

Jcc
11/30

19 November 1992
Ref: NC367

Alameda County Health Care Services Agency
Division of Hazardous Materials
Department of Environmental Health
80 Sway Way, Room 200
Oakland, California 94621

Attention: Ms. Eva Chu

Subject: Lake Del Valle Underground Fuel Storage Tank
Investigation, Livermore, California

Dear Ms. Chu:

Engineering-Science, Inc. (ES) conducted soil and water sampling associated with removal of two underground fuel storage tanks (UFSTs) at the East Bay Regional Park District (EBRPD) Lake Del Valle site. The two tanks were both 1,000-gallon capacity and contained regular gasoline and diesel fuel. Both UFSTs were removed on 10 September 1992. ES collected soil and "grab" water samples from the two excavations on this date. One additional soil sample was collected from one of the excavations on 9 October 1992. In addition, ES collected soil samples from the excavated and stockpiled soil on this date. All samples were analyzed by a California Environmental Protection Agency certified hazardous waste laboratory.

The approximate locations of the UFSTs and the soil and "grab" water samples collected by ES at the site are shown on the attached two figures. The attached table summarizes the analytical results of the two phases of sampling conducted by ES at the project site. The certified analytical laboratory reports and associated chain-of-custody records are also attached. Should you have any questions regarding this documentation, please do not hesitate to call.

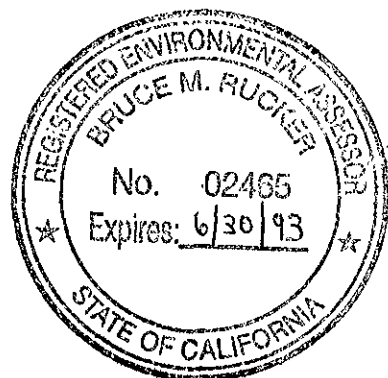
Very truly yours,

Bruce M. Rucker

Bruce M. Rucker, REA
Project Manager

Attachments
cc:

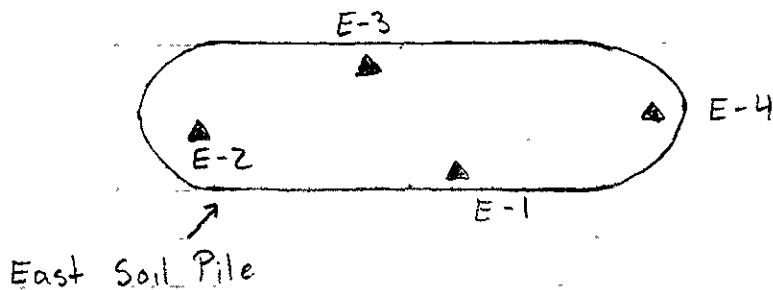
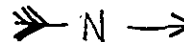
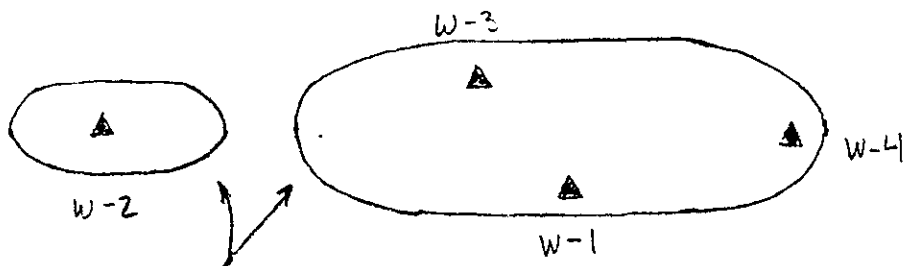
W. Gee, EBRPD
N. Siler, ES



Client East Bay Regional Parks District
 Subject Lake Del Valle UST Sampling

Job No. NC367
 By Betsy Rosenberg
 Checked Bruce Rucker

Sheet 1 of 2
 Date 11/17/92
 Rev. _____



Notes:

- Locations and dimensions of soil stockpiles are not to scale.
- All samples collected approximately 6 inches below surface of pile.
- East and West piles each approximately 10 bank cubic yards (approximately 15 stockpiled cubic yards).

