

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

Mountain View
Oakland
San Ramon
Fullerton

6/12/01

Development
plans

Cost 201

May 29, 2001
1424-4

Mr. Dennis O'Keefe
PULTE HOME CORPORATION
7031 Koll Center Parkway, Suite 150
Pleasanton, California 94566

**RE: SUPPLEMENTAL SOIL QUALITY
EVALUATION
1274 65TH STREET AND 1269 66TH
STREET
EMERYVILLE, CALIFORNIA**

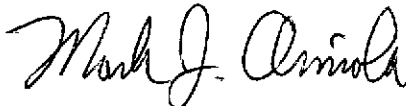
Dear Mr. O'Keefe:

The attached report summarizes the results of our supplemental soil quality evaluation performed at 1274 65th Street and 1269 66th Street in Emeryville, California. This report was prepared in accordance with our agreement dated May 15, 2001.

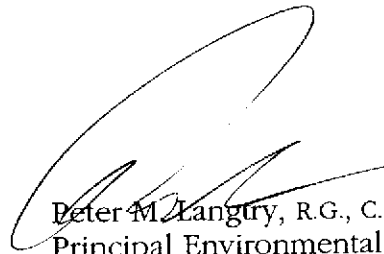
We refer you to the text of the report for details regarding this study. Thank you for choosing us to assist you. If you have any questions, please call and we will be glad to discuss them with you.

Very truly yours,

LOWNEY ASSOCIATES



Mark J. Arniola, R.G., R.E.A.
Senior Project Geologist



Peter M. Langry, R.G., C.H.G.
Principal Environmental Geologist

PML:MJA:vh

Copies: Addressee (3)
Alameda County Department of Environmental Health
Attn: Susan Hugo (1)

OK, 1424-4 LSI Sup Soil.doc

Supplemental Soil Quality Evaluation

1274 65th Street and 1269 66th Street
Emeryville, California

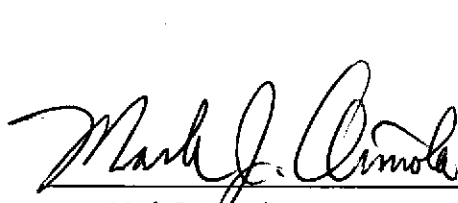
This report has been prepared for:

Pulte Home Corporation

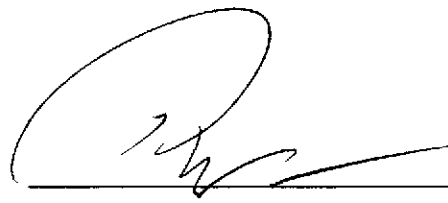
7031 Koll Center Parkway, Suite 150, Pleasanton, California 94566

May 29, 2001

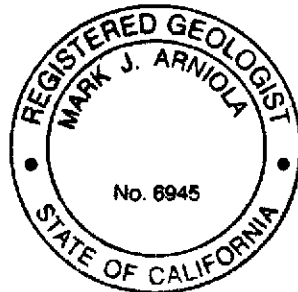
Project No. 1424-4



Mark J. Arniola, R.G., R.E.A.
Senior Project Geologist



Peter M. Langtry, R.G., C.H.G.
Principal Environmental Geologist



Mountain View

Fullerton

Oakland

San Ramon

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SUPPLEMENTAL SOIL QUALITY EVALUATION
1274 65TH STREET AND 1269 66TH STREET
EMERYVILLE, CALIFORNIA

1.0 INTRODUCTION

1.1 Purpose

In this report, we present the results of the supplementary soil quality evaluation performed at 1274 65th Street and 1269 66th Street in Emeryville, California. This work was performed for Pulte Home Corporation who is considering purchasing the property for development of multi-family attached housing.

1.2 Site Background

Based on information from historic Sanborn fire insurance maps and soil borings drilled for Lowney Associates' May 2, 2001 *Phase I Environmental Site Assessment and Soil and Ground Water Quality Evaluation*, a former stream appeared to be located on the eastern portion of the site. The stream was shown on a 1903 Sanborn map and appeared to have been filled by 1911. This report has been prepared as a supplement to the Phase I report to further evaluate fill depth and quality in the area of the former stream.

1.3 Scope of Work

The scope of work for this study was outlined in our agreement dated May 15, 2001 and included the following tasks.

- ▼ Drilling and logging 11 exploratory borings.
- ▼ Collecting soil samples for laboratory analysis.

2.0 SOIL QUALITY EVALUATION

2.1 Subsurface Investigation

On May 17, 2001 under the supervision of Senior Project Geologist Mark Arniola, Staff Engineer Ryan Gerber directed a subsurface exploration program and logged 11 borings (SS-15 through SS-25) to approximate depths of 5 to 10 feet. The borings were drilled to evaluate subsurface conditions along the projected location of a former creek on the eastern portion of the site based on the location shown on the 1903 Sanborn map and site access constraints. Additionally, soil samples were collected from borings SS-16, SS-18, SS-19, SS-22, SS-23, and SS-24 to evaluate the quality of the creek fill, including an evaluation of soil quality in the area of former

borings SS-9 and SS-11 where elevated concentrations of lead were detected (Figure 2). Soil sampling protocol is presented in Appendix A.

Apparent fill material was encountered in borings SS-16, SS-17, SS-18, SS-20, SS-21, SS-22, and SS-23 to depths of 2 to 4 feet below the ground surface.

2.2 Soil Sample Collection and Analyses

To evaluate soil quality, soil samples were collected from borings SS-16, SS-18, SS-19, SS-22, SS-23, and SS-24. The fill at these locations was primarily a clayey gravel with sand. Fragments of brick and wood were observed in the fill at boring SS-22 at 3½ to 4 feet below the ground surface. A fuel odor was detected in the soil at SS-18 with the apparent strongest odor emanating from the soil at approximately 5 feet. The selected samples were submitted to a state-certified analytical laboratory.

Soil samples SS-16, SS-18, SS-19, and SS-22 were analyzed for total petroleum hydrocarbons in the gasoline range (TPHg); benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Test Method 8015/8020); total petroleum hydrocarbons in the diesel range (TPHd) and motor oil range (TPHmo) (EPA Test Method 8015); and 17 California Assessment Manual (CAM) metals. In addition, soil samples SS-18 and SS-22 were additionally analyzed for polynuclear aromatic hydrocarbons (PNAs) (EPA Test Method 8310) and sample SS-18 for polychlorinated biphenyls (PCBs) (EPA Test Method 8082). Samples SS-23 and SS-24 were analyzed for total lead. These analyses were selected to help evaluate the quality of the fill.

Analytical results are presented in Tables 1A and 1B. Copies of the analytical reports and chain of custody documentation are presented in Appendix A.

Table 1A. Analytical Results of Selected Soil Samples
(concentrations in parts per million)

Boring Number	Depth (feet)	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes
SS-16	1½ - 2	<1.0	2.5	<50	<0.005	<0.005	<0.005	<0.005
SS-18	5 - 5½	47	680	<250	<0.62	<0.62	<0.62	<0.62
SS-19	4 - 4½	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005
EB-22	3½ - 4	<1.0	4.4	<50	<0.005	<0.005	<0.005	<0.005
Residential PRG*		NE	NE	NE	0.65	520	230	210

< Indicates that the compound was not detected at or above the stated laboratory reporting limit

* Preliminary Remediation Goal-EPA Region 9, 2000

NE Not established

Table 1B. Analytical Results of Selected Soil Samples
(concentrations in parts per million)

Boring Number	Depth (feet)	Arsenic ¹	Cadmium ¹	Lead ¹	Nickel ¹	Zinc ¹	PNAs	PCBs
SS-16	1½ - 2	3.1	1.5	6.8	7.3	70	--	--
SS-18	5 - 5½	2.3	1.2	35	19	57	0.31 ²	ND
SS-19	4 - 4½	2.5	<0.5	4.4	12	12	--	--
SS-22	3½ - 4	5.9	1.2	140	16	480	ND	--
SS-23	3½ - 4	--	--	280	--	--	--	--
SS-24	2 - 2½	--	--	12	--	--	--	--
Residential PRG*		0.39/22 ³	9.0	200**	150	23,000		0.22
TTL		500	100	350	2,000	5,000		1.0

* Preliminary Remediation Goal—EPA Region 9, 2000

** Residential Risk Based Screening Level (RBSL), CRWQCB, August 2000

ND Not detected at or above laboratory reporting limit

TTL - Total Threshold Limit Concentration

1 Other CAM metals were non-detect or consistent with typical background levels

2 PAHs detected included 0.031 ppm naphthalene, 0.13 ppm fluorene, and 0.14 ppm phenanthrene

3 Cancer endpoint/non-cancer endpoint

The preliminary remediation goals (PRGs) presented in Tables 1A and 1B are risk-based concentrations developed by EPA Region 9; PRGs are for use as screening levels in determining if further evaluation is warranted, in prioritizing areas of concern, in establishing initial cleanup goals, and in estimation of potential health risks.

