMIT CONCENTRATION (STLC)

Preparation Method: Title 22 Waste Extraction Test (WET)

Project Name: 5531 Vallejo St

Project Number: 04.0600140.01

Sample Description: Soil

Lab Project-ID Number: 5942-004

Sample Number: 54219 05-11-C2

Date Sampled: 05/11/92

Date Received: 05/13/92

Date Extracted: 05/13/92

Batch Number: 920513-1101

METAL (SYMBOL)/EPA METHOD	DATE ANALYZED	CONCENTRATION mg/L (ppm)	REPORTING LIMIT mg/L (ppm)
Lead (Pb)/6010	05/18/92	BRL	1.0

Dilution: None

Comments: (a) Only the requested analyte is reported.

Approved By: Nancy McDonald for CM Date: 5-28-92
Cheryl Matterson, Associate Chemist

The cover letter and attachments are integral parts of this report.

102891MTL6

McLaren Hart

CAM METALS (a)
TOTAL THRESHOLD LIMIT CONCENTRATION (TTLC)

Preparation Method: EPA 3050

Project Name: 5531 Vallejo St.

Project Number: 04.0600140.0(

Sample Description: Soil

Lab Project-ID Number: 5942-001

Sample Number: 54216 05-11-A

Date Sampled: 05/11/92

Date Received: 05/13/92

Date Digested: 05/14/92

Batch Number: 920514-1302

METAL (SYMBOL)/EPA METHOD	DATE ANALYZED	CONCENTRATION mg/Kg (ppm)	REPORTING LIMIT mg/Kg (ppm)
Lead (Pb)/6010	05/18/92	15.	2.5

Dilution: None

Comments: (a) Only the requested analyte is reported.

Approved By: Nancy McDonald for CM Date: 5-22-92
Cheryl Matterson, Associate Chemist

The cover letter and attachments are integral parts of this report.

082391MTL4

McLaren Hart

CAM METALS (a)
TOTAL THRESHOLD LIMIT CONCENTRATION (TTLC)

Preparation Method: EPA 3050

Project Name: 5531 Vallejo St.

Project Number: 04.0600140.0

Sample Description: Soil

Lab Project-ID Number: 5942-002

Sample Number: 54217 05-11-B

Date Sampled: 05/11/92

Date Received: 05/13/92

Date Digested: 05/14/92

Batch Number: 920514-1302

METAL (SYMBOL)/EPA METHOD	DATE ANALYZED	CONCENTRATION mg/Kg (ppm)	REPORTING LIMIT mg/Kg (ppm)
Lead (Pb)/6010	05/18/92	24.	2.5

Dilution: None

Comments: (a) Only the requested analyte is reported.

Approved By: Nancy McDonald for CM Date: 5-22-92
Cheryl Matterson, Associate Chemist

The cover letter and attachments are integral parts of this report.

082391MTL4

McLaren Hart

CAM METALS (a)
TOTAL THRESHOLD LIMIT CONCENTRATION (TTLC)

Preparation Method: EPA 3050

Project Name: 5531 Vallejo St.

Project Number: 04.0600140...

Sample Description: Soil

Lab Project-ID Number: 5942-003

Sample Number: 54218 05-11-C1

Date Sampled: 05/11/92

Date Received: 05/13/92

Date Digested: 05/14/92

Batch Number: 920514-1302

METAL (SYMBOL)/EPA METHOD	DATE ANALYZED	CONCENTRATION mg/Kg (ppm)	REPORTING LIMIT mg/Kg (ppm)
Lead (Pb)/6010	05/18/92	21.	2.5

Dilution: None

Comments: (a) Only the requested analyte is reported.

Approved By: Nancy McDonald for CM Date: 5-27-92
Cheryl Matterson, Associate Chemist

The cover letter and attachments are integral parts of this report.

082391MTL4

McLaren Hart

CAM METALS (a)
TOTAL THRESHOLD LIMIT CONCENTRATION (TTLC)

Preparation Method: EPA 3050

Project Name: 5531 Vallejo St.

Project Number: 04.0600140.0

Sample Description: Soil

Lab Project-ID Number: 5942-004

Sample Number: 54219 05-11-C2

Date Sampled: 05/11/92

Date Received: 05/13/92

Date Digested: 05/14/92

Batch Number: 920514-1302

METAL (SYMBOL)/EPA METHOD	DATE ANALYZED	CONCENTRATION mg/Kg (ppm)	REPORTING LIMIT mg/Kg (ppm)
Lead (Pb)/6010	05/18/92	12.	2.5

Dilution: None

Comments: (a) Only the requested analyte is reported.

