

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

REMEDIAL ACTION COMPLETION CERTIFICATION

September 7, 2001

Mr. Mike Alo
Liquid Sugars, Inc. / MCP
P.O. Box 96
Oakland, California 94604

RE: RO# 11 / STID# 537

**Liquid Sugars, Inc.
1275 66th Street, Emeryville, California 94608**

Dear Mr. Alo:

This letter confirms the completion of a site investigation and remedial action for the three underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung, Director

c: Chuck Headlee, San Francisco Bay RWQCB
Dave Deaner, SWRCB, UST Cleanup Fund Program (with enclosure)
George Warren, Emeryville Fire Department, 1333 Park Avenue, Emeryville, CA 94608
Ignacio Dayrit, City of Emeryville, 1333 Park Avenue, Emeryville, CA 94608
SH / file

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Mr. Mike Alo
Liquid Sugars, Inc. / MCP
P.O. Box 96
Oakland, California 94604

**RE: Fuel Leak Site Case Closure
(STID # 537 / RO #11)**

**Liquid Sugars, Inc.
1275 66th Street, Emeryville, California 94608**

Dear Mr. Alo:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37 [h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health Services, Local Oversight Program is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

Site Investigation and Cleanup Summary:

Please be advised that the following conditions exist at the site:

- Ten thousand three hundred parts per million (ppm) Total Petroleum Hydrocarbon (TPH) as Diesel; 3,400 ppm TPH as gasoline; 33 ppm benzene; 95 ppm toluene; 43 ppm ethylbenzene; 210 ppm xylene and 16 ppm lead remain in soil at the site.
- One thousand six hundred parts per billion (ppb) TPH as diesel; 1,400 ppb TPH gasoline; 130 ppb benzene; 1.5 ppb toluene; 15 ppb ethyl benzene; 2.8 xylene ; 30 ppb methyl tertiary butyl ether (MTBE) and 8 ppb lead remain in groundwater beneath the site.
- A risk management plan (RMP) is required to address residual soil and groundwater contamination left at the site during any construction activities at the subject site.

If you have any questions, please contact me at (510) 567-6780. Thank you.

Sincerely,

Susan L. Hugo
Supervisor, Hazardous Materials Specialist

Enclosures:

1. Case Closure Letter
2. Case Closure Summary

c: George Warren, Emeryville Fire Department, 1333 Park Avenue, Emeryville, CA 94608
Ignacio Dayrit, City of Emeryville, 1333 Park Avenue, Emeryville, CA 94608
SH / files

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: July 23, 2001

Agency Name: **Alameda County-HazMat**
 City/State/ Zip: **Alameda, CA 94502**
 Responsible Staff Person: **Susan L. Hugo**

Address: **1131 Harbor Bay Parkway**
 Phone: **(510) 567-6700**
 Title: **Hazardous Materials Specialist**

II. CASE INFORMATION

Site Facility Name: **Liquid Sugars, Inc.**

Site Facility Address: **1275 66th Street, Emeryville, CA 94608**

RB LUSTIS Case No.: **N/A**

Local Case No./LOP Case No. **537 / RO # 11**

URF Filing Date: **12/04/90**

SWEEPS No.: **N/A**

Responsible Parties:

Addresses:

Phone Numbers:

Liquid Sugars, Inc./MCP

P O Box 96, Oakland, CA 94604 (510)777-4710

Attn: Mike Alo

Tank No:	Size in gal.	Contents:	Closed in-place or removed?:	Date:
1	1,000	Gasoline	Removed	11/02/90
2	1,000	Gasoline	Removed	11/02/90
3	10,000	Diesel	Removed	11/02/90

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Unknown**

Site characterization complete: **Yes**

Date approved by oversight agency: **10/2/91**

Monitoring wells installed? **Yes**

Number: **5**

Proper screened interval? **Yes (5' - 20' bgs)**

Highest GW depth below ground surface: **3.9'**

Lowest depth: **9.0'**

Flow direction: **Southwest**

Most sensitive current use: **Commercial**

Are drinking water wells affected? **No**

Aquifer Name: **Unknown**

Is surface water affected? **No**

Nearest affected SW name: **NA**

Off-site beneficial use impacts (address / location): **Unknown**

Report (s) on file? **Yes**

Where is report (s) filed? **Alameda County, 1131 Harbor Bay Parkway, Alameda, CA 94502**

Treatment and Disposal of Affected Materials:

Materials	Amount (Include Units)	Action (Treatment /or Disposal w/ Destination)	Date
Tank	1 - 10,000 gallons	Disposed at Erickson Inc., Richmond, CA	11/02/90
	2 - 1,000 gallons	Disposed at Erickson Inc., Richmond, CA	11/02/90
Soil	70 cubic yards	Disposed at Vasco Sanitary LF, Livermore, CA	09/91

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program
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Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before*	After**	Before***	After****
TPH gasoline	3,400	-	1,100	1,400
TPH diesel	10,300	-	2,100	1,600
Benzene	33	-	320	130
Toluene	95	-	6.5	1.5
Ethylbenzene	43	-	8.2	15
Xylene	210	-	13	2.8
MTBE	--	<0.250	--	30
Metals (Lead)	--	16	--	8
SVOCs	--	<0.67	--	<10

*Results from soil samples collected following the removal of the USTs in 1990 (see Table 1).

**Results from soil samples collected from borings drilled in May 1999 (see Table 5).

*** Results from groundwater samples collected from monitoring well MW-2 in 4/93 following well installation.

**** Results from groundwater samples collected from five monitoring wells (MW-1 to MW-5) during the last monitoring event conducted on 3/23/00.

Comments (Depth of Remediation, etc.): See "Additional Comments" section.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan ? **Unknown**

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan ? **Unknown**

Does corrective action protect public health for current land use ? **Yes**

Site management requirements: **A risk management plan is required to address residual soil and groundwater contamination left at the site during construction activities at the subject site.**

Should corrective action be reviewed if land use changes ? **YES**

Monitoring wells Decommissioned : **No (will decommission upon closure of th4e site)**

Number Decommissioned: **NA**

Number Retained: **Five**

List enforcement actions taken: **None**

List enforcement actions rescinded: **NA**

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program
Page 3 of 4

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Susan L. Hugo** Title: **Acting Manager, LOP Program**

Signature: *Susan L. Hugo* Date: *8/03/01*

Reviewed by:

Name: **Ariu Levi** Title: **Chief, Environmental Health Department**

Signature: *Ariu Levi* Date: *08/02/01*

VI. RWQCB NOTIFICATION

Date Submitted to RB: RB Response: *Concur*

RWQCB Staff Name: **Chuck Headlee** Title: **Associate Engineering Geologist**

Signature: *Chuck Headlee* Date: *8/3/01*

VII. ADDITIONAL COMMENTS, DATA, ETC.

The subject site is located at 1275 66th Street in the industrial part of Emeryville. In the late 1940s until the mid-1970s, Mohawk Petroleum Company operated a bulk fuel facility at the site. Liquid Sugars, Inc., a liquid sweetener wholesale distribution facility occupied the site in early 1960s.

Two 1,000-gallon gasoline underground storage tanks (USTs) and one 10,000-gallon diesel UST were removed in 11/90. Soil samples taken beneath the USTs contained elevated concentration of petroleum hydrocarbons (see Table 1). Additional sidewall samples were collected at 4.5 to 5 feet below ground surface (bgs) in 7/91 prior to backfilling the excavation. In November 1991, eight borings (TB-1 to TB-8) were drilled ranging from 5.0 to 10.5 feet bgs around the perimeter of the former excavation to characterize the extent of soil and groundwater contamination at the site. Results showed significant contamination at ten feet depth (see Table 2) northeast and southwest from the former USTs. Subsurface condition encountered at the site consisted of silty clay from one foot to approximately 8 feet in-depth. Sandy gravels were encountered from approximately 8 feet to a final depth of 11.5 feet. These gravels were not encountered in 3 borings (TB-1, TB-6 and TB-7). No groundwater samples were collected during this investigation,

In April 1993, two monitoring wells (MW-1 and MW-2) were installed in the assumed downgradient direction of the former USTs. Soil and groundwater samples collected from these two borings showed petroleum hydrocarbon contamination (see Table 3). Groundwater sampling was conducted from these wells MW-1 and MW-2 from 1993 to March 2000. Dissolved petroleum hydrocarbon was detected in these two wells at varying concentrations (see Table 5).

In June 1999, three additional wells (MW-3, MW-4 and MW-5) were installed to define the extent of groundwater contamination at the site. Groundwater monitoring conducted at the site with the last monitoring event in March 2000, showed that the groundwater plume appears to be stable and not-migrating off site. Groundwater samples from near-

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program
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source wells MW-1 and MW-2 have shown up to 1.7 ppm of TPHg and 21 ppm of TPHd, but have attenuated since 1993. Groundwater samples from downgradient wells MW-4 and MW-5 have shown little or no detectable concentrations of BTEX and MTBE. A RBCA assessment was conducted in July 2000 found no significant risk for current land use and potential residential receptors assuming that residual contamination will remain capped underneath the site.