The PRGs are chemical concentrations that correspond to fixed levels of risk (either a cancer risk of one in one million [10^{-6}] or a non-carcinogenic hazard quotient of one, whichever occurs at a lower concentration). These levels are based on common exposure pathways, but effects of exposure to multiple contaminants and other site specific conditions are not considered. Thus, they are not intended as a substitute for a site specific health risk assessment. Chemical concentrations above the PRGs would not automatically designate the site as a health threat or trigger a response action. Exceeding a PRG, however, may suggest that further evaluation of potential risks is appropriate. This further evaluation may include additional sampling and/or the reassessment of the assumptions and routes of exposure that were used to develop the non-site specific PRGs.

2.3 Soluble Lead Analysis

Elevated lead (190 parts per million (ppm)) was detected in sample SS-9 during our previous soil quality evaluation (Lowney Associates, May 2, 2001). The sample was additionally analyzed for soluble threshold limit concentration (STLC) lead. The laboratory analysis detected 16 ppm soluble lead in the sample. The California hazardous waste limit for the soluble lead is 5 ppm.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 Fill Quality

No TPHmo, BTEX, or PCBs were detected in the samples analyzed. Low concentrations of the PNAs naphthalene, fluorene, and phenanthrene were detected in boring SS-18, but at levels significantly below residential PRGs. TPHg and TPHd also were detected at 47 ppm and 680 ppm in boring SS-18, respectively. The soil at SS-18 will require appropriate handling and disposal if excavated during site development. The concentrations detected do not appear to be a significant threat to human health.

With the exception of lead, metals detected appeared to be consistent with typical background concentrations. Elevated levels of lead were detected in soil from borings SS-22 (140 ppm) and SS-23 (280 ppm). STLC lead analysis of soil from boring SS-9 detected lead (16 ppm), exceeding the hazardous waste limit of 5 ppm. We recommend excavation and off-site disposal of the lead-impacted soil at the southeast portion of the site around borings SS-9, SS-22, and SS-23 and at the northeast portion of the site around boring SS-11. This soil will require disposal at a Class I hazardous waste facility. Pockets of fill with elevated lead or buried debris may be present. If the fill requires excavation during construction we recommend sampling the excavated soil to evaluate appropriate disposal alternatives

3.2 Extent of Fill

During this investigation, apparent fill material was encountered at borings SS-16, SS-17, SS-18, SS-20, SS-21, SS-22, and SS-23) at depths of 2 to 4 feet. The extent of fill encountered in the borings appears to generally coincide with the location of the creek shown on the 1903 Sanborn map. We recommend that Lowney Associates observe the soil following building demolition to confirm the extent of the creek fill.

3.3 Soil Management Plan

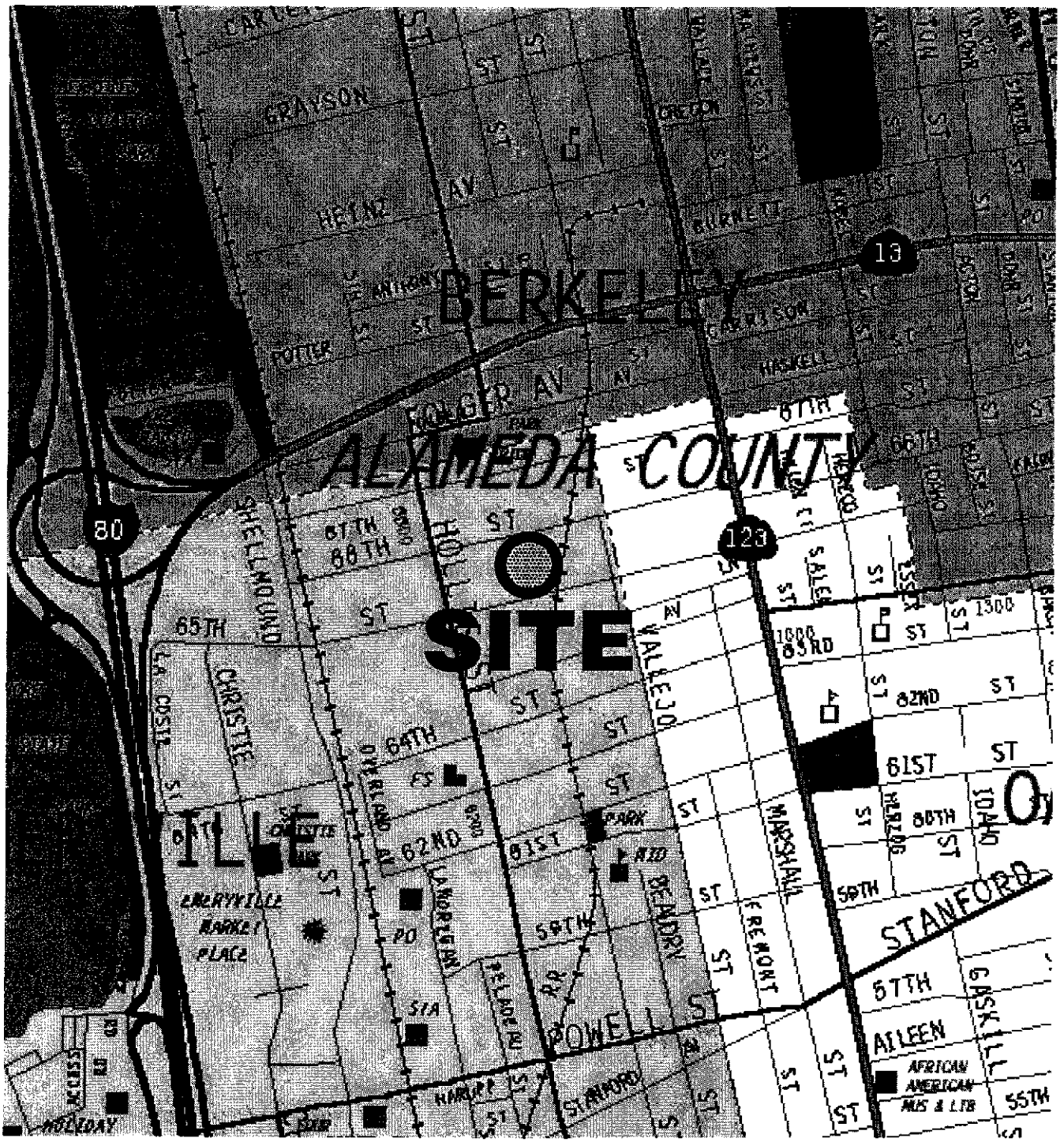
We recommend preparing a soil management plan that presents protocol for addressing soil with residual hydrocarbons and the creek fill if encountered during site development.

4.0 LIMITATIONS

This report was prepared for the use of Pulte Home Corporation in evaluating soil quality at 1274 65th Street and 1269 66th Street at the time of this study. We make no warranty, expressed or implied, except that our services have been performed in accordance with environmental principles generally accepted at this time and location. The chemical and other data presented in this report can change over time and are applicable only to the time this study was performed. We are not responsible for the data presented by others.

The accuracy and reliability of geo- or hydrochemical studies are a reflection of the number and type of samples taken and extent of the analyses conducted, and are thus inherently limited and dependent upon the resources expended. Chemical analyses were performed for specific parameters during this investigation, as detailed in the scope of services. Please note that additional constituents not analyzed for during this evaluation may be present in soil and ground water at the site. Our sampling and analytical plan was designed using accepted environmental principles and our judgment for the performance of a soil and ground water quality evaluation and was based on the degree of investigation approved by you. It is possible to obtain a greater degree of certainty, if desired, by implementing a more rigorous soil and ground water sampling program or evaluating the risk posed by the contaminants detected, if any.