Approved By: Nancy McDonald for CM Date: 5-22-92
Cheryl Matterson, Associate Chemist

The cover letter and attachments are integral parts of this report.

082391MTL4

McLaren Hart

J00594

McLaren Hart

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY
Laboratory Project No.: 5942 — Secured: Yes ✓ No
Storage Refrigerator ID: 4-35
Storage Freezer ID:

Project Name: 5531 Vallejo St. Project #: 04.0600110.000 Sampler: Gary Galindo (Printed Name) (Signature)

Relinquished by: (Signature and Printed Name)	Received by: (Signature and Printed Name)	Date	Time
X [illegible]	W. Eich Exp.ct	5-12-92	16:00
W. Eich	Gorey	5-13-92	0730
Gorey	[illegible]	5-13-92	850
	LANA ross	5-13-92	0135

SHIP TO:
McLaren Analytical Laboratory
11101 White Rock Road
Rancho Cordova, CA 95670
(916) 638-3696
FAX (916) 638-2842

Method of Shipment: Express-it

Shipment ID:

Circle or Add Analysis(es) Requested

a) Identify specific metals requested under Special Instructions

Sample ID Number	Date	Time	Description	MTL#1 Cd, Cr, Cu, Hg, Pb, Ni, Zn	MTL#2 Cd, Cr, Cu, Pb, Ni, Zn	Explosives	~~Org Pb / Org Pb~~ WET Pb	Cr VI / Nitrates / Nitrites	602 / 8020	608 / 8080	610 / 8100	625 / 8270	TPH / D	Sieve / TOC	Moisture / Density	Chloride / pH	Selected Metals Based on TTLC	Selected Metals Based on pH and Sulf	TDS 160.1 / Hardness 242.1	Ammonia-330 / Sulfate-376	Title 22 / Metals	Alkalinity 310.1 / Formaldehyde	TAT	Container(s) #	Container(s) Type	FOR LABORATORY USE ONLY Lab ID
1 [illegible] A	[illegible]		Soil			X										X							4	1	B	5942-001
2 [illegible]	5-12		Soil																				4	1	B	-002
3 [illegible]	[illegible]		Soil																				4	1	B	-003
4 [illegible]	5-12		Soil																				4	1	B	-004
5																										
6																										
7																										
8																										
9																										
10																										

Special Instructions/Comments: Analyze for Pb only both soluble by WET and Total by TTLC

Sample Archive/Disposal:
☒ Laboratory Standard
☐ Other

TAT (Analytical Turn-Around Times) 1 = 24 hours 2 = 48 hours 3 = 1 week 4 = 2 weeks
Container Types: B=Brass Tube, V=VOA Vial, A=1-Liter Amber, G=Glass Jar, C=Cassette, O = Other

SEND DOCUMENTATION AND RESULTS TO (Check one):
☒ Project Manager/Office: Chris Alger / Alameda
☐ Client Name:
Company:
Address:

FOR LABORATORY USE ONLY. Sample Condition Upon Receipt: sample intact Temp OK

QUALITY CONTROL DEFINITIONS

METHOD BLANK RESULTS: A method blank (MB) is a laboratory generated sample free of any contamination. The method blank assesses the degree to which the laboratory operations and procedures cause false-positive analytical results for your samples. The method blank results associated with your samples are attached.

LABORATORY CONTROL SPIKES

The LCS Program:

The laboratory control spike is a well characterized matrix (organic pure type II water for water samples and contamination free sand for soil samples) which is spiked with certain target parameters and analyzed in duplicate at approximately 5% of the sample load in order to assure the accuracy and precision of the analytical method. The results of the laboratory control spike associated with your samples are attached.

Accuracy is measured using percent recovery, i.e.:

$$\text{Percent Recovery} = \frac{\text{(measured concentration)}}{\text{(actual concentration)}} \times 100$$

Precision is measured using the relative percent difference (RPD) from duplicate tests, i.e.:

$$\text{RPD} = \frac{\%\ \text{Recovery of Spike}_{(1)} - \%\ \text{Recovery of Spike}_{(2)}}{(\%\ \text{Recovery of Spike}_{(1)} + \%\ \text{Recovery of Spike}_{(2)})/2} \times 100$$

Control limits for accuracy and precision are different for different methods. They may also vary with the different sample matrices. They are based on laboratory average historical data and EPA limits which are approved by the Quality Assurance Department.