This case appears to be a "Low Risk Soil and Groundwater Case" as described in the San Francisco Bay Regional Water Quality Control Board (RWQCB) memorandum dated January 5, 1996 based on the following rationale:

1. The leak has been stopped and ongoing sources have been removed. The subject tanks were removed in 1990.
2. The site has been adequately characterized. Site assessments were conducted in 1991, 1993 and 1999. Five monitoring wells were installed and monitored from 1993 to 2000. Residual contaminants do not appear to be migrating off-site.
3. Groundwater at the site is not used as drinking water source. There are no known municipal or residential water wells or surface water bodies that are expected to be impacted from the release at the site.
4. The site presents no significant risk to human health based on the RBCA assessment conducted in July 2000,
5. The site presents no significant risk to the environment. No environmental receptors are expected to be impacted by the release at the site.
6. A risk management plan is required to address residual soil and groundwater contamination left at the site during construction activities at the subject site.

TABLE 1
 SUMMARY OF ANALYTICAL RESULTS
 Liquid Sugars, Inc.
 1275 66th Street, Emeryville

Sample Type	Sample Location	Sample Identification	Date	Gasoline	Diesel	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead
<u>Soil:</u> (mg/kg)										
Excavation ¹		1102-S-01	11/2/90	[REDACTED]	--	[REDACTED]	45.000	22.000	110.000	6.3
		1102-S-02	11/2/90	[REDACTED]	--	[REDACTED]	95.000	43.000	210.000	7.1
		1102-S-03	11/2/90	[REDACTED]	--	[REDACTED]	18.000	12.000	64.000	7.0
		1102-S-04	11/2/90	[REDACTED]	[REDACTED]	[REDACTED]	2.100	5.400	11.000	3.6
		1102-S-05	11/2/90	--	[REDACTED]	[REDACTED]	1.100	0.560	3.900	--
		1102-S-06	11/2/90	--	17	0.008	0.0077	0.011	0.042	--
Spoil Pile ²	1102-P1	11/2/90	[REDACTED]	[REDACTED]	[REDACTED]	4.80 ✓	4.60 ✓	23.0 ✓	[REDACTED]	
<u>Water:</u> (mg/L)										
Excavation ³	W-1	12/5/90	ND	[REDACTED]	ND	ND	ND	ND	ND	--

¹ Samples collected from depths ranging from seven to sixteen feet below ground surface.

² Sample composited from five locations (a-e), Figure 2.

³ Sample also analyzed for volatile organics by EPA Method 8240. Volatile organics were not detected.

Notes: ND = Constituent not detected.
 -- = Constituent not analyzed.
 Sampling locations are shown in Figure 2.
 Laboratory reports are included in Appendix A.

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Table 2
SUMMARY OF SOIL ANALYTICAL RESULTS

Sample ID	Sample Depth	Concentration (ppm)					
		TPH-G	TPH-D	Benzene	Toluene	Xylenes	Ethyl benzene
<u>Sidewall Samples - 07/30/91</u>							
SW-1	5.5 feet	ND	10 ¹	ND	ND	ND	ND
SW-2	4.5 feet	ND	19 ¹	ND	ND	ND	ND
<u>Stockpile Sample - 08/05/91</u>							
SP-2.1 thru SP-2.5	--	3.3	560 ¹ 590 ²	ND	ND	ND	ND
<u>Soil Boring Investigation - 11/07/91</u>							
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.

product thickness, pH, specific conductance, temperature and visible clarity in accordance with approved protocols.

- After these parameters had stabilized, the wells were sampled using a disposable PVC bailer as follows: (1) Three 40-ml glass VOC vials and two 1-liter glass amber bottles were completely filled directly from the bailer with a minimum of agitation; (2) After making sure that no air bubbles were present, each container was tightly sealed with a teflon-lined septum; and (3) Each container was labeled and placed in cold storage for transport to the analytical laboratory.
- All sampling equipment was thoroughly cleaned and decontaminated between each sample collection by triple-rinsing as described above.

4.0 LABORATORY ANALYSIS OF SOIL AND WATER SAMPLES

Four soil samples and two ground water samples were analyzed at National Environmental Testing Inc., a State-certified analytical laboratory. Each sample was analyzed for TPH-G, TPH-D, and BTXE.

These results are summarized in Table 1. Laboratory data reports for these analyses are included in Appendix E.

Table 2.1 SUMMARY OF ANALYTICAL RESULTS Liquid Sugars UST Site								
Sample ID	Sample Matrix	Sample Depth	Concentration (parts per million)					
			TPH-G	TPH-D	B	T	X	E
Monitoring Well No. 1 (MW-1)								
MW-1.1	Soil	5.5 ft	ND(1) ¹	ND(10)	ND(.0025)	ND(.0025)	ND(.0025)	ND(.0025)
MW-1.2	Soil	10.5 ft	23	27 ²	ND(.0025)	ND(.0025)	0.22	0.11
MW-1.1W	Water	6.72 ft ³	0.64 ⁴	0.99 ²	0.0063	ND(.0005)	0.0025	0.0056
Monitoring Well No. 2 (MW-2)								
MW-2.1	Soil	5.5 ft	ND(1)	ND(10)	0.047	0.0038	ND(.0025)	ND(.0025)
MW-2.2	Soil	10.5 ft	670	940 ²	0.74	0.94	3.40	1.60
MW-2.1W	Water	6.73 ft ³	1.1 ⁴	2.1 ²	0.032	0.0065	0.013	0.0082

¹ - Not detected above the value expressed in the parentheses.

² - NET Pacific lab report states "The positive result for Petroleum Hydrocarbons as Diesel appears to be

Table 3
SUMMARY OF ANALYTICAL RESULTS FROM GROUNDWATER INVESTIGATION
 Liquid Sugars UST Site, 1275 66th Street Site

Well Number	Sample Date	Sample Depth/GW Elevation	Constituent (ppm)									
			TPH-D	TPH-MO	TPH-G	B	T	E	X	MTBE	SVOCs	PB
Soil Samples												
MW-3.1	06/23/99	4.5 ft	<1.0	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--
MW-3.2	06/23/99	9.5 ft	<1.0	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--
MW-4.1	06/23/99	4.5 ft	20	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--
MW-4.2	06/23/99	8.5 ft	6.9	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--
MW-5.1	06/23/99	9.0 ft	63	<10	25	0.032	0.028	<0.015	0.026	<0.15	--	--
Groundwater Samples												
MW-1	04/23/93	21.22 ft	0.99	--	0.64	0.0063	<0.0005	0.0056	0.0025	--	--	--
<27.94>	07/13/93	19.94 ft	1.50	--	0.70	0.032	0.0012	0.0033	0.0110	--	--	--
	11/02/93	18.99 ft	1.70	--	0.87	0.019	<0.0005	0.0066	0.0044	--	--	--
	02/15/94	20.03 ft	2.00	--	1.20	0.022	0.0018	0.01	0.0064	--	--	--
	05/18/94	20.29 ft	2.60 ¹	--	1.70	0.057	0.021	0.30	0.13	--	--	--
	08/17/94	19.43 ft	2.20 ¹	--	1.20	0.013	0.0019	0.0008	0.0082	--	--	--
	12/22/94	21.36 ft	2.40 ^{2,3}	--	1.10	0.027	0.0069	0.0014	0.0059	--	--	--
	05/09/95	21.21 ft	2.00 ^{2,3}	--	1.20	0.014	0.0082	0.0120	0.0062	--	--	--
	11/05/98	18.86 ft	<0.050	<0.100	0.380	0.0040	0.0064	0.0042	0.0019	<0.0050	--	--
	2/05/99	20.66 ft	<0.050	<0.100	0.490	0.0012	0.0061	0.0046	0.0019	<0.0050	--	--
	06/02/99	19.61 ft	0.770	<0.100	0.340	0.029	0.0040	0.0058	0.0015	<0.0050	--	--
	06/28/99	19.08 ft	<0.050	<0.100	0.460	0.0073	0.0049	0.0026	0.0022	<0.0050	--	--
MW-2	04/23/93	21.14 ft	2.10	--	1.10	0.320	0.0065	0.0082	0.013	--	--	--
<27.87>	07/13/93	19.49 ft	0.21	--	0.48	0.033	0.0025	0.0052	0.0047	--	--	--
	11/02/93	18.82 ft	1.80	--	0.43	0.016	0.0009	0.0019	0.0021	--	--	--
	02/15/94	21.05 ft	2.80	--	1.40	0.056	0.0029	0.0075	0.0071	--	--	--
	05/18/94	20.31 ft	3.00	--	0.54	0.024	0.0013	0.0026	0.0034	--	--	--

Table 3
SUMMARY OF ANALYTICAL RESULTS FROM GROUNDWATER INVESTIGATION
 Liquid Sugars UST Site, 1275 66th Street Site