* * * * *



© 1999 Thomas Bros. Maps

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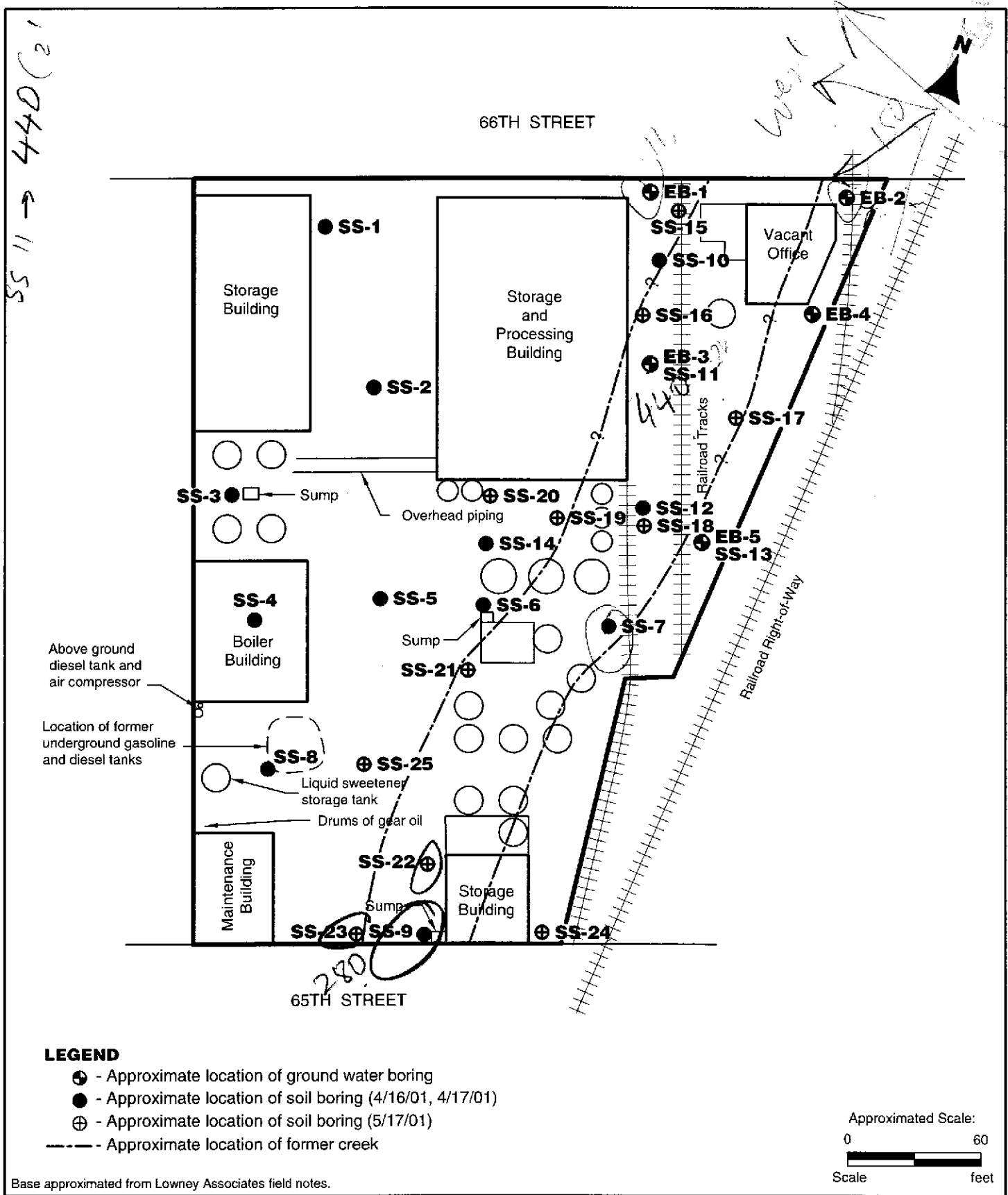
VICINITY MAP

1269 66TH STREET, 1274 65TH STREET
Emeryville, California

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 1
1424-4

Pb: SS23 → 280 (3 1/2')
 SS 11 → 440 (2')



Base approximated from Lowney Associates field notes.

SITE PLAN

1269 66TH STREET, 1274 65TH STREET
 Emeryville, California

APPENDIX A
SUBSURFACE INVESTIGATION AND SOIL SAMPLING PROTOCOL
AND ANALYTICAL RESULTS

The subsurface investigation was performed on May 17, 2001 using a limited access hydraulic coring rig. Ten soil borings were drilled to depths of approximately 5 to 10 feet. Soils encountered in the borings were logged using the Unified Soil Classification System (ASTM D-2487).

Soil samples for laboratory analysis were collected in acetate liners, the ends covered in Teflon sheets, taped, then labeled with a unique identification number, placed in an ice-chilled cooler, and transported to a state-certified analytical laboratory with chain of custody documentation.

All drilling and sampling equipment was cleaned in a solution of laboratory grade detergent and distilled water or steam-cleaned before use at each sampling point.

The chilled samples were delivered to a state-certified analytical laboratory. Chain of custody documentation was maintained for all samples. Attached are copies of the analytical results and the chain of custody form.

Lowney & Associates Oakland

129 Filbert Street
Oakland, Ca 94607

Attn.: Mr. Mark Arniola

Project: 1424-4
Liquid Sugar

Dear Mr. Arniola,

Attached is our report for your samples received on Thursday May 17, 2001
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after July 1, 2001
unless you have requested otherwise. We appreciate the opportunity to be of service to you.
If you have any questions, please call me at (925) 484-1919. You can also contact me via email.
My email address is: vvancil@chromalab.com

Sincerely,



Vincent Vancil

Polynuclear Aromatic Hydrocarbons (PNA)

Lowney & Associates Oakland	✉ 129 Filbert Street Oakland, Ca 94607
Attn: Mark Arniola	Phone: (510) 267-1970 Fax: (510) 267-1972
Project #: 1424-4	Project: Liquid Sugar

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SS-18 @ 5-5.5	Soil	05/17/2001 10:00	2
SS-22 @ 3.5-4	Soil	05/17/2001 12:00	5

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0328

To: **Lowney & Associates Oakland**

Test Method: 8310

Attn.: Mark Arniola

Prep Method: 3550/8310

Polynuclear Aromatic Hydrocarbons (PNA)

Sample ID: SS-18 @ 5-5.5	Lab Sample ID: 2001-05-0328-002
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 10:00	Extracted: 05/18/2001 08:18
Matrix: Soil	QC-Batch: 2001/05/18-01.18

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Naphthalene	31	15	ug/Kg	1.00	05/18/2001 20:19	
Acenaphthylene	ND	10	ug/Kg	1.00	05/18/2001 20:19	
Acenaphthene	ND	10	ug/Kg	1.00	05/18/2001 20:19	
Fluorene	130	5.0	ug/Kg	1.00	05/18/2001 20:19	
Phenanthrene	140	5.0	ug/Kg	1.00	05/18/2001 20:19	
Anthracene	ND	5.0	ug/Kg	1.00	05/18/2001 20:19	
Fluoranthene	ND	5.0	ug/Kg	1.00	05/18/2001 20:19	
Pyrene	ND	5.0	ug/Kg	1.00	05/18/2001 20:19	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	05/18/2001 20:19	
Chrysene	ND	5.0	ug/Kg	1.00	05/18/2001 20:19	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	05/18/2001 20:19	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	05/18/2001 20:19	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	05/18/2001 20:19	
Dibenzo(a,h)anthracene	ND	10	ug/Kg	1.00	05/18/2001 20:19	
Benzo(g,h,i)perylene	ND	10	ug/Kg	1.00	05/18/2001 20:19	
Indeno(1,2,3-cd)pyrene	ND	10	ug/Kg	1.00	05/18/2001 20:19	
Surrogate(s)						
1-Methyl naphthalene	196.7	50-150	%	1.00	05/18/2001 20:19	sh

1220 Quarry Lane * Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0328

To: **Lowney & Associates Oakland**
Attn.: Mark Arniola

Test Method: 8310
Prep Method: 3550/8310

Polynuclear Aromatic Hydrocarbons (PNA)

Sample ID: SS-22 @ 3.5-4	Lab Sample ID: 2001-05-0328-005
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 12:00	Extracted: 05/18/2001 08:18
Matrix: Soil	QC-Batch: 2001/05/18-01.18

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Naphthalene	ND	15	ug/Kg	1.00	05/18/2001 19:20	
Acenaphthylene	ND	10	ug/Kg	1.00	05/18/2001 19:20	
Acenaphthene	ND	10	ug/Kg	1.00	05/18/2001 19:20	
Fluorene	ND	5.0	ug/Kg	1.00	05/18/2001 19:20	
Phenanthrene	ND	5.0	ug/Kg	1.00	05/18/2001 19:20	
Anthracene	ND	5.0	ug/Kg	1.00	05/18/2001 19:20	
Fluoranthene	ND	5.0	ug/Kg	1.00	05/18/2001 19:20	
Pyrene	ND	5.0	ug/Kg	1.00	05/18/2001 19:20	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	05/18/2001 19:20	
Chrysene	ND	5.0	ug/Kg	1.00	05/18/2001 19:20	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	05/18/2001 19:20	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	05/18/2001 19:20	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	05/18/2001 19:20	
Dibenzo(a,h)anthracene	ND	10	ug/Kg	1.00	05/18/2001 19:20	
Benzo(g,h,i)perylene	ND	10	ug/Kg	1.00	05/18/2001 19:20	
Indeno(1,2,3-cd)pyrene	ND	10	ug/Kg	1.00	05/18/2001 19:20	
Surrogate(s)						
1-Methyl naphthalene	63.3	50-150	%	1.00	05/18/2001 19:20	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

