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ENGEO
INCORPORATED
2401 Crow Canyon Road
Suite 200
San Ramon, CA 94583
(510) 838-1600
Fax (510) 838-7425

LETTER OF TRANSMITTAL

DATE: July 14, 1992 ENGEO PROJECT NO.: N2-3174-F4

TO: Alameda County Health Agency
Division of Hazardous Materials
80 Swan Way Room 200
Oakland, CA. 94621

ATTENTION: Ms. Eva Chu

SUBJECT: Underground Storage tank permits.

TRANSMITTED HEREWITH: Three copies of forms A and B.

REMARKS: Please telephone if you have questions about the enclosed forms.

ENGEO INCORPORATED
BY: ERIC HARREL
COPIES:

- [x] FOR YOUR INFORMATION
- [ ] FOR YOUR REVIEW
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LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT

EDUCATION CENTER
685 E. JACK LONDON BOULEVARD • LIVERMORE, CALIFORNIA 94550 • TELEPHONE 447-9500

September 17, 1992

Alameda County
Environmental Health Department
ATTN: Ms. Eva Chu
470 27th Street Room 323
Oakland, CA 94612

Dear Ms. Chu:

Enclosed is the Closure Report for the Underground Storage Tank Site, Livermore School District, submitted by Engeo, Incorporated.

If you have questions or comments, please direct them to Brian Flaherty of Engeo, Inc.

Thank you.

Michael G. White, Director
Facilities Management

sg
Enclosure

Rec'd Haz Mat DW
Sep 29, 1992

RECEIVED
SEP 29 1992
OFFICE OF
SOLID WASTE MANAGEMENT

ENGEO
INCORPORATED

GEOTECHNICAL & ENVIRONMENTAL CONSULTANTS

In Reply
Please Refer to:
N2-3174-F4

August 31, 1992

Livermore Valley Joint Unified School District
685 East Jack London Boulevard
Livermore, CA 94550

Attention: Mr. Mike White

Subject: Transportation Facility Maintenance Yard
2801 and 2900 Ladd Avenue
Livermore, California

UNDERGROUND STORAGE TANK SITE CLOSURE REPORT

Gentlemen:

We are pleased to present this report which provides details of the tank removal and soil sampling activities conducted at the subject properties. Laboratory testing of soil samples collected at the time of the tank removal detected gasoline in the soil beneath the former underground storage tank complex at 2900 Ladd Avenue. Laboratory testing of soil samples from 2801 Ladd Avenue reported nondetectable levels of petroleum hydrocarbons.

A copy of this report should be provided to Ms. Eva Chu, Environmental Health Specialist with the Alameda County Department of Environmental Health.

We appreciate the opportunity to be of continued service to you on this project. If you have any questions, please contact our office.

Very truly yours,

ENGEO INCORPORATED

Eric Harrell
Project Environmental Geologist

Reviewed by:

Brian Flaherty
CEG 1256

cc: 4 - Client

REPORT

to

LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT

LIVERMORE, CALIFORNIA

on the

UNDERGROUND STORAGE TANK SITE CLOSURE

for the

TRANSPORTATION FACILITY MAINTENANCE YARD
2801 AND 2900 LADD AVENUE

LIVERMORE, CALIFORNIA

ENGEO INCORPORATED N2-3174-F4

AUGUST 31, 1992

TABLE OF CONTENTS

INTRODUCTION

Site History

The subject facilities are located at 2801 and 2900 Ladd Avenue in Livermore, California (Figure 1). The site at 2801 Ladd Avenue contains a 2,000-gallon steel underground gasoline storage tank with associated piping and dispenser (Figure 2). We understand from conversations with District personnel that this tank has passed pressure and integrity testing. No subsurface exploration of the soil or ground water in the area of the underground tank had been previously conducted.

The facility at 2900 Ladd Avenue includes an operations building, a maintenance yard, fuel dispensing pumps, associated underground piping and vents, and three fiberglass underground fuel storage tanks (Figure 3). The underground tank complex consists of 6,000-gallon regular gasoline, 6,000-gallon low-lead gasoline and 10,000-gallon diesel fuel storage tanks. The tanks are located within a common excavation and are attached to a concrete hold-down pad. The tank and fuel pump area are surfaced with asphalt and concrete respectively.

The regular gasoline tank located at 2900 Ladd Avenue failed a precision test in 1990. In order to prepare a preliminary assessment of possible soil contamination, a limited subsurface investigation was undertaken (Reference 1). Soil samples were collected from adjacent to the 6,000-gallon regular unleaded gasoline tank. Laboratory testing of the soils exposed total petroleum hydrocarbons (TPH) as gasoline at concentrations of 2,300 ppm at 14 feet and 1,500 ppm at 17 feet. These gasoline concentrations exceeded the Regional Water Quality Control Board (RWQCB) guideline level of 100 ppm for TPH in soil. We understand that an *Underground Storage Tank Unauthorized Release Report* was prepared.

ENGEO Incorporated conducted a soil and ground-water study of the area around the tank complex in December, 1990. A ground-water monitoring well placed adjacent to the underground tanks exposed soil and ground-water contamination. Laboratory testing found significant soil contamination from 15 to 40 feet beneath the ground surface in the area of the tanks. Ground-water samples contained concentrations of benzene at 63 parts per billion (ppb).

Ground-water sampling of the monitoring well was conducted in September 1991 and July 1992 and is documented in References 3 and 4 respectively. Gasoline and BTXE were not detected in a ground-water sample obtained in September 1991. Laboratory analysis of the ground-water sample recovered in July 1992 detected 50 ppb gasoline and 17 ppb benzene. The measured ground-water surface had dropped 15.2 feet to 59.0 feet below the ground surface between the December 1990 and September 1991. The ground-water level rose 6.4 feet to a depth of 52.6 feet beneath the ground surface between September 1991 and July 1992.

The installation dates of the four underground storage tanks are unknown. It is our understanding that the 2,000-gallon gasoline tank was last used in April 1992. The 6,000-gallon regular gasoline tank, 6,000-gallon unleaded gasoline tank and 10,000-gallon diesel tank were last used in November 1990, April 1992 and June 1992, respectively. Product in the tanks had been pumped and drained to the extent feasible using the existing dispensing equipment. At the time of the exploratory drilling program in December 1990, the westernmost of the fiberglass tanks was punctured by the drill rig. Approximately 3 to 4 yards of pea gravel backfill emptied into the tank.

Based on the results of the limited soil investigation, ENGEO recommended that the underground tanks be removed in accordance with Alameda County regulations. Decommissioning of the monitoring well was undertaken on July 9, 1992, since the well location

was within the limits of the proposed tank excavation. A permit to decommission the well was obtained from Alameda County Zone 7 Flood Control District.

Scope of Services

ENGEO's scope of work for this project included the following:

- Permitting and Set-Up

  Preparation of permits required by The City of Livermore Fire Department and the Alameda County Health Care Agency - Department of Environmental Health with notification of the Bay Area Air Quality Management District. Preparation of the site specific health and safety plan.

- Soil and Ground-Water Sampling

  Soil samples from beneath the tanks were collected following the guidelines contained in the Tri-Regional Board Staff Recommendations For Preliminary Evaluation and Investigation of Underground Tanks (August 1990). As a minimum, two soil samples were collected from beneath each tank to satisfy the Regional Water Quality Control Board guidelines. In addition one soil sample was collected for every 20 lineal feet of piping.

- Laboratory Analyses

  The two soil samples collected from beneath each gasoline tank were tested for Total Petroleum Hydrocarbons as gasoline and for Benzene, Toluene, Xylene and Ethylbenzene (BTXE); (EPA Test Method 5030/8015 & 8020) and lead. The two soil samples collected from beneath the diesel tank were tested for Total Extractable Petroleum Hydrocarbons (EPA Test Method 3510/8015) and BTXE. Composite samples from the soil stockpiles were tested for both volatile and extractable hydrocarbons and lead.

- Documentation and Report Preparation

  Preparation of this site closure report with documentation of sampling/analysis, manifests and permits.

UNDERGROUND STORAGE TANK REMOVAL

Permitting/Health and Safety

Prior to the initiation of the field work, permits were submitted to and approved by the Alameda County Health Care Services Agency - Department of Environmental Health and subsequently submitted to the Livermore Fire Department for their approval. The Underground Tank Closure Plan was approved by Alameda County on July 17, 1992, and the Livermore Fire Department on August 3, 1992. The Bay Area Air Quality Management District was notified prior to the removal of the underground storage tanks. Copies of the permit and notifications are included in Appendix D. A site specific health and safety plan was prepared prior to work activities.

Tank Removal Services

Ms. Eva Chu, Environmental Health Specialist with Alameda County, was on site to witness the UST removal and to inspect the exposed tanks. Prior to the arrival of Ms. Chu, the asphalt/cement cover was removed along with a portion of the backfill to expose the four underground storage tanks and associated piping. A copy of the Alameda Inspection Report is included in Appendix D.

On August 4, 1992 a vacuum truck was used to remove approximately 450 gallons of water and petroleum hydrocarbons from the four USTs. The tanks were rinsed with water from a high pressure washer at the time the fluids were pumped from the tanks. This water was removed for recycling under a uniform hazardous waste manifest by Waste Oil Recovery. A copy of the manifest is included in Appendix D.

On August 5, 1992, the 6,000-gallon leaded gasoline tank was removed from the tank excavation. This work included the removal of the south end of the tank in order to remove

pea gravel from the tank cavity. The gravel entered the tank from the puncture caused during the 1990 soil and ground-water investigation. Approximately 3 to 4 yards of pea gravel was removed from the UST and placed on plastic in the maintenance yard.

The tanks were purged of residual vapors by placing 150 pounds of dry ice in the 10,000-gallon diesel UST, 100 pounds of dry ice in the 6,000-gallon unleaded gasoline tank and 50 pounds of dry ice in the 2,000-leaded gasoline tank. Since the end of the 6,000-gallon leaded gasoline tank had been removed, no dry ice was needed. The UST atmospheres were monitored with a combustible gas indicator before and after purging. Inspector Danielle Stephini from the Livermore Fire Department witnessed the monitoring of the USTs with the combustible gas meter.

The three USTs at 2900 Ladd Avenue were constructed of single walled fiberglass surrounded by a pea-sized gravel backfill and were attached to a concrete hold down pad. The 10,000-gallon diesel tank was approximately 7 feet in diameter with a length of 30 feet. The 6,000-gallon gasoline tanks were 7 feet in diameter and approximately 19 feet in length. The concrete pad is situated at a depth of 11.5 feet.

