LIQUID SUGARS, INC.

December 23, 1991 91 DEC 23 PM 3:19

Mrs. Susan L. Hugo
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
80 Swan Way, Room #200
Oakland, CA 94621

REFERENCE: **UNDERGROUND FUEL TANKS, LSI/LIQUID SUGARS**
1275 - 66TH STREET, EMERYVILLE, CA 94608

Dear Mrs. Hugo:

Enclosed, please find a copy of the cover letter dated 12/23/91, and Report of Excavation Return Backfilling, Stockpile Disposal, and Soil Boring Investigation dated 12/13/91, prepared for Liquid Sugars, Inc., by Century West Engineering.

We are beginning to get bids for the installation of the ground water monitoring wells as outlined in our Workplan, and as recommended in the enclosed report.

Please contact me as soon as you have reviewed the enclosed report so that we may then proceed with this project.

Sincerely,

W. Taylor Partch,
Special Projects Manger

LIQUID SUGARS, INC.

WTP:mrq

cc: J. Gribi - Century West Engineering

Enclosure(s)

1285 66th St. • P.O. Box 96 • Oakland, CA 94604-0096 • (510) 420-7100 • TWX #910-366-7110 • FAX (510) 420-7110

REPORT OF EXCAVATION PIT BACKFILLING, STOCKPILE DISPOSAL AND SOIL BORING INVESTIGATION

1275 66th Street
Emeryville, California

STID 561

Prepared for:

Liquid Sugars, Inc.
P. O. Box 96
Oakland, CA 94604-0096

Prepared by:
Century West Engineering Corporation
7950 Dublin Blvd., Suite 210
Dublin, CA. 94568

December 13, 1991
Project No. 20516-001-03

CENTURY WEST ENGINEERING

December 23, 1991

Mr. Taylor Partch
Liquid Sugars, Inc.
P. O. Box 96
Oakland, CA 94604-0096

Subject: Report of Excavation Pit Backfilling,
Soil Stockpile Disposal and Soil Boring Investigation
Liquid Sugars, Inc.
1275 66th Street
Emeryville, California
CWEC 20516-001-03

Dear Mr. Partch:

In accordance with our agreement, Century West Engineering Corporation has completed tasks related to underground storage tank (UST) closure at the Liquid Sugars, Inc. facility in Emeryville, California. These tasks included: (1) Preparation of an amended Workplan for submittal to Alameda County Health Agency; (2) Collection and analysis of soil samples from the excavation pit sidewalls and from the soil stockpile; (3) Drilling and sampling of eight soil borings; and (4) Preparation of this report of findings.

The UST pit was backfilled in accordance with Alameda County Health Agency requirements, and the stockpiled soil was properly disposed of at Vasco Road Sanitary Landfill. The results of the soil boring investigation indicate that no significant levels of gasoline and diesel constituents are present in soils at a depth of five feet below grade. However, soil samples taken at a depth of ten feet depth indicate elevated levels of both gasoline and diesel constituents, particularly adjacent to the southwest, south and east sides of the UST excavation. Thus, it appears likely that any fuel leakage from the USTs spread laterally on the ground water table rather than vertically.

Given the possibility that only a relatively thin layer of soil has been impacted by fuel leakage from the USTs, we do not recommend that excavation of fuel laden soil be carried out at this time. Rather, we recommend the drilling and installation of three monitoring wells as described in the amended Workplan.

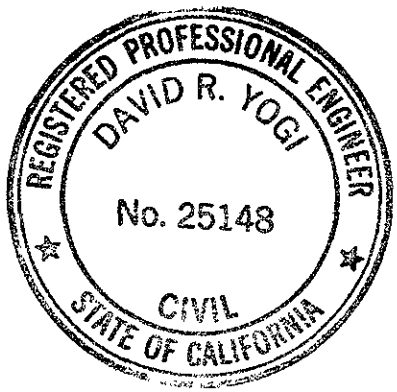
We appreciate the opportunity to provide these services for you. Please contact us if you have questions or require additional information.

Very truly yours,

CENTURY WEST ENGINEERING CORPORATION

James E. Gribi
Project Geologist

David R. Yogi, Jr.
Registered Civil Engineer
California No. 25148



cc: Susan Hugo, Alameda County Health Agency

JEG/DRY:ct

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1.0 INTRODUCTION

Century West Engineering Corporation was retained by Liquid Sugars, Inc. to prepare and implement an amended Workplan related to underground storage tank (UST) closure at its facility located 1265 66th Street in Emeryville, California. This report documents the partial implementation of the amended Workplan, including backfilling of the UST excavation, disposing of the soil stockpile, and conducting a soil boring investigation.

2.0 SCOPE OF WORK

Century West Engineering was retained by Liquid Sugars, Inc. in July 1991 to provide environmental services related to closure of the UST site at the Emeryville facility. The work completed to date included the following tasks:

Task 1: Prepare an amended Workplan for submittal to Alameda County Health Agency.

Task 2: Collect soil samples of the excavation sidewalls and the soil stockpile.

Task 3: Conduct a soil boring investigation.

Task 4: Prepare a report of findings.

With the submittal of this report, we have completed the tasks listed above.

3.0 LIMITATIONS

This report has been prepared for the exclusive use of Liquid Sugars, Inc., with specific application to the 1275 66th Street site located in Emeryville, California. The use of this report, its contents, or any part of it by a party, or its agents, other than for whom this report is prepared, is herewith disallowed.

In part, these findings, conclusions, and recommendations are based on the best available information known or made available by the site owner, regulators, other consultants, or other sources. Over time, the surficial evidence of some activities are obscured or obliterated entirely. It is possible that certain adverse conditions could exist at the site which were not detected in this evaluation.

The services provided under this contract as described in this report include professional opinions and judgments based on data collected. These services have been performed according to generally accepted engineering practices. The opinions and conclusions contained in this report are typically based on information obtained from:

1. Observations and measurements by our field staff.
2. Contacts and discussions with regulatory agencies and others.
3. Opinions and judgments of Century West Engineering based on information available.

4.0 SITE BACKGROUND

The project site is located between 65th Street and 66th Street, at 1275 66th Street, in Emeryville, California (see Figure 1). The Liquid Sugars, Inc. facility is located approximately one-half mile east from San Francisco Bay in a predominantly industrial and commercial area of Emeryville. The facility comprises a roughly rectangular parcel of land approximately 350 feet by 200 feet which is used by Liquid Sugars, Inc. to blend, store and transport liquid sugar products. The Liquid Sugars facility formerly contained two 1,000-gallon gasoline USTs and one 10,000-gallon diesel UST, located on the southwest side of the site (see Figure 2). (Historical information indicates that this portion of the site was formerly occupied by a Mohawk Oil Company bulk fuel facility.) The following is a brief chronology of key events related to removal of the USTs.

4.1 Chronology of Key Events

November 2, 1990	Two 1,000-gallon gasoline USTs and one 10,000-gallon diesel UST were removed by VCI of California. Several holes were visible at the seam at either end of the diesel tank; no apparent holes in the gasoline tanks. Soil samples taken beneath the USTs contained TPH-D levels ranging from 17 ppm to 10,300 ppm, and TPH-G levels ranging from 710 ppm to 3,400 ppm. Benzene levels in the soil samples ranged from 0.008 ppm to 33 ppm [Reference 1]. Consultant: Environmental Geotechnical Consultants, Inc.
January 1991	LSI submitted *Workplan for a Preliminary Site Assessment, 1275 66th Street, Emeryville, California* to Alameda County Health Agency. This Workplan proposed to: (1) Excavate fuel laden soil from the bottom and sides of the excavation to the extent possible; (2) Collect verification samples for TPH-G, TPH-D, and BTXE analysis; (3) Treat fuel laden soil onsite by enhanced bioremediation followed by Class III landfill disposal; and (4) Install and sample one downgradient ground water monitoring well [Reference 2]. Consultant: Baseline Environmental Consulting.
March 12, 1991	LSI received approval of Workplan from Alameda County Health Care Services with the provision that LSI must install three ground water monitoring wells rather than one as originally proposed.
July 12, 1991	LSI submitted *Amended Workplan For a Preliminary Site Assessment, Liquid Sugars, Inc., 1275 66th Street, Emeryville, California* to Alameda County Health Agency. The amended Workplan contained the following elements: (1) Backfill the excavation pit; (2) Remediate and/or dispose of stockpiled soil; (3) Drill and sample five soil borings; (4) Remediate fuel laden soil above ground water table; and (5) Install and sample three ground water monitoring wells. Consultant: Century West Engineering.

July 29, 1991	Received verbal approval from Alameda County Health Agency to proceed with amended Workplan.
July 30, 1991	Visqueen was placed in UST excavation pit, and pit was backfilled and compacted using clean material. Prior to backfilling, two soil samples were collected from the west sidewall at a depth of approximately five feet below grade. Samples contained 10 ppm and 19 ppm of TPH-motor oil. Other fuel constituents were nondetectable. Consultant: Century West Engineering.
August 5, 1991	Collected five discrete soil samples from the soil stockpile for compositing into one sample. Composite sample was analyzed for TPH-gas, TPH-diesel, BTXE, RCI, and 17 CAM Metals. Sample contained 590 ppm of TPH-diesel and 560 ppm of TPH-motor oil. Consultant: Century West Engineering.
September 14, 1991	Stockpiled soil was hauled to Vasco Road Sanitary Landfill in Livermore, California for disposal.
November 7, 1991	Eight soil borings were drilled and sampled around the backfilled UST pit to assess lateral and vertical extent of fuel constituents in soil. Consultant: Century West Engineering.