Well Number	Sample Date	Sample Depth/GW Elevation	Constituent (ppm)									
			TPH-D	TPH-MO	TPH-G	B	T	E	X	MTBE	SVOCs	Pb
	08/17/94	19.37 ft	2.20 ¹	--	0.88	0.025	0.0030	0.0028	0.0086	--	--	--
	12/22/94	21.64 ft	3.10 ^{2,3}	--	0.61 ⁴	0.0036	0.0033	0.0054	0.0016	--	--	--
	05/09/95	21.16 ft	5.20	--	2.30	0.0150	0.0060	0.0110	0.0130	--	--	--
	11/05/98	19.04 ft	9.10	0.200	1.20 ⁵	0.0065	0.0018	0.0059	0.0014	<0.010	--	--
	2/05/99	20.96 ft	3.50	<0.100	0.790 ⁵	0.017	0.0049	0.0064	0.0016	<0.0050	--	--
	06/02/99	19.84 ft	21.0	<0.500	0.480	0.032	0.0040	0.0059	0.0016	<0.0050	<0.010 ⁶	0.008
	06/28/99	19.29 ft	0.650	<0.100	0.380	0.010	0.0020	0.0033	0.00077	<0.0050	--	--
MW-3	06/28/99	18.77 ft	0.300	<0.100	0.066	<0.00050	<0.00050	<0.00050	<0.00050	<0.0050	--	--
		<26.19>										
MW-4	06/28/99	18.49 ft	0.320	<0.100	0.110	0.00052	0.0011	0.0022	<0.00050	<0.0050	--	--
		<24.90>										
MW-5	06/28/99	18.64 ft	<0.050	<0.100	0.140	0.0030	0.0017	<0.00050	<0.00050	0.024 ⁷	--	--
		<25.90>										

GW Elevation = Groundwater mean sea level elevation.
 TPH-G = Total Petroleum Hydrocarbons as Gasoline.
 TPH-D = Total Petroleum Hydrocarbons as Diesel.
 TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.
 B = Benzene
 T = Toluene
 E = Ethylbenzene
 X = Xylenes
 MTBE = Methyl-t-Butyl Ether
 SVOCs = Semi-Volatile Organic Compounds
 Pb = Total Lead

<27.94> = Top of casing mean sea level elevation
 <0.0005 = Not detected above the expressed detection level.
 -- = Not analyzed for this analyte.
 1 = Lab report states: "The positive result has an atypical pattern for Diesel analysis."
 2 = Lab report states: "The positive result appears to be a heavier hydrocarbon than Diesel."
 3 = Lab report states: "The positive result appears to be a lighter hydrocarbon than Diesel."
 4 = Lab report states: "The positive result appears to be a heavier hydrocarbon than Gasoline."
 5 = Lab report states: "Product is not typical gasoline."
 6 = No detectable levels of 69 SVOC analytes
 7 = MTBE result confirmed using USEPA Method 8260B.

Table 4
SUMMARY OF ANALYTICAL RESULTS FROM SOIL BORING INVESTIGATION
 Liquid Sugars UST Site, 1275 66th Street

Sample ID	Sample Depth	Concentration (ppm)									
		TPH-D	TPH-MO	TPH-G	B	T	E	X	MTBE	SVOCs	PB
Soil Samples											
IB-1.1	6.5 ft	19	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--
IB-1.2	10.5 ft	440	11	4.3 ¹	0.010	0.0088	0.0051	<0.0050	<0.050	<0.67 ²	<5.0
IB-2.1	6.0 ft	<1.0	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--
IB-2.2	10.0 ft	<1.0	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--
IB-3.2	7.0 ft	<1.0	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--
IB-3.3	11.0 ft	<2.0 ³	<10	23	<0.025	0.051	0.062	0.12	<0.25	--	--
IB-4.1	3.0 ft	<3.0 ⁴	34	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--
IB-4.2	7.5 ft	<2.0 ³	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--
IB-4.3	10.5 ft	<2.0 ³	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.67 ²	16
IB-5.1	3.5 ft	<1.0	<10	<1.0	0.018	<0.0050	<0.0050	<0.0050	<0.050	--	--
IB-5.2	6.5 ft	910	<20	74 ¹	0.16	0.24	0.096	0.11	<0.25	--	--
IB-5.3	11.5 ft	490	<10	3.5 ¹	0.0075	0.0063	<0.0050	<0.0050	<0.050	--	--
IB-6.2	7.5 ft	<1.0	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--
IB-6.3	10.5 ft	<1.0	<10	1.5	0.0063	0.0053	0.0078	<0.0050	<0.050	--	--
IB-7.1	3.5 ft	<1.0	22	1.3	0.0067	<0.0050	<0.0050	<0.0050	<0.050	--	--
IB-7.3	7.5 ft	1,300	<20	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--
IB-7.4	10.5 ft	<1.0	<10	32	0.055	0.010	0.047	0.046	<0.10	--	--

Table 4
SUMMARY OF ANALYTICAL RESULTS FROM SOIL BORING INVESTIGATION
 Liquid Sugars UST Site, 1275 66th Street

Sample ID	Sample Depth	Concentration (ppm)									
		TPH-D	TPH-MO	TPH-G	B	T	E	X	MTBE	SVOCs	PB
Grab Groundwater Samples											
IB-1W	7.7 ft	580	22	530	0.520	1.10	2.70	1.40	<5.0	--	--
IB-2W	13.6 ft	<0.100 ³	<0.100	0.590 ¹	<0.00050	<0.00050	0.0011	0.00062	<0.0050	--	--
IB-3W	10.3 ft	<0.100	<0.200	<0.050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0050	--	--
IB-4W	6.4 ft	<0.050	<0.100	0.078	<0.00050	<0.00050	<0.00050	<0.00050	<0.0050	--	--
IB-5W	7.2 ft	230	<23.0	1,300	3.70	<1.0	1.20	1.10	<10	--	--
IB-6W	13.3 ft	<0.050	<0.100	0.061	<0.00050	<0.00050	<0.00050	<0.00050	<0.0050	<0.010	0.005
IB-7W	9.0 ft	310	<4.9	6.80	2.90	<0.025	0.026	<0.025	<0.250	--	--

TPH-D = Total Petroleum Hydrocarbons as Diesel
 TPH-MO = Total Petroleum Hydrocarbons as Motor Oil
 TPH-G = Total Petroleum Hydrocarbons as Gasoline
 B = Benzene
 T = Toluene
 E = Ethyl benzene
 X = Xylene
 MTBE = Methyl-t-Butyl Ether
 SVOCs = Semi-volatile Organic Compounds. Includes 69 individual analytes.
 PB = Total Lead

-- = Not analyzed for this analyte.
 <110 = Not detected above the expressed value.
¹ = Acculabs, Inc. laboratory report states "Product is not typical gasoline."
² = No detectable levels of 69 SVOC analytes.
³ = Acculabs, Inc. laboratory report states "Increased reporting limit due to gasoline range interference."
⁴ = Acculabs, Inc. laboratory report states "Increased reporting limit due to oil range interference."

Table 5
SUMMARY OF ANALYTICAL RESULTS FROM GROUNDWATER MONITORING
 Liquid Sugars UST Site, 1275 66th Street Site