Three holes were visible in the 6,000-gallon leaded gasoline tank. Two of the holes in the southern portion of the tank could be attributed to the puncture of the UST during a 1990 soil and ground-water study. The UST had been emptied of gasoline prior to the drilling incident. A hole observed in the northern end of the tank was caused during the backfill excavation. No holes were observed in the 6,000-gallon unleaded tank or the 10,000-gallon diesel tank. Soil staining was evident around the fill pipe end of the diesel tank.

Native soil at the perimeter of the excavation consisted of a gravelly clay. A slight petroleum odor with elevated OVM readings was noted in the native soil at the northern ends of both the diesel tank and the leaded gasoline tank. No free ground water was encountered in the excavation.

No soil discoloration or elevated PID levels were noted along the product lines extending from the tanks to the pumps. Product lines were situated approximately 3 feet beneath the ground surface. Some soil staining was visible directly beneath the diesel pump and the regular unleaded gasoline pump.

The 2,000-gallon tank had a diameter of approximately 60 inches and was about 8 feet in length. The tank was constructed of single walled steel which was deeply pitted. A pin hole was observed on the east end of the tank. The steel tank did not have a protective coating or wrap. The base of the tank was 10.5 feet beneath the existing ground surface.

Following their removal, the tanks were loaded onto two flat bed transports and shipped to Erickson Inc. for processing. A copy of the uniform hazardous waste manifest for the tank is included in Appendix D.

Soil Sampling and Laboratory Analyses

At the time of the tank removal, soil samples were recovered from the native soil below the tanks, piping and dispensing pumps. The two soil samples collected from beneath each gasoline tank were tested for Total Petroleum Hydrocarbons as gasoline and for benzene, toluene, xylene and ethylbenzene (BTXE); (EPA Test Method 5030/8015 & 8020) and lead. The two soil samples collected from beneath the diesel tank were tested for Total Extractable Petroleum Hydrocarbons (EPA Test Method 3510/8015) and BTXE. Soil samples from beneath the piping and from the soil stockpiles were tested for both volatile and extractable hydrocarbons and lead. Soil samples from beneath the diesel pump were analyzed for TPHD and BTXE. Soil samples from beneath the gasoline pumps were analyzed for TPHG, BTXE. The soil samples beneath the leaded gasoline pump were also tested for lead. Soil samples were collected approximately 1 foot into native soils beneath the dispensing pumps.

Sampling locations were selected after consultation with Ms. Chu of the Alameda County Department of Environmental Health and are shown on Figures 2 and 3.

Gasoline impact was reported in the soil samples collected from beneath the north end of the 6,000-gallon leaded gasoline tank and beneath the unleaded gasoline pump. Diesel was detected at the north end of the diesel tank and beneath the diesel pump. Table I summarizes the test results which were above the laboratory detection limits for soil samples collected from beneath the USTs, product lines and fuel pumps.

TABLE I
Laboratory Test Results
(Concentrations in milligram per kilogram (ppm))

Sample Number	Depth (feet)	Gasoline	Diesel
T1-1N	12.0	---	37
T4-1N	11.5	1,200	---
DP-1	3.75	---	46
RULP-1	3.5	3.0	---

At the request of Ms. Chu additional excavation was undertaken beneath the diesel and unleaded fuel dispensing pumps. Eva Chu noted a petroleum odor and discolored soil beneath these two pumps and was concerned about the potential for soil impact. On August 27, 1992, additional excavation was undertaken beneath the two dispensing pumps. Soil discoloration appeared to be limited to the area immediately adjacent to the pea-gravel backfill. PID readings decreased significantly beneath the area of discolored soil.

Ms. Eva Chu directed that one discreet sample be submitted for laboratory analysis from every 20 cubic yards of soil which will be used as backfill in the excavation. One sample for every 50 cubic yards of gravel backfill was also submitted for laboratory testing. Five samples were recovered from the approximately 250 cubic yards of gravel stockpiled from the tank excavation and two soil samples were collected from the approximately 40 cubic

yards of excavated soil. The 40 cubic yards of soil consisted of 20 cubic yards from the tank excavation at 2801 Ladd Avenue and 20 yards from beneath the pumps and product lines at 2900 Ladd Avenue.

The laboratory test results are presented in Table II. No gasoline or BTXE was detected in the samples submitted for laboratory analysis. Diesel was detected in three of the five gravel samples. Gravel sample S4A was obtained from the same stockpile as S-4 at the request of Ms. Eva Chu. Ms. Chu was concerned about the level of diesel exposed from sample S-4 and requested a second sample be collected to verify levels found in the initial analysis.

A copy of the laboratory test reports are included in Appendix C.

TABLE II
Stockpile Sampling Laboratory Test Results
(Concentrations in milligram per kilogram (ppm))

Sample Number	Diesel
S-2	3.5
S-4	24
S-4A	1.5*
S-6	4.8

*Unknown hydrocarbons in late diesel range quantified as diesel.

DISCUSSION WITH RECOMMENDATIONS

Soil and ground-water sampling conducted at 2900 Ladd Avenue, prior to the underground storage tank removal activities, exposed gasoline in the soil at a maximum concentration of 2,700 ppm at a depth of 36 feet. The soil sampling location was situated adjacent to the 6,000-gallon leaded gasoline UST. The boring from which the soil sample was recovered was subsequently converted to a ground-water monitoring well (Figure 3). Laboratory analysis of ground-water samples from monitoring well MW1 exposed levels of benzene ranging from nondetectable to 63 ppb. In three ground-water sampling events, a measured rise in the ground-water surface corresponded to an increase in gasoline and BTXE concentration detected in the ground water. The ground water surface ranged from 43.8 to 59.0 feet beneath the ground surface between December 1990 and July 1992. The monitoring well was decommissioned prior to removal of the USTs.

Conformation soil samples taken from beneath the USTs, fuel product lines and pumps were below 100 ppm petroleum hydrocarbons with the exception the north end of the 6,000-gallon leaded gasoline storage tank. Laboratory analysis of soil sample T4N recovered from the north end of the 6,000-gallon leaded gasoline tank detected gasoline at 1,200 ppm. The Regional Water Quality Control Board uses 100 ppm as a guideline for determining the need for addition soil and ground-water characterization.

Seven discreet samples were recovered from the stockpiled soil and gravel at 2900 Ladd Avenue. After consultation with Ms. Eva Chu the excavated material was used to backfill the excavation.

A pin-hole was visible in the 2,000-gallon steel gasoline tank removed from 2801 Ladd Avenue. No gasoline or BTXE was detected in the confirmation samples or in the discreet stockpile soil sample. No field observations or screenings with the OVM indicated a release

of gasoline from the UST. The information obtained to date indicates that the 2801 Ladd Avenue UST site requires no further action.

Based on the soil and ground-water sampling, laboratory analyses and observations compiled prior to and during the tank removal operations Alameda County may require an additional soil and ground-water investigation to determine the extent of soil and/or ground-water contamination at 2900 Ladd Avenue. The soil investigation could include a number of soil borings with field screening and collection of soil samples for laboratory testing to determine the lateral and vertical extent of gasoline impacted soil. The magnitude and extent of ground-water impact could be determined with the installation of one or more ground-water monitoring wells within the area of the former leaded gasoline underground storage tank. Based on the results of the soil and ground-water sampling, monitoring and/or remediation alternatives could be implemented.

LIMITATIONS

It should be recognized that the recommendations presented in this report were made with an incomplete knowledge of conditions present. The scope of our services included the observation of the removal of the underground tanks and piping; collection of soil samples from beneath USTs, piping and dispensing pumps to satisfy regulatory requirements; collection of soil samples form the stockpiled soil and gravel to satisfy Alameda County requirements and preparation of this report documenting the work performed.

Visual observations referenced in this report are intended only to represent site conditions on August 6 and 27, 1992. The field services completed at this site were performed to assess specific soil conditions at the points of collection. Soil samples collected for this study represent that portion of the substrata encountered. The test results presented within this report reflect only the laboratory analyses performed on selected soil samples. These results do not reflect the presence of organic or inorganic substances which were not analyzed or included in the reported laboratory analyses.

It is recognized and agreed that ENGEO has assumed responsibility only for conducting the assessment and reporting the results and conclusions to the Client. The responsibility for disclosures or reports to third parties and for remedial or mitigative action, shall be solely that of the Client. ENGEO agrees not to provide a report to any third party not legally required, unless authorized by the Client.

ENGEO Incorporated has prepared this report for the exclusive use of our client, Livermore Valley Joint Unified School District. This assessment was performed in accordance with the standard of practice in Northern California in 1992. No other warranties, expressed or implied, as to the services provided are made.

REFERENCES

1. BSK and Associates; Soil Boring/Sampling and Chemical Testing, Existing Underground Gasoline Tank, Bus Maintenance Yard, 2900 Ladd Avenue, Livermore, California; August 10, 1990.

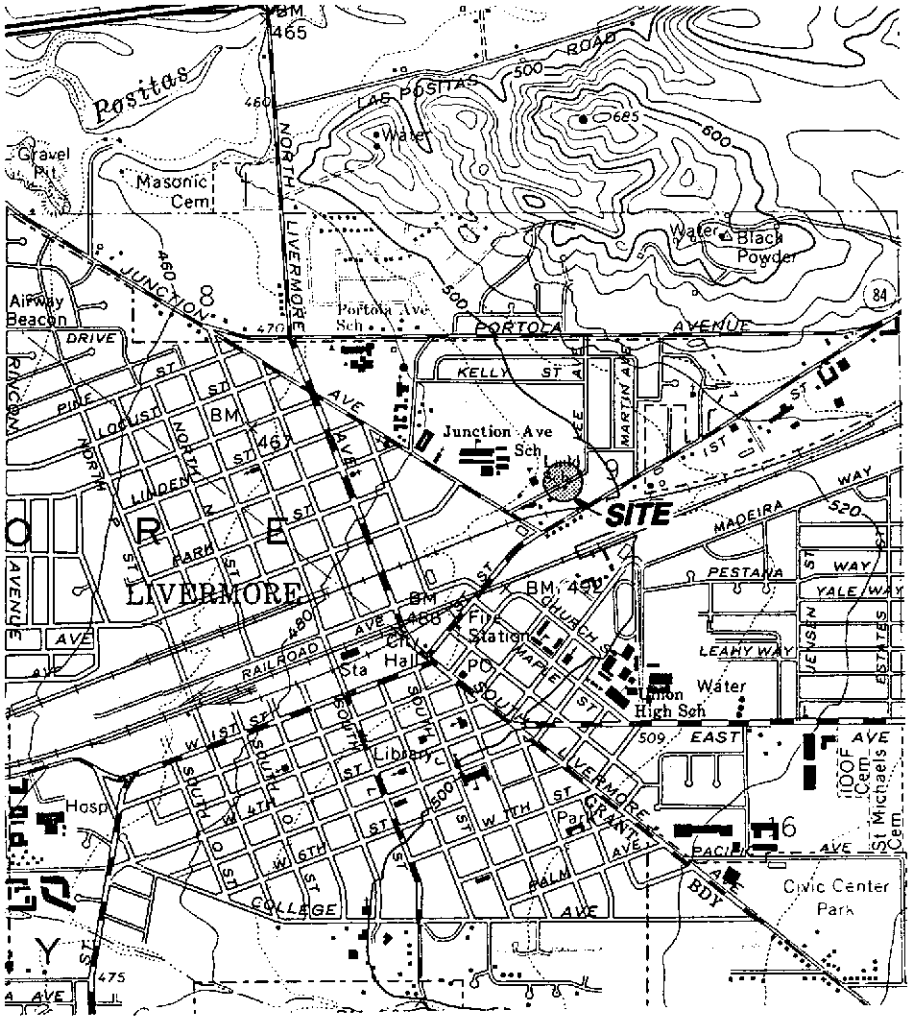
2. ENGEO Inc.; Soil and Ground-Water Study, Transportation Facility, 2900 Ladd Avenue, Livermore, California; September 3, 1991.