5.0 IMPLEMENTATION OF THE AMENDED WORKPLAN

The amended Workplan prepared by Century West Engineering contained the following elements: (1) Backfill the UST excavation pit; (2) Remediate and/or dispose of stockpiled soil; (3) Drill and sample five soil borings; (4) Remediate fuel laden soil above ground water table; and (5) Install and sample three ground water monitoring wells. To date, the first three elements have been completed. This report documents the implementation of these Workplan elements in the following sections:

5.1 Backfilling of the UST Excavation Pit
5.2 Disposal of Stockpiled Soil
5.3 Soil Boring Investigation

5.1 Backfilling of UST Excavation Pit

The UST excavation pit was backfilled on July 30, 1991 by TNT Enterprises of Richmond, California. Backfilling consisted of: (1) Placing coarse rock in the bottom of the excavation pit to a depth of eight feet below grade, which was approximately one foot above the ground water level in the pit; (2) Placing visqueen in the UST pit; (3) Backfilling and compacting the UST pit with clean material; and (4) Placing asphalt pavement to match existing grade.

Because caving had occurred along the west excavation pit wall, two soil samples (SW-1 and SW-2) were collected along this wall prior to backfilling. These samples were taken directly from the wall at a depth of approximately five feet below grade after the pit was partially backfilled to allow easy entry into the pit. The location of these two samples are shown in Figure 2. At each sampling point, a sample was taken using a 2-inch by 6-inch brass tube as follows. Approximately three inches of exposed soil was scraped away and a clean brass

tube was driven into the soil. Extra care was taken to minimize excess void in the tube. After removing the tube, it was quickly sealed with aluminum foil and plastic end caps, wrapped tightly with tape, labeled, and immediately placed in cold storage for transport to the laboratory under formal chain-of-custody.

Both samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G); total petroleum hydrocarbons as diesel or motor oil (TPH-D); and benzene, toluene, xylenes and ethylbenzene (BTXE) by NET Pacific, a state certified analytical laboratory. The only constituents found in the two samples were TPH-D as motor oil. The north sample, SW-1 contained 10 ppm and the south sample, SW-2, contained 19 ppm of motor oil. These results are summarized in Table 1. Laboratory data reports are included in Appendix A.

5.2 Disposal of Stockpiled Soil

The soil stockpile which remained from the UST removal in November 1990, consisted of 50 to 70 cubic yards of soil. In order to assess disposal options, one composite sample (SP-2.1 through SP-2.5) was taken on August 5, 1991. This composite sample consisted of five discrete samples taken in brass tubes samples and transported to NET Pacific, where they were composited for analysis. Each of the five discrete samples was taken using the sampling methods described above. The locations of these samples are shown on Figure 2.

After compositing the five sample tubes into one sample, NET Pacific analyzed the sample for TPH-G, TPH-D, BTXE. This composite sample contained TPH-D levels of 590 ppm as diesel and 560 ppm as motor oil. These results are summarized in Table 1. Laboratory data reports for these analyses are included in Appendix B.

After submitting these results to Mr. John Lydick, the Compliance Manager for Vasco Road Sanitary Landfill, he requested that the composite sample be analyzed for RCI (reactivity, corrosivity, and ignitability), and CAM 17 Metals using STLC extraction. These analyses, which are routinely required by Vasco Road Sanitary Landfill before allowing disposal of fuel laden soil at the landfill, were run on the composite sample by NET Pacific. The results of RCI and CAM 17 Metals analyses were within acceptable limits for disposal at Vasco Road Sanitary Landfill. The laboratory data reports for these analyses are included in Appendix B.

Liquid Sugars, Inc. received verbal approval on September 13, 1991 from Mr. John Lydick to dispose of the stockpiled soil at Vasco Road Sanitary Landfill. On September 14, 1991, the soil was transported to Vasco Road Sanitary Landfill for disposal.

5.3 Soil Boring Investigation

In order to assess the nature and extent of fuel constituents in subsurface soils above ground water, eight investigative test borings (TB-1 through TB-8) were drilled in a grid pattern surrounding the backfilled UST excavation. Boring locations are shown on Figure 3.

5.3.1 Field Methods

Soil borings were drilled by Kvilhaug Well Drilling and Pump Co. using hollow stem auger. Subsurface soils were logged and field evaluated for lithology and for the presence of hydrocarbons using sight, smell and a photoionization detector.

Undisturbed soils were sampled in advance of the auger at five-foot intervals to a depth of ten feet as follows: (1) A two-inch inside diameter California-style split spoon sampler was driven into undisturbed soil ahead of the drill bit; (2) The sampler was raised quickly to the surface and the brass liners exposed; (3) One of the brass liners (the one containing the most undisturbed soil) was quickly sealed with aluminum foil and plastic end caps, labeled, and wrapped tightly with tape; and (4) The sealed soil sample was immediately placed in cold storage for transport to the analytical laboratory under formal chain-of-custody. All drilling cuttings were stored on-site in sealed drums pending laboratory results. All sampling equipment was thoroughly cleaned and decontaminated between each sample collection by triple-rinsing first with water, then with dilute tri-sodium phosphate solution, and finally with distilled water.

5.3.2 General Subsurface Conditions

Each of the eight investigative borings was logged by a qualified Century West Engineering geologist. Boring logs for each of the borings are included in Appendix C. The subsurface stratigraphy was generally similar in each of the borings. Concrete and baserock were present in each of the borings down to approximately one foot below grade. From one foot to approximately eight feet in depth, soils consisted of dark gray, firm, slightly silty clay. Gray green clayey, sandy gravels were encountered from approximately eight feet to a final depth of 11.5 feet. These gravels were not encountered in three borings (TB-1, TB-6 and TB-7) located west and northwest from the UST excavation. In the remaining five borings, the gravels were generally found at the eight-foot depth, except in TB-3, where it was encountered at a depth of five feet below grade and extended down to 11.5 feet.

Ground water in each of the well borings was first encountered at a depth of approximately ten feet below grade. Hydrocarbon odors were encountered in all of the borings and ranged from faint to strong. PID readings generally exceeded 100, and ranged from 18 to 700.

5.3.3 Analytical Results

A total of 16 soil samples (two samples per boring) were analyzed for TPH-G, TPH-D, and BTXE by NET Pacific. These results are summarized in Table 1. Laboratory data reports for these analyses are included in Appendix D.

Table 1
SUMMARY OF SOIL ANALYTICAL RESULTS

Sample ID	Sample Depth	Concentration (ppm) TPH-G	TPH-D	Benzene	Toluene	Xylenes	Ethyl-benzene
Sidewall Samples - 07/30/91							
SW-1	5.5 feet	ND	10[1]	ND	ND	ND	ND
SW-2	4.5 feet	ND	19[1]	ND	ND	ND	ND
Stockpile Sample - 08/05/91							
SP-2.1 thru SP-2.5	--	3.3	560[1] 590[2]	ND	ND	ND	ND
Soil Boring Investigation - 11/07/91							
TB-1	5.5 feet	ND	ND	0.015	ND	0.0085	0.0048
	10.5 feet	7.0	34[3]	0.025	ND	0.041	0.025
TB-2	5.5 feet	ND	ND	0.024	ND	0.0029	ND
	10.5 feet	550	1,500	ND	ND	4.100	1.700
TB-3	5.0 feet	2.8	8.2	0.110	ND	0.0091	0.0036
	10.5 feet	240	360	ND	ND	1.700	0.230
TB-4	5.5 feet	56	130	0.700	ND	0.011	0.170
	10.5 feet	420	570	1.200	ND	1.300	0.640
TB-5	5.0 feet	ND	5.5	0.120	0.0025	ND	0.0035
	10.5 feet	330	360	0.290	0.310	2.900	1.100
TB-6	5.5 feet	1.3	3.7	ND	ND	ND	ND
	10.5 feet	13	71	0.020	ND	0.120	ND
TB-7	5.5 feet	ND	ND	0.0038	ND	ND	ND
	10 5 feet	15	100	0.017	ND	0.130	ND
TB-8	5.5 feet	ND	ND	0.0069	0.0028	0.0043	ND
	10.0 feet	610	1,500	ND	ND	4.700	2.500
Detection Limit - Soil		1.0	1.0	0.0025	0.0025	0.0025	0.0025

[1] - Total petroleum hydrocarbons identified as motor oil
[2] - TPH-D result is due to a petroleum hydrocarbon that is heavier than diesel but lighter than motor oil.
[3] - All TPH-D results from the soil boring investigation are identified as diesel.

