

September 15, 1993

UST Local Oversight Program  
Alameda County Health Agency  
Department of Environmental Health  
80 Swan Way, Suite 200  
Oakland, CA 94621

ST10-537

Attention: Ms. Susan Hugo

Subject: Report of Second Quarterly Ground Water Monitoring  
Liquid Sugars UST Site  
1275 66th Street  
Emeryville, California  
CWEC 20516-001-04

Ladies and Gentlemen:

This letter report documents recent quarterly monitoring of two ground water monitoring wells at the subject site in Emeryville, California (see Figures 1 and 2). This letter report summarizes the work performed and the results of this monitoring event.

#### DESCRIPTION OF SAMPLING ACTIVITIES

On July 13, 1993, Century West Engineering Corporation purged and sampled MW-1 and MW-2. Purging and sampling of each of the wells was conducted in accordance with California LUFT Field Manual guidelines as follows:

- After unlocking and opening the monitoring well, the water level was measured to the nearest 0.01 foot with an electronic probe.
- Using a disposable PVC bailer, a single bail of ground water was taken to check for the presence or absence of floating free product.
- The well was purged of approximately three well volumes. Temperature, pH, conductivity, and turbidity of the well water were periodically monitored and recorded until they stabilized. All purged water was stored onsite in a sealed 55-gallon metal drum. Ground water sampling data sheets for each well are contained in Appendix A.

- After purging parameters had stabilized, ground water was poured directly from the bailer into two one-liter amber jars and three 40-ml VOC vials. Each container was then tightly sealed with teflon lined septums, making sure that no air bubbles were present in the containers. Each containers was then labeled and placed in cold storage for transport to the analytical laboratory under formal chain-of-custody.

## RESULTS OF QUARTERLY MONITORING

### Hydrologic Conditions

Ground water depth in both wells was approximately eight feet below grade. Although no hydrocarbon sheen was noted in purged water from either of the monitoring wells, hydrocarbon odors were noted in water samples from both wells.

### Analytical Results

Ground water samples from the two wells were analyzed for total petroleum hydrocarbons as gasoline (TPH-gas by EPA Method 5030/M8015); total petroleum hydrocarbons as diesel (TPH-diesel by EPA Method 8015 Modified); and benzene, toluene, xylenes, and ethylbenzene (BTXE by EPA Method 602/8020). Table 1 summarizes these analytical results. Laboratory data reports and chain-of-custody records are contained in Appendix B.

Well Number	Sample Date	Water Depth	Constituent (ppm)					
			TPH-gas	TPH-diesel	B	T	X	E
<u>MW-1</u>	04/23/93	6.72 ft	0.64	0.99	0.0063	ND(.0005) <sup>1</sup>	0.0025	0.0056
(West)	07/13/93	8.00 ft	0.70	1.5	0.032	0.0012	0.011	0.0033
<u>MW-2</u>	04/23/93	6.73 ft	1.1	2.1	0.32	0.0065	0.013	0.0082
(East)	07/13/93	8.38 ft	0.48	0.21	0.033	0.0025	0.0047	0.0052

<sup>1</sup> - Not detected above the concentration expressed in the parentheses.

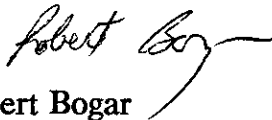
UST Local Oversight Program  
Alameda County Health Care Services  
September 15, 1993  
Page 3

## CONCLUSIONS

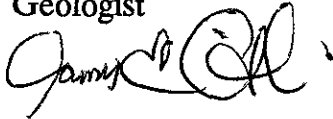
Ground water samples from both monitoring wells contained low levels of gasoline and diesel constituents. However, no free product was encountered, and based on the concentrations encountered, we would not recommend any ground water remediation. Thus, we recommend continued quarterly ground water sampling of these two wells.

We appreciate this opportunity to provide this report for your review. Please contact us if there are questions or if additional information is required.