Legend

▲ - Soil Sample W-4
 W-4

Confirmation Sampling of Excavated
 Stockpiled Soil

Lake Del Valle UST Site, Livermore, California

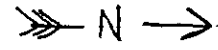
9 October 1992

Client East Bay Regional Parks District
 Subject Lake Del Valle UST Sampling

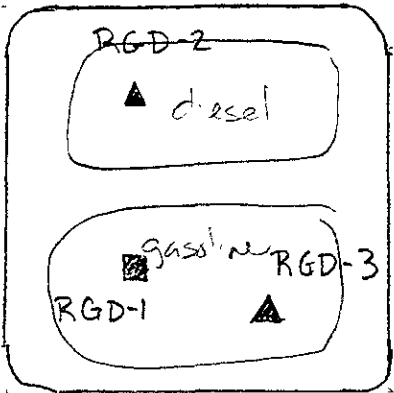
Job No. NC 367
 By Betsy Rosenbergy
 Checked Bruce Ruelter

Sheet 2 of 2
 Date 11/17/92
 Rev. _____

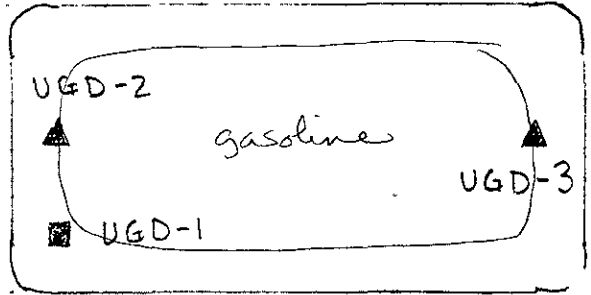
Administrative Building



Fence
 - x - 0 - x - 0 - x - 0 - x - 0 - x - 0 - x -



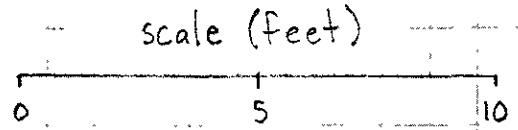
1 gasoline UST 55 gal
 1 diesel UST - 55 gal



1K unloaded gasoline UST

Note:

Scale is approximate



Legend

- ▲ - Soil Sample UGD-1
- UGD-1
- - "Grab" Water Sample UGD-2
- UGD-2

Excavation Confirmation Soil and
 "Grab" Water Sampling

Lake Del Valle UST Site, Livermore, California

9 October 1992

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 17, 1992

ChromaLab File No.: 0992100

Engineering Science, Inc.

Attn: Bruce Rucker

RE: Two water and four soil samples for Gas/BTEX and Diesel analyses

Project Name: EBRPD-UST (LAKE DEL VALLE)

Project Number: NC 367.03

Date Sampled: Sep. 10, 1992

Date Submitted: Sep. 10, 1992

Date Extracted: Sep. 15, 1992

Date Analyzed: Sep. 15-16, 1992

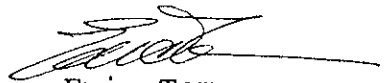
RESULTS:

Sample I.D.	Gasoline ($\mu\text{g/l}$)	Diesel ($\mu\text{g/l}$)	Benzene ($\mu\text{g/l}$)	Toluene ($\mu\text{g/l}$)	Ethyl Benzene ($\mu\text{g/l}$)	Total Xylenes ($\mu\text{g/l}$)
RGD-1	350	7400	N.D.	N.D.	N.D.	N.D.
UGD-1	5200	---	36	67	N.D.	1200
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE REC.	103%	98%	104%	99%	98%	98%
DUP SPIKE REC	96%	100%	102%	101%	95%	98%
DET. LIMIT	50	50	0.5	0.5	0.5	0.5
METHOD OF ANALYSIS	5030/ 8015	3510/ 8015	602	602	602	602

Sample I.D.	Gasoline (mg/Kg)	Diesel (mg/Kg)	Benzene ($\mu\text{g/Kg}$)	Toluene ($\mu\text{g/Kg}$)	Ethyl Benzene ($\mu\text{g/Kg}$)	Total Xylenes ($\mu\text{g/Kg}$)
UGD-2	78	---	380	8300	4600	13000
UGD-3	N.D.	---	N.D.	N.D.	N.D.	N.D.
RGD-2	N.D.	2.1	N.D.	N.D.	N.D.	N.D.
RGD-3	N.D.	2.4	N.D.	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE REC.	99%	87%	109%	103%	100%	97%
DUP SPIKE REC	103%	91%	107%	102%	97%	96%
DET. LIMIT	1.0	1.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	5030/ 8015	3550/ 8015	8020	8020	8020	8020

ChromaLab, Inc.


Billy Thach
Analytical Chemist


Eric Tam
Laboratory Director

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 17, 1992

ChromaLab File No.: 0992100

ENGINEERING-SCIENCE, INC. BERKELEY

Attn: B. Rucker

RE: One water sample for Total Lead analysis

Project Name: EBRAD-UST (LAKE DEL VALLE)

Project Number: CN367.03

Date Sampled: Sept. 10, 1992

Date Submitted: Sept. 10, 1992

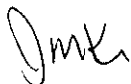
Date Extracted: Sept. 17, 1992

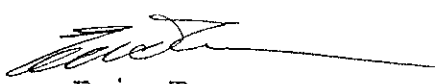
Date Analyzed: Sept. 17, 1992

RESULTS:

<u>Sample I.D.</u>	<u>Lead (mg/L)</u>
UGD-1	0.31
BLANK	N.D.
SPIKED RECOVERY	111%
DUPLICATE SPIKED RECOVERY	103%
DETECTION LIMIT	0.05
METHOD OF ANALYSIS	3010/7420

ChromaLab, Inc.