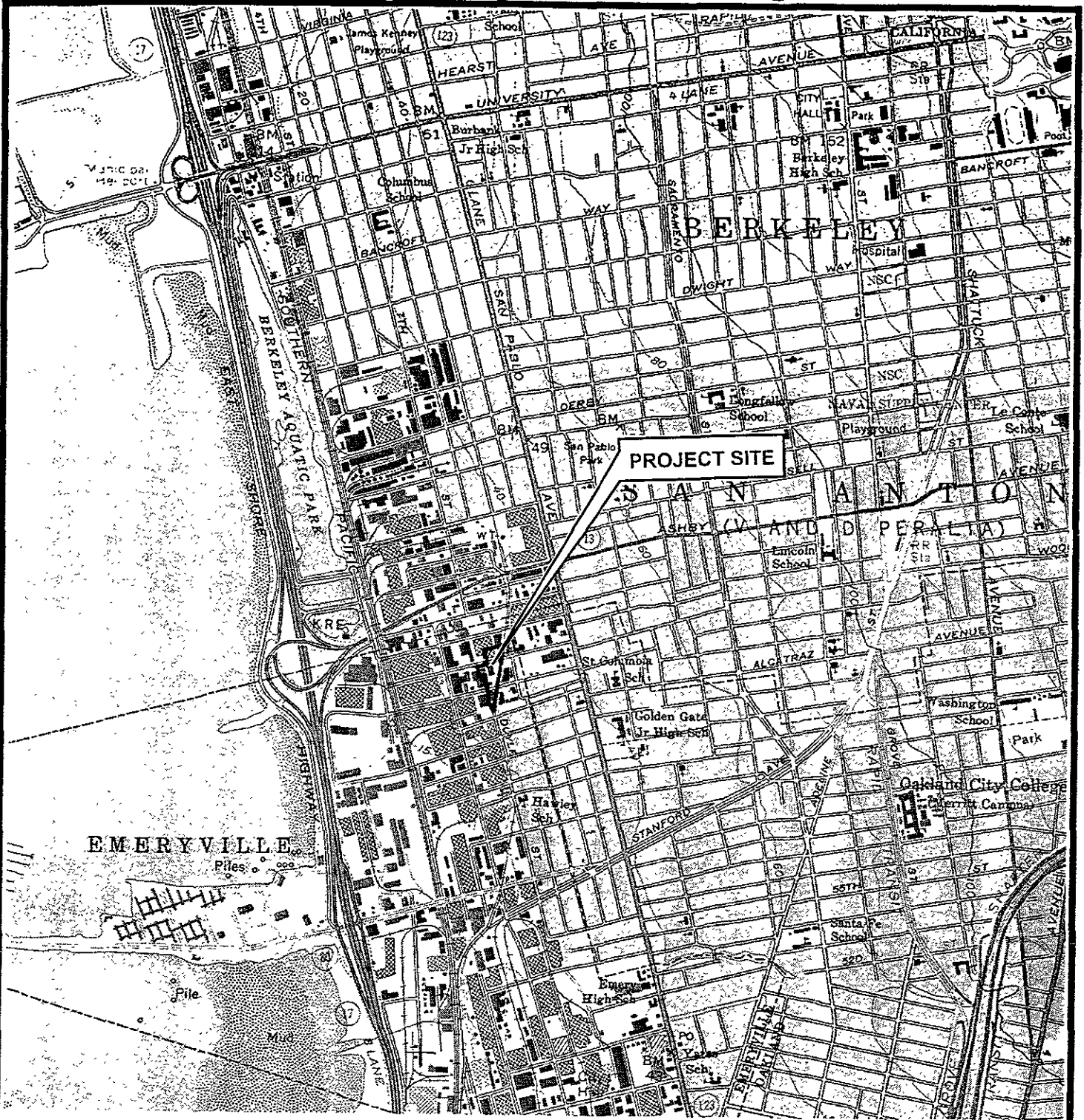
Well Number	Sample Date	Groundwater Elevation	Constituent (ppm)									
			TPH-D	TPH-MO	TPH-G	B	T	E	X	MTBE	SVOCs	PB
MW-1	04/23/93	21.22 ft	0.99	--	0.64	0.0063	<0.0005	0.0056	0.0025	--	--	--
<27.94>	07/13/93	19.94 ft	1.50	--	0.70	0.032	0.0012	0.0033	0.0110	--	--	--
	11/02/93	18.99 ft	1.70	--	0.87	0.019	<0.0005	0.0066	0.0044	--	--	--
	02/15/94	20.03 ft	2.00	--	1.20	0.022	0.0018	0.01	0.0064	--	--	--
	05/18/94	20.29 ft	2.60 ¹	--	1.70	0.057	0.021	0.30	0.13	--	--	--
	08/17/94	19.43 ft	2.20 ¹	--	1.20	0.013	0.0019	0.0008	0.0082	--	--	--
	12/22/94	21.36 ft	2.40 ^{2,3}	--	1.10	0.027	0.0069	0.0014	0.0059	--	--	--
	05/09/95	21.21 ft	2.00 ^{2,3}	--	1.20	0.014	0.0082	0.0120	0.0062	--	--	--
	11/05/98	18.86 ft <i>2.08</i>	<0.050	<0.100	0.380	0.0040	0.0064	0.0042	0.0019	<0.0050	--	--
	2/05/99	20.66 ft	<0.050	<0.100	0.490	0.0012	0.0061	0.0046	0.0019	<0.0050	--	--
	06/02/99	19.61 ft	0.770	<0.100	0.340	0.029	0.0040	0.0058	0.0015	<0.0050	--	--
	06/28/99	19.08 ft	<0.050	<0.100	0.460	0.0073	0.0049	0.0026	0.0022	<0.0050	--	--
	09/28/99	18.93 ft	0.099	<0.100	0.580	0.0015	0.0025	0.0053	0.0055	<0.0050	--	--
	12/28/99	--	<0.050	<0.100	0.490	0.0012	0.012	0.0023	0.0023	<0.0050	--	--
	3/23/00	22.05 ft <i>5.89</i>	<i>1.6</i>	<0.100	0.690	0.013	<i>0.0015</i>	0.0058	0.0028	<0.0050	--	--
MW-2	04/23/93	21.14 ft	2.10	--	1.10	0.320	0.0065	0.0082	0.013	--	--	--
<27.87>	07/13/93	19.49 ft	0.21	--	0.48	0.033	0.0025	0.0052	0.0047	--	--	--
	11/02/93	18.82 ft <i>9.05</i>	1.80	--	0.43	0.016	0.0009	0.0019	0.0021	--	--	--
	02/15/94	21.05 ft	2.80	--	1.40	0.056	0.0029	0.0075	0.0071	--	--	--
	05/18/94	20.31 ft	3.00	--	0.54	0.024	0.0013	0.0026	0.0034	--	--	--
	08/17/94	19.37 ft	2.20 ¹	--	0.88	0.025	0.0030	0.0028	0.0086	--	--	--
	12/22/94	21.64 ft	3.10 ^{2,3}	--	0.61 ⁴	0.0036	0.0033	0.0054	0.0016	--	--	--
	05/09/95	21.16 ft	5.20	--	2.30	0.0150	0.0060	0.0110	0.0130	--	--	--
	11/05/98	19.04 ft	9.10	0.200	1.20 ⁵	0.0065	0.0018	0.0059	0.0014	<0.010	--	--

Table 5
SUMMARY OF ANALYTICAL RESULTS FROM GROUNDWATER MONITORING
 Liquid Sugars UST Site, 1275 66th Street Site

Well Number	Sample Date	Groundwater Elevation	Constituent (ppm)									
			TPH-D	TPH-MO	TPH-G	B	T	E	X	MTBE	SVOCs	Pb
	2/05/99	20.96 ft	3.50	<0.100	0.790 ⁵	0.017	0.0049	0.0064	0.0016	<0.0050	--	--
	06/02/99	19.84 ft	21.0	<0.500	0.480	0.032	0.0040	0.0059	0.0016	<0.0050	<0.010 ⁶	0.008
	06/28/99	19.29 ft	0.650	<0.100	0.380	0.010	0.0020	0.0033	0.00077	<0.0050	--	--
	09/28/99	19.23 ft	7.00	<0.100	1.6	<0.0025	0.0079	0.0091	0.013	<0.025	--	--
	12/28/99	20.36 ft	0.640	<0.100	1.1 ⁵	0.0075	0.012	0.0056	0.0053	0.0086	--	--
	3/23/00	22.67 ft <i>5.2</i>	1.2	<0.100	1.4	0.027	0.0012	0.0058	<0.0010	<0.010	--	--
MW-3	06/28/99	18.77 ft <i>7.42</i>	0.300	<0.100	0.066	<0.00050	<0.00050	<0.00050	<0.00050	<0.0050	--	--
<26.19>	09/28/99	19.05 ft	0.350	<0.100	<0.050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0050	--	--
	12/28/99	20.07 ft	0.220	<0.100	<0.050	<0.00050	0.013	<0.00050	<0.00050	<0.0050	--	--
	3/23/00	21.91 ft <i>4.28</i>	<0.050	<0.100	0.052	<0.00050	<0.00050	<0.00050	<0.00050	<0.0050	--	--
MW-4	06/28/99	18.49 ft	0.320	<0.100	0.110	0.00052	0.0011	0.0022	<0.00050	<0.0050	--	--
<24.90>	09/28/99	18.45 ft <i>6.45</i>	0.060	<0.100	0.110	0.0034	<0.00050	0.0018	<0.00050	0.0068	--	--
	12/28/99	19.24 ft	<0.050	<0.100	0.086	0.0033	0.0069	0.00064	<0.00050	<0.0050	--	--
	3/23/00	21.01 ft <i>3.89</i>	<0.050	<0.100	0.240	0.017	<0.00050	0.015	<0.00050	<0.0050	--	--
MW-5	06/28/99	18.64 ft	<0.050	<0.100	0.140	0.0030	0.0017	<0.00050	<0.00050	0.024 ⁷	--	--
<25.90>	09/28/99	18.56 ft <i>7.34</i>	<0.050	<0.100	0.140	0.010	0.00083	0.00081	0.00084	0.034 ⁷	--	--
	12/28/99	18.98 ft	<0.050	<0.100	0.190	0.048	0.00062	0.0018	0.0015	0.040	--	--
	3/23/00	21.24 ft <i>4.66</i>	<0.050	<0.100	0.420	0.130	<0.0010	<0.0010	0.0028	0.030	--	--

Groundwater Elevation = Groundwater mean sea level elevation
 TPH-G = Total Petroleum Hydrocarbons as Gasoline
 TPH-D = Total Petroleum Hydrocarbons as Diesel
 TPH-MO = Total Petroleum Hydrocarbons as Motor Oil
 B = Benzene
 T = Toluene
 E = Ethylbenzene
 X = Xylenes
 MTBE = Methyl-t-Butyl Ether
 SVOCs = Semi-Volatile Organic Compounds
 Pb = Total Lead

<27.94> = Top of casing mean sea level elevation
 <0.0005 = Not detected above the expressed detection level
 -- = Not analyzed for this analyte
 1 = Lab report states: "The positive result has an atypical pattern for Diesel analysis"
 2 = Lab report states: "The positive result appears to be a heavier hydrocarbon than Diesel"
 3 = Lab report states: "The positive result appears to be a lighter hydrocarbon than Diesel."
 4 = Lab report states: "The positive result appears to be a heavier hydrocarbon than Gasoline"
 5 = Lab report states: "Product is not typical gasoline"
 6 = No detectable levels of 69 SVOC analytes
 7 = MTBE result confirmed using USEPA Method 8260B



TOPOGRAPHY FROM USGS OAKLAND, WEST, CALIFORNIA
7.5-MINUTE QUADRANGLE MAPS, (TOPO! 1997).