3. ENGEO Inc.; Report on Ground-Water Sampling, 2900 Ladd Avenue, Livermore, California; September 13, 1991.

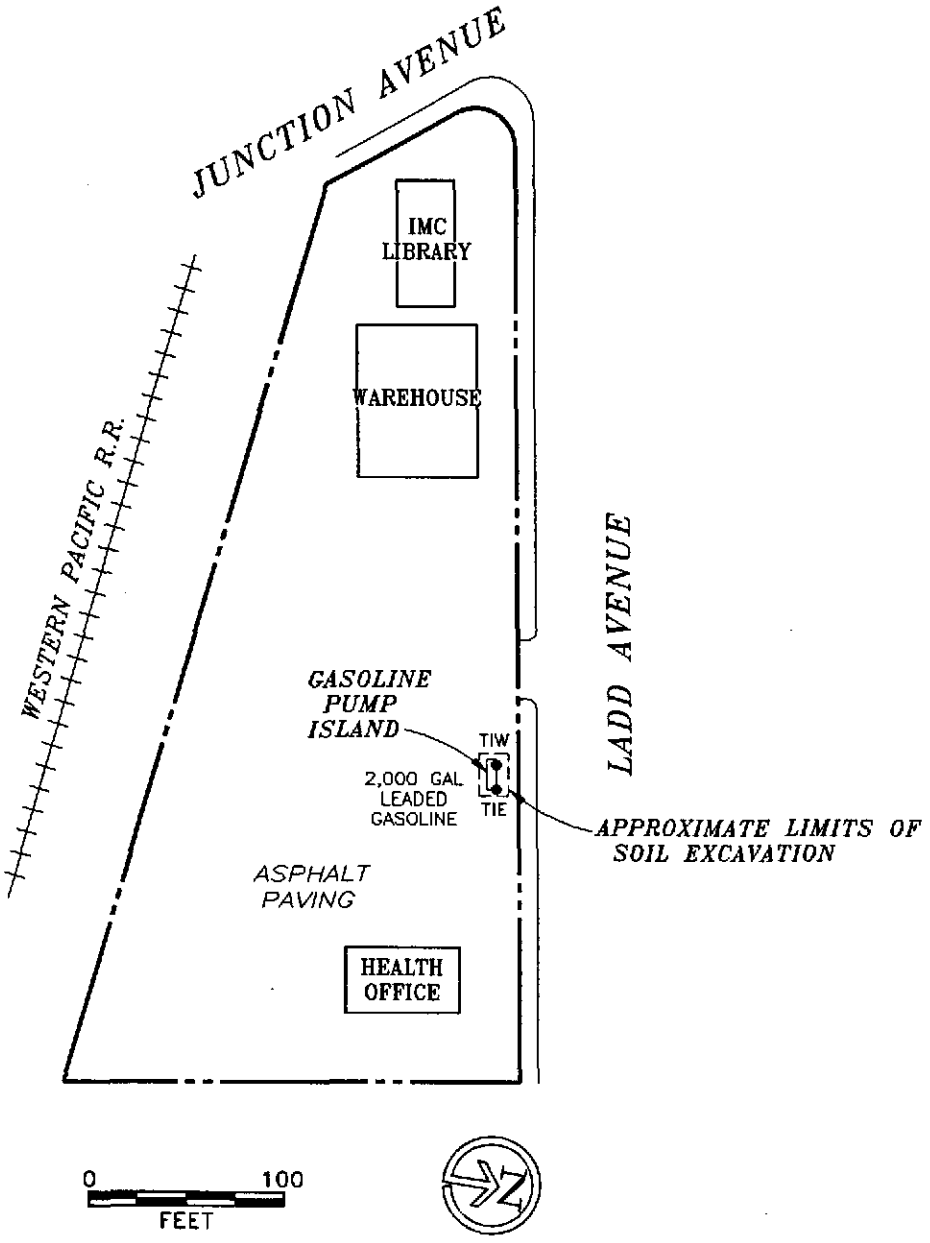
4. ENGEO Inc.; Report on Ground-Water Sampling and Well Destruction, 2900 Ladd Avenue, Livermore, California; July 28, 1992.

APPENDIX A

Figure 1	Site Location
Figure 2	Site Plan with Sampling Locations - 2801 Ladd Avenue
Figure 3	Site Plan with Sampling Locations - 2900 Ladd Avenue

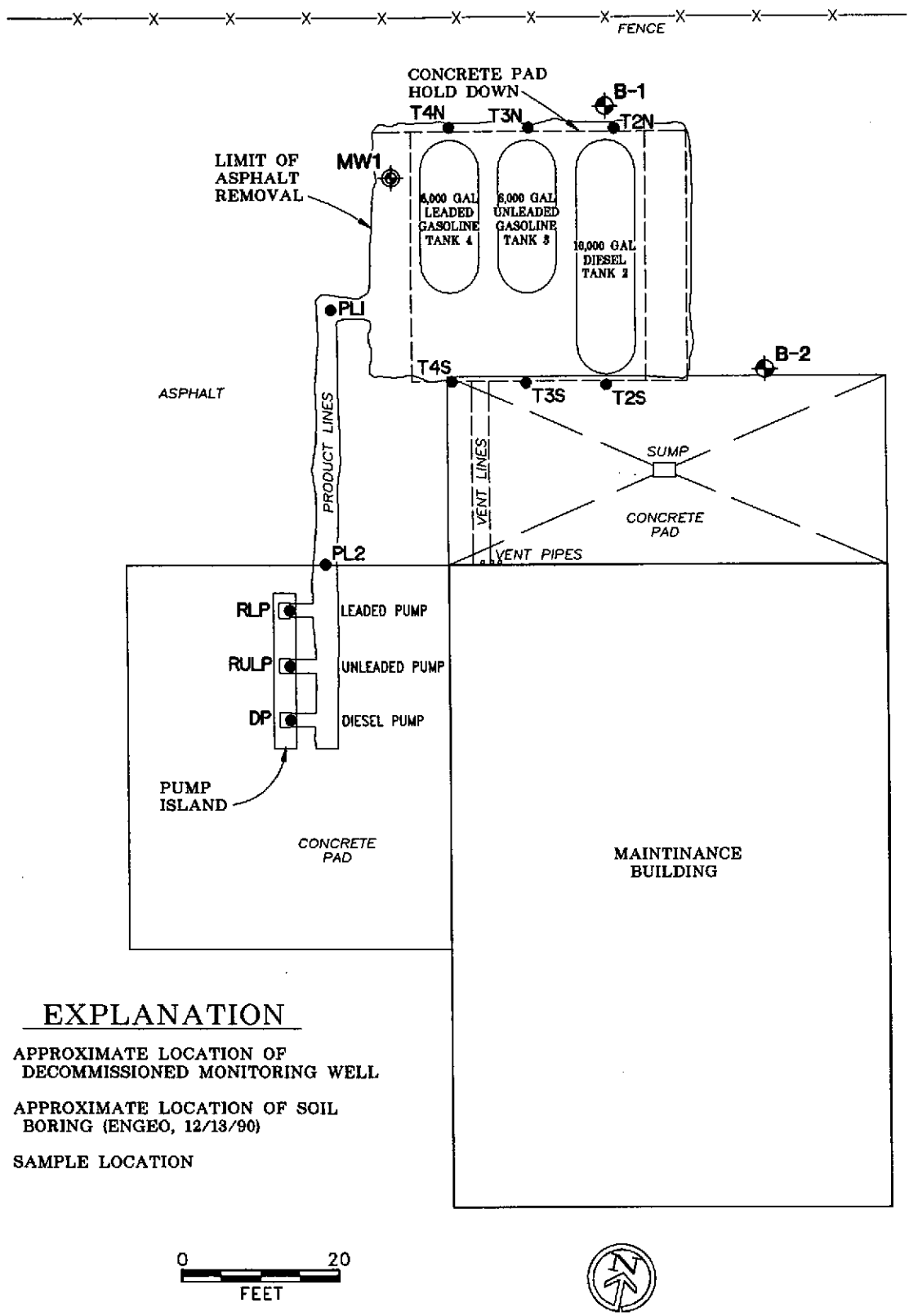


ENGEO INCORPORATED	SITE LOCATION MAP L.V.J.U.S.D. MAINTENANCE YARD 2801, 2900 LADD AVENUE LIVERMORE, CALIFORNIA	JOB NO.: N2-3174-F4 DATE: AUGUST 1992 DRAWN BY: DS / CHECKED BY: RF	FIGURE NO. 1



• SAMPLE LOCATION

ENGEO INCORPORATED	SITE PLAN WITH SAMPLING LOCATIONS L.V.J.U.S.D. MAINTENANCE YARD 2801 LADD AVENUE LIVERMORE, CALIFORNIA	JOB NO.: N2-3174-F4 DATE: AUGUST 1992 DRAWN BY: DS CHECKED BY: RE	FIGURE NO. 2



ENGEO INCORPORATED	SITE PLAN WITH SAMPLING LOCATIONS L.V.J.U.S.D. MAINTENANCE YARD 2900 LADD AVENUE LIVERMORE, CALIFORNIA	JOB NO.: N2-3174-F4 DATE: AUGUST 1992 DRAWN BY: CS / CHECKED BY: RF	FIGURE NO. 3

APPENDIX B

SAMPLING INFORMATION FORMS
CHAIN-OF-CUSTODY DOCUMENTS

ENGEO INCORPORATED
SOIL SAMPLING INFORMATION

Date: August 6, 1992
Job Number: N2-3174-F4
Location: Livermore, California

By: Eric Harrell
Job Name: LVJUSD UST Removal
Client: L.V.J.U.S.D.