Jack Kelly
Analytical Chemist


Eric Tam
Laboratory Director

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 17, 1992

ChromaLab File No.: 0992100

ENGINEERING-SCIENCE, INC. BERKELEY

Attn: B. Rucker

RE: Two soil samples for Total Lead analysis

Project Name: EBRAD-UST (LAKE DEL VALLE)

Project Number: CN367.03

Date Sampled: Sept. 10, 1992

Date Submitted: Sept. 10, 1992

Date Extracted: Sept. 17, 1992

Date Analyzed: Sept. 17, 1992

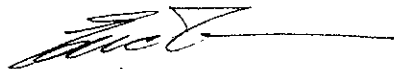
RESULTS:

<u>Sample I.D.</u>	<u>Lead (mg/Kg)</u>
UGD-2	12
UGD-3	13
BLANK	N.D.
SPIKED RECOVERY	99%
DUPLICATE SPIKED RECOVERY	101%
DETECTION LIMIT	2.5
METHOD OF ANALYSIS	3050/7420

ChromaLab, Inc.



Jack Kelly
Analytical Chemist



Eric Tam
Laboratory Director

CHAIN OF CUSTODY RECORD

LAB:

CLIENT: ENGINEERING-SCIENCE, INC. BERKELEY		PROJECT MANAGER: B. RUCKER		PROJ. NO.: UC67.05		NO. OF CONTAINERS	ANALYSES REQUIRED						AB			REMARKS	
PROJECT NAME / LOCATION: ESTROD - UST (LAKE DEL VALLE)							TPND (DRC/LUT) TPAG/BTEX (DRC/LUT) TOTAL LEAD (Pb)	CHROMALAB FILE # 992100 ORDER # 7741									
SAMPLER(S): (SIGNATURE) NEAL STICKER <i>NEAL</i>																	
SAMPLE ID	DATE	TIME	MATRIX	SAMPLE LOCATION													
RGD-1	9/10/92	11:41	H ₂ O	DIESEL/REG GAS EXCAVATION		3	✓										3- 1 LITRE AMPH
RGD-1	9/10/92	11:45	H ₂ O	DIESEL/REG GAS EXCAVATION		3		✓									3- VOA VIAL
UGD-1	9/10/92	12:20	"	GASOLINE EXCAVATION		3		✓									3- VOA VIAL
UGD-1	9/10/92	"	"	"		1			✓								1- 1 LITRE AMPH
UGD-1			"														
UGD-2	9/10/92	12:45	SOIL	GASOLINE EXCAVATION		1		✓	✓								1- 2" DIAMETER BUST
UGD-3	9/10/92	1:20	SOIL	"		1		✓	✓								1- 2" DIAMETER BUST
UGD-3																	1- 2" DIAMETER TUB
RGD-2	9/10/92	1:25	SOIL	DIESEL/REG GAS EXCAVATION		1	✓	✓									1- 2" DIAMETER TUB
RGD-3	9/10/92	1:30	SOIL	"		1	✓	✓									1- 2" DIAMETER TUB
RELINQUISHED BY: (SIGNATURE)		DATE/TIME		RECEIVED BY: (SIGNATURE)		RELINQUISHED BY: (SIGNATURE)		DATE/TIME		RECEIVED BY: (SIGNATURE)							
RELINQUISHED BY: (SIGNATURE)		DATE/TIME		RECEIVED FOR LABORATORY BY: (SIGNATURE)		DATE/TIME		REMARKS									
<i>NEAL</i>		9/10/92 2:35pm		<i>Charles M. Volley</i>		9/10/92 2:55pm											

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 19, 1992

ChromaLab File No.: 1092103

ENGINEERING-SCIENCE, INC. BERKELEY

Attn: Bruce Rucker

RE: Three soil samples for Gasoline/BTEX analyses

Project Name: LAKE DEL VALLE / LIVERMORE

Project Number: NC367.03

Date Sampled: Oct. 9, 1992


Date Submitted: Oct. 9, 1992

Date Analyzed: Oct. 15, 1992

RESULTS:

Sample I.D.	Gasoline (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)
Pile-E-1,2,3,4	N.D.	N.D.	N.D.	N.D.	N.D.
Pile-W-1,2,3,4	N.D.	N.D.	N.D.	N.D.	N.D.
VGD-4	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	96%	102%	96%	95%	93%
DUP SPIKE RECOVERY	----	104%	107%	107%	103%
DETECTION LIMIT	1.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	5030/8015	8020	8020	8020	8020

ChromaLab, Inc.