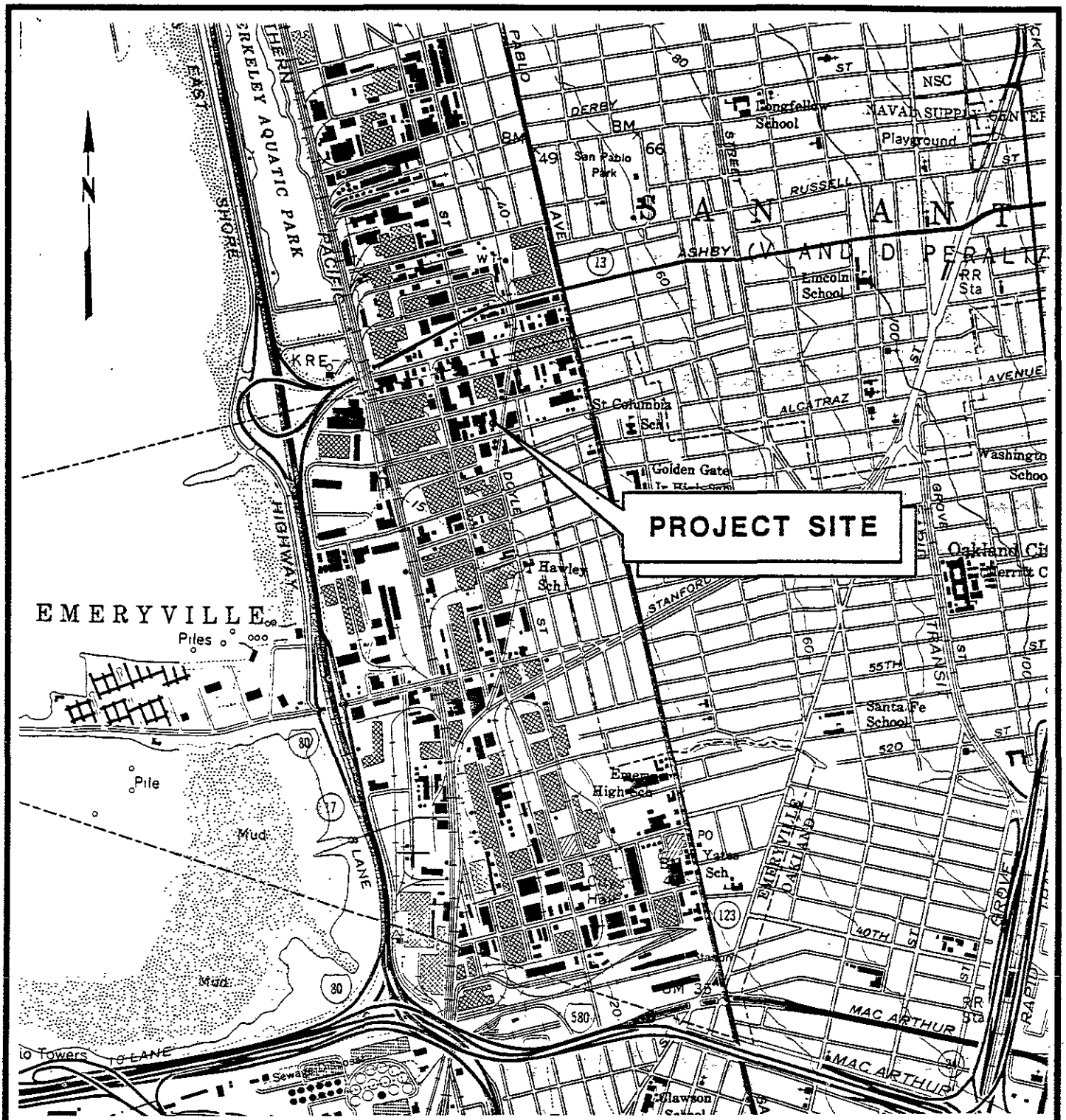
6.0 CONCLUSIONS AND RECOMMENDATIONS

The results of the soil boring investigation indicate that no significant levels of gasoline and diesel constituents are present in soils at a depth of 5.5 feet below grade (see Figure 3 and Figure 4). These soils, which generally extended down to eight feet in depth, consisted of dark gray firm clays. These clays would tend to retard the lateral migration of leaking fuel products.

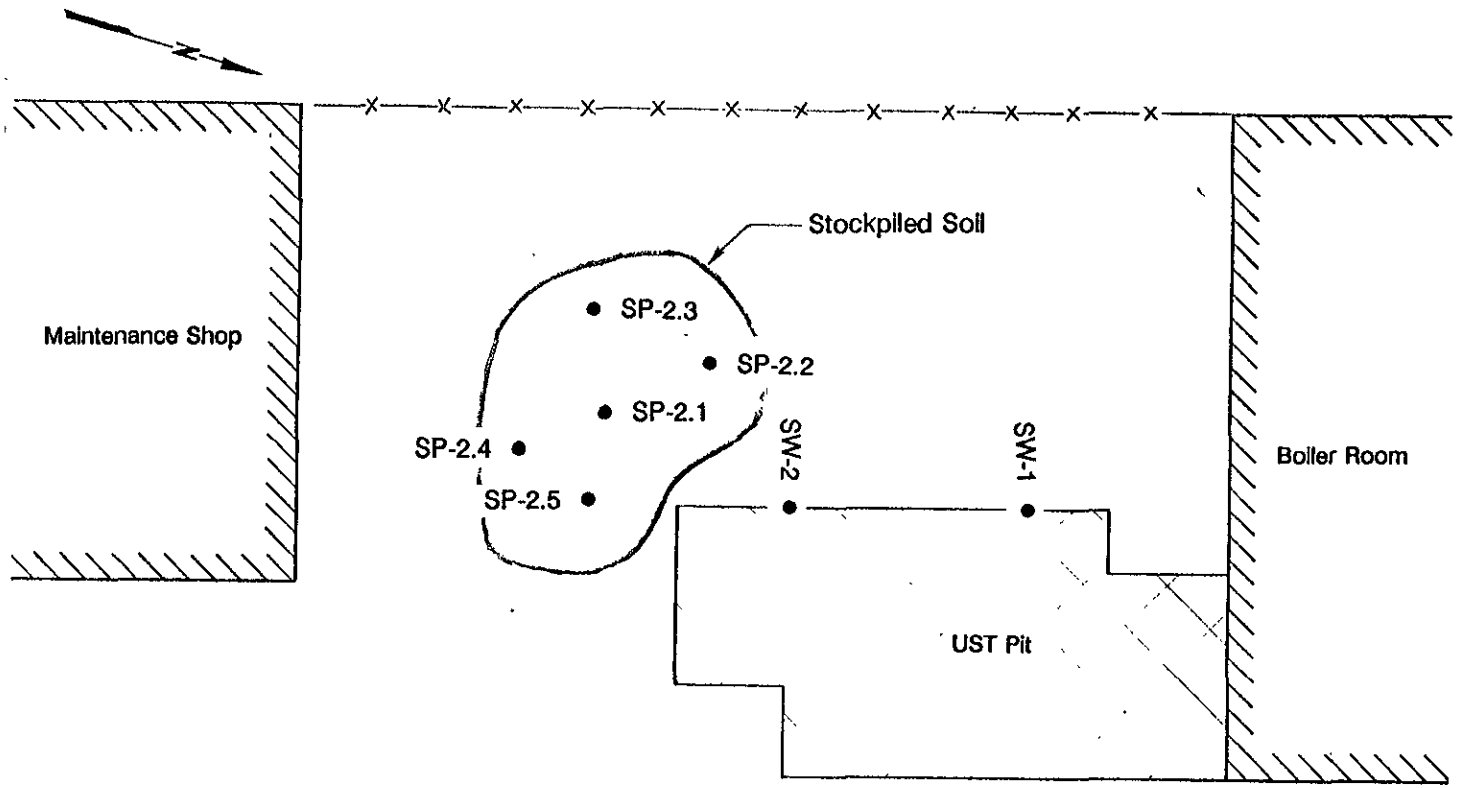
Samples taken at a depth of 10.5 feet contained TPH-G and TPH-D levels that exceeded the 100 ppm Regional Board action level in five of the test borings (TB-2, TB-3, TB-4, TB-5, and TB-6) [Reference 3]. Each of these five test borings had gravels present at and around the 10.5-foot soil sampling depth. The three test borings (TB-1, TB-7 and TB-8) that did not contain TPH-G and TPH-D levels above 100 ppm encountered less permeable sandy silts below a depth of eight feet, rather than gravels.

The results of the soil boring investigation indicate that vertical migration of any fuel leaking from the USTs was limited by: (1) The shallow ground water table, which was situated close to the tank bottom, and thus effectively halted the downward migration of less dense fuel hydrocarbons through the soil column; and (2) The low permeability clays, present down to a depth of approximately eight feet, which retarded the lateral migration of fuel constituents. Thus, it appears that any fuel leakage has spread laterally away from the USTs on the ground water table, rather than vertically, impacting only a thin layer of soil between eight and ten feet in depth. Although no ground water samples were taken and analyzed, it is likely that ground water has been impacted by fuel leakage from the USTs.

Given the likelihood that only a relatively thin layer of soil has been impacted by fuel leakage from the USTs, we do not recommend further excavation of fuel laden soil be carried out at this time. Rather, we recommend drilling and installing three monitoring wells as described in the amended Workplan. This will provide a preliminary assessment of ground water quality in a downgradient direction from the UST excavation.