Very truly yours,



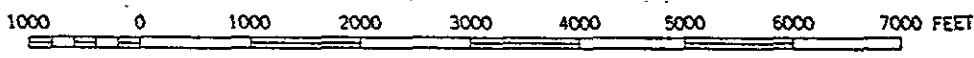
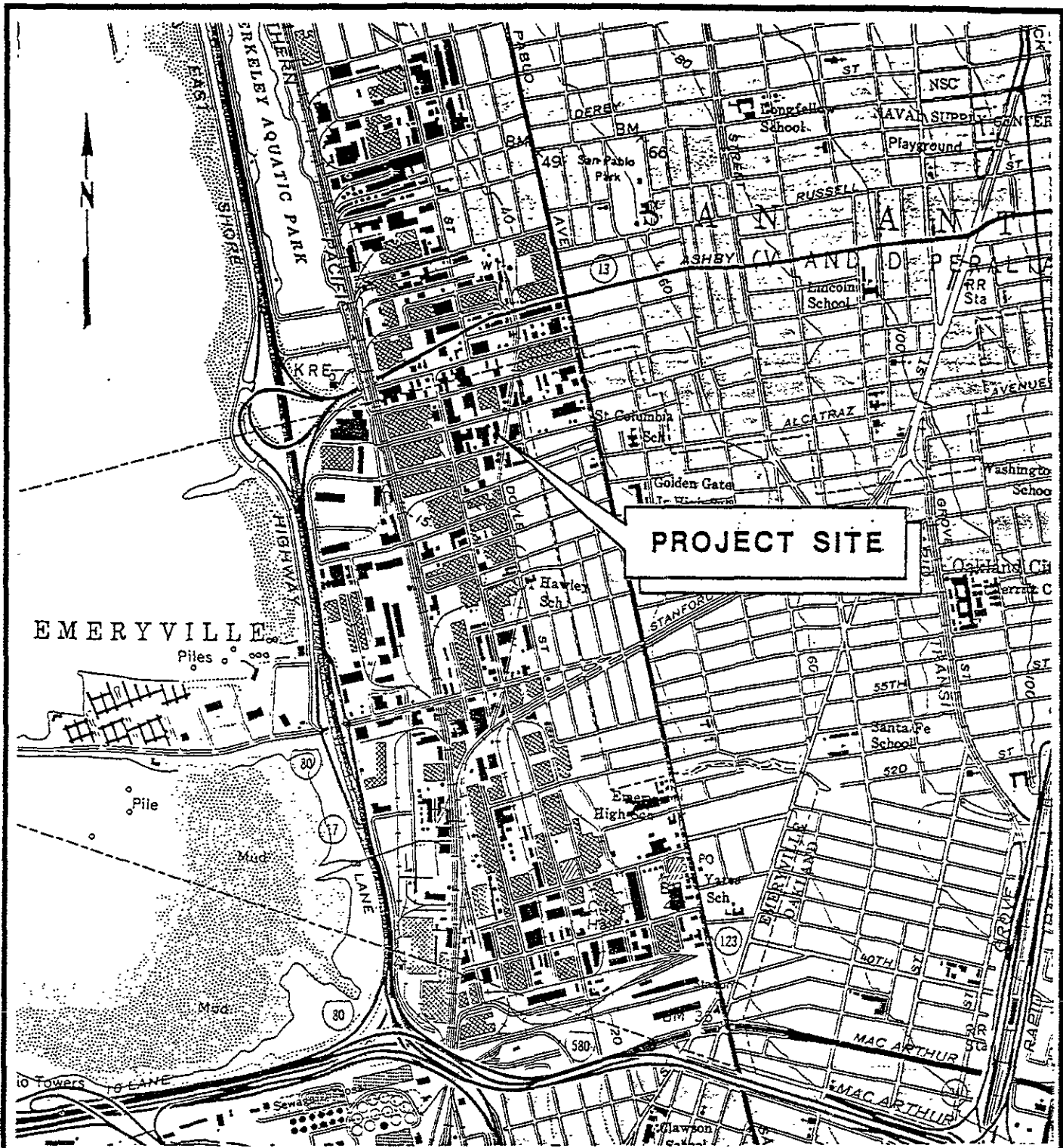
Robert Bogar  
Geologist