To: **Lowney & Associates Oakland**
 Attn.: Mark Arniola

Test Method: 8310
 Prep Method: 3550/8310

Batch QC Report
 Polynuclear Aromatic Hydrocarbons (PNA)

Method Blank	Soil	QC Batch # 2001/05/18-01.18
MB: 2001/05/18-01.18-001		Date Extracted: 05/18/2001 08:18

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Naphthalene	ND	15.0	ug/Kg	05/18/2001 17:19	
Acenaphthylene	ND	10	ug/Kg	05/18/2001 17:19	
Acenaphthene	ND	10	ug/Kg	05/18/2001 17:19	
Fluorene	ND	5.0	ug/Kg	05/18/2001 17:19	
Phenanthrene	ND	5.0	ug/Kg	05/18/2001 17:19	
Anthracene	ND	5.0	ug/Kg	05/18/2001 17:19	
Fluoranthene	ND	5.0	ug/Kg	05/18/2001 17:19	
Pyrene	ND	5.0	ug/Kg	05/18/2001 17:19	
Benzo(a)anthracene	ND	5.0	ug/Kg	05/18/2001 17:19	
Chrysene	ND	5.0	ug/Kg	05/18/2001 17:19	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	05/18/2001 17:19	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	05/18/2001 17:19	
Benzo(a)pyrene	ND	5.0	ug/Kg	05/18/2001 17:19	
Dibenzo(a,h)anthracene	ND	10.0	ug/Kg	05/18/2001 17:19	
Benzo(g,h,i)perylene	ND	10.0	ug/Kg	05/18/2001 17:19	
Indeno(1,2,3-cd)pyrene	ND	10.0	ug/Kg	05/18/2001 17:19	
Surrogate(s)					
1-Methyl naphthalene	74.0	50-150	%	05/18/2001 17:19	

To: **Lowney & Associates Oakland**

Test Method: 8310

Attn: Mark Arniola

Prep Method: 3550/8310

Batch QC Report

Polynuclear Aromatic Hydrocarbons (PNA)

Laboratory Control Spike (LCS/LCSD)		Soil		QC Batch # 2001/05/18-01.18	
LCS:	2001/05/18-01.18-002	Extracted:	05/18/2001 08:18	Analyzed	05/18/2001 16:49
LCSD:	2001/05/18-01.18-003	Extracted:	05/18/2001 08:18	Analyzed	05/18/2001 17:49

Compound	Conc. [ug/Kg]		Exp.Conc. [ug/Kg]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Naphthalene	151	171	200	200	75.5	85.5	12.4	50-150	35		
Phenanthrene	223	233	200	200	111.5	116.5	4.4	50-150	35		
Pyrene	251	263	200	200	125.5	131.5	4.7	50-150	35		
Chrysene	236	235	200	200	118.0	117.5	0.4	50-150	35		
Benzo(a)pyrene	148	182	200	200	74.0	91.0	20.6	50-150	35		
Surrogate(s)											
1-Methyl naphthalene	9.17	9.81	15	15	61.1	65.4		50-150			

To: **Lowney & Associates Oakland**
 Attn.: Mark Arniola

Test Method: 8310
 Prep Method: 3550/8310

Batch QC Report

Polynuclear Aromatic Hydrocarbons (PNA)

Matrix Spike (MS / MSD)	Soil	QC Batch # 2001/05/18-01.18
Sample ID: SS-22 @ 3.5-4		Lab Sample ID: 2001-05-0328-005
MS: 2001/05/18-01.18-004	Extracted: 05/18/2001 08:18	Analyzed: 05/18/2001 18:20 Dilution: 1.0
MSD: 2001/05/18-01.18-005	Extracted: 05/18/2001 08:18	Analyzed: 05/18/2001 18:50 Dilution: 1.0

Compound	Conc. [ug/Kg]			Exp. Conc. [ug/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD		Recovery	RPD	MS	MSD
Naphthalene	103	106	ND	200	200	51.5	53.0	2.9	50-150	35		
Phenanthrene	171	168	ND	200	200	85.5	84.0	1.8	50-150	35		
Pyrene	170	194	ND	200	200	85.0	97.0	13.2	50-150	35		
Chrysene	174	200	ND	200	200	87.0	100.0	13.9	50-150	35		
Benzo(a)pyrene	152	138	ND	200	200	78.0	69.0	9.7	50-150	35		
Surrogate(s)												
1-Methyl naphthalene	3.41	5.13		15	15	22.7	34.2		50-150			

To: **Lowney & Associates Oakland**
Attn: Mark Arniola

Test Method: 8310
Prep Method: 3550/8310

Legend & Notes

Polynuclear Aromatic Hydrocarbons (PNA)

QC Sample Notes

SS-22 @ 3.5-4 >> MS (Lab# 2001/05/18-01.18-004)

The surrogate recovery for the MS/MSD was low and did not meet acceptance criteria.
Matrix effect and sample heterogeneity is indicated.

Analyte Flags

sh

Surrogate recovery was higher than QC limit due to matrix interference.

CAM 17 Metals

Lowney & Associates Oakland	✉ 129 Filbert Street Oakland, Ca 94607
Attn: Mark Arniola	Phone: (510) 267-1970 Fax: (510) 267-1972
Project #: 1424-4	Project: Liquid Sugar

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SS-16 @ 1.5-2	Soil	05/17/2001 14:30	1
SS-18 @ 5-5.5	Soil	05/17/2001 10:00	2
SS-19 @ 4-4.5	Soil	05/17/2001 10:30	3
SS-22 @ 3.5-4	Soil	05/17/2001 12:00	5

To: **Lowney & Associates Oakland**

Test Method: 6010B
7471A

Attn.: Mark Arniola

Prep Method: 3050B
7471A

CAM 17 Metals

Sample ID: SS-16 @ 1.5-2	Lab Sample ID: 2001-05-0328-001
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 14:30	Extracted: 05/21/2001 07:34
Matrix: Soil	QC-Batch: 2001/05/21-02.15 2001/05/21-02.16

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Antimony	ND	2.0	mg/Kg	1.00	05/21/2001 12:13	
Arsenic	3.1	1.0	mg/Kg	1.00	05/21/2001 12:13	
Barium	69	1.0	mg/Kg	1.00	05/21/2001 12:13	
Beryllium	ND	0.50	mg/Kg	1.00	05/21/2001 12:13	
Cadmium	1.5	0.50	mg/Kg	1.00	05/21/2001 12:13	
Chromium	9.2	1.0	mg/Kg	1.00	05/21/2001 12:13	
Cobalt	5.7	1.0	mg/Kg	1.00	05/21/2001 12:13	
Copper	13	1.0	mg/Kg	1.00	05/21/2001 12:13	
Lead	6.8	1.0	mg/Kg	1.00	05/21/2001 12:13	
Molybdenum	ND	1.0	mg/Kg	1.00	05/21/2001 12:13	
Nickel	7.3	1.0	mg/Kg	1.00	05/21/2001 12:13	
Selenium	ND	2.0	mg/Kg	1.00	05/21/2001 12:13	
Silver	ND	1.0	mg/Kg	1.00	05/21/2001 12:13	
Thallium	ND	1.0	mg/Kg	1.00	05/21/2001 12:13	
Vanadium	19	1.0	mg/Kg	1.00	05/21/2001 12:13	
Zinc	70	1.0	mg/Kg	1.00	05/21/2001 12:13	
Mercury	0.19	0.050	mg/Kg	1.00	05/21/2001 11:13	

To: **Lowney & Associates Oakland**

Test Method: 6010B
7471A

Attn.: Mark Arniola

Prep Method: 3050B
7471A

CAM 17 Metals

Sample ID: SS-18 @ 5-5.5	Lab Sample ID: 2001-05-0328-002
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 10:00	Extracted: 05/21/2001 07:34
Matrix: Soil	QC-Batch: 2001/05/21-02.15 2001/05/21-02.16