DESIGNED BY:	CHECKED BY:	**Figure 1** **SITE VICINITY MAP** CWEC 20516-001-03	DATE:	FIGURE:
DRAWN BY:	SCALE:		CENTURY WEST ENGINEERING	
DWG. NO.:				



DESIGNED BY :	DATE :	CENTURY WEST ENGINEERING	**Figure 2** **SITE PLAN** CWEC 20516-001-03	DRAWING NO.
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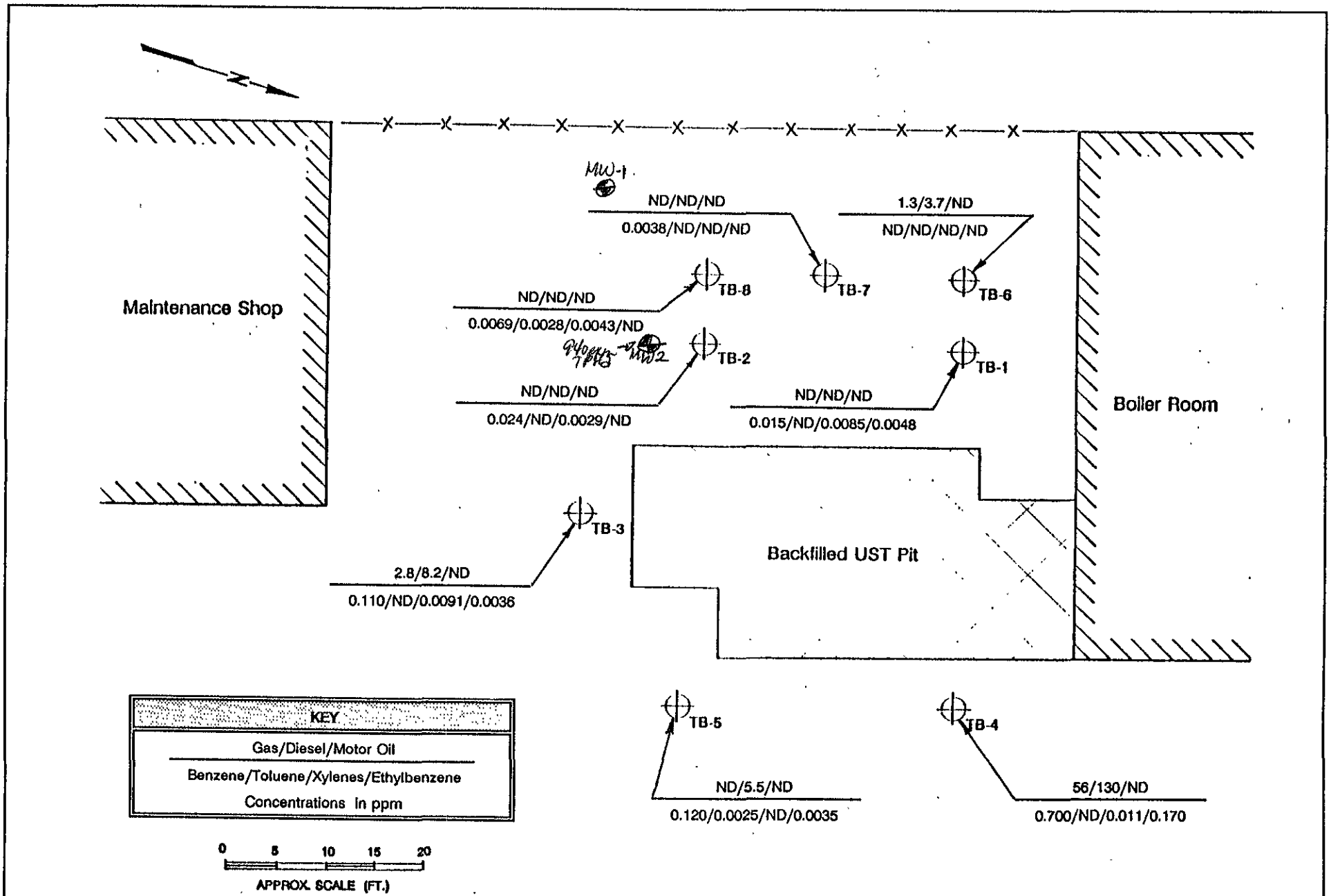
DRAWING NO. :				



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CENTURY WEST ENGINEERING

Figure 3
SOIL SAMPLES AT 5.5 FT DEPTH
CWEC 20516-001-03

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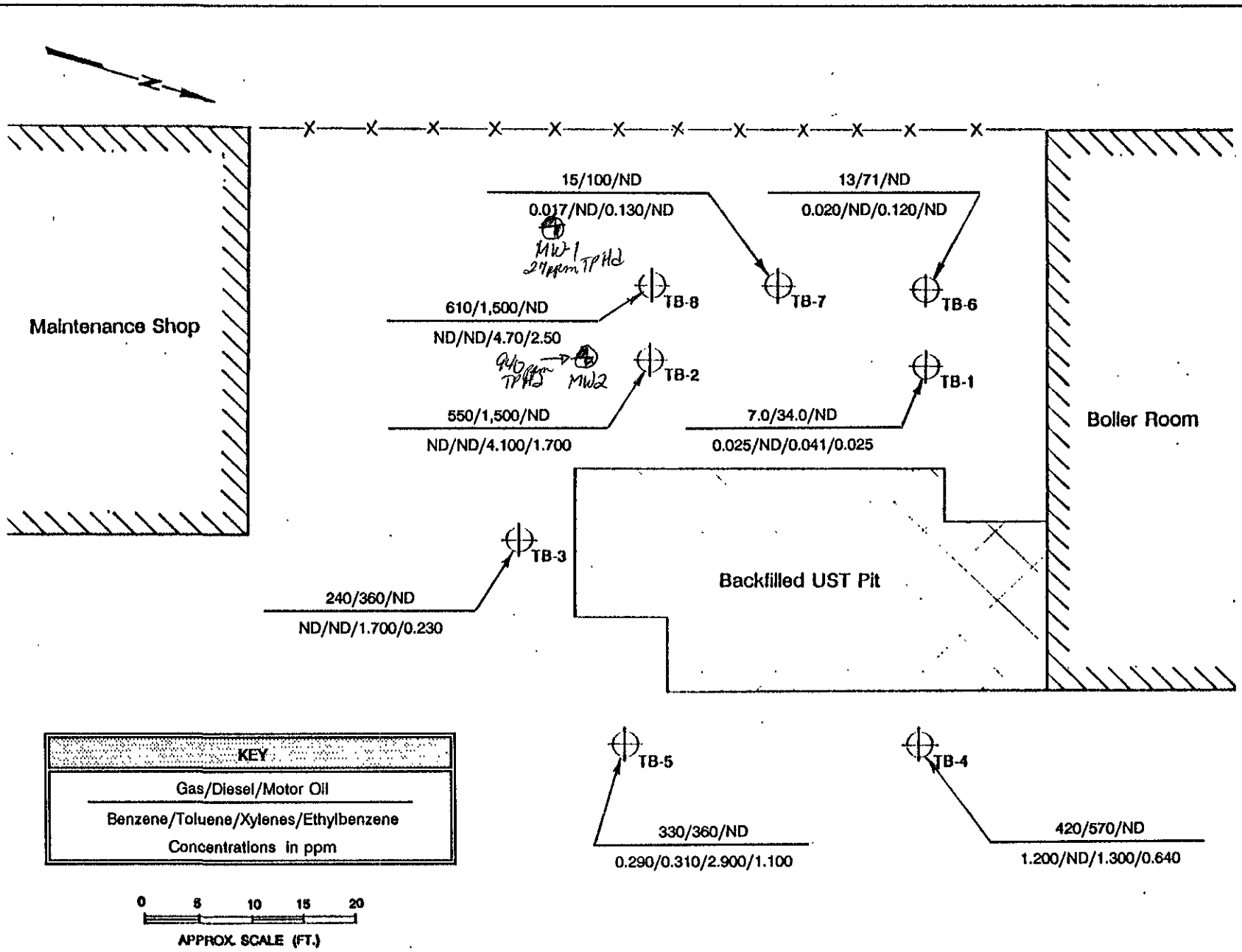
SHEET NO.