McLaren Hart

QUALITY CONTROL REPORT

METHOD BLANK

Method: CAM Metals STLC
Units: mg/l (ppm)

Date Analyzed: 05/18/92
Date Extracted: 05/13/92
Batch Number: 920513-1101

Compound	Reporting Limit	Results of the MB
Lead (Pb)/6010	1.0	BRL

(DC3-CN5942)

McLaren Hart

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5942

Instrument #: ICP #1

Analyst: RK

Batch #: 920518-1101

Date Of Analysis: 05/18/92

Spike Sample ID: LCSX/LCSDX

Date of Digestion: 05/18/92

Spike ID Code: 4-1411

Matrix: Soil Extract Units: mg/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Pb	0	5.	4.61	92	5.11	102	10	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

McLaren Hart

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5942

Instrument #: ICP #1

Analyst: RJ

Batch #: 920518-1101

Date Of Analysis: 05/18/92

Spike Sample ID: 5942-001MS

Date of Digestion: 05/18/92

Spike ID Code: 4-1411

Matrix: Soil Extract Units: mg/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Pb	0	5.	4.97	99	NA	NA	NA	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

McLaren Hart

QUALITY CONTROL REPORT

METHOD BLANK

Method: CAM Title 22 Metals (TTLC Limit)
Units: mg/Kg (ppm)

Date Analyzed: 05/18/92
Date Extracted: 05/14/92
Batch Number: 920514-1302

Compound	Reporting Limit	Results of the MB
Lead (Pb)/6010	2.5	BRL

McLaren Hart

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5942

Instrument #: ICP #1

Analyst: RI

Batch #: 920514-1302

Date Of Analysis: 05/18/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 05/13/92

Spike ID Code: 4-1411

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Pb	0	25.	24.8	99	24.9	100	0	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

McLaren Hart

ABBREVIATIONS USED IN THIS REPORT

BRL	Below Reporting Limit
MB	Method Blank
MS	Matrix Spike
MSD	Matrix Spike Duplicate
LCS	Laboratory Control Spike
LCSD	Laboratory Control Spike Duplicate
RPD	Relative Percent Difference
NS	Not Specified
NA	Not Applicable

COMMENTS

Test methods may include minor modifications of published EPA methods (e.g., reporting limits or parameter lists). Reporting limits are adjusted to reflect dilution of the sample when appropriate. Solids and waste are analyzed with no correction made for moisture content. Blank results are reported in the Case Narrative.

For STLC metals analysis, the laboratory reports batch numbers on the following basis: Extraction batch numbers are reported for the samples and method blanks. Digestion batch numbers are reported for the spikes.

Results are reported on the attached data sheets.

McLaren Hart

North State Environmental Laboratory
CA ELAP # 1753
90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • (650) 266-4563 • FAX (650) 266-4560

C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 00-0700
Client: Ronald Henry
Project: 5531 VALLEJO ST., EMERYVILLE, CA

Date Reported: 06/05/2000

Lead by Method 7420,AA Spectroscopy

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 00-0700-01	Client ID: B1-0.5			05/17/2000	SOIL
Lead	7420	160	mg/Kg		05/23/2000
Sample: 00-0700-02	Client ID: B1-1.0			05/17/2000	SOIL
Lead	7420	91	mg/Kg		06/05/2000
Sample: 00-0700-05	Client ID: B2-0.5			05/17/2000	SOIL
Lead	7420	340	mg/Kg		05/23/2000
Sample: 00-0700-06	Client ID: B2-1.0			05/17/2000	SOIL
Lead	7420	154	mg/Kg		06/05/2000
Sample: 00-0700-09	Client ID: B3-0.5			05/17/2000	SOIL
Lead	7420	340	mg/Kg		05/23/2000
Sample: 00-0700-10	Client ID: B3-1.0			05/17/2000	SOIL
Lead	7420	56	mg/Kg		06/05/2000
Sample: 00-0700-13	Client ID: B4-0.5			05/17/2000	SOIL
Lead	7420	230	mg/Kg		05/23/2000

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C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 00-0700
Client: Ronald Henry
Project: 5531 VALLEJO ST., EMERYVILLE, CA