DRILLING INFORMATION

Drilling Contractor: Minter and Fahey
Auger Type: Excavation
Hole Diameter: - - -

License # - - -
Sampler Type: slide hammer

SAMPLE INFORMATION

Decon Procedure: TSP X
Solvent

Dist. H_2O X
Acid

Sample	Time	Size	Test	Comments - Depth (feet)
T1-1E	11:40	2"X6"	TPHG, BTXE, LEAD	12.0
T1-1W	11:45	2"X6"	TPHG, BTXE, LEAD	12.0
T2-1N	12:07	2"X6"	TPHD, BTXE	11.5
T2-1S	14:00	2"X6"	TPHD, BTXE	12.0
T3-1N	12:25	2"X6"	TPHG, BTXE	11.5
T3-1S	13:50	2"X6"	TPHG, BTXE	12.0
T4-1N	12:40	2"X6"	TPHG, BTXE, LEAD	11.5
T4-1S	13:31	2"X6"	TPHG, BTXE, LEAD	12.0
PL-1	14:21	2"X6"	TPHG, TPHD, BTXE	4.0
PL-2	14:34	2"X6"	TPHG, TPHD, BTXE	4.0
DP1	15:05	2"X6"	TPHD, BTXE	3.75
RULP-1	15:24	2"X6"	TPHG, BTXE	3.5
RLP-1	15:34	2"X6"	TPHG, BTXE, LEAD	3.75

TPHG - Total Petroleum Hydrocarbons as Gasoline.

TPHD - Total Petroleum Hydrocarbons as Diesel.

BTXE - Benzene, Toluene, Xylenes and Ethyl Benzene.

ENGEO INCORPORATED
SOIL SAMPLING INFORMATION

Date: August 17, 1992
Job Number: N2-3174-F4
Location: Livermore, California

By: Eric Harrell
Job Name: LVJUSD UST Removal
Client: LVJUSD

DRILLING INFORMATION

Drilling Contractor: - - -
Auger Type: Hand Auger
Hole Diameter: 3.0

License # - - -
Sampler Type: 2.0 inch slide hammer

SAMPLE INFORMATION

Decon Procedure: TSP X Solvent ____ Dist. H_2O X Acid ____

Sample	Time	Size	Test	Comments
S-1	16:07	2"X6"	TPHG, BTXE	Soil-2801 Ladd Ave.
S-2	16:30	2"X6"	TPHG, TPHD, BTXE	Gravel-UST 2
S-3	16:31	2"X6"	TPHG, TPHD, BTXE	Gravel-UST 3
S-4	16:37	2"X6"	TPHG, TPHD, BTXE	Gravel-UST 4
S-5	16:40	2"X6"	TPHG, TPHD, BTXE	Gravel-E stockpile
S-6	16:45	2"X6"	TPHG, TPHD, BTXE	Gravel-W stockpile
S-7	16:48	2"X6"	TPHG, TPHD, BTXE	Soil-Pumps, Piping

TPHG - Total Petroleum Hydrocarbons as Gasoline.
TPHD - Total Petroleum Hydrocarbons as Diesel.
BTXE - Benzene, Toluene, Xylenes and Ethyl Benzene.

ENGEO INCORPORATED
SOIL SAMPLING INFORMATION

Date: August 27, 1992
Job Number: N2-3174-F4
Location: Livermore, California

By: Eric Harrell
Job Name: LVJUSD UST Removal
Client: LVJUSD

DRILLING INFORMATION

Drilling Contractor: - - -
Auger Type: Hand Auger
Hole Diameter: 3.0 inch

License # - - -
Sampler Type: 2.0 inch slide hammer

SAMPLE INFORMATION

Decon Procedure: TSP X
Solvent
Dist. H_2O X
Acid

Sample	Time	Size	Test	Comments
S-4A	8:07	2"X6"	Total Petroleum Hydrocarbons as Diesel	Gravel- UST 4

CHROMALAB FILE # 892044
ORDER # 7291

ENGEO INCORPORATED
2401 CROW CANYON ROAD, SUITE 200
SAN RAMON, CA 94583-1545

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: N2-3174-F4
PROJECT NAME: LVJUSD UST Removal
SAMPLED BY: (SIGNATURE) Eric Harrell

SAMPLE NUMBER	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	CONTAINER SIZE	PRESERVATIVE	TPH – GASOLINE (EPA 8015/5030)	TPH – DIESEL (EPA 8015/3550/3510)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240)	BASE/NEUTRALS, ACIDS (EPA 625,8270)	TOTAL OIL & GREASE (SMWW 5520(F))	OC PESTICIDES/PCB (EPA 608, 8080)	OP PESTICIDES (EPA 614/8140)	TITLE 26 METALS (17)	PRIORITY METALS (13)	Total LEAD					REMARKS REQUIRED DETECTION LIMITS
T1-1E	8-6-92	11:40	soil	1	2"x6"	ice	X		X									X					
T1-1W	8-6-92	11:45	soil	1	2"x6"	ice	X		X									X					
T2-1N	8-6-92	12:07	soil	1	2"x6"	ice		X	X														
T2-1S	8-6-92	14:00	soil	1	2"x6"	ice		X	X														
T3-1N	8-6-92	12:25	soil	1	2"x6"	ice	X		X														
T3-1S	8-6-92	13:50	soil	1	2"x6"	ice	X		X														
T4-1N	8-6-92	12:40	soil	1	2"x6"	ice	X		X									X					
T4-1S	8-6-92	13:31	soil	1	2"x6"	ice	X		X									X					
PL-1	8-6-92	14:21	soil	1	2x6"	ice	X	X	X														
PL-2	8-6-92	14:34	soil	1	2x6"	ice	X	X	X														
DP-1	8-6-92	15:05	soil	1	2"x6"	ice		X	X														
RLP1	8-6-92	15:24	soil	1	2"x6"	ice	X		X														
RLP-1	8-6-92	15:34	soil	1	2"x6"	ice	X		X									X					

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Eric Harrell	8-6-92 17:15				
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	
		[signature]	8/6/92 1715	5-day TAT – LUFT Detection Limits.	

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2401 CROW CANYON ROAD, SUITE 200
SAN RAMON, CALIFORNIA 94583
PHONE (510) 838-1600

HAIN OF CUSTODY RECORD

PROJECT NUMBER	PROJECT NAME
N2-3174-F4	LVJUSD UST Removal

SAMPLED BY: (SIGNATURE) Eric Harrell

SAMPLE NUMBER	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	CONTAINER SIZE	PRESERVATIVE	TPH – GASOLINE (EPA 8015/5030)	TPH – DIESEL (EPA 8015/3550/3510)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240)	BASE/NEUTRALS, ACIDS (EPA 625,8270)	TOTAL OIL & GREASE (SMWW 5520(F))	OC PESTICIDES/PCB (EPA 608, 8080)	OP PESTICIDES (EPA 614/8140)	TITLE 26 METALS (17)	PRIORITY METALS (13)						REMARKS REQUIRED DETECTION LIMITS
S-1	8-17	16:07	soil	1	2x6"	ice	X		X														
S-2	8-17	16:30	pea gravel	1	2x6"	ice	X	X	X														
S-3	8-17	16:31	pea gravel	1	2x6"	ice	X	X	X														
S-4	8-17	16:32	pea gravel	1	2x6"	ice	X	X	X														
S-5	8-17	16:40	pea gravel	1	2"x6"	ice	X	X	X														
S-6	8-17	16:45	pea gravel	1	2x6"	ice	X	X	X														
S-7	8-17	16:48	soil	1	2x6"	ice	X	X	X														

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
Eric Harrell	8-17-92 17:40	Retah A. Mankin 8-17-92			
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
		Retah A. Mankin 5:40			
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE/TIME	REMARKS	
				5-DAY TAT or FRIDAY P.M. if possible	

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT; COPY TO PROJECT FIELD FILES

CHROMALAB FILE # 892243
ORDER # 7569

ENGEO
INCORPORATED
2401 CROW CANYON ROAD, SUITE 200
SAN RAMON, CALIFORNIA 94583
PHONE (510) 838-1600

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: N2-3174-F4/B
PROJECT NAME: LVJ USD VST Removal
SAMPLED BY: (SIGNATURE) Eric Harrell

SAMPLE NUMBER	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	CONTAINER SIZE	PRESERVATIVE	TPH – GASOLINE (EPA 8015/5030)	TPH – DIESEL (EPA 8015/3550/3510)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240)	BASE/NEUTRALS, ACIDS (EPA 625,8270)	TOTAL OIL & GREASE (SMWW 5520(F).)	OC PESTICIDES/PCB (EPA 608, 8080)	OP PESTICIDES (EPA 614/8140)	TITLE 26 METALS (17)	PRIORITY METALS (13)						REMARKS REQUIRED DETECTION LIMITS
S-4A	8-27-92	8:07	gravel	1	2" x 6"	ice		X															

RELINQUISHED BY: (SIGNATURE) Eric Harrell — DATE/TIME 8-27-92 16:50 — RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE) — DATE/TIME — RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE) — DATE/TIME — RECEIVED FOR LABORATORY BY: (SIGNATURE) Jillie Mallatt — DATE/TIME 8-27-92 16:50

RELINQUISHED BY: (SIGNATURE) — DATE/TIME — RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE) — DATE/TIME — RECEIVED BY: (SIGNATURE)

REMARKS

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT; COPY TO PROJECT FIELD FILES

APPENDIX C

LABORATORY ANALYSIS REPORTS

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

August 13, 1992 ChromaLab File No.: 0892044

ENGEO, INC.