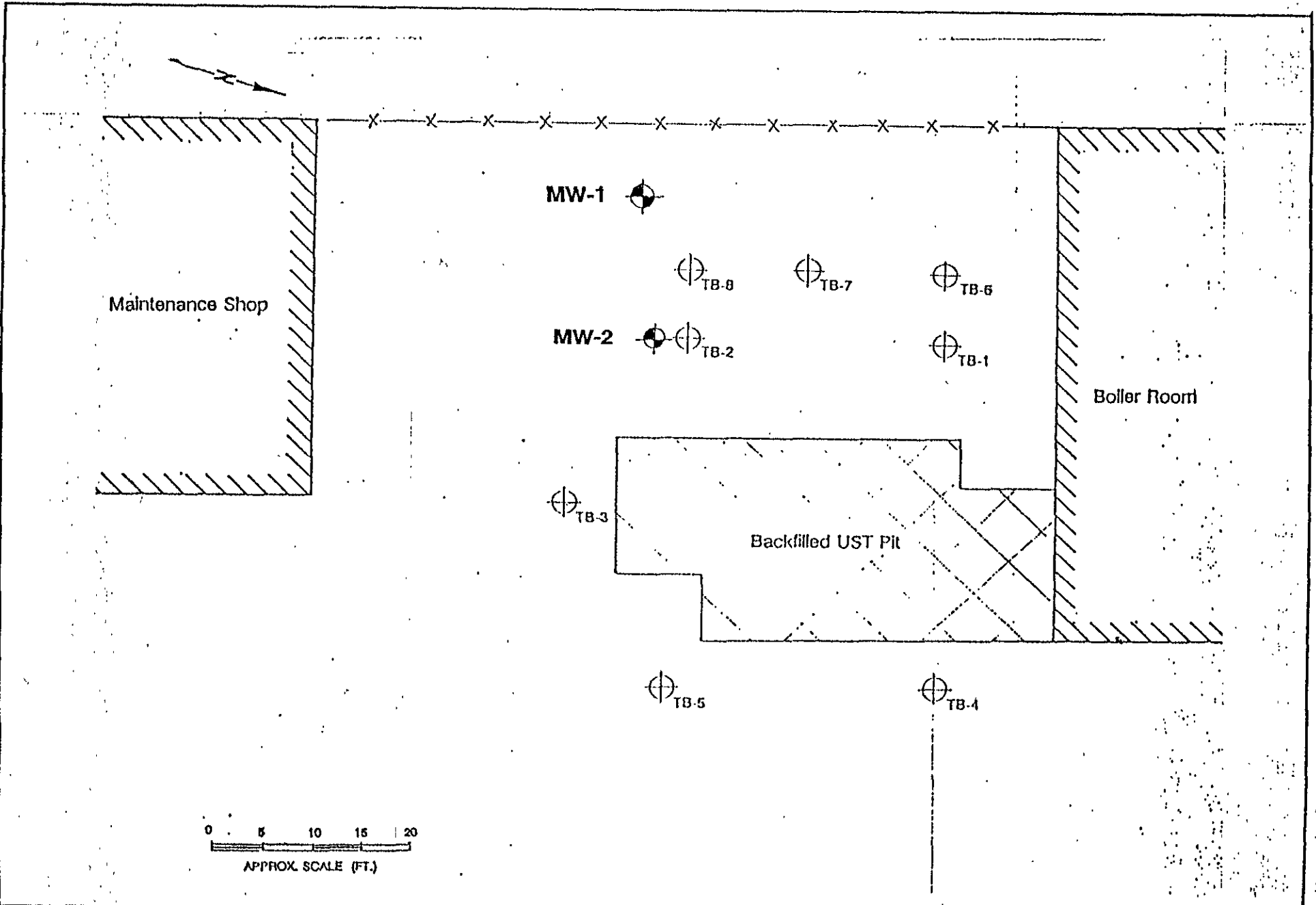
James E. Gribi  
Project Manager

RB/JEG:cc  
Enclosure

cc: Mr. Alan Mooney, Liquid Sugars, Inc.  
Mr. Rich Hiatt, Regional Water Quality Control Board



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



DESIGNED BY :	DATE :
DRAWN BY :	SCALE :
CHECKED BY :	SEC. :
DRAWING NO. :	

CENTURY WEST  ENGINEERING

**FIGURE 2**  
**PROPOSED WELL LOCATIONS**

CWEC 20516-001-04

DRAWING NO.
SHEET NO.

**APPENDIX A**

**GROUND WATER SAMPLING DATA SHEETS**

# CENTURY WEST ENGINEERING

## GROUNDWATER SAMPLING RECORD

\*\*\*\*\*

SAMPLE NO. MW-2E (2 inch) WELL NO. MW-2

PROJECT NAME LSI/AINSVILLE PROJECT NO. 20511-00-05

DATE 7/14 TIME \_\_\_\_\_ ELEV. TOP OF CASING \_\_\_\_\_

WELL DIAMETER 2 WELL DEPTH \_\_\_\_\_ SCREEN INTERVAL \_\_\_\_\_

H2O LEVEL INIT. 8.0 ' FIN. \_\_\_\_\_

CALC. PURGE H2O COL. \_\_\_\_\_ FT. (X) \*\* = \_\_\_\_\_ (X) 3 = \_\_\_\_\_ GALS.