Date Reported: 06/05/2000

Lead by Method 7420,AA Spectroscopy

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 00-0700-14	Client ID: B4-1.0			05/17/2000	SOIL
Lead	7420	240	mg/Kg		06/05/2000
Sample: 00-0700-18	Client ID: B5-0.5			05/17/2000	SOIL
Lead	7420	200	mg/Kg		05/23/2000
Sample: 00-0700-19	Client ID: B5-1.0			05/17/2000	SOIL
Lead	7420	36	mg/Kg		06/05/2000
Sample: 00-0700-22	Client ID: B6-0.5			05/17/2000	SOIL
Lead	7420	290	mg/Kg		05/23/2000
Sample: 00-0700-23	Client ID: B6-1.0			05/17/2000	SOIL
Lead	7420	100	mg/Kg		06/05/2000
Sample: 00-0700-26	Client ID: B7-0.5			05/17/2000	SOIL
Lead	7420	100	mg/Kg		05/23/2000
Sample: 00-0700-27	Client ID: B7-1.0			05/17/2000	SOIL
Lead	7420	36	mg/Kg		06/05/2000

North State Environmental Laboratory
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C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 00-0700
Client: Ronald Henry
Project: 5531 VALLEJO ST., EMERYVILLE, CA

Date Reported: 06/05/2000

Lead by Method 7420,AA Spectroscopy

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 00-0700-30 Client ID: B8-0.5				05/17/2000	SOIL
Lead	7420	600	mg/Kg		05/23/2000
Sample: 00-0700-31 Client ID: B8-1.0				05/17/2000	SOIL
Lead	7420	71	mg/Kg		06/05/2000
Sample: 00-0700-34 Client ID: B9-0.5				05/17/2000	SOIL
Lead	7420	380	mg/Kg		05/23/2000
Sample: 00-0700-35 Client ID: B9-1.0				05/17/2000	SOIL
Lead	7420	54	mg/Kg		06/05/2000
Sample: 00-0700-38 Client ID: B10-0.5				05/17/2000	SOIL
Lead	7420	340	mg/Kg		05/23/2000
Sample: 00-0700-39 Client ID: B10-1.0				05/17/2000	SOIL
Lead	7420	94	mg/Kg		06/05/2000
Sample: 00-0700-42 Client ID: B11-0.5 (1-4)				05/17/2000	SOIL
Lead	7420	280	mg/Kg		05/23/2000

North State Environmental Laboratory
CA ELAP # 1753
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C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 00-0700
Client: Ronald Henry
Project: 5531 VALLEJO ST., EMERYVILLE, CA

Date Reported: 06/05/2000

Lead by Method 7420,AA Spectroscopy

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 00-0700-43	Client ID: B12-0.5			05/17/2000	SOIL
Lead	7420	590	mg/Kg		05/23/2000
Sample: 00-0700-44	Client ID: B12-1.0			05/17/2000	SOIL
Lead	7420	420	mg/Kg		06/05/2000
Sample: 00-0700-47	Client ID: B13-0.5 (1-4)			05/17/2000	SOIL
Lead	7420	78	mg/Kg		05/23/2000
Sample: 00-0700-48	Client ID: B14-0.5			05/17/2000	SOIL
Lead	7420	35	mg/Kg		05/23/2000
Sample: 00-0700-52	Client ID: B15-0.5 (1-4)			05/17/2000	SOIL
Lead	7420	95	mg/Kg		05/23/2000
Sample: 00-0700-53	Client ID: B16-0.5			05/17/2000	SOIL
Lead	7420	120	mg/Kg		05/23/2000
Sample: 00-0700-54	Client ID: B16-1.0			05/17/2000	SOIL
Lead	7420	840	mg/Kg		06/05/2000

North State Environmental Laboratory
CA ELAP # 1753
90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • (650) 266-4563 • FAX (650) 266-4560

C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 00-0700
Client: Ronald Henry
Project: 5531 VALLEJO ST., EMERYVILLE, CA

Date Reported: 06/05/2000

Lead by Method 7420,AA Spectroscopy

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 00-0700-57	Client ID: B17-0.5 (1-4)			05/17/2000	SOIL
Lead	7420	710	mg/Kg		05/23/2000
Sample: 00-0700-58	Client ID: B18-0.5 (1-4)			05/17/2000	SOIL
Lead	7420	340	mg/Kg		05/23/2000
Sample: 00-0700-59	Client ID: B19-0.5			05/17/2000	SOIL
Lead	7420	10	mg/Kg		05/23/2000
Sample: 00-0700-63	Client ID: B20-0.5			05/17/2000	SOIL
Lead	7420	280	mg/Kg		05/23/2000
Sample: 00-0700-64	Client ID: B20-1.0			05/17/2000	SOIL
Lead	7420	250	mg/Kg		06/05/2000
Sample: 00-0700-67	Client ID: B21-1.0			05/17/2000	SOIL
Lead	7420	230	mg/Kg		05/23/2000
Sample: 00-0700-68	Client ID: B21-1.5			05/17/2000	SOIL
Lead	7420	22	mg/Kg		06/05/2000