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Antimony	ND	2.0	mg/Kg	1.00	05/21/2001 12:17	
Arsenic	2.3	1.0	mg/Kg	1.00	05/21/2001 12:17	
Barium	140	1.0	mg/Kg	1.00	05/21/2001 12:17	
Beryllium	ND	0.50	mg/Kg	1.00	05/21/2001 12:17	
Cadmium	1.2	0.50	mg/Kg	1.00	05/21/2001 12:17	
Chromium	18	1.0	mg/Kg	1.00	05/21/2001 12:17	
Cobalt	6.2	1.0	mg/Kg	1.00	05/21/2001 12:17	
Copper	17	1.0	mg/Kg	1.00	05/21/2001 12:17	
Lead	35	1.0	mg/Kg	1.00	05/21/2001 12:17	
Molybdenum	ND	1.0	mg/Kg	1.00	05/21/2001 12:17	
Nickel	19	1.0	mg/Kg	1.00	05/21/2001 12:17	
Selenium	ND	2.0	mg/Kg	1.00	05/21/2001 12:17	
Silver	ND	1.0	mg/Kg	1.00	05/21/2001 12:17	
Thallium	ND	1.0	mg/Kg	1.00	05/21/2001 12:17	
Vanadium	21	1.0	mg/Kg	1.00	05/21/2001 12:17	
Zinc	57	1.0	mg/Kg	1.00	05/21/2001 12:17	
Mercury	0.24	0.050	mg/Kg	1.00	05/21/2001 11:14	

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0328

To: **Lowney & Associates Oakland**

Test Method: 6010B
7471A

Attn.: Mark Arniola

Prep Method: 3050B
7471A

CAM 17 Metals

Sample ID: SS-19 @ 4-4.5	Lab Sample ID: 2001-05-0328-003
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 10:30	Extracted: 05/21/2001 07:34
Matrix: Soil	QC-Batch: 2001/05/21-02.15 2001/05/21-02.16

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Antimony	ND	2.0	mg/Kg	1.00	05/21/2001 12:21	
Arsenic	2.5	1.0	mg/Kg	1.00	05/21/2001 12:21	
Barium	150	1.0	mg/Kg	1.00	05/21/2001 12:21	
Beryllium	ND	0.50	mg/Kg	1.00	05/21/2001 12:21	
Cadmium	ND	0.50	mg/Kg	1.00	05/21/2001 12:21	
Chromium	19	1.0	mg/Kg	1.00	05/21/2001 12:21	
Cobalt	3.5	1.0	mg/Kg	1.00	05/21/2001 12:21	
Copper	11	1.0	mg/Kg	1.00	05/21/2001 12:21	
Lead	4.4	1.0	mg/Kg	1.00	05/21/2001 12:21	
Molybdenum	ND	1.0	mg/Kg	1.00	05/21/2001 12:21	
Nickel	12	1.0	mg/Kg	1.00	05/21/2001 12:21	
Selenium	ND	2.0	mg/Kg	1.00	05/21/2001 12:21	
Silver	ND	1.0	mg/Kg	1.00	05/21/2001 12:21	
Thallium	ND	1.0	mg/Kg	1.00	05/21/2001 12:21	
Vanadium	25	1.0	mg/Kg	1.00	05/21/2001 12:21	
Zinc	12	1.0	mg/Kg	1.00	05/21/2001 12:21	
Mercury	ND	0.050	mg/Kg	1.00	05/21/2001 11:15	

1220 Quarry Lane * Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0328

To: **Lowney & Associates Oakland**

Test Method: 6010B
7471A

Attn.: Mark Arniola

Prep Method: 3050B
7471A

CAM 17 Metals

Sample ID: SS-22 @ 3.5-4	Lab Sample ID: 2001-05-0328-005
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 12:00	Extracted: 05/21/2001 07:34
Matrix: Soil	QC-Batch: 2001/05/21-02.15 2001/05/21-02.16

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Antimony	ND	2.0	mg/Kg	1.00	05/21/2001 12:24	
Arsenic	5.9	1.0	mg/Kg	1.00	05/21/2001 12:24	
Barium	140	1.0	mg/Kg	1.00	05/21/2001 12:24	
Beryllium	ND	0.50	mg/Kg	1.00	05/21/2001 12:24	
Cadmium	1.2	0.50	mg/Kg	1.00	05/21/2001 12:24	
Chromium	23	1.0	mg/Kg	1.00	05/21/2001 12:24	
Cobalt	7.2	1.0	mg/Kg	1.00	05/21/2001 12:24	
Copper	82	1.0	mg/Kg	1.00	05/21/2001 12:24	
Lead	140	1.0	mg/Kg	1.00	05/21/2001 12:24	
Molybdenum	ND	1.0	mg/Kg	1.00	05/21/2001 12:24	
Nickel	16	1.0	mg/Kg	1.00	05/21/2001 12:24	
Selenium	ND	2.0	mg/Kg	1.00	05/21/2001 12:24	
Silver	ND	1.0	mg/Kg	1.00	05/21/2001 12:24	
Thallium	ND	1.0	mg/Kg	1.00	05/21/2001 12:24	
Vanadium	38	1.0	mg/Kg	1.00	05/21/2001 12:24	
Zinc	480	1.0	mg/Kg	1.00	05/21/2001 12:24	
Mercury	0.25	0.050	mg/Kg	1.00	05/21/2001 11:19	

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Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

To: **Lowney & Associates Oakland**
Attn.: Mark Arniola

Test Method: 7471A
Prep Method: 7471A

Batch QC Report
CAM 17 Metals

Method Blank	Soil	QC Batch # 2001/05/21-02.16
MB: 2001/05/21-02.16-012		Date Extracted: 05/21/2001 09:01

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Mercury	ND	0.050	mg/Kg	05/21/2001 11:04	

To: **Lowney & Associates Oakland**
 Attn.: Mark Arniola

Test Method: 6010B
 Prep Method: 3050B

Batch QC Report
 CAM 17 Metals

Method Blank	Soil	QC Batch # 2001/05/21-02.15
MB: 2001/05/21-02.15-031		Date Extracted: 05/21/2001 07:34

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Antimony	ND	2.0	mg/Kg	05/21/2001 11:31	
Arsenic	ND	1.0	mg/Kg	05/21/2001 11:31	
Barium	ND	1.0	mg/Kg	05/21/2001 11:31	
Beryllium	ND	0.50	mg/Kg	05/21/2001 11:31	
Cadmium	ND	0.50	mg/Kg	05/21/2001 11:31	
Chromium	ND	1.0	mg/Kg	05/21/2001 11:31	
Cobalt	ND	1.0	mg/Kg	05/21/2001 11:31	
Copper	ND	1.0	mg/Kg	05/21/2001 11:31	
Lead	ND	1.0	mg/Kg	05/21/2001 11:31	
Molybdenum	ND	1.0	mg/Kg	05/21/2001 11:31	
Nickel	ND	1.0	mg/Kg	05/21/2001 11:31	
Selenium	ND	2.0	mg/Kg	05/21/2001 11:31	
Silver	ND	1.0	mg/Kg	05/21/2001 11:31	
Thallium	ND	1.0	mg/Kg	05/21/2001 11:31	
Vanadium	ND	1.0	mg/Kg	05/21/2001 11:31	
Zinc	ND	1.0	mg/Kg	05/21/2001 11:31	

To: **Lowney & Associates Oakland**
Attn: Mark Amiola

Test Method: 7471A
Prep Method: 7471A

Batch QC Report
CAM 17 Metals

Laboratory Control Spike (LCS/LCSD)	Soil	QC Batch # 2001/05/21-02.16
LCS: 2001/05/21-02.16-013	Extracted: 05/21/2001 09:01	Analyzed 05/21/2001 11:05
LCSD: 2001/05/21-02.16-014	Extracted: 05/21/2001 09:01	Analyzed 05/21/2001 11:07

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Mercury	0.559	0.561	0.500	0.500	111.8	112.2	0.4	85-115	20		

To: **Lowney & Associates Oakland**
 Attn: Mark Arniola

Test Method: 6010B
 Prep Method: 3050B

Batch QC Report

CAM 17 Metals

Laboratory Control Spike (LCS/LCSD)		Soil		QC Batch # 2001/05/21-02.15	
LCS:	2001/05/21-02.15-032	Extracted:	05/21/2001 07:34	Analyzed	05/21/2001 11:36
LCSD:	2001/05/21-02.15-035	Extracted:	05/21/2001 07:34	Analyzed	05/21/2001 11:55