Billy Thach
Analytical Chemist



Eric Tam
Laboratory Director

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 19, 1992

ChromaLab File No.: 1092103

ENGINEERING-SCIENCE, INC. BERKELEY

Attn: Bruce Rucker

RE: Three soil samples for Diesel analysis

Project Name: LAKE DEL VALLE / LIVERMORE

Project Number: NC367.03

Date Sampled: Oct. 9, 1992

Date Submitted: Oct. 9, 1992

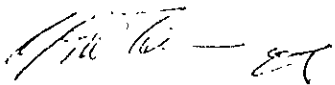
Date Extracted: Oct. 13, 1992

Date Analyzed: Oct. 13, 1992

RESULTS:

<u>Sample I.D.</u>	<u>Diesel (mg/Kg)</u>
VGD-4	N.D.
Pile-E-1, Pile-E-2, Pile-E-3, Pile-E-4	N.D.
Pile-W-1, Pile-W-2, Pile-W-3, Pile-W-4	4.9
BLANK	N.D.
SPIKED RECOVERY	92%
DUPLICATE SPIKED RECOVERY	80%
DETECTION LIMIT	1.0
METHOD OF ANALYSIS	3550/8015

ChromaLab Inc.,


Yiu Tam
Analytical Chemist


Eric Tam
Laboratory Director

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 16, 1992

ChromaLab File No.: 1092103

ENGINEERING-SCIENCE, INC. BERKELEY

Attn: Bruce Rucker

RE: Three soil samples for Lead analysis

Project Name: LAKE DEL VALLE / LIVERMORE

Project Number: NC367.03

Date Sampled: Oct. 9, 1992

Date Submitted: Oct. 9, 1992

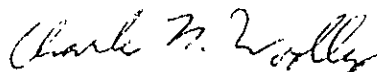
Date Extracted: Oct. 14, 1992

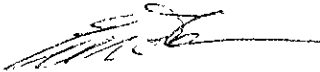
Date Analyzed: Oct. 15, 1992

RESULTS:

<u>Sample I.D.</u>	<u>Lead (mg/Kg)</u>
Pile-E-1, E-2, E-3, E-4	11
Pile-W-1, W-2, W-3, W-4	14
VGD-4	12
BLANK	N.D.
SPIKED RECOVERY	91%
DUPLICATE SPIKED RECOVERY	89%
DETECTION LIMIT	2.5
METHOD OF ANALYSIS	3050/7420

ChromaLab, Inc.


Charles Woolley
Analytical Chemist


Eric Tam
Laboratory Director

**ENGINEERING - SCIENCE, INC.
CHAIN OF CUSTODY RECORD**

LAB: Chromalab

CLIENT: ENGINEERING-SCIENCE, INC. BERKELEY		PROJECT MANAGER: Bruce Rucker		PROJ. NO.:	NO. OF CONTAINERS	ANALYSES REQUIRED						PRESERVED TO BE COMPOSITED BY LAB TURNAROUND TIME	REMARKS	
PROJECT NAME / LOCATION: Lake Del Valle / Livermore						TPH-G F-STAKE (8015)	TPH-Metal (8915)	Total Lead (7411)						
SAMPLER(S): (SIGNATURE) Bruce M Rucker														
SAMPLE ID	DATE	TIME	MATRIX	SAMPLE LOCATION										
UGD-4	10/9/93	1200	Soil	10 K untraced oas VST	1	X	X	X			X	5 day	Preservation: Cooling	
Pile-E-1		1215		Soil spoils Pile E	1	X	X	X			X	X	Composite in lab before analysis	
Pile-E-2		1220		" "	1	X	X	X			X	X		
Pile-E-3		1225		" "	1	X	X	X			X	X		
Pile-E-4		1230		" "	1	X	X	X			X	X		
Pile-W-1		1235		Soil spoils Pile W	1	X	X	X			X	X	Composite in lab before analysis	
Pile-W-2		1240		" "	1	X	X	X			X	X		
Pile-W-3		1240		" "	1	X	X	X			X	X		
Pile-W-4	↓	1245	↓	" "	1	X	X	X			X	X		

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE) Bruce M Rucker	10/9/93 1631	RECEIVED FOR LABORATORY BY: (SIGNATURE) 	DATE/TIME	10-9-93 1631	REM

CHROMALAB FILE # 1092103
ORDER # 8123