Attn: Eric Harrell

RE: Thirteen soil samples for Gas/BTEX and Diesel analyses

Project Name: LVJUSD UST REMOVAL
Project Number: N2-3174-F4
Date Sampled: Aug. 6, 1992 Date Submitted: Aug. 6, 1992
Date Extracted: Aug. 10-11, 1992 Date Analyzed: Aug. 11-12, 1992

RESULTS:

Sample I.D.	Gasoline (mg/Kg)	Diesel (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)
T1-1E	N.D.	----	N.D.	N.D.	N.D.	N.D.
T1-1W	N.D.	----	N.D.	N.D.	N.D.	N.D.
T2-1N	N.D.	37	N.D.	N.D.	N.D.	N.D.
T2-1S	----	N.D.	N.D.	N.D.	N.D.	N.D.
T3-1N	N.D.	----	N.D.	N.D.	N.D.	N.D.
T3-1S	N.D.	----	N.D.	N.D.	N.D.	N.D.
T4-1N	**1200**	----	**2100**	**4200**	**2400**	**160000**
T4-1S	N.D.	----	N.D.	N.D.	N.D.	N.D.
PL-1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PL-2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
DP-1	----	46	N.D.	N.D.	N.D.	N.D.
RULP-1	3.0	----	N.D.	N.D.	7.4	13
RLP-1	N.D.	----	N.D.	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	95%	101%	84%	115%	105%	107%
DUP.SPIKE REC.	----	94%	82%	111%	103%	103%
METHOD OF ANALYSIS	5030/ 8015	3550/ 8015	8020	8020	8020	8020

ChromaLab, Inc.

Billy Thach
Analytical Chemist

Eric Tam
Laboratory Director

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

August 11, 1992 ChromaLab File No.: 0892044

ENGEO, INC.

Attn: Eric Harrell

RE: Five soil samples for Total Lead analysis

Project Name: LVJUSD UST REMOVAL
Project Number: N2-3174-FA
Date Sampled: Aug. 6, 1992 Date Submitted: Aug. 6, 1992
Date Extracted: Aug. 11, 1992 Date Analyzed: Aug. 11, 1992

RESULTS:

Sample I.D.	Lead (mg/Kg)
RLP-1	12
T1-1E	8.0
T1-1W	7.6
T4-1N	12
T4-1S	8.2

BLANK	N.D.
SPIKE RECOVERY	90%
DUPLICATE SPIKE RECOVERY	89%
DETECTION LIMIT	2.5
METHOD OF ANALYSIS	3050/7420

ChromaLab, Inc.

Jack Kelly
Analytical Chemist

Eric Tam
Laboratory Director

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

August 24, 1992 ChromaLab File No.: 0892139

ENGEO, INCORPORATED

Attn: Eric Harrell

RE: Seven soil/gravel samples for Gas/BTEX and Diesel analyses

Project Name: LVJUSD UST REMOVAL
Project Number: N2-3174-F4
Date Sampled: Aug. 17, 1992 Date Submitted: aug. 17, 1992
Date Extracted: Aug. 20, 1992 Date Analyzed: Aug. 20, 1992

RESULTS:

Sample I.D.	Gasoline (mg/Kg)	Diesel (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)
S-1	N.D.	----	N.D.	N.D.	N.D.	N.D.
S-2	N.D.	3.5	N.D.	N.D.	N.D.	N.D.
S-3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
S-4	N.D.	24	N.D.	N.D.	N.D.	N.D.
S-5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
S-6	N.D.	4.8	N.D.	N.D.	N.D.	N.D.
S-7	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE REC	105%	101%	108%	104%	103%	103%
DUP SPIKE REC	----	101%	102%	98%	98%	98%
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

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 3, 1992 ChromaLab File No.: 0892243

ENGEO, INC.

Attn: Eric Harrell

RE: One soil sample for Diesel analysis.

Project Name: LVJUSD UST REMOVAL
Project Number: N2-3174-F4
Date Sampled: Aug. 27, 1992 Date Submitted: Aug. 27, 1992
Date Extracted: Sept. 2, 1992 Date Analyzed: Sept. 2, 1992

RESULTS:

SAMPLE I.D.	DIESEL mg/Kg
S-4A	1.5*
BLANK	N.D.
SPIKED RECOVERY	81%
DUPLICATE SPIKED RECOVERY	85%
DETECTION LIMIT	1.0
METHOD OF ANALYSIS	3550/ 8015

*Unknown hydrocarbons in late diesel range quantified as diesel.

ChromaLab, Inc.

Yiu Tam
Analytical Chemist

Eric Tam
Laboratory Director

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

APPENDIX D

U.S.T. REMOVAL PERMITS AND MANIFESTS
ALAMEDA COUNTY INSPECTION REPORT
SITE HEALTH AND SAFETY PLAN

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621
PHONE NO. 510/271-4320

Plans approved: Noter concerns noted 7/17/92 AC

ACCEPTED

DEPARTMENT OF ENVIRONMENTAL HEALTH
470 - 27th Street, Third Floor
Oakland, CA 94612
Telephone (415) 874-7237

These plans have been reviewed and found to be acceptable and essentially meet the requirements of State and local health laws. Changes to your plans indicated by this Department are to assure compliance with State and local laws. The project proposed herein is now released for issuance of any required building permits for construction.

One copy of these accepted plans must be on the job and available to all contractors and craftsmen involved with the removal.

Any changes or alterations of these plans and specifications must be submitted to this Department and to the Fire and Building Inspection Department to determine if such changes are in the interests of State and local laws. Notify this Dept. at least 48 hours prior to the following required inspection:

_____ Removal of Tank and Piping
_____ Sampling
_____ Final Inspection

Issuance of a permit to operate is dependent on compliance with accepted plans and all applicable laws and regulations.

THERE IS A PENALTY FOR NOT OBTAINING THESE INSPECTIONS.

UNDERGROUND TANK CLOSURE PLAN

*** * * Complete according to attached instructions * * ***

1. Business Name LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT

   Business Owner MR. Mike White

2. Site Address 2501 and 2900 Ladd Avenue

   City LIVERMORE Zip 94550 Phone 447-9500

3. Mailing Address 685 Las Positas Boulevard

   City Livermore Zip 94550 Phone 447-9500

4. Land Owner Livermore Valley Joint Unified School District

   ~~Address~~ 685 Las Positas Blvd City, State Livermore, CA Zip 94550

5. General Job name under which tank will be manifested _____

   EPA I.D. No. under which tank will be manifested _____

   Ladd Lane: CAC 000865504

   Ladd Lane: CAC 000865512

EPA I.D. No. has been requested 6-26-92.

CITY OF LIVERMORE
CODE ADMINISTRATION AND INSPECTION DIVISION
FIRE PREVENTION BUREAU

These plans/specifications are acceptable based on information shown. They shall not be changed, modified, or altered without authorization from the Fire Marshal, and all work shall be done in accordance with such approved plans/specifications. This acceptance shall not prevent the Fire Marshal from requiring correction of errors, and does not guarantee that all laws, ordinances, regulations, or requirements have been complied with; nor does it permit the violation of any law, ordinance, or regulations.

LETTER OF _____ SEE COMMENTS ☒ on permit

DATE 8/3/92 REVIEWED BY _____

Rev 3/92

6. Contractor Minter and Fahy Construction Company, Inc.

Address 411 North Buchanan Circle

City Pacheco Phone 510-674-8800

License Type* A - HAZ ID# 477315 H

*Effective January 1, 1992, Business and Professional Code Section 7058.7 requires prime contractors to also hold Hazardous Waste Certification issued by the State Contractors License Board. Indicate that the certificate has been received, in addition, to holding the appropriate contractors license type.

7. Consultant Enger Incorporated

Address 2401 Crow Canyon Road Suite 200

City San Ramon Phone 510-838-1600

8. Contact Person for Investigation

Name ERIC HARRELL Title Staff Environmental Geologist

Phone 510-838-1600

9. Number of tanks being closed under this plan 4

Length of piping being removed under this plan Approx. 60 feet

Total number of tanks at facility 4

10. State Registered Hazardous Waste Transporters/Facilities (see instructions).

** Underground tanks are hazardous waste and must be handled ** as hazardous waste

a) Product/Residual Sludge/Rinsate Transporter

Name Waste Oil Recovery EPA I.D. No. CAD000626515

Hauler License No. 0843 License Exp. Date 7/31/93

Address 6401 Leona Street

City Oakland State CA Zip 94605

b) Product/Residual Sludge/Rinsate Disposal Site

Name Waste Oil Recovery EPA I.D. No. CAD000626515

Address 6401 Leona Street

City Oakland State CA Zip 94605

c) Tank and Piping Transporter

Name Erickson Inc EPA I.D. No. CAD094666392

Hauler License No. C019 License Exp. Date 5-31-93

Address 255 Parr Boulevard

City Richmond State CA Zip 94801

d) Tank and Piping Disposal Site

Name Erickson EPA I.D. No. CAD094666392

Address 255 Parr Boulevard

City Richmond State CA Zip 94801

11. Experienced Sample Collector

Name Eric Harrell

Company Engeo Incorporated

Address 2401 Crow Canyon Road, Suite 200

City San Ramon State CA Zip 94583 Phone 510-838-1600

12. Laboratory

Name Chromalab Incorporated

Address 2239 Omega Road, Suite 1

City San Ramon State CA Zip 94583

State Certification No. 1094

13. Have tanks or pipes leaked in the past? Yes [X] No [ ]

If yes, describe. We understand that a 6,000 gallon unleaded gasoline tank failed a precision test conducted in 1990. A subsequent subsurface investigation exposed petroleum hydrocarbons in the soil and groundwater beneath the tank.

14. Describe methods to be used for rendering tank inert

1. Tank will be pumped to remove remaining product.
2. Dry ice will be used to lower the O_2 content of the tank. (15 lbs CO_2 / 1,000 gal capacity,) or per local fire department requirements

Before tanks are pumped out and inerted, all associated piping must be flushed out into the tanks. All accessible associated piping must then be removed. Inaccessible piping must be plugged.

The Bay Area Air Quality Management District (771-6000), along with local Fire and Building Departments, must also be contacted for tank removal permits. Fire departments typically require the use of explosion proof combustible gas meters to verify tank inertness. **It is the contractor's responsibility to bring a working combustible gas meter on site to verify tank inertness.**

15. Tank History and Sampling Information

Tank		Material to be sampled (tank contents, soil, groundwater, etc.)	Location and Depth of Samples
Capacity (GAL)	Use History (see instructions)		
2,000	Installed/Last Used Contents Unknown / 4-92 Regular Gasoline	Soil *	2- beneath the UST a maximum of two feet beneath the native soil/backfill interface.
6,000	Unknown / 11-90 Regular Gasoline	Soil	2- See description above
6,000	unknown / 4-92 Low-Lead Gasoline	Soil	2- See description above
10,000	unknown / 6-92 Diesel	Soil * and groundwater if encountered	2- See description above

One soil sample must be collected for every 20 feet of piping that is removed. A ground water sample must be collected should any ground water be present in the excavation.