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90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • **(650) 266-4563** • FAX (650) 266-4560

C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 00-0700
Client: Ronald Henry
Project: 5531 VALLEJO ST., EMERYVILLE, CA

Date Reported: 06/05/2000

Lead by Method 7420,AA Spectroscopy

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 00-0700-69 Client ID: B22-2.0				05/17/2000	SOIL
Lead	7420	140	mg/Kg		05/23/2000
Sample: 00-0700-70 Client ID: RINSE WATER				05/17/2000	WATER
Lead	7420	0.25	mg/L		05/23/2000

North State Environmental Laboratory
CA ELAP # 1753
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C E R T I F I C A T E O F A N A L Y S I S

Quality Control/Quality Assurance

Lab Number: 00-0700
Client: Ronald Henry
Project: 5531 VALLEJO ST., EMERYVILLE, CA

Date Reported: 06/05/2000

Lead by Method 7420,AA Spectroscopy

Analyte	Method	Reporting Limit	Unit	Blank	Avg MS/MSD Recovery	RPD
Lead	7420	1.0	mg/Kg	ND	120/124	3
Lead	7420	0.05	mg/L	ND	98/86	14

ELAP Certificate NO:1753
Reviewed and Approved

John A.Murphy,Laboratory Director

North State Environmental Laboratory
CA ELAP # 1753
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C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 00-1120
Client: Ronald Henry
Project: 5531 VALLEJO ST., EMERYVILLE

Date Reported: 08/16/2000

Lead by Method 7420,AA Spectroscopy
California WET Extraction and Lead by AA Spectroscopy

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 00-1120-01 Client ID: SOIL COMP				05/17/2000	SOIL
Lead	7420	220	mg/Kg		08/09/2000
STLC Lead	7420	12	mg/L		08/11/2000

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CA ELAP # 1753

C E R T I F I C A T E O F A N A L Y S I S

Quality Control/Quality Assurance

Lab Number: 00-1120
Client: Ronald Henry
Project: 5531 VALLEJO ST., EMERYVILLE

Date Reported: 08/16/2000

Lead by Method 7420,AA Spectroscopy
California WET Extraction and Lead by AA Spectroscopy

Analyte	Method	Reporting Limit	Unit	Blank	Avg MS/MSD Recovery	RPD
Lead	7420	1.0	mg/Kg	ND	96/95	1
STLC Lead	7420	0.05	mg/L	ND	98/101	2

ELAP Certificate NO:1753
Reviewed and Approved

John A.Murphy Laboratory Director

00-1120

North State Environmental Analytical Laboratory

90 South Spruce Avenue, Suite W, South San Francisco, CA 94080
Phone: (650) 266-4563 Fax: (650) 266-4560

Chain of Custody / Request for Analysis
Lab Job No.:_____ Page 1 of 1

Client: RON HENRY	Report to: B WHEELER	Phone: 510.923.3628	Turnaround Time: 5 DAY
Mailing Address: 5573 VALLEJO ST. EMERYVILLE, CA 94608	Billing to: SAME	Fax: 510.923.4117	Date: 8/7/00
		PO# / Billing Reference: NSE 00-0025C	Sampler: BAW/MWD

Project / Site Address: 5531 VALLEJO ST. EMERYVILLE, CA

Analysis Requested: TPH 8260, BTEX 8260

Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	Comments / Hazards
B4-1.5	SOIL	4 oz JAR	4°C	8/7/00 9:25	
B9-1.5	↓	↓	↓	9:59	COMPOSITE BEFORE ANALYSIS
B12-1.5	↓	↓	↓	10:45	↓
B16-1.5	↓	↓	↓	11:40	SAMPLE I.D. "SOIL COMP"

Relinquished by: B. A. Wheeler	Date: 8/7/00	Time: 12:00	Received by:	Lab Comments
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by:	