Compound	Conc. [mg/Kg]		Exp. Conc. [mg/Kg]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Antimony	94.8	89.5	100.0	100.0	94.8	89.5	5.8	80-120	20		
Arsenic	98.3	93.1	100.0	100.0	98.3	93.1	5.4	80-120	20		
Barium	96.3	91.3	100.0	100.0	96.3	91.3	5.3	80-120	20		
Beryllium	93.7	86.9	100.0	100.0	93.7	86.9	7.5	80-120	20		
Cadmium	93.2	88.3	100.0	100.0	93.2	88.3	5.4	80-120	20		
Chromium	96.1	91.0	100.0	100.0	96.1	91.0	5.5	80-120	20		
Cobalt	94.7	89.9	100.0	100.0	94.7	89.9	5.2	80-120	20		
Copper	99.2	94.0	100.0	100.0	99.2	94.0	5.4	80-120	20		
Lead	93.9	88.8	100.0	100.0	93.9	88.8	5.6	80-120	20		
Molybdenum	97.2	91.9	100.0	100.0	97.2	91.9	5.6	80-120	20		
Nickel	95.2	90.0	100.0	100.0	95.2	90.0	5.6	80-120	20		
Selenium	89.9	85.5	100.0	100.0	89.9	85.5	5.0	80-120	20		
Silver	96.5	90.2	100.0	100.0	96.5	90.2	6.7	80-120	20		
Thallium	94.5	88.9	100.0	100.0	94.5	88.9	6.1	80-120	20		
Vanadium	98.0	92.8	100.0	100.0	98.0	92.8	5.5	80-120	20		
Zinc	91.7	86.9	100.0	100.0	91.7	86.9	5.4	80-120	20		

Gas/BTEX

Lowney & Associates Oakland	✉ 129 Filbert Street Oakland, Ca 94607
Attn: Mark Arniola	Phone: (510) 267-1970 Fax: (510) 267-1972
Project #: 1424-4	Project: Liquid Sugar

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SS-16 @ 1.5-2	Soil	05/17/2001 14:30	1
SS-19 @ 4-4.5	Soil	05/17/2001 10:30	3
SS-22 @ 3.5-4	Soil	05/17/2001 12:00	5

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0328

To: **Lowney & Associates Oakland**

Test Method: 8020
8015M

Attn.: Mark Arniola

Prep Method: 5030

Gas/BTEX

Sample ID: SS-16 @ 1.5-2	Lab Sample ID: 2001-05-0328-001
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 14:30	Extracted: 05/18/2001 11:36
Matrix: Soil	QC-Batch: 2001/05/18-01.04

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	05/18/2001 11:36	
Benzene	ND	0.0050	mg/Kg	1.00	05/18/2001 11:36	
Toluene	ND	0.0050	mg/Kg	1.00	05/18/2001 11:36	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	05/18/2001 11:36	
Xylene(s)	ND	0.0050	mg/Kg	1.00	05/18/2001 11:36	
Surrogate(s)						
Trifluorotoluene	86.6	53-125	%	1.00	05/18/2001 11:36	
4-Bromofluorobenzene-FID	92.6	58-124	%	1.00	05/18/2001 11:36	

1220 Quarry Lane * Pleasanton, CA 94566-4756
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STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0328

To: **Lowney & Associates Oakland**

Test Method: 8020
8015M

Attn.: Mark Arniola

Prep Method: 5030

Gas/BTEX

Sample ID: SS-19 @ 4-4.5	Lab Sample ID: 2001-05-0328-003
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 10:30	Extracted: 05/18/2001 15:10
Matrix: Soil	QC-Batch: 2001/05/18-01.04

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	05/18/2001 15:10	
Benzene	ND	0.0050	mg/Kg	1.00	05/18/2001 15:10	
Toluene	ND	0.0050	mg/Kg	1.00	05/18/2001 15:10	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	05/18/2001 15:10	
Xylene(s)	ND	0.0050	mg/Kg	1.00	05/18/2001 15:10	
Surrogate(s)						
Trifluorotoluene	79.2	53-125	%	1.00	05/18/2001 15:10	
4-Bromofluorobenzene-FID	95.7	58-124	%	1.00	05/18/2001 15:10	

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STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0328

To: **Lowney & Associates Oakland**

Test Method: 8020
8015M

Attn.: Mark Arniola

Prep Method: 5030

Gas/BTEX

Sample ID: SS-22 @ 3.5-4	Lab Sample ID: 2001-05-0328-005
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 12:00	Extracted: 05/18/2001 16:07
Matrix: Soil	QC-Batch: 2001/05/18-01.04

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	05/18/2001 16:07	
Benzene	ND	0.0050	mg/Kg	1.00	05/18/2001 16:07	
Toluene	ND	0.0050	mg/Kg	1.00	05/18/2001 16:07	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	05/18/2001 16:07	
Xylene(s)	ND	0.0050	mg/Kg	1.00	05/18/2001 16:07	
Surrogate(s)						
Trifluorotoluene	65.9	53-125	%	1.00	05/18/2001 16:07	
4-Bromofluorobenzene-FID	67.5	58-124	%	1.00	05/18/2001 16:07	

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To: **Lowney & Associates Oakland**

Test Method: 8015M
8020

Attn.: Mark Arniola

Prep Method: 5030

Batch QC Report
Gas/BTEX

Method Blank	Soil	QC Batch # 2001/05/18-01.04
MB: 2001/05/18-01.04-003		Date Extracted: 05/18/2001 08:06

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	05/18/2001 08:06	
Benzene	ND	0.0050	mg/Kg	05/18/2001 08:06	
Toluene	ND	0.0050	mg/Kg	05/18/2001 08:06	
Ethyl benzene	ND	0.0050	mg/Kg	05/18/2001 08:06	
Xylene(s)	ND	0.0050	mg/Kg	05/18/2001 08:06	
Surrogate(s)					
Trifluorotoluene	93.0	53-125	%	05/18/2001 08:06	
4-Bromofluorobenzene-FID	106.1	58-124	%	05/18/2001 08:06	

To: **Lowney & Associates Oakland**

Test Method: 8020

Attn: Mark Arniola

Prep Method: 5030

Batch QC Report

Gas/BTEX

Laboratory Control Spike (LCS/LCSD)	Soil	QC Batch # 2001/05/18-01.04
LCS: 2001/05/18-01.04-004	Extracted: 05/18/2001 08:33	Analyzed 05/18/2001 08:33
LCSD: 2001/05/18-01.04-005	Extracted: 05/18/2001 09:01	Analyzed 05/18/2001 09:01

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Benzene	0.0926	0.0851	0.1000	0.1000	92.6	85.1	8.4	77-123	35		
Toluene	0.0874	0.0814	0.1000	0.1000	87.4	81.4	7.1	78-122	35		
Ethyl benzene	0.0874	0.0818	0.1000	0.1000	87.4	81.8	6.6	70-130	35		
Xylene(s)	0.265	0.248	0.300	0.300	88.3	82.7	6.5	75-125	35		
Surrogate(s)											
Trifluorotoluene	480	442	500	500	96.0	88.4		53-125			

To: **Lowney & Associates Oakland**

Test Method: 8015M
8020

Attn: Mark Arniola

Prep Method: 5030

Batch QC Report

Gas/BTEX

Laboratory Control Spike (LCS/LCSD)	Soil	QC Batch # 2001/05/18-01.04
LCS: 2001/05/18-01.04-006	Extracted: 05/18/2001 09:28	Analyzed 05/18/2001 09:28
LCSD: 2001/05/18-01.04-007	Extracted: 05/18/2001 09:56	Analyzed 05/18/2001 09:56

Compound	Conc. [mg/Kg]		Exp. Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Gasoline	0.530	0.482	0.500	0.500	106.0	96.4	9.5	75-125	35		
Surrogate(s)											
4-Bromofluorobenzene-FI	597	554	500	500	119.4	110.8		58-124			

Gas/BTEX (High Level)

Lowney & Associates Oakland	☒ 129 Filbert Street Oakland, Ca 94607
Attn: Mark Arniola	Phone: (510) 267-1970 Fax: (510) 267-1972
Project #: 1424-4	Project: Liquid Sugar

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SS-18 @ 5-5.5	Soil	05/17/2001 10:00	2

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0328

To: **Lowney & Associates Oakland**

Test Method: 8020
8015M

Attn.: Mark Arniola

Prep Method: 5030AEXT

Gas/BTEX (High Level)

Sample ID: SS-18 @ 5-5.5	Lab Sample ID: 2001-05-0328-002
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 10:00	Extracted: 05/21/2001 12:47
Matrix: Soil	QC-Batch: 2001/05/21-05.02