DESIGNED BY :	DATE :	CENTURY WEST ENGINEERING	**Figure 4** **SOIL SAMPLES AT 10.5 FT DEPTH** CWEC 20516-001-03	DRAWING NO.
DRAWN BY :	SCALE :			SHEET NO.
CHECKED BY :	SEC. :			
DRAWING NO. :				

APPENDIX A

LABORATORY DATA REPORTS AND CHAIN-OF-CUSTODY RECORDS

SIDEWALL SOIL SAMPLES

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Jim Gribi
Century West Engineering
7950 Dublin Blvd., Ste 210
Dublin, CA 94568

Date: 08-12-91
NET Client Acct No: 753
NET Pacific Log No: 8990
Received: 08-01-91 0800

Client Reference Information

Liquid Sugars Inc., Project: 2051-001-01

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

NET Pacific, Inc

Client Acct: 753 Date: 08-12-91
®Client Name: Century West Engineering Page: 2
NET Log No: 8990

Ref: Liquid Sugars Inc., Project: 2051-001-01

Parameter	Reporting Limit	Descriptor, Lab No. and Results SW-1 07-30-91 1240 93462	SW-2 07-30-91 1240 93463	Units
PETROLEUM HYDROCARBONS		--	--	
VOLATILE (SOIL)		--	--	
DILUTION FACTOR *		1	1	
DATE ANALYZED		08-02-91	08-03-91	
METHOD GC FID/5030		--	--	
as Gasoline	1	ND	ND	mg/Kg
METHOD 8020		--	--	
DILUTION FACTOR *		1	1	
DATE ANALYZED		08-02-91	08-03-91	
Benzene	2.5	ND	ND	ug/Kg
Ethylbenzene	2.5	ND	ND	ug/Kg
Toluene	2.5	ND	ND	ug/Kg
Xylenes, total	2.5	ND	ND	ug/Kg
PETROLEUM HYDROCARBONS		--	--	
EXTRACTABLE (SOIL)		--	--	
DILUTION FACTOR *		1	1	
DATE EXTRACTED		8-2-91	8-2-91	
DATE ANALYZED		08-04-91	08-04-91	
METHOD GC FID/3550		--	--	
as Diesel	1	ND	ND	mg/Kg
as Motor Oil	10	10	19	mg/Kg

NET Pacific, Inc

Client Acct: 753 Date: 08-09-91
Client Name: Century West Engineering Page: 3
NET Log No: 8990

Ref: Liquid Sugars Inc., Project: 2051-001-01

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	1	mg/Kg	101	ND	79	77	1.9
Motor Oil	10	mg/Kg	99	ND	N/A	N/A	N/A
Gasoline	1	mg/Kg	115	ND	101	101	< 1
Benzene	2.5	ug/Kg	96	ND	102	101	< 1
Toluene	2.5	ug/Kg	96	ND	100	99	< 1
Gasoline	1	mg/Kg	106	ND	84	87	3.5
Benzene	2.5	ug/Kg	92	ND	93	95	2.1
Toluene	2.5	ug/Kg	94	ND	90	92	2.2

COMMENT: Blank Results were ND on other analytes tested.

NET Pacific, Inc.

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

CENTURY TESTING LABORATORIES

CHAIN OF CUSTODY RECORD

1444 NW College Way / Bend, Oregon 97701
(503) 382-6432 / (800) 458-9672 / Fax: (503) 382-6432

8990

1. PROJ. NO.	2. PROJECT NAME & ADDRESS	10. NO. OF CONTAINERS	11. ANALYSIS TO BE PERFORMED: TPH-D	TPH-G	BTXE	CWEC LAB SAMPLE NO.	12. REMARKS
20516-001-01	Liquid Sugars, INC						
3. SAMPLERS: (SIGNATURE)							

4. STA. NO.	5. DATE	6. TIME	7. COMPOSITE	8. GRAB	9. STATION LOCATION	10. NO. OF CONTAINERS	TPH-D	TPH-G	BTXE	CWEC LAB SAMPLE NO.	12. REMARKS
SW-1	7/30	12:40			N 5.5' Depth	1	X	X	X		
SW-2	7/30	12:40			S 4.5' Depth	1	X	X	X		
											2-Week TAT

CUSTODY SEALED 7/31/91 @ 1900 MW

13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)	13. RELINQUISHED BY: (SIGNATURE)	14. DATE/ TIME	15. RECEIVED BY: (SIGNATURE)
	7/31/91 11:30	7/31/91		7/31/91	
13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)	13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY (SIGNATURE)
13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	16. RECEIVED FOR LABORATORY BY:	17. DATE/TIME	18. REMARKS	
(VIA NCS)			8/1/91 0800		

APPENDIX B

LABORATORY DATA REPORTS AND CHAIN-OF-CUSTODY RECORDS

STOCKPILED SOIL COMPOSITE SAMPLE

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Jim Gribi
Century West Engineering
7950 Dublin Blvd., Ste 210
Dublin, CA 94568

Date: 08-15-91
NET Client Acct. No: 753
NET Pacific Log No: 9093
Received: 08-07-91 0800

Client Reference Information

Liquid Sugars, Project: 20516-001-01

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

Ref: Liquid Sugars, Project: 20516-001-01

SAMPLE DESCRIPTION: SP-2.1-5 cmp08-05-91 1400
LAB Job No: (-93862)

Parameter	Method	Reporting Limit	Results	Units
PETROLEUM HYDROCARBONS			--	
VOLATILE (SOIL)			--	
DILUTION FACTOR *			1	
DATE ANALYZED			08-08-91	
METHOD GC FID/5030			--	
as Gasoline		1	3.3	mg/Kg
METHOD 8020			--	
DILUTION FACTOR *			1	
DATE ANALYZED			08-08-91	
Benzene		2.5	ND	ug/Kg
Ethylbenzene		2.5	ND	ug/Kg
Toluene		2.5	ND	ug/Kg
Xylenes, total		2.5	ND	ug/Kg
PETROLEUM HYDROCARBONS			--	
EXTRACTABLE (SOIL)			--	
DILUTION FACTOR *			10	
DATE EXTRACTED			08-07-91	
DATE ANALYZED			08-08-91	
METHOD GC FID/3550			--	
as Diesel		1	590 *	mg/Kg
as Motor Oil		10	560	mg/Kg

* NOTE: Petroleum hydrocarbon as diesel result is due to a petroleum hydrocarbon that is heavier than diesel but lighter than motor oil.

Ref: Liquid Sugars, Project: 20516-001-01

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	1	mg/Kg	103	ND	54	54	< 1
Motor Oil	10	mg/Kg	101	ND	N/A	N/A	N/A

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	1	mg/Kg	111	ND	110	117	6.5
Benzene	2.5	ug/Kg	110	ND	99	104	5.3
Toluene	2.5	ug/Kg	108	ND	99	103	5.4

COMMENT: Blank Results were ND on other analytes tested.

CENTURY TESTING LABORATORIES

CHAIN OF CUSTODY RECORD

1444 NW College Way / Bend, Oregon 97701
(503) 382-6432 / (800) 458-9672 / Fax: (503) 382-6432

9093

1. PROJ. NO.	2. PROJECT NAME & ADDRESS
20516-001-01	Liquid Sugars

3. SAMPLERS: (SIGNATURE) James Call

4. STA. NO.	5. DATE	6. TIME	7. COMPOSITE	8. GRAB	9. STATION LOCATION	10. NO. OF CONTAINERS	11. ANALYSIS TO BE PERFORMED: TPH-G & TPH-D BTXE	CWEC LAB SAMPLE NO.	12. REMARKS
SP-2.1	8/5	2:00			Composite into one	1	X X X		2-week TAT
SP-2.2						1			
SP-2.3						1			Call Jim Gribi w/ results 415/551-7774
SP-2.4						1			
SP-2.5						1			

CUSTODY SEALED 8/6/91 @ 2000 Jwl seal intact

13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)	13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)
James Call	8/6/91 5:45	Tina Barnett	Tina M. Barnett	8-6-91 5:50 pm	
13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)	13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY (SIGNATURE)

13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	16. RECEIVED FOR LABORATORY BY:	17. DATE/TIME	18. REMARKS
(VIA NCS)			8/7/91 0800	

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Jim Gribi
Century West Engineering
7950 Dublin Blvd., Ste 210
Dublin, CA 94568

Date: 09-05-91
NET Client Acct. No: 753
NET Pacific Log No: 9311
Received: 08-16-91 1745

Client Reference Information

Liquid Sugars, Project: 20516-001-01

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

NET Pacific, Inc

Client Acct: 753
Client Name: Century West Engineering
NET Log No: 9311

Date: 09-05-91
Page: 2

Ref: Liquid Sugars, Project: 20516-001-01

SAMPLE DESCRIPTION: SP-2.1-5 08-05-91 1400
LAB Job No: (-94913)

Parameter	Method	Reporting Limit	Results	Units
pH	EPA9045	N/A	7.5	pH units
Flashpoint	1010	--	>140	deg F
Sulfide, Total	9030	10	ND	mg/Kg
Cyanide (total)	9010	0.20	ND	mg/Kg

NET Pacific, Inc

Client Acct: 753
®Client Name: Century West Engineering
NET Log No: 9311

Date: 09-05-91
Page: 3

Ref: Liquid Sugars, Project: 20516-001-01

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
pH	N/A	pH units	100	N/A	N/A	N/A	< 1
Cyanide (total)	0.20	mg/Kg	96	ND	105	94	12
Sulfide (total)	10	mg/Kg	100	N/A	87	104	18
Flashpoint	--	deg F	99	N/A	N/A	N/A	< 1

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Jim Gribi
Century West Engineering
7950 Dublin Blvd., Ste 210
Dublin, CA 94568

Date: 09-17-91
NET Client Acct. No: 753
NET Pacific Log No: 9630
Received: 09-05-91 1400

Client Reference Information

Liquid Sugars, Project: 20516-001-01

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

NET Pacific, Inc.