Excavated/Stockpiled Soil	
Stockpiled Soil Volume (Estimated) Unknown	Sampling Plan One four-liner-composite will be recovered for every 50 cubic yards of soil/backfill excavated. - if excavated soil is to be reused on site, one(1) discrete soil per every 20 yards^3 is required, N.D. results.

Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.

16. Chemical methods and associated detection limits to be used for analyzing samples

The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits should be followed. See attached Table 2.

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Method Number	Method Detection Limit
Gasoline	5030	8015/DHS method	1.0 ppm
BTEX	5030	8020	0.005 ppm
Diesel	3550	8015/DHS method	1.0 ppm
Lead (total)	AA	6010	

17. Submit Site Health and Safety Plan (See Instructions)

18. Submit Worker's Compensation Certificate copy

Name of Insurer State Compensation Insurance Fund
Contractor is obtaining Workers Comprnsation Cererificate Copy.

19. Submit Plot Plan (See Instructions)

20. Enclose Deposit (See Instructions)

21. Report any leaks or contamination to this office within 5 days of discovery. The report shall be made on an Underground Storage Tank Unauthorized Leak/Contamination Site Report form. (See Instructions)

22. Submit a closure report to this office within 60 days of the tank removal. This report must contain all the information listed in item 22 of the instructions.

I declare that to the best of my knowledge and belief the statements and information provided above are correct and true.

I understand that information in addition to that provided above may be needed in order to obtain an approval from the Department of Environmental Health and that no work is to begin on this project until this plan is approved.

I understand that any changes in design, materials or equipment will void this plan if prior approval is not obtained.

I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Safety and Health Administration) requirements concerning personnel health and safety. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Once I have received my stamped, accepted closure plan, I will contact the project Hazardous Materials Specialist at least three working days in advance of site work to schedule the required inspections.

Signature of Contractor

Name (please type) Matthew W. Minter

Signature Matthew W. Minter

Date June 29, 1992

Signature of Site Owner or Operator

Name (please type) DICK ALFORD

Signature Dick Alford

Date 6/26/92

POLICY NUMBER: #CCP147089
Minter & Fahy

COMMERCIAL GENERAL LIABILITY

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED — OWNERS, LESSEES OR CONTRACTORS (FORM B)

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART.

SCHEDULE

Name of Person or Organization: LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT, OFFICERS, AGENTS & EMPLOYEES

685 E. Jack London Blvd.
Livermore, CA 94550

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

WHO IS AN INSURED (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" for that insured by or for you.

STATE COMPENSATION INSURANCE FUND

P.O. BOX 807, SAN FRANCISCO, CA 94101-0807

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

JUNE 23, 1992

POLICY NUMBER: 1243626 - 92
CERTIFICATE EXPIRES: 4-18-93

LIVERMORE VALLEY - JOINT UNIFIED SCHOOL DIST
685 E - JACK LONDON BLVD.
LIVERMORE CA 94550

This is to certify that we have issued a valid Workers' Compensation insurance policy in a form approved by the California Insurance Commissioner to the employer named below for the policy period indicated.

This policy is not subject to cancellation by the Fund except upon ten days' advance written notice to the employer.

We will also give you TEN days' advance notice should this policy be cancelled prior to its normal expiration.

This certificate of insurance is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies listed herein. Notwithstanding any requirement, term, or condition of any contract or other document with respect to which this certificate of insurance may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.

John A. Kelly

PRESIDENT

EMPLOYER

MINTER & FAHY CONSTRUCTION INC.
411 N. BUCHANAN CIR #2
PACHECO CA 94553

ACORD

CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY): 6/23/92

PRODUCER
River Valley Ins. Assoc.
3841 N. Freeway Blvd.
P.O. Box 340127
Sacramento, CA 95834-0127

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
Minter & Fahy Construction Co.,Inc.
411 North Buckanan Circle, #2
Pacheco, CA 94553

COMPANIES AFFORDING COVERAGE

COMPANY LETTER A: Golden Eagle Insurance
COMPANY LETTER B:
COMPANY LETTER C:
COMPANY LETTER D:
COMPANY LETTER E:

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A	GENERAL LIABILITY X COMPREHENSIVE FORM PREMISES/OPERATIONS UNDERGROUND EXPLOSION & COLLAPSE HAZARD PRODUCTS/COMPLETED OPER. CONTRACTUAL INDEPENDENT CONTRACTORS BROAD FORM PROPERTY DAMAGE PERSONAL INJURY	CCP 147089	7/9/91	7/9/92	BODILY INJURY OCC. BODILY INJURY AGG. PROPERTY DAMAGE OCC. PROPERTY DAMAGE AGG. BI & PD COMBINED OCC. BI & PD COMBINED AGG. PERSONAL INJURY AGG.	$ $ $ $ $ 1,000,000 $ 1,000,000 $
A	AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS (Priv. Pass.) ALL OWNED AUTOS (Other Than Priv. Pass.) X HIRED AUTOS X NON-OWNED AUTOS GARAGE LIABILITY X SPECIFICALLY DESCRIBED VEHICLES	CCP 147089	7/9/91	7/9/92	BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE BODILY INJURY & PROPERTY DAMAGE COMBINED	$ $ $ $ 1,000,000
	EXCESS LIABILITY UMBRELLA FORM OTHER THAN UMBRELLA FORM				EACH OCCURRENCE AGGREGATE	$ $
	WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY				STATUTORY LIMITS EACH ACCIDENT DISEASE--POLICY LIMIT DISEASE--EACH EMPLOYEE	 $ $ $
	OTHER					

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS
FORM #CG 20 10 11 85 ATTACHED.

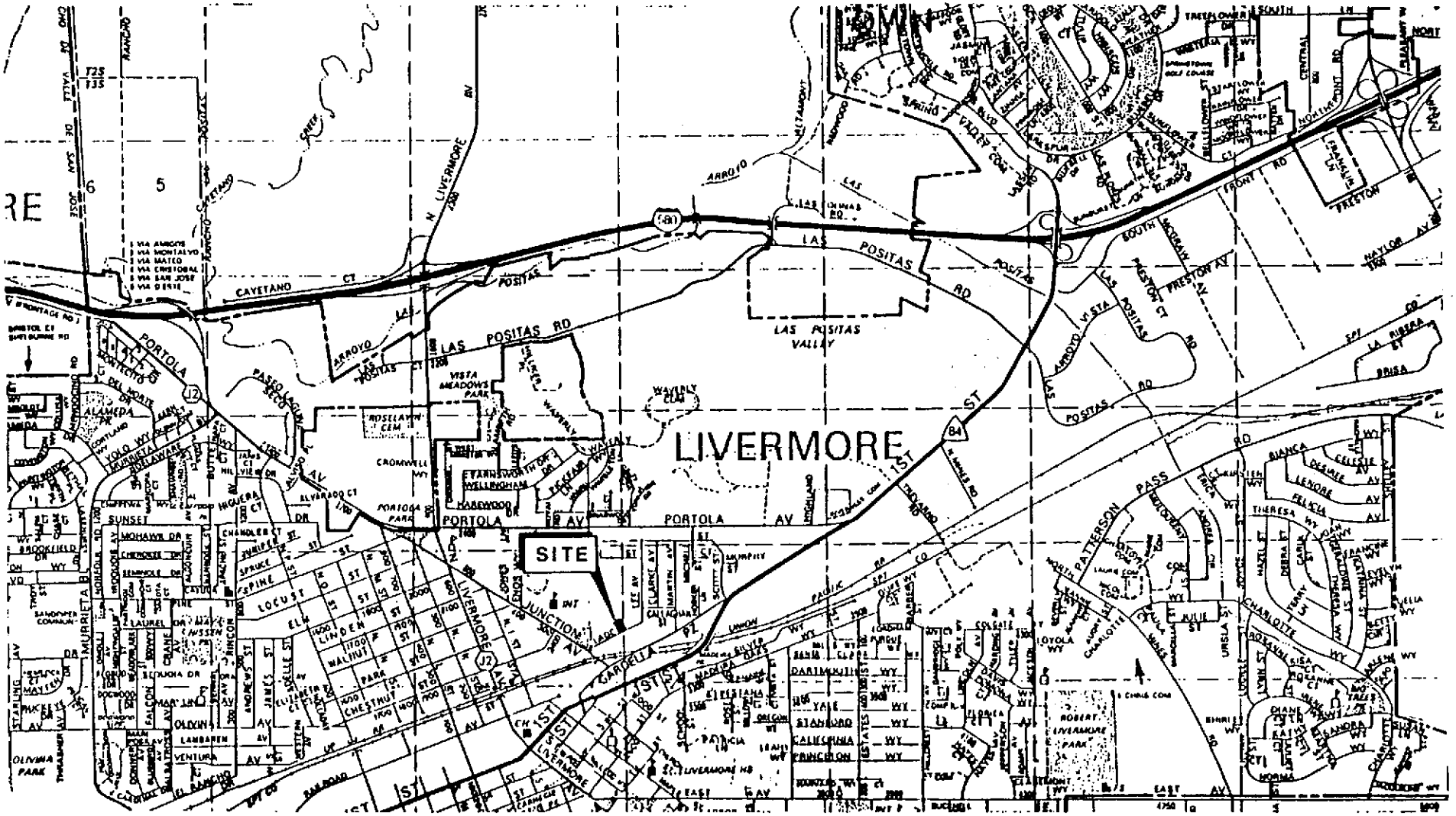
CERTIFICATE HOLDER

Livermore Valley Joint Unified
School District
685 E. Jack London Blvd
Livermore, CA 94550