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	47	10	mg/Kg	1.00	05/21/2001 12:47	g
Benzene	ND	0.62	mg/Kg	1.00	05/21/2001 12:47	
Toluene	ND	0.62	mg/Kg	1.00	05/21/2001 12:47	
Ethyl benzene	ND	0.62	mg/Kg	1.00	05/21/2001 12:47	
Xylene(s)	ND	0.62	mg/Kg	1.00	05/21/2001 12:47	
Surrogate(s)						
Trifluorotoluene	98.0	53-125	%	1.00	05/21/2001 12:47	
Trifluorotoluene-FID	102.3	53-125	%	1.00	05/21/2001 12:47	

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To: **Lowney & Associates Oakland**

Test Method: 8015M
8020

Attn.: Mark Arniola

Prep Method: 5030AEXT

Batch QC Report
Gas/BTEX (High Level)

Method Blank	Soil	QC Batch # 2001/05/21-05.02
MB: 2001/05/21-05.02-001		Date Extracted: 05/21/2001 11:44

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	10	mg/Kg	05/22/2001 11:44	
Benzene	ND	0.62	mg/Kg	05/22/2001 11:44	
Toluene	ND	0.62	mg/Kg	05/22/2001 11:44	
Ethyl benzene	ND	0.62	mg/Kg	05/22/2001 11:44	
Xylene(s)	ND	0.62	mg/Kg	05/22/2001 11:44	
Surrogate(s)					
Trifluorotoluene	115.0	53-125	%	05/22/2001 11:44	
Trifluorotoluene-FID	120.0	53-125	%	05/22/2001 11:44	

To: **Lowney & Associates Oakland**

Test Method: 8015M
8020

Attn: Mark Arniola

Prep Method: 5030AEXT

Batch QC Report

Gas/BTEX (High Level)

Laboratory Control Spike (LCS/LCSD)	Soil	QC Batch # 2001/05/21-05.02
LCS: 2001/05/21-05.02-002	Extracted: 05/21/2001 12:15	Analyzed 05/22/2001 12:15
LCSD: 2001/05/21-05.02-003	Extracted: 05/21/2001 17:32	Analyzed 05/21/2001 17:32

Compound	Conc. [mg/Kg]		Exp. Conc. [mg/Kg]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Gasoline	0.739	0.711	0.625	0.625	118.2	113.8	3.8	75-125	35		
Benzene	0.123	0.121	0.125	0.125	98.4	96.8	1.6	77-123	35		
Toluene	0.135	0.129	0.125	0.125	108.0	103.2	4.5	78-122	35		
Ethyl benzene	0.132	0.127	0.125	0.125	105.6	101.6	3.9	70-130	35		
Xylene(s)	0.390	0.392	0.375	0.375	104.0	104.5	0.5	75-125	35		
Surrogate(s)											
Trifluorotoluene	545	548	500	500	109.0	109.6		53-125			
Trifluorotoluene-FID	573	510	500	500	114.6	102.0		53-125			

To: **Lowney & Associates Oakland**

Test Method: 8020
8015M

Attn: Mark Arniola

Prep Method: 5030AEXT

Legend & Notes

Gas/BTEX (High Level)

Analyte Flags

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

Total Lead by AA

Lowney & Associates Oakland	☒ 129 Filbert Street Oakland, Ca 94607
Attn: Mark Arniola	Phone: (510) 267-1970 Fax: (510) 267-1972
Project #: 1424-4	Project: Liquid Sugar

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SS-23 @ 3.5-4	Soil	05/17/2001 12:30	6
SS-24 @ 2-2.5	Soil	05/17/2001 13:00	7

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0328

To: **Lowney & Associates Oakland**
Attn.: Mark Arniola

Test Method: 7420
Prep Method: 3050B

Total Lead by AA

Sample ID: SS-23 @ 3.5-4	Lab Sample ID: 2001-05-0328-006
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 12:30	Extracted: 05/18/2001 19:16
Matrix: Soil	QC-Batch: 2001/05/18-02.17

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Lead	280	5.0	mg/Kg	1.00	05/21/2001 12:19	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0328

To: **Lowney & Associates Oakland**
Attn.: Mark Arniola

Test Method: 7420
Prep Method: 3050B

Total Lead by AA

Sample ID: SS-24 @ 2-2.5	Lab Sample ID: 2001-05-0328-007
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 13:00	Extracted: 05/18/2001 19:16
Matrix: Soil	QC-Batch: 2001/05/18-02.17

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Lead	12	5.0	mg/Kg	1.00	05/21/2001 12:20	

To: **Lowney & Associates Oakland**
Attn.: Mark Arniola

Test Method: 7420
Prep Method: 3050B

Batch QC Report
Total Lead by AA

Method Blank	Soil	QC Batch # 2001/05/18-02.17
MB: 2001/05/18-02.17-012		Date Extracted: 05/18/2001 19:16

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Lead	ND	5	mg/Kg	05/21/2001 12:09	

To: **Lowney & Associates Oakland**
Attn: Mark Arniola

Test Method: 7420
Prep Method: 3050B

Batch QC Report

Total Lead by AA

Laboratory Control Spike (LCS/LCSD)	Soil	QC Batch # 2001/05/18-02.17
LCS: 2001/05/18-02.17-013	Extracted: 05/18/2001 19:16	Analyzed 05/21/2001 12:09
LCSD: 2001/05/18-02.17-014	Extracted: 05/18/2001 19:16	Analyzed 05/21/2001 12:10

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Lead	268	256	250	250	107.2	102.4	4.6	85-115	20		

PCBs

Lowney & Associates Oakland	☒ 129 Filbert Street Oakland, Ca 94607
Attn: Mark Arniola	Phone: (510) 267-1970 Fax: (510) 267-1972
Project #: 1424-4	Project: Liquid Sugar

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SS-18 @ 5-5.5	Soil	05/17/2001 10:00	2

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0328

To: **Lowney & Associates Oakland**
Attn.: Mark Arniola

Test Method: 8082
Prep Method: 3550/8082

PCBs

Sample ID: SS-18 @ 5-5.5	Lab Sample ID: 2001-05-0328-002
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 10:00	Extracted: 05/18/2001 10:23
Matrix: Soil	QC-Batch: 2001/05/18-01.14

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Aroclor 1016	ND	0.050	mg/Kg	1.00	05/21/2001 10:17	
Aroclor 1221	ND	0.050	mg/Kg	1.00	05/21/2001 10:17	
Aroclor 1232	ND	0.050	mg/Kg	1.00	05/21/2001 10:17	
Aroclor 1242	ND	0.050	mg/Kg	1.00	05/21/2001 10:17	
Aroclor 1248	ND	0.050	mg/Kg	1.00	05/21/2001 10:17	
Aroclor 1254	ND	0.050	mg/Kg	1.00	05/21/2001 10:17	
Aroclor 1260	ND	0.050	mg/Kg	1.00	05/21/2001 10:17	
Surrogate(s)						
2,4,5,6-Tetrachloro-m-xylene	56.9	50-125	%	1.00	05/21/2001 10:17	
Decachlorobiphenyl (PCB/8082)	60.7	46-142	%	1.00	05/21/2001 10:17	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

To: **Lowney & Associates Oakland**
Attn.: Mark Arniola

Test Method: 8082
Prep Method: 3550/8082

Batch QC Report
PCBs

Method Blank	Soil	QC Batch # 2001/05/18-01.14
MB: 2001/05/18-01.14-001		Date Extracted: 05/18/2001 10:23

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Aroclor 1016	ND	0.05	mg/Kg	05/21/2001 10:17	
Aroclor 1221	ND	0.05	mg/Kg	05/21/2001 10:17	
Aroclor 1232	ND	0.05	mg/Kg	05/21/2001 10:17	
Aroclor 1242	ND	0.05	mg/Kg	05/21/2001 10:17	
Aroclor 1248	ND	0.05	mg/Kg	05/21/2001 10:17	
Aroclor 1254	ND	0.05	mg/Kg	05/21/2001 10:17	
Aroclor 1260	ND	0.05	mg/Kg	05/21/2001 10:17	
Surrogate(s)					
2,4,5,6-Tetrachloro-m-xylene	77.2	50-125	%	05/21/2001 10:17	
Decachlorobiphenyl (PCB/8082)	81.2	46-142	%	05/21/2001 10:17	

To: **Lowney & Associates Oakland**
Attn: Mark Arniola

Test Method: 8082
Prep Method: 3550/8082

Batch QC Report
PCBs

Laboratory Control Spike (LCS/LCSD)	Soil	QC Batch # 2001/05/18-01.14
LCS: 2001/05/18-01.14-002	Extracted: 05/18/2001 10:23	Analyzed 05/21/2001 10:50
LCSD: 2001/05/18-01.14-003	Extracted: 05/18/2001 10:23	Analyzed 05/21/2001 11:49