Client Acct: 753
Client Name: Century West Engineering
NET Log No: 9630

Date: 09-17-91
Page: 2

Ref: Liquid Sugars, Project: 20516-001-01

SAMPLE DESCRIPTION: SP-2.1-5 08-05-91 1400
LAB Job No: (-96500)

Parameter	Method	Reporting Limit	Results	Units
17 CAM Metals,WET-sol.		--		mg/L
Antimony	6010	0.2	ND	mg/L
Arsenic	7060	0.005	0.30	mg/L
Barium	6010	0.05	7.0	mg/L
Beryllium	6010	0.05	ND	mg/L
Cadmium	6010	0.05	ND	mg/L
Chromium (VI)	7197	0.005	N/A	mg/L
Chromium	6010	0.05	0.17	mg/L
Cobalt	6010	0.05	0.42	mg/L
Copper	6010	0.05	1.1	mg/L
Lead	6010	0.5	0.66	mg/L
Mercury	7470	0.005	ND	mg/L
Molybdenum	6010	0.1	ND	mg/L
Nickel	6010	0.05	0.71	mg/L
Selenium	7740	0.005	ND	mg/L
Silver	6010	0.05	ND	mg/L
Thallium	6010	0.5	ND	mg/L
Vanadium	6010	0.05	0.51	mg/L
Zinc	6010	0.05	4.6	mg/L

Ref: Liquid Sugars, Project: 20516-001-01

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Antimony	0.2	mg/L	101	ND	90	87	2.2
Arsenic	0.005	mg/L	96	ND	92	92	<1
Barium	0.05	mg/L	108	ND	88	82	<1
Beryllium	0.05	mg/L	101	ND	86	83	4.8
Cadmium	0.05	mg/L	103	ND	91	88	2.2
Chromium	0.05	mg/L	93	ND	80	84	4.9
Cobalt	0.05	mg/L	106	ND	90	87	2.1
Copper	0.05	mg/L	97	ND	85	81	1.9
Lead	0.5	mg/L	95	ND	82	80	4.3
Mercury	0.005	mg/L	100	ND	99	103	3.5
Molybdenum	0.1	mg/L	102	ND	90	89	2.2
Nickel	0.05	mg/L	92	ND	80	82	2.1
Selenium	0.005	mg/L	92	ND	88	89	<1
Silver	0.05	mg/L	110	ND	88	86	2.3
Thallium	0.5	mg/L	98	ND	80	82	2.5
Vanadium	0.05	mg/L	98	ND	91	88	4.0
Zinc	0.05	mg/L	103	ND	94	87	4.4

APPENDIX C

BORING LOGS

SOIL BORING LOG TB-1

Century West Engineering

Site Location: LIQUID SUGARS, INC., EMERYVILLE, CA	Boring ID: TB-1	Total Depth: 11.5'
Boring Location: NW side of UST pit	Elevation: Unknown	Initial GW Depth: 10.5'
Purpose: Investigative	Logged By: Jim Gribi	Final GW Depth:
Date: November 7, 1991	Blank Casing:	From: To:
Consulting Firm: Century West Engineering	Perforations:	From: To:
Project Number: 20516-001-03	Filter Sand:	From: To:
Drilling Contractor: Kvilhaug Well Drilling	Bentonite:	From: To:
Drilling Method: Hollow Stem Auger	Grout: Cement/sand	From: 0.0' To: 11.5'

Depth	PID	Sample ID	Blow Counts	Profile	Soil Description	Remarks & USCS Classification
01 02 03 04 05					0.0 - 1.0 Concrete and baserock. 1.0 - 10.0 Dark gray silty CLAY, firm, moist, faint to moderate HC odor.	USCS: CL
06 07 08 09 10	480	TB-1.1	13 38 50		10.0 - 11.5 Gray green silty SAND, fine grained, moist to saturated, moderate HC odor.	USCS: SM
11 12 13 14 15	560	TB-1.2	10 17 18		Total Depth - 11.5'	Ground water = 10.5'

SOIL BORING LOG TB-2

Century West Engineering

Site Location: LIQUID SUGARS, INC., EMERYVILLE, CA	Boring ID: TB-2	Total Depth: 11.5'
Boring Location: SW side of UST pit	Elevation: Unknown	Initial GW Depth: None
Purpose: Investigative	Logged By: Jim Gribi	Final GW Depth:
Date: November 7, 1991	Blank Casing:	From: To:
Consulting Firm: Century West Engineering	Perforations:	From: To:
Project Number: 20516-001-03	Filter Sand:	From: To:
Drilling Contractor: Kvilhaug Well Drilling	Bentonite:	From: To:
Drilling Method: Hollow Stem Auger	Grout: Cement/sand	From: 0.0' To: 11.5'

Depth	PID	Sample ID	Blow Counts	Profile	Soil Description		Remarks & USCS Classification
01 02 03 04 05					0.0 - 1.0	Concrete and baserock.	
					1.0 - 8.0	Dark gray CLAY, slightly silty, firm, slightly gravely, moist, moderate HC odor.	USCS: CL
06 07 08 09 10	550	TB-2.1	10 20 34				
					8.0 - 11.5	Gray green clayey GRAVEL, clasts - 1/4" to 1+" subrounded, sandy, moist to saturated, moderate to strong HC odor.	USCS: GC-GM
							No ground water
11 12 13 14 15	700	TB-2.2	22 29 45		Total Depth - 11.5'		

SOIL BORING LOG TB-3

Century West Engineering

Site Location: LIQUID SUGARS, INC., EMERYVILLE, CA	Boring ID: TB-3	Total Depth: 11.5'
Boring Location: S side of UST pit	Elevation: Unknown	Initial GW Depth: 10'
Purpose: Investigative	Logged By: Jim Gribi	Final GW Depth:
Date: November 7, 1991	Blank Casing:	From: To:
Consulting Firm: Century West Engineering	Perforations:	From: To:
Project Number: 20516-001-03	Filter Sand:	From: To:
Drilling Contractor: Kvilhaug Well Drilling	Bentonite:	From: To:
Drilling Method: Hollow Stem Auger	Grout: Cement/sand	From: 0.0' To: 11.5'

Depth	PID	Sample ID	Blow Counts	Profile	Soil Description		Remarks & USCS Classification
01					0.0 - 1.0	Concrete and baserock.	
02					1.0 - 3.0	Light gray SILT, clayey, moist, no HC odor.	USCS: ML
03							
04							
05					3.0 - 5.0	Dark gray silty CLAY, firm, hard, moist, faint HC odor.	USCS: CL
06	490	TB-3.1	12 24 50				
07							
08					5.0 - 11.5	Gray green clayey GRAVEL, clasts - 1/4" to 1+" subrounded, very sandy, moist to saturated, faint to moderate HC odor.	USCS: GC-GM
09							
10							Ground water = 10'
11	180	TB-3.2	22 40 22		Total Depth - 11.5'		
12							
13							
14							
15							

SOIL BORING LOG TB-4

Century West Engineering

Site Location: LIQUID SUGARS, INC., EMERYVILLE, CA	Boring ID: TB-4	Total Depth: 11.5'
Boring Location: NE side of UST pit	Elevation: Unknown	Initial GW Depth: 10'
Purpose: Investigative	Logged By: Jim Gribi	Final GW Depth:
Date: November 7, 1991	Blank Casing:	From: To:
Consulting Firm: Century West Engineering	Perforations:	From: To:
Project Number: 20516-001-03	Filter Sand:	From: To:
Drilling Contractor: Kvilhaug Well Drilling	Bentonite:	From: To:
Drilling Method: Hollow Stem Auger	Grout: Cement/sand	From: 0.0' To: 11.5'

Depth	PID	Sample ID	Blow Counts	Profile	Soil Description		Remarks & USCS Classification
01 02 03 04 05					0.0 - 2.0	Concrete and baserock.	
					2.0 - 10.0	Dark gray CLAY, slightly silty, firm, moist, faint HC odor.	USCS: CL
06 07 08 09 10	640	TB-4.1	8 20 35		10.0 - 11.5	Gray green clayey GRAVEL, sandy, moist to saturated, faint to moderate HC odor.	USCS: GC-GM Ground water = 10'
11 12 13 14 15	300	TB-4.2	25 43 25		Total Depth - 11.5'		

SOIL BORING LOG TB-5

Century West Engineering

Site Location: LIQUID SUGARS, INC., EMERYVILLE, CA	Boring ID: TB-5	Total Depth: 11.5'
Boring Location: SE side of UST pit	Elevation: Unknown	Initial GW Depth: 10.5'
Purpose: Investigative	Logged By: Jim Gribi	Final GW Depth:
Date: November 7, 1991	Blank Casing:	From: To:
Consulting Firm: Century West Engineering	Perforations:	From: To:
Project Number: 20516-001-03	Filter Sand:	From: To:
Drilling Contractor: Kvilhaug Well Drilling	Bentonite:	From: To:
Drilling Method: Hollow Stem Auger	Grout: Cement/sand	From: 0.0' To: 11.5'

Depth	PID	Sample ID	Blow Counts	Profile	Soil Description		Remarks & USCS Classification
01					0.0 - 1.0	Concrete and baserock.	
02					1.0 - 8.0	Dark gray green CLAY, slightly silty, firm, slightly gravely, moist, faint to moderate HC odor.	USCS: CL
03							
04							
05							
06	280	TB-5.1	8				
07			20				
08			42		8.0 - 11.5	Gray green clayey GRAVEL, clasts - 1/4" to 1/2" subrounded, very sandy, moist to saturated, faint HC odor.	USCS: GC-GM
09							
10							
11	180	TB-5.2	25				Ground water = 10.5'
12			42				
13			20		Total Depth - 11.5'		
14							
15							