APPENDIX B

GENERAL FIELD PROCEDURES

GENERAL FIELD PROCEDURES

SOIL SAMPLING

Borings are either percussion drilled (typically 2.5-inch-diameter borings), drilled with solid- or hollow-stem augers (typically 6- to 8-inch-diameter borings), or manually drilled utilizing a 3.25-inch-diameter hand auger. In percussion drilling soil samples are collected by hydraulically hammering a 2-foot-long, 1-inch-inner-diameter split-spoon sampler lined with an plastic tube. The plastic tube is removed from the sampler, cut, and the open ends covered with Teflon tape and plastic caps. If solid-stem auger is used, soil samples are either collected by hand driving a metal tube-lined slide hammer into the bottom of the borehole after the auger is withdrawn (borings <6 feet) or by driving a metal tube into the soil cuttings adhering to the auger flight. The tubes are then capped with teflon tape and plastic caps. If hollow-stem augers are used, soil samples are typically collected by driving a metal tube-lined split-spoon sampler with a 140-pound hammer falling 30 inches. Again, the samples are capped with teflon tape and plastic caps. For hand-augered borings, soil samples can be collected directly from the hand auger or collected using a 25 pound slide hammer attached to a 2.25-inch-diameter, brass tube-lined, remote core sampler.

Soil samples are collected at a minimum frequency of once every 5 feet, but may also be collected at changes in lithology and within the capillary fringe. The date, project number, and sample identification number are written on each sample and a chain of custody form and the sample is placed in a cooler chilled to approximately 4° C. Soil adjacent to the sample is screened by an organic vapor analyzer and described using the Unified Soil Classification System. Drilling rods, augers, and samplers are cleaned in a hot water pressure washer or cleaned with a phosphate free TSP or Alconox cleaning solution and rinsed with potable water prior to drilling each boring or collecting each sample.

FLUID-LEVEL MONITORING AND GROUNDWATER SAMPLING

Fluid-levels in monitoring wells are measured using an electronic probe or fiberglass tape coated with pastes that indicate the presence of water or free product. In the presence of free product, fluid levels would be additionally measured using a oil/water interface probe. Depth to fluid is measured from the top of the well casing which is typically surveyed to a local Bench Mark.

Monitoring wells are sampled in accordance with the guidelines established by the local oversight agency. If well purging is required before the well water can be sampled, then the temperature, pH, and specific conductance of the well water is measured before the well is purged and after every ½ casing or borehole volume of groundwater is purged from the well. Well purging is terminated when successive physical parameter measurements vary by less than 10%, the well does not recharge to 80% of its pre-purged volume within two hours, or when three well casing or borehole volumes of fluid have been removed. The purged water is either pumped directly into a vacuum truck or into labeled drums which are temporarily stored onsite.

Groundwater samples are collected immediately after purging is terminated. The samples are generally collected by lowering a bottom-fill, check-valve-equipped, stainless steel or disposable Teflon bailer into the well to just below the water level. However, a peristaltic pump may be used to collect groundwater samples from wells <2 inches in diameter. The samples are carefully transferred to 40-milliliter to 1-liter glass containers, filled to zero-head space, and fitted with Teflon-lined caps. The project and sample number, date of collection, and sampler's initials are written on each sample and the chain of custody record. The samples are placed in a cooler and chilled to approximately 4° C until they are delivered to a state-certified laboratory for analysis.

WASTE GENERATION AND DISPOSAL

Soil cuttings generated during drilling activities are either temporarily stored onsite in 55-gallon drums or stockpiled onsite. If the cuttings are drummed, then a label is affixed to each drum indicating contents, accumulation date, consultant, consultant phone number, and site address. If the cuttings are stockpiled, then they are placed on and covered by visqueen secured with sandbags. The drummed or stockpiled soil is either disposed of onsite (if permitted by the local oversight agency) or transported to an appropriate disposal facility based on the laboratory results of soil sample analysis. A copy of each waste manifest is submitted to the local oversight agency.

Well purge water and equipment wash and rinse water is pumped into a vacuum truck or temporarily stored onsite in labeled 55-gallon drums. The label indicates drum contents, accumulation date, consultant, consultant phone number, and site address. The fluid in the drums is either discharged onsite (if permitted by the local oversight agency), discharged to the sewer (if permitted by the local wastewater agency), or transported to an appropriate disposal facility based on the laboratory results of groundwater sample analysis. A copy of each waste manifest is submitted to the local oversight agency.