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Aroclor 1016	0.0536	0.0488	0.0667	0.0667	80.4	73.2	9.4	65-135	30		
Aroclor 1260	0.0531	0.0503	0.0667	0.0667	79.6	75.4	5.4	65-135	30		
Surrogate(s)											
2,4,5,6-Tetrachloro-m-xyl	37.1	35.1	50	50	74.2	70.2		50-125			
Decachlorobiphenyl	38.2	36.5	50	50	76.4	73.0		46-142			

TEPH w/ Silica Gel Clean-up

Lowney & Associates Oakland	☒ 129 Filbert Street Oakland, Ca 94607
Attn: Mark Arniola	Phone: (510) 267-1970 Fax: (510) 267-1972
Project #: 1424-4	Project: Liquid Sugar

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SS-16 @ 1.5-2	Soil	05/17/2001 14:30	1
SS-18 @ 5-5.5	Soil	05/17/2001 10:00	2
SS-19 @ 4-4.5	Soil	05/17/2001 10:30	3
SS-22 @ 3.5-4	Soil	05/17/2001 12:00	5

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0328

To: **Lowney & Associates Oakland**
Attn.: Mark Arniola

Test Method: 8015M
Prep Method: 3550/8015M

TEPH w/ Silica Gel Clean-up

Sample ID: SS-16 @ 1.5-2	Lab Sample ID: 2001-05-0328-001
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 14:30	Extracted: 05/18/2001 06:28
Matrix: Soil	QC-Batch: 2001/05/18-03.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	2.5	1.0	mg/Kg	1.00	05/18/2001 15:06	ndp
Motor Oil	ND	50	mg/Kg	1.00	05/18/2001 15:06	
Surrogate(s) o-Terphenyl	103.7	60-130	%	1.00	05/18/2001 15:06	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

To: **Lowney & Associates Oakland**
Attn.: Mark Arniola

Test Method: 8015M
Prep Method: 3550/8015M

TEPH w/ Silica Gel Clean-up

Sample ID: SS-18 @ 5-5.5	Lab Sample ID: 2001-05-0328-002
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 10:00	Extracted: 05/18/2001 06:28
Matrix: Soil	QC-Batch: 2001/05/18-03.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	680	5.0	mg/Kg	5.00	05/21/2001 08:01	ndp
Motor Oil	ND	250	mg/Kg	5.00	05/21/2001 08:01	
Surrogate(s) o-Terphenyl	NA	60-130	%	5.00	05/21/2001 08:01	sd

To: **Lowney & Associates Oakland**
Attn.: Mark Arniola

Test Method: 8015M
Prep Method: 3550/8015M

TEPH w/ Silica Gel Clean-up

Sample ID: SS-19 @ 4-4.5	Lab Sample ID: 2001-05-0328-003
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 10:30	Extracted: 05/18/2001 06:28
Matrix: Soil	QC-Batch: 2001/05/18-03.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	05/18/2001 16:44	
Motor Oil	ND	50	mg/Kg	1.00	05/18/2001 16:44	
Surrogate(s) o-Terphenyl	88.6	60-130	%	1.00	05/18/2001 16:44	

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0328

To: **Lowney & Associates Oakland**
Attn.: Mark Arniola

Test Method: 8015M
Prep Method: 3550/8015M

TEPH w/ Silica Gel Clean-up

Sample ID: SS-22 @ 3.5-4	Lab Sample ID: 2001-05-0328-005
Project: 1424-4 Liquid Sugar	Received: 05/17/2001 18:33
Sampled: 05/17/2001 12:00	Extracted: 05/18/2001 06:28
Matrix: Soil	QC-Batch: 2001/05/18-03.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	4.4	1.0	mg/Kg	1.00	05/18/2001 17:33	ndp
Motor Oil	ND	50	mg/Kg	1.00	05/18/2001 17:33	
Surrogate(s) o-Terphenyl	88.8	60-130	%	1.00	05/18/2001 17:33	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

To: **Lowney & Associates Oakland**
Attn.: Mark Arniola

Test Method: 8015M
Prep Method: 3550/8015M

Batch QC Report
TEPH w/ Silica Gel Clean-up

Method Blank	Soil	QC Batch # 2001/05/18-03.10
MB: 2001/05/18-03.10-001		Date Extracted: 05/18/2001 06:28

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Diesel	ND	1	mg/Kg	05/21/2001 07:27	
Motor Oil	ND	50	mg/Kg	05/21/2001 07:27	
Surrogate(s) o-Terphenyl	110.5	60-130	%	05/21/2001 07:27	

To: **Lowney & Associates Oakland**
Attn: Mark Arniola

Test Method: 8015M
Prep Method: 3550/8015M

Batch QC Report

TEPH w/ Silica Gel Clean-up

Laboratory Control Spike (LCS/LCSD)		Soil		QC Batch # 2001/05/18-03.10	
LCS:	2001/05/18-03.10-002	Extracted:	05/18/2001 06:28	Analyzed	05/18/2001 12:40
LCSD:	2001/05/18-03.10-003	Extracted:	05/18/2001 06:28	Analyzed	05/18/2001 13:28

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Diesel	40.2	38.2	41.7	41.7	96.4	91.6	5.1	60-130	25		
Surrogate(s) o-Terphenyl	21.6	20.2	20.0	20.0	108.0	101.0		60-130			

To: **Lowney & Associates Oakland**
Attn: Mark Arniola

Test Method: 8015M
Prep Method: 3550/8015M

Legend & Notes

TEPH w/ Silica Gel Clean-up

Analyte Flags

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

sd

Surrogate recovery not reportable due to required dilution.

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0403

Date: May 24, 2001

Lowney & Associates Oakland
129 Filbert Street
Oakland, Ca 94607

Attn: Mr. Mark Arniola

Project:1424-4
Liquid Sugar

Dear Mr. Arniola

Attached is our report for your samples received on Monday May 21, 2001
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after July 5, 2001
unless you have requested otherwise. We appreciate the opportunity to be of service to you.
If you have any questions, please call me at (925) 484-1919. You can also contact me via email.
My email address is: vvancil@chromalab.com

Sincerely,

Vincent Vancil

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 200105-0403

CAM W.E.T. (STLC) Lead

Lowney & Associates Oakland

129 Filbert Street
Oakland, Ca 94607

Attn: Mark Arniola

Phone:(510) 267-1970 Fax(510) 267-1972

Project #: 1424-4

Project Liquid Sugar

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SS9@0-0.5	Soil	04/16/2001 15:00	1

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Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

Printed on: 05/24/2001 14:02

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STL ChromaLab

Environmental Services (CA 1094)

Submission #: 200105-0403

To: Lowney & Associates Oakland
Attn.: Mark Arniola

Test Method: 6010B
Prep Method: 3005A

CAM W.E.T. (STLC) Lead

Sample ID: SS9@0-0.5	Lab Sample ID: 2001-05-0403-001
Project: 1424-4 Liquid Sugar	Received: 05/21/2001 12:23
Sampled: 04/16/2001 15:00	Extracted: 05/24/2001 05:56
Matrix: Soil	QC-Batch: 2001/05/24-02.15

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Lead	16	0.50	mg/L	1.00	05/24/2001 10:04	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

Printed on: 05/24/2001 14:02

Page 2 of 4

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 200105-0403

To: Lowney & Associates Oakland
Attn: Mark Arniola

Test Method: 6010B
Prep Method: 3005A

Batch QC Report
CAM W.E.T. (STLC) Lead

Method Blank	Soil	QC Batch # 2001/05/24-02.15
MB: 2001/05/24-02.15-020		Date Extracted: 05/24/2001 05:56

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Lead	ND	0.50	mg/L	05/24/2001 09:34	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

Printed on: 05/24/2001 14:02

Page 3 of 4

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 200105-0403

To: Lowney & Associates Oakland
 Attn: Mark Arniola

Test Method: 6010B
 Prep Method: 3005A

Batch QC Report

CAM W.E.T. (STLC) Lead

Laboratory Control Spike (LCS/LCSD)	Soil	QC Batch # 2001/05/24-02.15
LCS: 2001/05/24-02.15-023	Extracted: 05/24/2001 05:56	Analyzed 05/24/2001 09:50
LCSD: 2001/05/24-02.15-024	Extracted: 05/24/2001 05:56	Analyzed 05/24/2001 09:53

Compound	Conc. [mg/L]		Exp. Conc. [mg/L]		Recovery [%] RPD			Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD [%]	Recovery	RPD	LCS	LCSD
Lead	4.80	4.88	5.00	5.00	96.0	97.6	1.7	80-120	20		

1220 Quarry Lane * Pleasanton, CA 94566-4756
 Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

Printed on: 05/24/2001 14:02

Page 4 of 4