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE



N

ENGEO INCORPORATED
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

SITE LOCATION

BUS MAINTENANCE YARD, 2908 LADD AVENUE

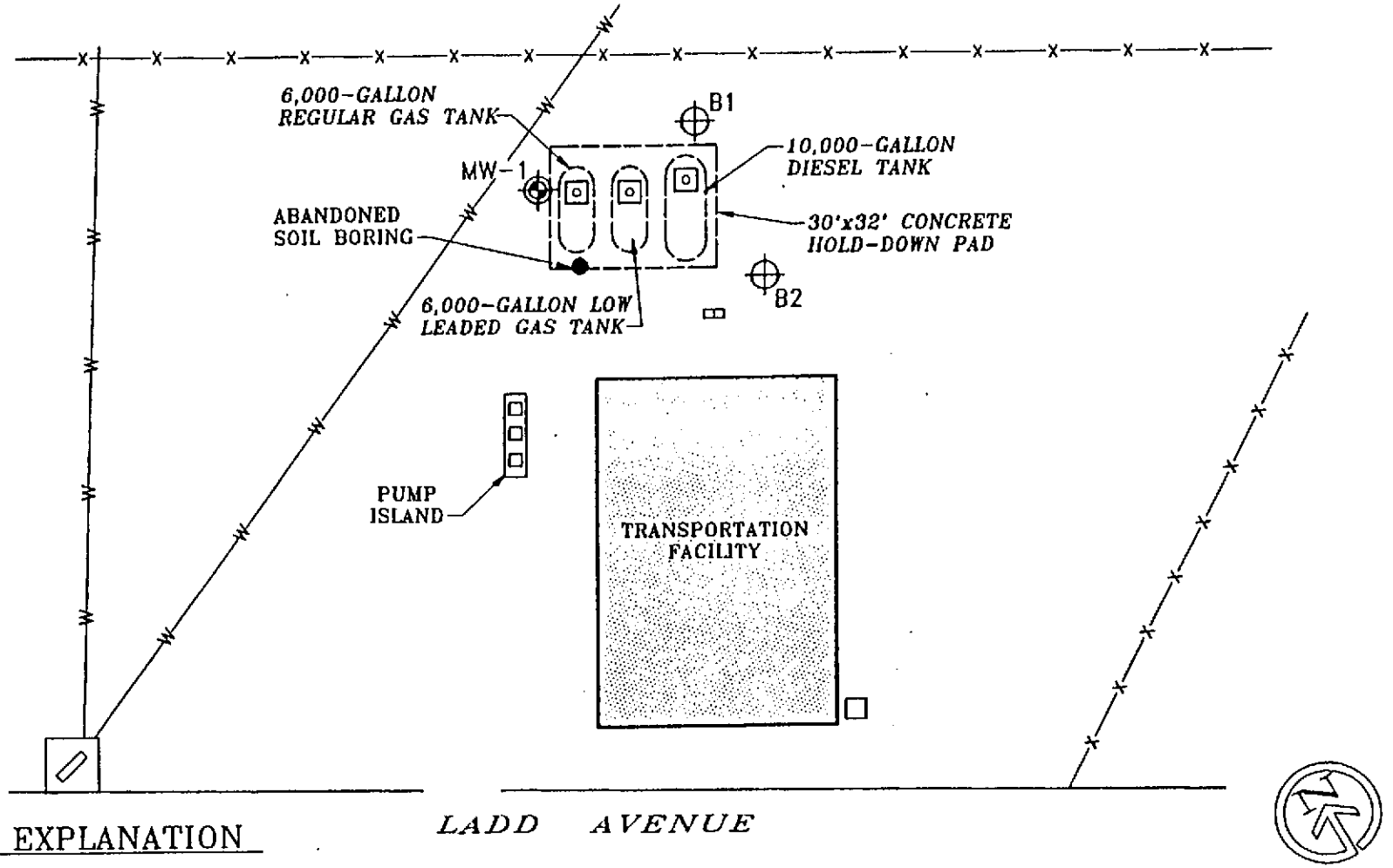
LIVERMORE, CALIFORNIA

SCALE: 1"=2200'

DATE: MARCH 1991

JOB NO. N1-3174-F1

FIGURE NO. **1**



EXPLANATION

MW-1 — APPROXIMATE LOCATION OF GROUNDWATER MONITORING WELL

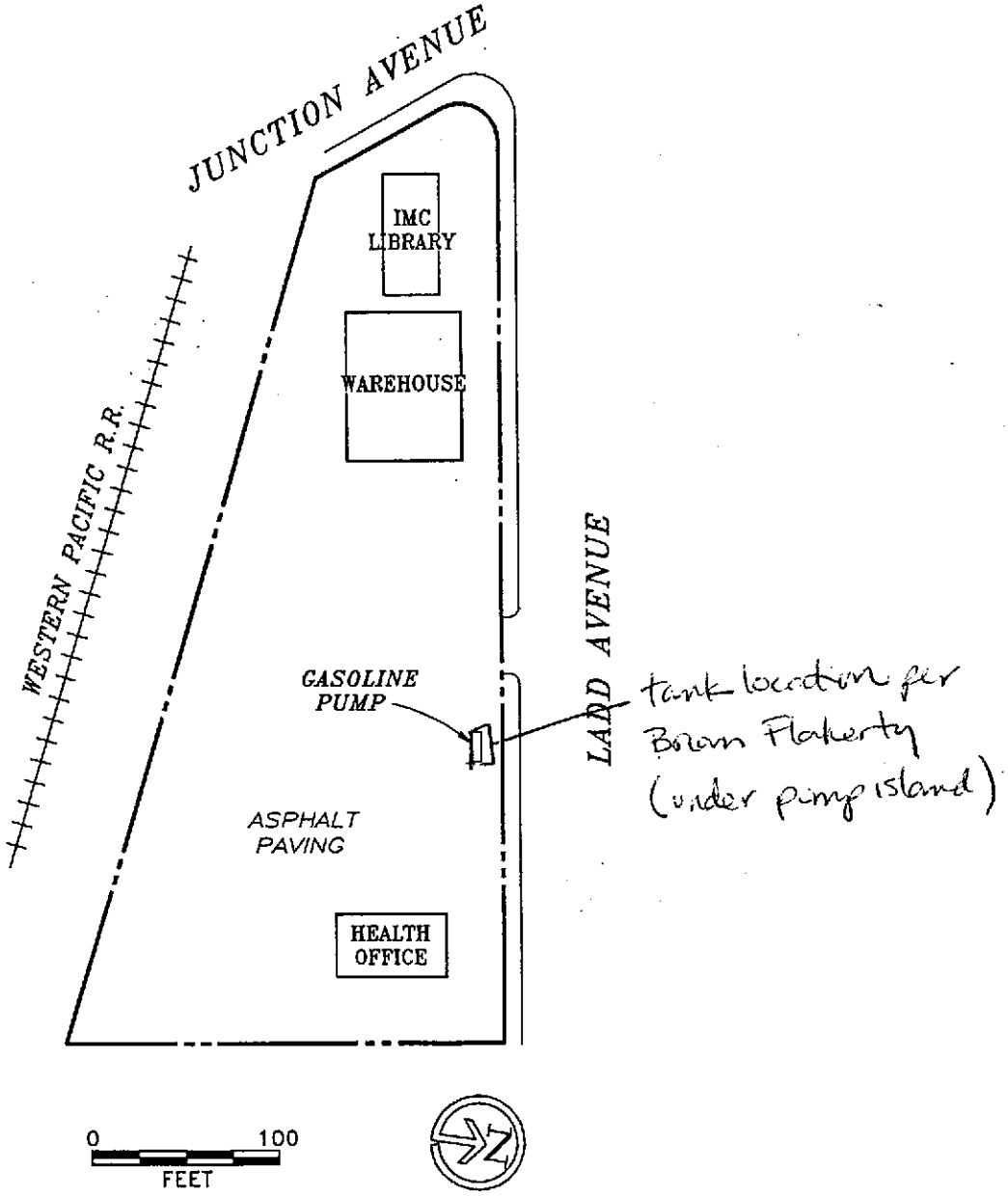
B1 — APPROXIMATE LOCATION OF SOIL BORING

ENGEO INCORPORATED
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

EXISTING UNDERGROUND GASOLINE STORAGE TANKS
BUS MAINTENANCE YARD, 2900 LADD AVENUE
LIVERMORE, CALIFORNIA

SCALE: 1" = Approx. 30'
DATE: APRIL 1992
JOB NO. N2-3174-F3

FIGURE NO. 2



ENGEO INCORPORATED	LOCATION OF 2000 GALLON GASOLINE STORAGE TANK 2801 LADD AVENUE LIVERMORE, CALIFORNIA	JOB NO.: N2-3174-F3 SCALE: AS SHOWN DATE: APRIL 1992	FIGURE NO. 3

CITY of LIVERMORE
LIVERMORE FIRE DEPARTMENT
FIRE PREVENTION BUREAU

AUG - 5

PERMIT NO. 92-088

EFFECTIVE DATE: Aug '92 **EXPIRATION DATE:** Aug '93

Under the provisions of the Uniform Fire Code of the City of Livermore.

Having made application in accordance therewith, a permit is hereby granted for the following:

Removal of Underground Storage Tank

Permit Issued to: *Engeo Incorporated*

Legal Owner of Premises: *Livermore Valley Joint Unified School District*

Address of Premises: *685 E. Jack London Blvd.*

This Permit does not take the place of any license required by the law and is not transferrable. ***Any change in the use or occupancy of premises shall require a new Permit.***

This Permit is issued and accepted on conditions that all provisions of the currently adopted edition of the Uniform Fire Code, Article 79 of the City of Livermore be complied with. Any violations of the provisions may be grounds for the revocation of this permit.

By: Danielle Stefani

Danielle Stefani, Hazardous Materials Specialist/hv

ADDITIONAL COMMENTS AND/OR REQUIREMENTS:

Explosimeter and calibration kit must be on-site and calibration must be demonstrated to fire inspector. All hazardous wastes must be taken to a licensed TSDF or ISF

THIS PERMIT MUST AT ALL TIMES BE KEPT POSTED ON THE PREMISES MENTIONED ABOVE

Distribution: White–Permittee; Yellow–File; Pink–Log

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

REGULATION 8, RULE 40
Aeration of Contaminanted Soil and Removal of Underground Storage Tanks

NOTIFICATION FORM

☒ Removal or Replacement of Tanks
☐ Excavation of Contaminated Soil

SITE INFORMATION

SITE ADDRESS 2801, 2900 LADD AVENUE
CITY, STATE, ZIP Livermore, CA 94550
OWNER NAME Livermore Joint Unified School District
SPECIFIC LOCATION OF PROJECT 2801, 2900 Ladd Avenue, LVJUSD Maintinance Yard, Livermore

TANK REMOVAL

SCHEDULED STARTUP DATE 8/16/92

VAPORS REMOVED BY:

[ ] WATER WASH
[X] VAPOR FREEING (CO^2)
[ ] VENTILATION

CONTAMINATED SOIL EXCAVATION

SCHEDULED STARTUP DATE 8-6-92

STOCKPILES WILL BE COVERED? YES X NO ____

ALTERNATIVE METHOD OF AERATION (DESCRIBE BELOW):

____
(MAY REQUIRE PERMIT)

CONTRACTOR INFORMATION

NAME Minter and Fahy Construction Co. Inc CONTACT Mr. Matt Minter
ADDRESS 411 North Buchanan Circle PHONE (510) 674-8800
CITY, STATE, ZIP Pacheco, CA, 94553

CONSULTANT INFORMATION
(IF APPLICABLE)

NAME ENGEO Incorporated CONTACT Eric Harrell/Brian Flaherty
ADDRESS 2401 Crow Canyon Road PHONE (510) 838-1600
CITY, STATE, ZIP San Ramon, CA, 94583

FOR OFFICE USE ONLY

DATE RECEIVED ____ BY ____ (INIT.)