LAB ANALYSIS STEX TPH 9, d,

LABORATORY NET PAC PURGE/SAMPLE METHOD \_\_\_\_\_

WEATHER CONDITIONS \_\_\_\_\_

\*\*\*\*\*

TIME	VOLUME PUMPED (GALS.)	PUMP RATE (GPM)	TEMP. (C)	COND.	PH	REMARKS (TURBIDITY)
0			67.8	2.61	7.13	CLEAR NO O/SHEEP
1			66.5	2.67	6.90	sl. murky/sl. odor
2			66.1	2.91	6.57	v. murky/sl. odor
3			66.0	3.22	6.42	" "
4			66.8	3.58	6.34	" "
5			65.8	3.66	6.41	" "
6			65.9	3.67	6.40	very murky - large amounts of sediment. strong odor...

SAMPLE CREW \_\_\_\_\_

REMARKS \_\_\_\_\_

\* (2" = 0.163 GAL/FT) (4" = 0.653 GAL/FT)

# CENTURY WEST ENGINEERING

## GROUNDWATER SAMPLING RECORD

\*\*\*\*\*

SAMPLE NO. MW-4E (4 inch) WELL NO. MW-2

PROJECT NAME LSI / Energy VILCO PROJECT NO. 20516-001-05

DATE 7/13 TIME 3:00 ELEV. TOP OF CASING \_\_\_\_\_

WELL DIAMETER \_\_\_\_\_ WELL DEPTH \_\_\_\_\_ SCREEN INTERVAL \_\_\_\_\_

H2O LEVEL INIT. 8.375 FIN. \_\_\_\_\_

CALC. PURGE H2O COL. \_\_\_\_\_ FT. (X) \*\* = \_\_\_\_\_ (X) 3 = \_\_\_\_\_ GALS.

LAB ANALYSIS \_\_\_\_\_

LABORATORY NET PACIFIC PURGE/SAMPLE METHOD MANUAL BAWLER

WEATHER CONDITIONS \_\_\_\_\_

\*\*\*\*\*

TIME	VOLUME PUMPED (GALS.)	PUMP RATE (GPM)	TEMP. (C)	COND.	pH	REMARKS (TURBIDITY)
0			79.5	4.63	6.54	CLEAR no O/S (CASE OF SCREEN)
4			73.0	3.81	6.71	sl. murky/sl. odor
8			69.9	3.70	6.59	murky mod odor
12			67.5	3.70	6.54	" strong odor
16			66.7	4.02	6.47	" "
20			66.6	4.23	6.45	" "
24			66.6	4.23	6.41	v. murky w/ st odor

SAMPLE CREW Bob Berger

REMARKS \_\_\_\_\_

\* (2" = 0.163 GAL/FT) (4" = 0.653 GAL/FT)



**APPENDIX B**

**LABORATORY DATA REPORTS AND  
CHAIN-OF-CUSTODY RECORDS**



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: 07/28/1993  
NET Client Acct. No: 75300  
NET Pacific Job No: 93.03041  
Received: 07/15/1993

Client Reference Information

LSI/Emeryville, 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)



Client Acct: 75300  
Client Name: Century West Engineering  
NET Job No: 93.03041

Date: 07/28/1993  
ELAP Certificate: 1386  
Page: 2

Ref: LSI/Emeryville, Project: 20516-001-01

SAMPLE DESCRIPTION: MW-4I (MW-2)  
Date Taken: 07/13/1993  
Time Taken:  
NET Sample No: 168468

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						07/19/1993
DILUTION FACTOR*	1						07/19/1993
as Gasoline	0.48		0.05	mg/L	5030		07/19/1993
METHOD 8020 (GC,Liquid)	--						07/19/1993
DILUTION FACTOR*	1						07/19/1993
Benzene	33		0.5	ug/L	8020		07/19/1993
Toluene	2.5		0.5	ug/L	8020		07/19/1993
Ethylbenzene	5.2		0.5	ug/L	8020		07/19/1993
Xylenes (Total)	4.7		0.5	ug/L	8020		07/19/1993
Bromofluorobenzene (SURR)	113			% Rec.	5030		07/19/1993
METHOD 3510/M8015						07/21/1993	
DILUTION FACTOR*	1						07/21/1993
as Diesel	0.21		0.05	mg/L	3510		07/21/1993