DESIGNED BY:

CHECKED BY:

SITE VICINITY MAP

DATE: 11/09/98

FIGURE: 1

DRAWN BY: JG

SCALE: 1:24,000

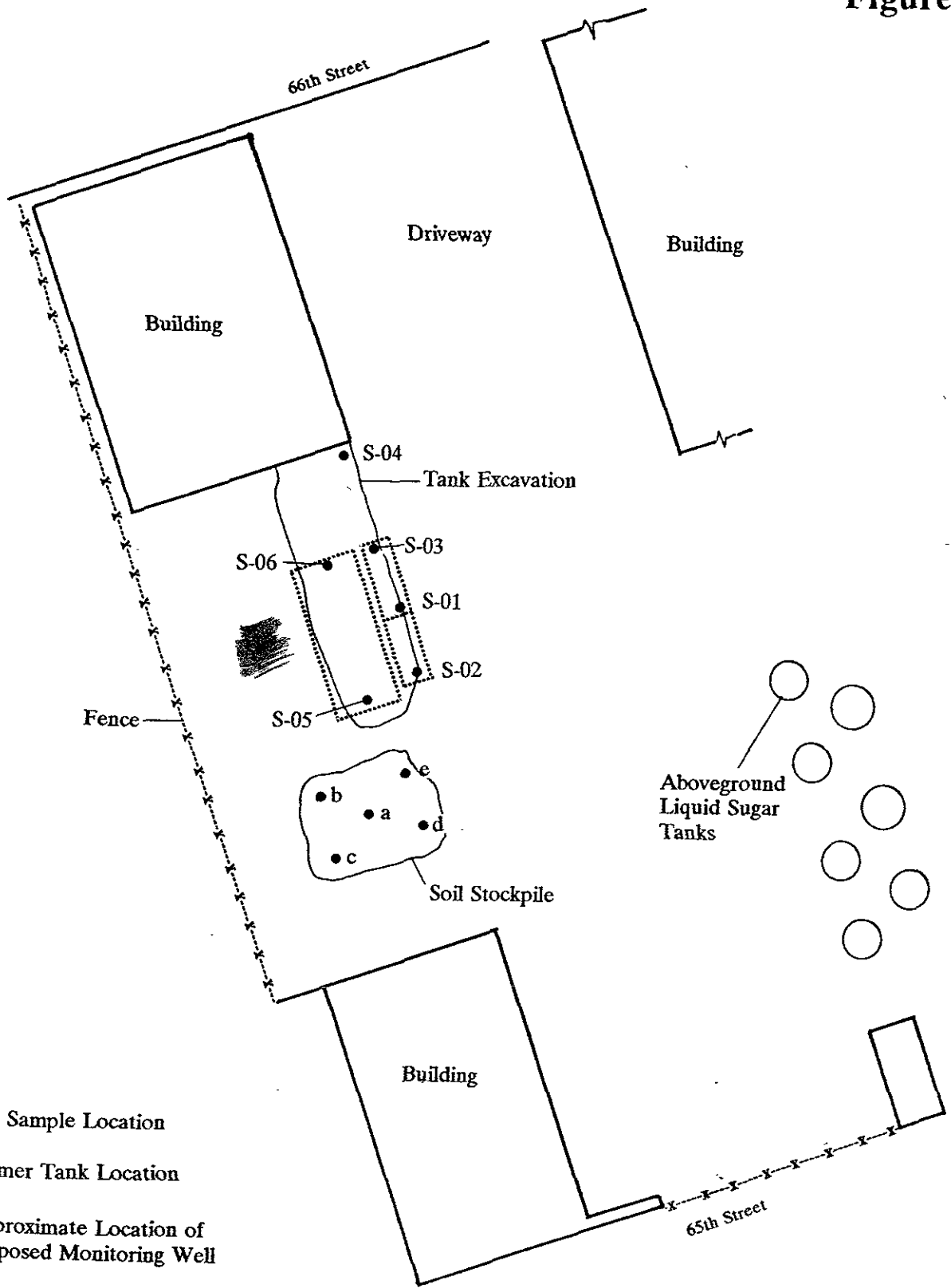
PROJECT NO: 149-01-01

LIQUID SUGARS, INC.
EMERYVILLE, CALIFORNIA

GRIBI Associates

SITE PLAN

Figure 2

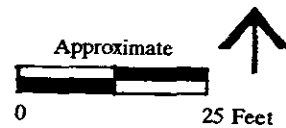


Legend

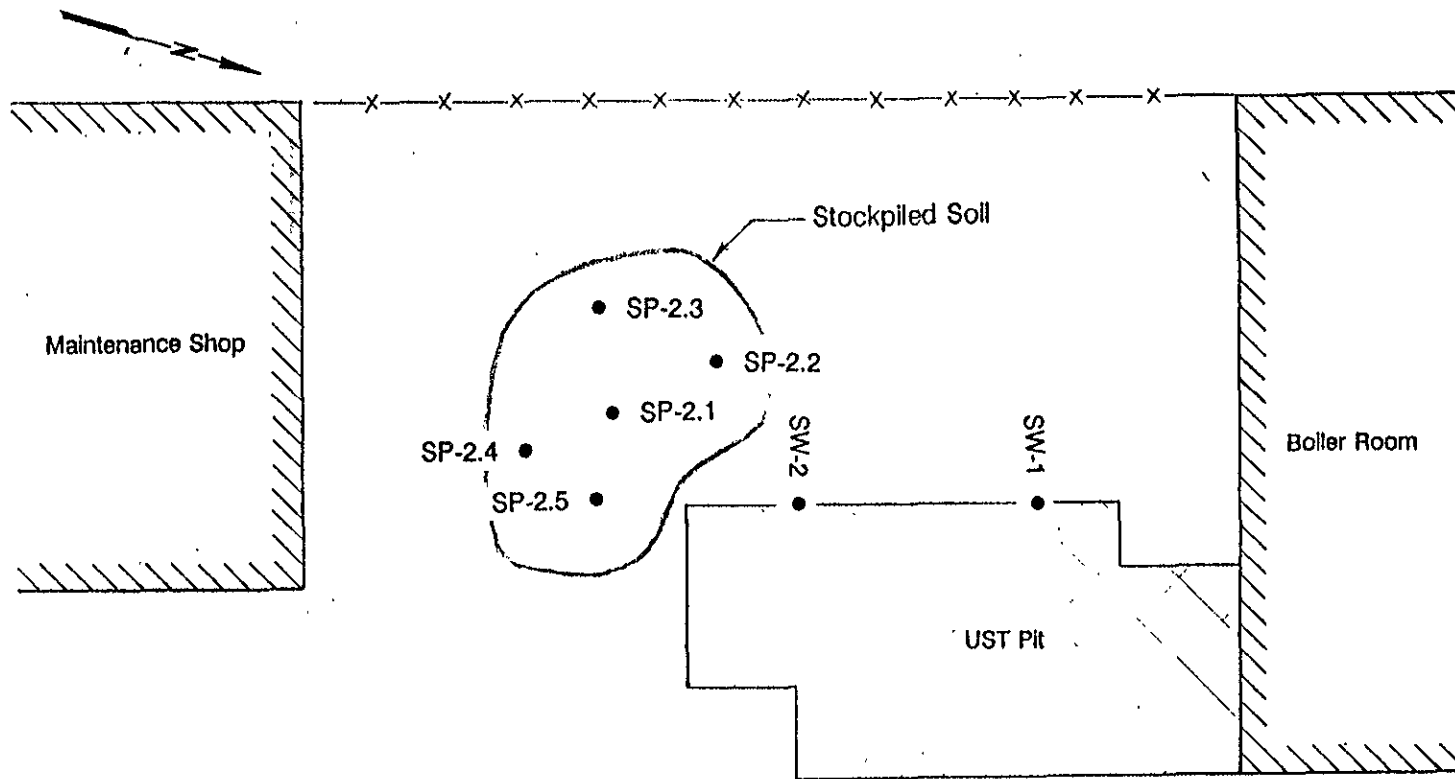
- Soil Sample Location
- ⋯ Former Tank Location
- ⊗ Approximate Location of Proposed Monitoring Well

Liquid Sugars, Inc.
1275 66th Street
Emeryville, California

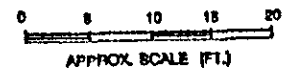
Source: Site Plan and Samplings Location Map, Liquid Sugars, Inc.,
Prepared by Environmental Geotechnical Consultants, Inc., 1990.