SOIL BORING LOG TB-6

Century West Engineering

Site Location: LIQUID SUGARS, INC., EMERYVILLE, CA	Boring ID: TB-6	Total Depth: 11.5'
Boring Location: NW side of UST pit, step out from TB-1	Elevation: Unknown	Initial GW Depth: 10'
Purpose: Investigative	Logged By: Jim Gribi	Final GW Depth:
Date: November 7, 1991	Blank Casing:	From: To:
Consulting Firm: Century West Engineering	Perforations:	From: To:
Project Number: 20516-001-03	Filter Sand:	From: To:
Drilling Contractor: Kvilhaug Well Drilling	Bentonite:	From: To:
Drilling Method: Hollow Stem Auger	Grout: Cement/sand	From: 0.0' To: 11.5'

Depth	PID	Sample ID	Blow Counts	Profile	Soil Description		Remarks & USCS Classification
01 02 03 04 05					0.0 - 1.0	Concrete and baserock.	
					1.0 - 8.0	Dark gray silty CLAY, firm, moist, faint HC odor.	USCS: CL
06 07 08 09 10	18	TB-6.1	10 25 45		8.0 - 11.5	Gray green to olive brown SILT, slightly sandy, moist to saturated, faint HC odor.	USCS: ML Ground water = 10'
11 12 13 14 15	48	TB-6.2	8 14 20		Total Depth - 11.5'		

SOIL BORING LOG TB-7

Century West Engineering

Site Location: LIQUID SUGARS, INC., EMERYVILLE, CA	Boring ID: TB-7	Total Depth: 11.5'
Boring Location: W of UST pit, step out	Elevation: Unknown	Initial GW Depth: 10'
Purpose: Investigative	Logged By: Jim Gribi	Final GW Depth:
Date: November 7, 1991	Blank Casing:	From: To:
Consulting Firm: Century West Engineering	Perforations:	From: To:
Project Number: 20516-001-03	Filter Sand:	From: To:
Drilling Contractor: Kvilhaug Well Drilling	Bentonite:	From: To:
Drilling Method: Hollow Stem Auger	Grout: Cement/sand	From: 0.0' To: 11.5'

Depth	PID	Sample ID	Blow Counts	Profile	Soil Description		Remarks & USCS Classification
01 02 03 04 05					0.0 - 1.0	Concrete and baserock.	
					1.0 - 7.0	Dark gray CLAY, slightly silty, firm, slightly gravely, moist, faint HC odor.	USCS: CL
06 07 08 09 10	175	TB-7.1	12 25 50		8.0 - 11.5	Olive gray to Gray green SILT, sandy, some large gravel clasts - 1/4" to 1+" subrounded, moist to saturated, faint HC odor.	USCS: ML Ground water = 10'
11 12 13 14 15	140	TB-7.2	12 25 30		Total Depth - 11.5'		

SOIL BORING LOG TB-8

Century West Engineering

Site Location: LIQUID SUGARS, INC., EMERYVILLE, CA	Boring ID: TB-8	Total Depth: 11.5'
Boring Location: SW side of UST pit, step out from TB-2	Elevation: Unknown	Initial GW Depth: 9'
Purpose: Investigative	Logged By: Jim Gribi	Final GW Depth:
Date: November 7, 1991	Blank Casing:	From: To:
Consulting Firm: Century West Engineering	Perforations:	From: To:
Project Number: 20516-001-03	Filter Sand:	From: To:
Drilling Contractor: Kvilhaug Well Drilling	Bentonite:	From: To:
Drilling Method: Hollow Stem Auger	Grout: Cement/sand	From: 0.0' To: 11.5'

Depth	PID	Sample ID	Blow Counts	Profile	Soil Description		Remarks & USCS Classification
01 02 03 04 05					0.0 - 1.0	Concrete and baserock.	
					1.0 - 4.0	Dark gray CLAY, firm, moist, faint HC odor.	USCS: CL
06 07 08 09 10	40	TB-8.1	9 20 45		4.0 - 8.0	Dark gray to gray green silty CLAY, moist, soft to firm, faint HC odor.	USCS: ML-CL
					8.0 - 11.5	Gray green sandy GRAVEL, clasts - 1/4" to 1+" angular to subrounded, slightly clayey, moist to saturated, faint to moderate HC odor.	USCS: GM-GC Ground water = 9'
11 12 13 14 15	510	TB-8.2	40 50 –		Total Depth - 11.5'		

APPENDIX D

LABORATORY DATA REPORTS AND CHAIN-OF-CUSTODY RECORDS

SOIL BORING INVESTIGATION

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Jim Gribi
Century West Engineering
7950 Dublin Blvd., Ste 210
Dublin, CA 94568

Date: 11/27/1991
NET Client Acct No: 75300
NET Pacific Log No: 91.0534
Received: 11/08/1991

Client Reference Information

LSI/Emeryville, Project: 20516-001-03

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

JS:rct
Enclosure(s)

NET Pacific, Inc

Client No: 75300
Client Name: Century West Engineering
NET Log No: 91.0534

Date: 11/27/1991
Page: 2

Ref: LSI/Emeryville, Project: 20516-001-03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results TB-1.1 11/07/1991 104344	 TB-1.2 11/07/1991 104345	Units
TPH (Gas/BTXE,Solid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-19-91	11-19-91	
DILUTION FACTOR*			1	1	
as Gasoline		1	ND	7.0	mg/Kg
METHOD 8020 (GC,Solid)			--	--	
DATE ANALYZED			11-19-91	11-19-91	
DILUTION FACTOR*			1	1	
Benzene		2.5	15	25	ug/Kg
Ethlybenzene		2.5	4.8	25	ug/Kg
Toluene		2.5	ND	ND	ug/Kg
Xylenes (Total)		2.5	8.5	41	ug/Kg
METHOD 3550 (GC,FID)					
DILUTION FACTOR*			1	1	
DATE EXTRACTED			11-10-91	11-10-91	
DATE ANALYZED			11-17-91	11-17-91	
as Diesel		1	ND	34	mg/Kg
as Motor Oil		10	ND	ND	mg/Kg

NET Pacific, Inc

Client No: 75300
Client Name: Century West Engineering
NET Log No: 91.0534

Date: 11/27/1991
Page: 3

Ref: LSI/Emeryville, Project: 20516-001-03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results TB-2.1 11/07/1991 104346	 TB-2.2 11/07/1991 104347	Units
TPH (Gas/BTXE,Solid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-21-91	11-20-91	
DILUTION FACTOR*			1	100	
as Gasoline		1	ND	550	mg/Kg
METHOD 8020 (GC,Solid)			--	--	
DATE ANALYZED			11-21-91	11-20-91	
DILUTION FACTOR*			1	100	
Benzene		2.5	24	ND	ug/Kg
Ethlybenzene		2.5	ND	1,700	ug/Kg
Toluene		2.5	ND	ND	ug/Kg
Xylenes (Total)		2.5	2.9	4,100	ug/Kg
METHOD 3550 (GC,FID)					
DILUTION FACTOR*			1	50	
DATE EXTRACTED			11-10-91	11-10-91	
DATE ANALYZED			11-17-91	11-17-91	
as Diesel		1	ND	1,500	mg/Kg
as Motor Oil		10	ND	ND	mg/Kg

NET Pacific, Inc

Client No: 75300 Date: 11/27/1991
Client Name: Century West Engineering
NET Log No: 91.0534 Page: 4

Ref: LSI/Emeryville, Project: 20516-001-03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results TB-3.1 11/07/1991 104348	 TB-3.2 11/07/1991 104349	Units
TPH (Gas/BTXE,Solid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-19-91	11-20-91	
DILUTION FACTOR*			1	100	
as Gasoline		1	2.8	240	mg/Kg
METHOD 8020 (GC,Solid)			--	--	
DATE ANALYZED			11-19-91	11-20-91	
DILUTION FACTOR*			1	100	
Benzene		2.5	110	ND	ug/Kg
Ethlybenzene		2.5	3.6	230	ug/Kg
Toluene		2.5	ND	ND	ug/Kg
Xylenes (Total)		2.5	9.1	1,700	ug/Kg
METHOD 3550 (GC,FID)					
DILUTION FACTOR*			1	20	
DATE EXTRACTED			11-10-91	11-10-91	
DATE ANALYZED			11-17-91	11-17-91	
as Diesel		1	8.2	360	mg/Kg
as Motor Oil		10	ND	ND	mg/Kg

NET Pacific, Inc

Client No: 75300 Date: 11/27/1991
Client Name: Century West Engineering
NET Log No: 91.0534 Page: 5