Client Acct: 75300  
Client Name: Century West Engineering  
NET Job No: 93.03041

Date: 07/28/1993  
ELAP Certificate: 1386  
Page: 3

Ref: LSI/Emeryville, Project: 20516-001-01

SAMPLE DESCRIPTION: MW-2I (MW-1)  
Date Taken: 07/13/1993  
Time Taken:  
NET Sample No: 168469

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						07/17/1993
DILUTION FACTOR*	1						07/17/1993
as Gasoline	0.7		0.05	mg/L	5030		07/17/1993
METHOD 8020 (GC,Liquid)	--						07/17/1993
DILUTION FACTOR*	1						07/17/1993
Benzene	32		0.5	ug/L	8020		07/17/1993
Toluene	1.2		0.5	ug/L	8020		07/17/1993
Ethylbenzene	3.3		0.5	ug/L	8020		07/17/1993
Xylenes (Total)	11		0.5	ug/L	8020		07/17/1993
Bromofluorobenzene (SURR)	MI			% Rec.	5030		07/17/1993
METHOD 3510/M8015						07/21/1993	
DILUTION FACTOR*	1						07/21/1993
as Diesel	1.5		0.05	mg/L	3510		07/21/1993



Client Acct: 75300  
Client Name: Century West Engineering  
NET Job No: 93.03041

Date: 07/28/1993  
ELAP Certificate: 1386  
Page: 4

Ref: LSI/Emeryville, Project: 20516-001-01

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verif		Duplicate		RPD
			Stand % Recovery	Blank Data	Spike % Recovery	Spike % Recovery	
Gasoline	0.05	mg/L	93.0	ND	92.0	93.0	1.1
Benzene	0.5	ug/L	86.2	ND	103.7	102.2	1.5
Toluene	0.5	ug/L	86.4	ND	101.8	100.1	1.7
Gasoline	0.05	mg/L	99.0	ND	99.0	97.0	2.0
Benzene	0.5	ug/L	103.8	ND	102.5	100.0	2.5
Toluene	0.5	ug/L	95.6	ND	102.1	100.7	1.4
Diesel	0.05	mg/L	103.0	ND	164.5	104.0	45.

COMMENT: Blank Results were ND on other analytes tested.



## 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, wet-weight basis (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,  $100 \text{ [Value 1 - Value 2] / mean value}$ .
- SNA : Standard not available.
- ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (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.



NATIONAL ENVIRONMENTAL TESTING, INC.

SANTA ROSA DIVISION, 435 TESCONI CIRCLE, SANTA ROSA, CA 95401  
(707) 526-7200 PHONE (707) 526-9623 FAX

### CHAIN OF CUSTODY RECORD

COMPANY Century West Engineering  
 ADDRESS 7950 DUBLIN BLVD  
 PHONE (570) 551-7774 FAX \_\_\_\_\_  
 PROJECT NAME/LOCATION LSI/EMERYVILLE  
 PROJECT NUMBER 20516-001-01  
 PROJECT MANAGER J GRIBI

4651

SAMPLED BY Bob Bogar  
 (PRINT NAME)  
 (PRINT NAME)

Bob Bogar  
 SIGNATURE  
 SIGNATURE

ANALYSES

TURNAROUND TIME 10 DAY(S)

DATE	TIME	SAMPLE ID/DESCRIPTION	GRAB	COMP	# OF CONTAINERS	MATRIX	PRESERVED Y/N	ANALYSES										COMMENTS						
7/13		MW-4I (MW-2)			4	WATER	16	X	X	X														
7/13		MW-2I (MW-1)			4	4	"	X	X	X														

TPH-G  
BT XE  
TPH-D

RESULTS TO:

INVOICE TO:

RELINQUISHED BY: Bob Bogar DATE/TIME: 7/14 1:13  
 RECEIVED BY: Andy Mackay  
 RELINQUISHED BY: \_\_\_\_\_ DATE/TIME: \_\_\_\_\_  
 RECEIVED BY: \_\_\_\_\_  
 METHOD OF SHIPMENT: \_\_\_\_\_ REMARKS: \_\_\_\_\_

RELINQUISHED BY: Andy Mackay DATE/TIME: 7-14-93 1800  
 RECEIVED BY: \_\_\_\_\_  
 RELINQUISHED BY: \_\_\_\_\_ DATE/TIME: 7/15/93 0800  
 RECEIVED FOR LABORATORY BY: K. Kuyper  
 (CUSTODY SEALED 7/14 @ 1800) sent to act