BASELINE



● Soil Sample and Location

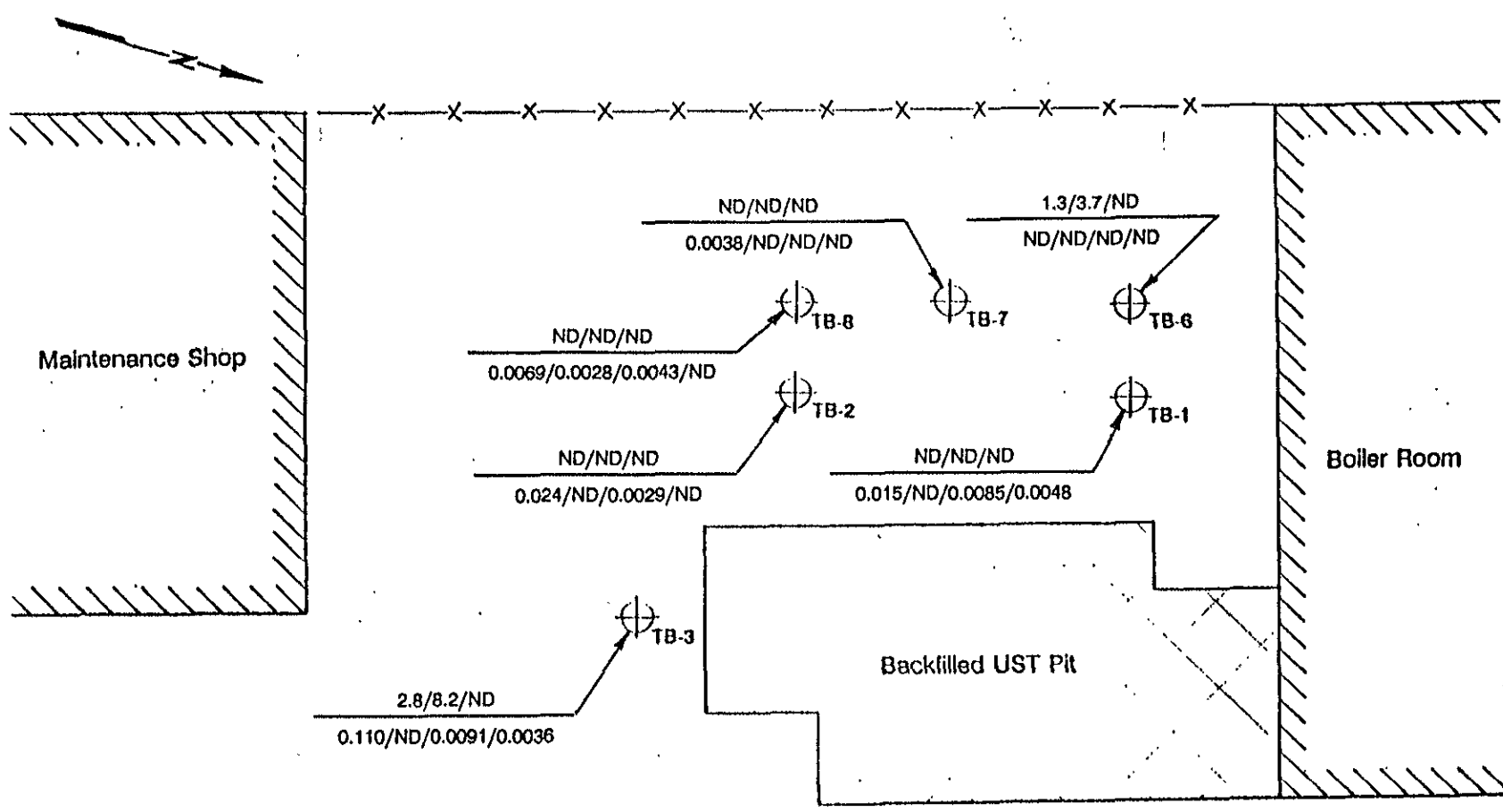


DESIGNED BY :	DATE :
DRAWN BY. :	SCALE :
CHECKED BY :	SEC. :
DRAWING NO. :	

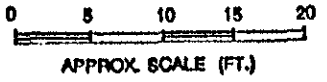
CENTURY WEST  ENGINEERING

Figure 3
SITE PLAN

DRAWING NO.
SHEET NO.



KEY	
Gas/Diesel/Motor Oil	Concentrations In ppm
Benzene/Toluene/Xylenes/Ethylbenzene	

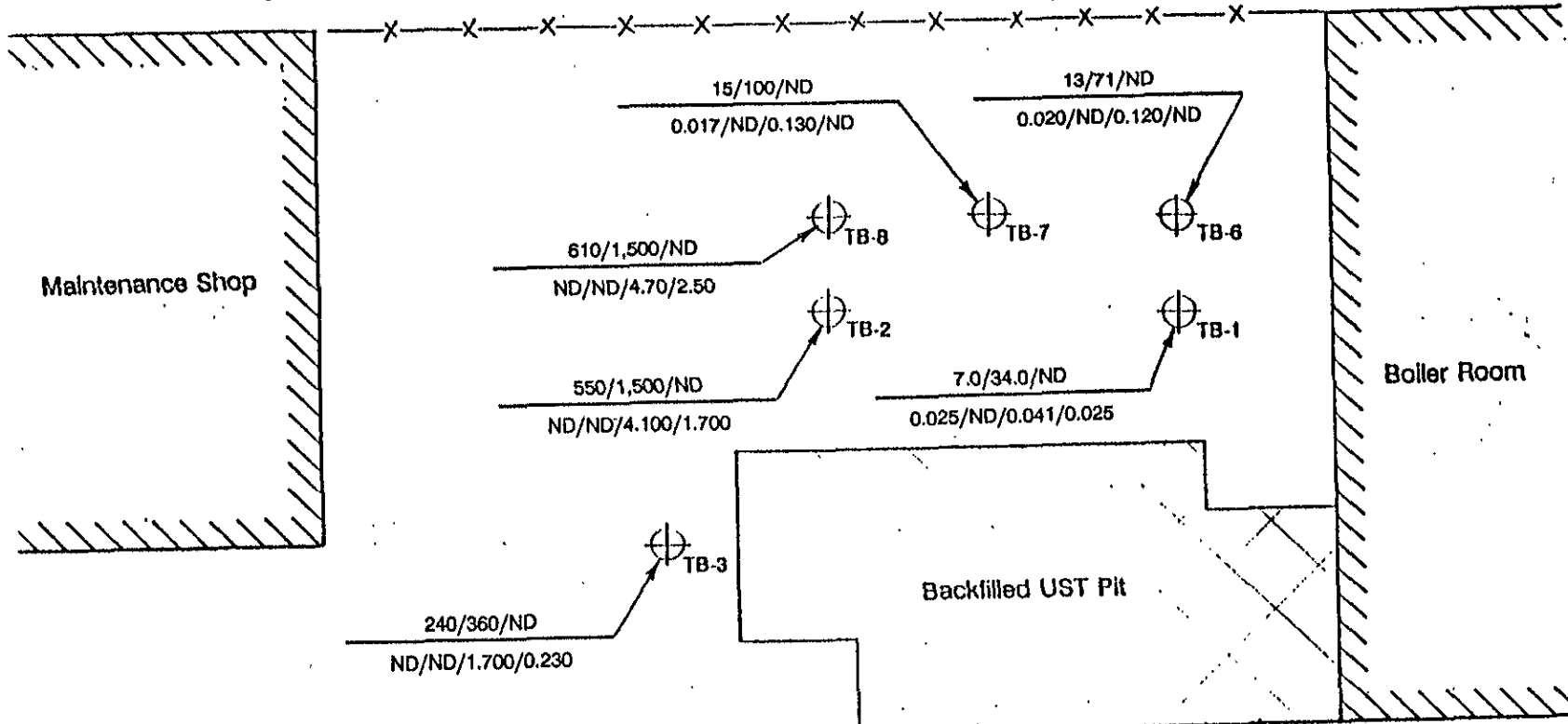


DESIGNED BY :	DATE :
DRAWN BY :	SCALE :
CHECKED BY :	SEC. :
DRAWING NO. :	

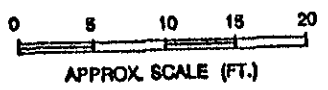
CENTURY WEST  ENGINEERING

Figure 4
SOIL SAMPLES AT 5.5
CWEC 20516-001

DRAWING NO.
SHEET NO.



KEY	
	Gas/Diesel/Motor Oil
	Benzene/Toluene/Xylenes/Ethylbenzene
Concentrations in ppm	



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

CENTURY WEST

Figure 5
SOIL SAMPLES AT 10.5 FT DEPTH
CWEC 20516-001-03

DRAWING NO.
SHEET NO.