Ref: LSI/Emeryville, Project: 20516-001-03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results TB-4.1 11/07/1991 104350	 TB-4.2 11/07/1991 104351	Units
TPH (Gas/BTXE,Solid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-19-91	11-20-91	
DILUTION FACTOR*			20	100	
as Gasoline		1	56	420	mg/Kg
METHOD 8020 (GC,Solid)			--	--	
DATE ANALYZED			11-19-91	11-20-91	
DILUTION FACTOR*			20	100	
Benzene		2.5	700	1,200	ug/Kg
Ethlybenzene		2.5	170	640	ug/Kg
Toluene		2.5	ND	ND	ug/Kg
Xylenes (Total)		2.5	11	1,300	ug/Kg
METHOD 3550 (GC,FID)					
DILUTION FACTOR*			5	20	
DATE EXTRACTED			11-10-91	11-10-91	
DATE ANALYZED			11-17-91	11-17-91	
as Diesel		1	130	570	mg/Kg
as Motor Oil		10	ND	ND	mg/Kg

NET Pacific, Inc

Client No: 75300 Date: 11/27/1991
Client Name: Century West Engineering
NET Log No: 91.0534 Page: 6

Ref: LSI/Emeryville, Project: 20516-001-03

			Descriptor, Lab No. and Results		
			TB-5.1 11/07/1991	TB-5.2 11/07/1991	
Parameter	Method	Reporting Limit	104352	104353	Units
TPH (Gas/BTXE,Solid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-21-91	11-20-91	
DILUTION FACTOR*			1	100	
as Gasoline		1	ND	330	mg/Kg
METHOD 8020 (GC,Solid)			--	--	
DATE ANALYZED			11-21-91	11-20-91	
DILUTION FACTOR*			1	100	
Benzene		2.5	120	290	ug/Kg
Ethlybenzene		2.5	3.5	1,100	ug/Kg
Toluene		2.5	2.5	310	ug/Kg
Xylenes (Total)		2.5	ND	2,900	ug/Kg
METHOD 3550 (GC,FID)					
DILUTION FACTOR*			1	20	
DATE EXTRACTED			11-10-91	11-10-91	
DATE ANALYZED			11-17-91	11-17-91	
as Diesel		1	5.5	360	mg/Kg
as Motor Oil		10	ND	ND	mg/Kg

NET Pacific, Inc

Client No: 75300 Date: 11/27/1991
Client Name: Century West Engineering
NET Log No: 91.0534 Page: 7

Ref: LSI/Emeryville, Project: 20516-001-03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results TB-6.1 11/07/1991 104354	 TB-6.2 11/07/1991 104355	Units
TPH (Gas/BTXE,Solid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-20-91	11-19-91	
DILUTION FACTOR*			1	1	
as Gasoline		1	1.3	13	mg/Kg
METHOD 8020 (GC,Solid)			--	--	
DATE ANALYZED			11-20-91	11-19-91	
DILUTION FACTOR*			1	1	
Benzene		2.5	ND	20	ug/Kg
Ethlybenzene		2.5	ND	ND	ug/Kg
Toluene		2.5	ND	ND	ug/Kg
Xylenes (Total)		2.5	ND	120	ug/Kg
METHOD 3550 (GC,FID)					
DILUTION FACTOR*			1	1	
DATE EXTRACTED			11-10-91	11-10-91	
DATE ANALYZED			11-17-91	11-17-91	
as Diesel		1	3.7	71	mg/Kg
as Motor Oil		10	ND	ND	mg/Kg

NET Pacific, Inc

Client No: 75300
Client Name: Century West Engineering
NET Log No: 91.0534

Date: 11/27/1991
Page: 8

Ref: LSI/Emeryville, Project: 20516-001-03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results TB-7.1 11/07/1991 104356	 TB-7.2 11/07/1991 104357	Units
TPH (Gas/BTXE,Solid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-20-91	11-19-91	
DILUTION FACTOR*			1	1	
as Gasoline		1	ND	15	mg/Kg
METHOD 8020 (GC,Solid)			--	--	
DATE ANALYZED			11-20-91	11-19-91	
DILUTION FACTOR*			1	1	
Benzene		2.5	3.8	17	ug/Kg
Ethlybenzene		2.5	ND	ND	ug/Kg
Toluene		2.5	ND	ND	ug/Kg
Xylenes (Total)		2.5	ND	130	ug/Kg
METHOD 3550 (GC,FID)					
DILUTION FACTOR*			1	5	
DATE EXTRACTED			11-10-91	11-10-91	
DATE ANALYZED			11-17-91	11-17-91	
as Diesel		1	ND	100	mg/Kg
as Motor Oil		10	ND	ND	mg/Kg

NET Pacific, Inc

Client No: 75300 Date: 11/27/1991
Client Name: Century West Engineering
NET Log No: 91.0534 Page: 9

Ref: LSI/Emeryville, Project: 20516-001-03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results TB-8.1 11/07/1991 104358	 TB-8.2 11/07/1991 104359	Units
TPH (Gas/BTXE,Solid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-19-91	11-20-91	
DILUTION FACTOR*			1	200	
as Gasoline		1	ND	610	mg/Kg
METHOD 8020 (GC,Solid)			--	--	
DATE ANALYZED			11-19-91	11-20-91	
DILUTION FACTOR*			1	200	
Benzene		2.5	6.9	ND	ug/Kg
Ethlybenzene		2.5	ND	2,500	ug/Kg
Toluene		2.5	2.8	ND	ug/Kg
Xylenes (Total)		2.5	4.3	4,700	ug/Kg
METHOD 3550 (GC,FID)					
DILUTION FACTOR*			1	50	
DATE EXTRACTED			11-10-91	11-10-91	
DATE ANALYZED			11-17-91	11-17-91	
as Diesel		1	ND	1,500	mg/Kg
as Motor Oil		10	ND	ND	mg/Kg

Ref: LSI/Emeryville, Project: 20516-001-03

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	1.0	mg/Kg	99	ND	81	69	17
Benzene	2.5	ug/Kg	112	ND	79	67	16
Toluene	2.5	ug/Kg	109	ND	81	71	<1
Gasoline	1.0	mg/Kg	96	ND	84	85	1.2
Benzene	2.5	ug/Kg	106	ND	94	94	<1
Toluene	2.5	ug/Kg	106	ND	92	92	<1
Gasoline	1.0	mg/Kg	96	ND	83	79	4.9
Benzene	2.5	ug/Kg	106	ND	75	73	2.7
Toluene	2.5	ug/Kg	106	ND	82	81	1.2
Diesel	1	mg/Kg	97	ND	N/A	N/A	29
Motor Oil	10	mg/Kg	101	ND	N/A	N/A	N/A

COMMENT: Blank Results were ND on other analytes tested.

NATIONAL ENVIRONMENTAL TESTING, INC. NET Laboratory Group

435 Tesconi Circle, Santa Rosa, CA 95401

CHAIN OF CUSTODY RECORD

2008

PROJ. NO.	PROJECT NAME
20516-001-03	LSI/Emeryville

SAMPLERS: (Signature) James Gill

STA. NO	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TPH-G	BTXE	TPH-D				REMARKS
TB-1.1	11/7				5.5	1	X	X	X				
TB-1.2					10.5	1	X	X	X				
TB-2.1					5.5	1	X	X	X				
TB-2.2					10.5	1	X	X	X				
TB-3.1					5.0	1	X	X	X				
TB-3.2					10.5	1	X	X	X				
TB-4.1					5.5	1	X	X	X				
TB-4.2					10.5	1	X	X	X				
TB-5.1					5.5	1	X	X	X				
TB-5.2					10.5	1	X	X	X				
TB-6.1					5.5	1	X	X	X				
TB-6.2					10.5	1	X	X	X				
													2 week TAT
													FAX result To
													510/551-7776

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
James Gill	11/7 4:40 p.m.	Lana M. Bennett	Lana M. Bennett	11-7-91 7:00 pm	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature) (VIA NLS)	Date / Time	Received for Laboratory by: (Signature) K Kempler	Date / Time 11/8/91 0800	Remarks	

[redacted] Pacific, Inc.

435 TESCONI CIRCLE
SANTA ROSA, CA 95401

TEL: 707-526-7200
FAX: 707-526-9623

CHAIN OF CUSTODY RECORD

2008

PROJECT NO: 20516-001-03

PROJECT NAME: LS1/Emeryville

SAMPLER: (Signature) James C Gribi

STA NO	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TPH-G	BTXE	TPH-D				REMARKS
TB-7.1	11/7				5.5	1	X	X	X				
TB-7.2					10.5	1	X	X	X				
TB-8.1					5.5	1	X	X	X				
TB-8.2					10.0	1	X	X	X				
													2-Week TAT
													Call Jim Gribi @ 510/551-7774
													FAX result - 510/551-7776

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
James C Gribi	11/7 4:40	Lana M. Bennett	Lana M. Bennett	11-7-91 7:00pm	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by. (Signature)
Relinquished by: (Signature) (via NCS)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
			11/8/91 0800		

APPENDIX E

REFERENCES

1. *Soil Sampling and Laboratory Analysis, Liquid Sugars, Inc., 1274 65th Street, Emeryville, California, for Verl's Construction, Inc.*, November 14, 1990, Environmental Geotechnical Consultants.

2. *Work Plan for a Preliminary Site Assessment, 1275 66th Street, Emeryville, California*, January 1991, Baseline Environmental Consulting.

3. *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites*, August 10, 1990, North Coast Regional Water Quality Control Board, San Francisco Bay Regional Water Quality Control Board and Central Valley Regional Water Quality Control Board.