LIQUID SUGARS, INC.
1285 66TH STREET

LIQUID SUGARS, INC.
1275 66TH STREET

OFFICES

WAREHOUSE

IB-6

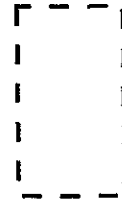
LOCATION OF FORMER
MOHAWK BERMED AST AREA

FORMER MOHAWK
LOADING RACK

BOILER
ROOM

IB-3

IB-4



1280 65TH STREET
AUTUMN PRESS

RAILSPUR

IB-2

MW-1

MW-2

LOCATION OF 3
FORMER USTS

IB-1

MW-5

IB-7

MAINTENANCE
SHOP

IB-5



NOTES

- - SOIL BORING LOCATION
- ⊕ - WELL LOCATION



APPROX. SCALE IN FEET

MW-4

SIDEWALK

MW-3

65TH STREET

DESIGNED BY:

CHECKED BY:

SITE PLAN

DATE: 08/04/99

FIGURE: 6

DRAWN BY: JG

SCALE:

LIQUID SUGARS, INC. SITE
1275 & 1285 66TH STREET
EMERYVILLE, CALIFORNIA

GRIBI Associates

PROJECT NO: 149-01-03

LIQUID SUGARS, INC.
285 66TH STREET

LIQUID SUGARS, INC.
1275 66TH STREET

OFFICES

WAREHOUSE

LOCATION OF FORMER
MOHAWK BERMED AST AREA

FORMER MOHAWK
LOADING RACK

BOILER
ROOM

1280 65TH STREET
AUTUMN PRESS

RAILSPUR

(+19.08)

MW-1

(+19.29)

MW-2

LOCATION OF 3
FORMER USTS

MW-5

(+18.64)

MAINTENANCE
SHOP

NOTES

⊕ - WELL LOCATION

ALL UNITS IN PARTS PER MILLION (MGL)



APPROX. SCALE IN FEET

MW-4

(+18.49)

SIDEWALK

MW-3

(+18.77)

65TH STREET

DESIGNED BY:

CHECKED BY:

GROUNDWATER GRADIENT MAP
06/28/99

DATE: 08/04/99

FIGURE: 7

DRAWN BY: JG

SCALE:

LIQUID SUGARS, INC. SITE
1275 & 1285 66TH STREET
EMERYVILLE, CALIFORNIA

GRIBI Associates

PROJECT NO: 149-01-03

LIQUID SUGARS, INC.
1285 66TH STREET

LIQUID SUGARS, INC.
1275 66TH STREET

OFFICES

WAREHOUSE

LOCATION OF FORMER
MOHAWK BERMED AST AREA

FORMER MOHAWK
LOADING RACK

BOILER
ROOM

1280 65TH STREET
AUTUMN PRESS

RAILSPUR

TPH-D <0.050
TPH-G 0.460
B 0.0073
T 0.0049
E 0.0026
X 0.0022
MTBE <0.0050

TPH-D 0.650
TPH-G 0.380
B 0.010
T 0.0020
E 0.0033
X 0.00077
MTBE <0.0050

MW-1

MW-2

LOCATION OF 3
FORMER USTS

TPH-D <0.050
TPH-G 0.140
B 0.0030
T 0.0017
E <0.00050
X <0.00050
MTBE 0.012

MW-5

MAINTENANCE
SHOP

TPH-D 0.320
TPH-G 0.110
B 0.00052
T 0.0011
E 0.0022
X <0.00050
MTBE <0.0050

MW-4

SIDEWALK

TPH-D 0.300
TPH-G 0.066
B <0.00050
T <0.00050
E <0.00050
X <0.00050
MTBE <0.0050

MW-3

65TH STREET

NOTES

⊙ - WELL LOCATION

0 25 50

APPROX. SCALE IN FEET

DESIGNED BY:

CHECKED BY:

GROUNDWATER HYDROCARBON
RESULTS

DATE: 08/04/99

FIGURE: 8

DRAWN BY: JG

SCALE:

LIQUID SUGARS, INC. SITE
1275 & 1285 66TH STREET
EMERYVILLE, CALIFORNIA

PROJECT NO: 149-01-03

GRIBI Associates

SOIL BORING LOG MW-1

Century West Engineering

Site Location: 1275 66th Street, Emeryville Ca.	Boring ID: MW-1	Total Depth: 25 ft
Boring Location: 25 ft west of the UST	Elevation: NA	Initial GW Depth: 18 ft
Purpose: Ground water monitoring	Logged By: Jim Gribi	Final GW Depth:
Date: April 15, 1993	Blank Casing: 2-inch Sch 40	From: 4.56 ft To: 0 (TDC)
Consulting Firm: Century West Engineering	Perforations: 0.020 inch	From: 24.56 ft To: 4.56 ft
Project Number: 20516-001-04	Filter Sand: Lonestar	From: 25 ft To: 4 ft
Drilling Contractor: Gregg Drilling and Testing	Bentonite: Hydrated pellets	From: 4 ft To: 3 ft
Drilling Method: Hollow stem auger	Grout: Cement slurry (bent. <5%)	From: 3 ft To: .5 ft.

Depth	Sample ID	Blow Counts	Profile	Soil Description	Remarks
<u>01</u>				0.0 - 1.0 ft Concrete	<u>USCS Classification</u> CL
<u>02</u>				1.0 - 9.0 ft Dark grey, firm, moist clay; gravel stringer at 4.5 ft., strong hydrocarbon odor at 5.0 ft.	
<u>03</u>					
<u>04</u>					
<u>05</u>					
<u>06</u>	MW-1.1	6 11 20			
<u>07</u>					
<u>08</u>					
<u>09</u>					
<u>10</u>					
<u>11</u>	MW-1.2	8 10 14		9.0 - 13.0 ft. Grey green to brown firm, moist to wet, silty clay; moderate to strong hydrocarbon odor	CH
<u>12</u>					
<u>13</u>					
<u>14</u>	MW-1.3	10 22 27			
<u>15</u>					
<u>16</u>				13.0 - 25.0 ft Reddish brown clayey silt; moist to wet with strong hydrocarbon odor.	CH
<u>17</u>					
<u>18</u>			▽	Hard from 21.0 to 25.0 ft.; ground water at 18 ft.	
<u>19</u>					
<u>20</u>					
<u>21</u>					
<u>22</u>					
<u>23</u>					
<u>24</u>				Final Auger Depth - 25 feet Ground Water Depth - 18 feet	
<u>25</u>					

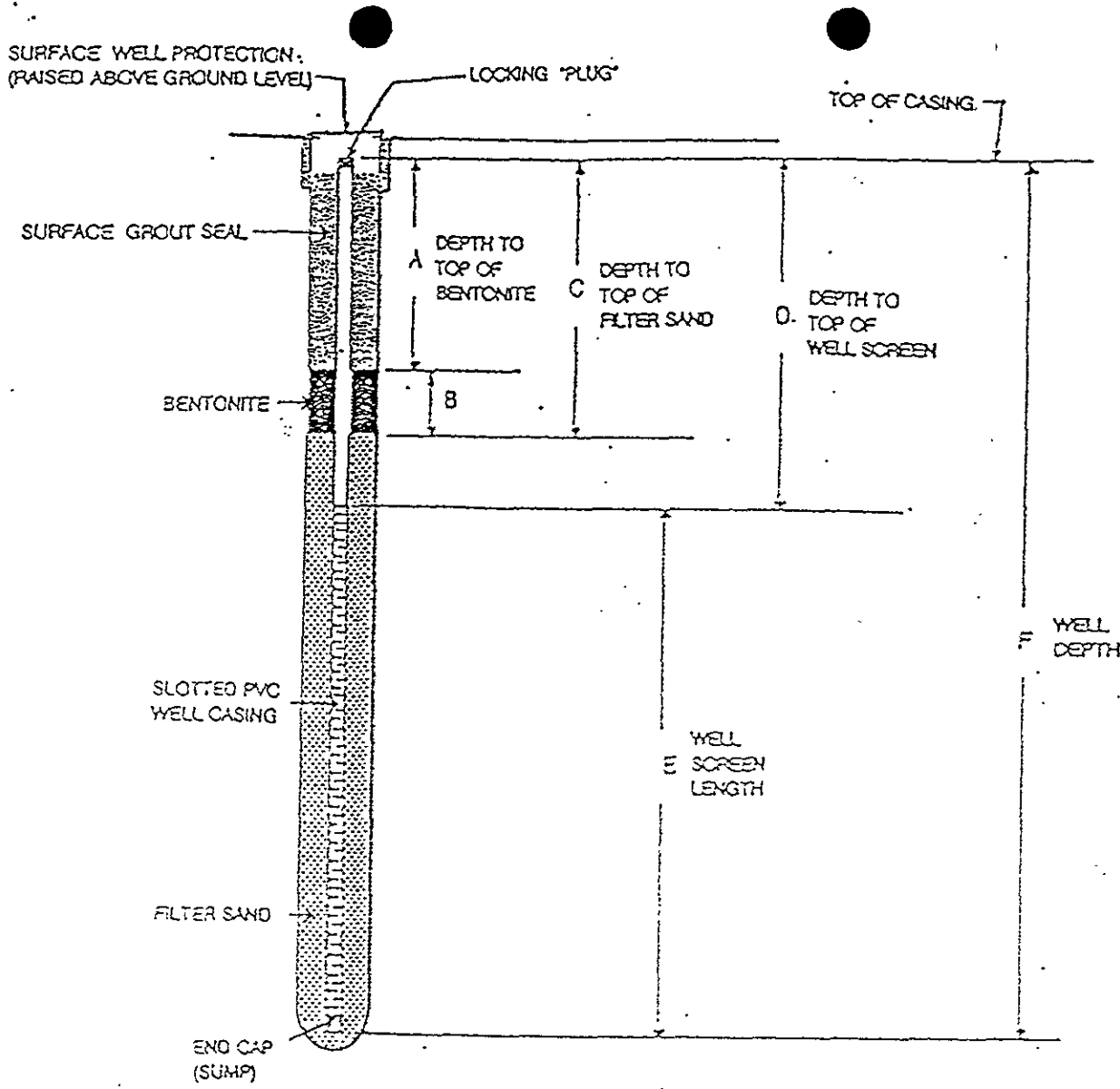
SOIL BORING LOG MW-2

Century West Engineering

Site Location: 1275 66th Street, Emeryville Ca.	Boring ID: MW-2	Total Depth: 21 ft
Boring Location: 10 ft west of the UST	Elevation: NA	Initial GW Depth: 18 ft
Purpose: Ground water monitoring	Logged By: Jim Gribi	Final GW Depth:
Date: April 15, 1993	Blank Casing: 4-inch Sch 40	From: 5.1 ft To: 0 (TDC)
Consulting Firm: Century West Engineering	Perforations: 0.020 inch	From: 21 ft To: 5.1 ft
Project Number: 20516-001-04	Filter Sand: Lonestar	From: 21 ft To: 3.5 ft
Drilling Contractor: Gregg Drilling and Testing	Bentonite: Hydrated pellets	From: 3.5 ft To: 2.5 ft
Drilling Method: Hollow stem auger	Grout: Cement slurry (bent. <5%)	From: 2.5 ft To: .5 ft

Depth	Sample ID	Blow Counts	Profile	Soil Description	Remarks
01				0.0 - 1.0 ft Concrete	USCS Classification
02				1.0 - 8.0 ft Dark grey, moist to wet firm clay; slight to moderate hydrocarbon odor	CH
03					
04					
05					
06	MW-2.1	9 12 25	▽	8.0 - 12.0 ft. Grey green, moist to wet, gravelly clay containing 1/4 to 1 inch clasts; moderate to strong hydrocarbon odor	CL
07					
08					
09					
10					
11	MW-2.2	20 24 29		12.0 - 21.0 ft. Brown, firm and wet clayey silt containing some gravels; slight to moderate hydrocarbon odor.	CL
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					

Final auger depth 21.0 ft
Ground Water Depth - 6.73 feet



MW-1 WELL SPECIFICATIONS			
WELL CASING:	Two-inch Sch. 40 PVC	A	3 feet
WELL SLOT SIZE:	0.020 inch	B	1 feet
BENTONITE:	Hydrated pellets	C	4 feet
SURFACE SEAL:	Cement slurry (bent. < 5%)	D	4.56 feet
WELL PLUG:	Locking expandable cap	E	20.00 feet
SURFACE PROTECTION:	Traffic rated, water tight	F	24.56 feet

DESIGN BY	CHECKED BY	WELL CONSTRUCTION DIAGRAM	APPROVED	
SURVEY BY	SCALE . NO SCALE		DATE	
DRAWN BY JEG	DWG. NO.			

SURFACE WELL PROTECTION:
(RAISED ABOVE GROUND LEVEL)

LOCKING "PLUG"

TOP OF CASING

SURFACE GROUT SEAL

A DEPTH TO
TOP OF
BENTONITE

C DEPTH TO
TOP OF
FILTER SAND

D. DEPTH TO
TOP OF
WELL SCREEN

BENTONITE

B

SLOTTED PVC
WELL CASING

WELL
SCREEN
LENGTH

F WELL
DEPTH

FILTER SAND

END CAP
(SUMP)

MW-2 WELL SPECIFICATIONS

WELL CASING:	Four-inch Sch. 40 PVC	A	2.5 feet
WELL SLOT SIZE:	0.020 inch	B	1 feet
BENTONITE:	Hydrated pellets	C	3.5 feet
SURFACE SEAL:	Cement slurry (bent. < 5%)	D	5.1 feet
WELL PLUG:	Locking expandable cap	E	15.00 feet
SURFACE PROTECTION:	Traffic rated, water tight	F	20.10 feet

GN BY	CHECKED BY	
VEY BY	SCALE	NO SCALE
VN BY	JEG	DWG. NO.

WELL CONSTRUCTION
DIAGRAM

APPROVED

DATE

CENTURY
WEST ENGINEERING
CORPORATION

SOIL BORING LOG TB-1

Total Depth: 11.5'

Site Location: LIQUID SUGARS, INC., EMERYVILLE, CA

Boring ID: TB-1

Initial GW Depth: 10.5'

Boring Location: NW side of UST pit

Elevation: Unknown

Final GW Depth:

Purpose: Investigative

Logged By: Jim Gribi

From: To:

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: Kvihaug Well Drilling

Bentonite:

From: To:

Grout: Cement/sand

From: 0.0' To: 11.5'

Drilling Method: Hollow Stem Auger

Remarks & USCS Classification

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

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
<u>01</u>					0.0 - 1.0 Concrete and baserock.	
<u>02</u>					1.0 - 8.0 Dark gray CLAY, slightly silty, firm, slightly gravely, moist, moderate HC odor.	USCS: CL
<u>03</u>						
<u>04</u>						
05						
<u>06</u>	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
<u>07</u>						
<u>08</u>						
<u>09</u>						
10						
<u>11</u>	700	TB-2.2	22 29 45		<u>Total Depth - 11.5'</u>	
<u>12</u>						
<u>13</u>						
<u>14</u>						
15						

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
<u>01</u>					0.0 - 1.0 Concrete and baserock.	
<u>02</u>					1.0 - 3.0 Light gray SILT, clayey, moist, no HC odor.	USCS: ML
<u>03</u>						
<u>04</u>					3.0 - 5.0 Dark gray silty CLAY, firm, hard, moist, faint HC odor.	USCS: CL
<u>05</u>						
<u>06</u>	490	TB-3.1	12 24 50		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
<u>07</u>						
<u>08</u>						
<u>09</u>						Ground water = 10'
<u>10</u>						
<u>11</u>	180	TB-3.2	22 40 22		<u>Total Depth - 11.5'</u>	
<u>12</u>						
<u>13</u>						
<u>14</u>						
<u>15</u>						

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					0.0 - 2.0 Concrete and baserock.	
02						
03						
04					2.0 - 10.0 Dark gray CLAY, slightly silty, firm, moist, faint HC odor.	USCS: CL
05						
06	640	TB-4.1	8			
07			20			
08			35			
09					10.0 - 11.5 Gray green clayey GRAVEL, sandy, moist to saturated, faint to moderate HC odor.	USCS: GC-GM
10						Ground water = 10'
11	300	TB-4.2	25			
12			43			
13			25			
14						
15						
					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
<u>01</u>					0.0 - 1.0 Concrete and baserock.	
<u>02</u>					1.0 - 8.0 Dark gray green CLAY, slightly silty, firm, slightly gravelly, moist, faint to moderate HC odor.	USCS: CL
<u>03</u>						
<u>04</u>						
<u>05</u>						
<u>06</u>	280	TB-5.1	8 20 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
<u>07</u>						
<u>08</u>						
<u>09</u>						
<u>10</u>					<u>Total Depth - 11.5'</u>	Ground water = 10.5'
<u>11</u>	180	TB-5.2	25 42 20			
<u>12</u>						
<u>13</u>						
<u>14</u>						
<u>15</u>						

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
<u>01</u>					0.0 - 1.0 Concrete and baserock.	
<u>02</u>					1.0 - 8.0 Dark gray silty CLAY, firm, moist, faint HC odor.	USCS: CL
<u>03</u>						
<u>04</u>						
05						
<u>06</u>	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'
<u>07</u>						
<u>08</u>						
<u>09</u>						
10						
<u>11</u>	48	TB-6.2	8 14 20		Total Depth - 11.5'	
<u>12</u>						
<u>13</u>						
<u>14</u>						
15						

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
<u>01</u>					0.0 - 1.0 Concrete and baserock.	
<u>02</u>					1.0 - 7.0 Dark gray CLAY, slightly silty, firm, slightly graveley, moist, faint HC odor.	USCS: CL
<u>03</u>						
<u>04</u>						
<u>05</u>						
<u>06</u>	175	TB-7.1	12 25 50			
<u>07</u>					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'
<u>08</u>						
<u>09</u>						
<u>10</u>						
<u>11</u>	140	TB-7.2	12 25 30			
<u>12</u>					Total Depth - 11.5'	
<u>13</u>						
<u>14</u>						
<u>15</u>						

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
<u>01</u>					0.0 - 1.0 Concrete and baserock.	
<u>02</u>					1.0 - 4.0 Dark gray CLAY, firm, moist, faint HC odor.	USCS: CL
<u>03</u>						
<u>04</u>						
05						
<u>06</u>	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
<u>07</u>					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'
<u>08</u>						
<u>09</u>						
10						
<u>11</u>	510	TB-8.2	40 50		<u>Total Depth - 11.5'</u>	
<u>12</u>						
<u>13</u>						
<u>14</u>						
15						