CC: INSPECTOR NO. ____ DATE ____ BY ____ (INIT.)

TELEPHONE UPDATE: CALLER ____ CHANGE MADE ____

BAAQMD N # ____

3/89

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM A

COMPLETE THIS FORM FOR EACH FACILITY/SITE

MARK ONLY ONE ITEM: ☐ 1 NEW PERMIT ☐ 2 INTERIM PERMIT ☐ 3 RENEWAL PERMIT ☐ 4 AMENDED PERMIT ☐ 5 CHANGE OF INFORMATION ☒ 7 PERMANENTLY CLOSED SITE ☐ 6 TEMPORARY SITE CLOSURE

I. FACILITY/SITE INFORMATION & ADDRESS - (MUST BE COMPLETED)

DBA OR FACILITY NAME	NAME OF OPERATOR	
Livermore Valley Joint Unified School District	Mr. Dick Alford	
ADDRESS	NEAREST CROSS STREET	PARCEL # (OPTIONAL)
2801 and 2900 Ladd Avenue	Lee Avenue	
CITY NAME	STATE / ZIP CODE	SITE PHONE # WITH AREA CODE
Livermore.	CA 94550	510-447-9500 ext 320

✓ BOX TO INDICATE: ☐ CORPORATION ☐ INDIVIDUAL ☐ PARTNERSHIP ☒ LOCAL-AGENCY DISTRICTS ☐ COUNTY-AGENCY ☐ STATE-AGENCY ☐ FEDERAL-AGENCY

TYPE OF BUSINESS: ☐ 1 GAS STATION ☐ 2 DISTRIBUTOR ☐ 3 FARM ☐ 4 PROCESSOR ☒ 5 OTHER

☐ ✓ IF INDIAN RESERVATION OR TRUST LANDS | # OF TANKS AT SITE: 4 | E. P. A. I. D. # (optional)

EMERGENCY CONTACT PERSON (PRIMARY)		EMERGENCY CONTACT PERSON (SECONDARY) - optional	
DAYS: NAME (LAST, FIRST)	PHONE # WITH AREA CODE	DAYS: NAME (LAST, FIRST)	PHONE # WITH AREA CODE
Alford, Dick	510 - 447-9500 ext 230		
NIGHTS: NAME (LAST, FIRST)	PHONE # WITH AREA CODE	NIGHTS: NAME (LAST, FIRST)	PHONE # WITH AREA CODE
Same			

II. PROPERTY OWNER INFORMATION - (MUST BE COMPLETED)

NAME	CARE OF ADDRESS INFORMATION		
Livermore Valley Joint Unified School District	Mr. Mike White		
MAILING OR STREET ADDRESS	✓ box to indicate: ☐ INDIVIDUAL ☒ LOCAL-AGENCY ☐ STATE-AGENCY ☐ CORPORATION ☐ PARTNERSHIP ☐ COUNTY-AGENCY ☐ FEDERAL-AGENCY		
685 Las Positas Boulevard			
CITY NAME	STATE	ZIP CODE	PHONE # WITH AREA CODE
Livermore	CA	94550	510-447-9500

III. TANK OWNER INFORMATION - (MUST BE COMPLETED)

NAME OF OWNER	CARE OF ADDRESS INFORMATION		
Livermore Valley Joint Unified School District	Mr Mike White		
MAILING OR STREET ADDRESS	✓ box to indicate: ☐ INDIVIDUAL ☒ LOCAL-AGENCY ☐ STATE-AGENCY ☐ CORPORATION ☐ PARTNERSHIP ☐ COUNTY-AGENCY ☐ FEDERAL-AGENCY		
685 Las Positas Boulevard			
CITY NAME	STATE	ZIP CODE	PHONE # WITH AREA CODE
Livermore	CA	94550	510-447-9500

IV. BOARD OF EQUALIZATION UST STORAGE FEE ACCOUNT NUMBER - Call (916) 323-9555 if questions arise.

TY (TK) HQ 44-00058 5

V. PETROLEUM UST FINANCIAL RESPONSIBILITY - (MUST BE COMPLETED) – IDENTIFY THE METHOD(S) USED

✓ box to indicate: ☒ 1 SELF-INSURED ☐ 2 GUARANTEE ☐ 3 INSURANCE ☐ 4 SURETY BOND ☐ 5 LETTER OF CREDIT ☐ 6 EXEMPTION ☐ 99 OTHER

VI. LEGAL NOTIFICATION AND BILLING ADDRESS

Legal notification and billing will be sent to the tank owner unless box I or II is checked.

CHECK ONE BOX INDICATING WHICH ABOVE ADDRESS SHOULD BE USED FOR LEGAL NOTIFICATIONS AND BILLING: I. ☐ II. ☐ III. ☒

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

APPLICANT'S NAME (PRINTED & SIGNATURE)	APPLICANT'S TITLE	DATE MONTH/DAY/YEAR
ERIC Harrell Eric Harrell	ENVIRONMENTAL GEOLOGIST	7/14/92

LOCAL AGENCY USE ONLY

COUNTY #	JURISDICTION #	FACILITY #

LOCATION CODE - *OPTIONAL*	CENSUS TRACT # - *OPTIONAL*	SUPVISOR - DISTRICT CODE - *OPTIONAL*

THIS FORM MUST BE ACCOMPANIED BY AT LEAST (1) OR MORE PERMIT APPLICATION - FORM B, UNLESS THIS IS A CHANGE OF SITE INFORMATION ONLY.

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM B

COMPLETE A SEPARATE FORM FOR EACH TANK SYSTEM.

MARK ONLY ONE ITEM: ☐ 1 NEW PERMIT ☐ 2 INTERIM PERMIT ☐ 3 RENEWAL PERMIT ☐ 4 AMENDED PERMIT ☐ 5 CHANGE OF INFORMATION ☐ 6 TEMPORARY TANK CLOSURE ☐ 7 PERMANENTLY CLOSED ON SITE ☒ 8 TANK REMOVED

DBA OR FACILITY NAME WHERE TANK IS INSTALLED: Livermore Valley Joint Unified School District Yard

I. TANK DESCRIPTION

COMPLETE ALL ITEMS -- SPECIFY IF UNKNOWN

A. OWNER'S TANK I. D. # 2801-2000	B. MANUFACTURED BY: Unknown
C. DATE INSTALLED (MO/DAY/YEAR) Unknown	D. TANK CAPACITY IN GALLONS: 2,000

II. TANK CONTENTS

IF A-1 IS MARKED, COMPLETE ITEM C.

A. ☒ 1 MOTOR VEHICLE FUEL ☐ 2 PETROLEUM ☐ 3 CHEMICAL PRODUCT ☐ 4 OIL ☐ 80 EMPTY ☐ 95 UNKNOWN

B. ☒ 1 PRODUCT ☐ 2 WASTE

C. ☐ 1a REGULAR UNLEADED ☐ 1b PREMIUM UNLEADED ☒ 2 LEADED ☐ 3 DIESEL ☐ 4 GASAHOL ☐ 5 JET FUEL ☐ 6 AVIATION GAS ☐ 7 METHANOL ☐ 99 OTHER (DESCRIBE IN ITEM D. BELOW)

D. IF (A.1) IS NOT MARKED, ENTER NAME OF SUBSTANCE STORED C. A. S. # :

III. TANK CONSTRUCTION

MARK ONE ITEM ONLY IN BOXES A, B, AND C, AND ALL THAT APPLIES IN BOX D AND E

A. TYPE OF SYSTEM: ☐ 1 DOUBLE WALL ☐ 2 SINGLE WALL ☐ 3 SINGLE WALL WITH EXTERIOR LINER ☐ 4 SECONDARY CONTAINMENT (VAULTED TANK) ☒ 95 UNKNOWN ☐ 99 OTHER

B. TANK MATERIAL (Primary Tank): ☐ 1 BARE STEEL ☐ 2 STAINLESS STEEL ☐ 3 FIBERGLASS ☐ 4 STEEL CLAD W/ FIBERGLASS REINFORCED PLASTIC ☐ 5 CONCRETE ☐ 6 POLYVINYL CHLORIDE ☐ 7 ALUMINUM ☐ 8 100% METHANOL COMPATIBLE W/FRP ☐ 9 BRONZE ☐ 10 GALVANIZED STEEL ☒ 95 UNKNOWN ☐ 99 OTHER

C. INTERIOR LINING: ☐ 1 RUBBER LINED ☐ 2 ALKYD LINING ☐ 3 EPOXY LINING ☐ 4 PHENOLIC LINING ☐ 5 GLASS LINING ☐ 6 UNLINED ☒ 95 UNKNOWN ☐ 99 OTHER
IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL ? YES ___ NO ___

D. CORROSION PROTECTION: ☐ 1 POLYETHYLENE WRAP ☐ 2 COATING ☐ 3 VINYL WRAP ☐ 4 FIBERGLASS REINFORCED PLASTIC ☐ 5 CATHODIC PROTECTION ☐ 91 NONE ☒ 95 UNKNOWN ☐ 99 OTHER

E. SPILL AND OVERFILL: SPILL CONTAINMENT INSTALLED (YEAR) _____ OVERFILL PREVENTION EQUIPMENT INSTALLED (YEAR) _____

IV. PIPING INFORMATION

CIRCLE A IF ABOVE GROUND OR U IF UNDERGROUND, BOTH IF APPLICABLE

A. SYSTEM TYPE: A (U) 1 SUCTION A U 2 PRESSURE A U 3 GRAVITY A U 99 OTHER

B. CONSTRUCTION: A U 1 SINGLE WALL A U 2 DOUBLE WALL A U 3 LINED TRENCH A (U) 95 UNKNOWN A U 99 OTHER

C. MATERIAL AND CORROSION PROTECTION: A U 1 BARE STEEL A U 2 STAINLESS STEEL A U 3 POLYVINYL CHLORIDE (PVC) A U 4 FIBERGLASS PIPE A U 5 ALUMINUM A U 6 CONCRETE A U 7 STEEL W/ COATING A U 8 100% METHANOL COMPATIBLE W/FRP A U 9 GALVANIZED STEEL A U 10 CATHODIC PROTECTION A (U) 95 UNKNOWN A U 99 OTHER

D. LEAK DETECTION: ☐ 1 AUTOMATIC LINE LEAK DETECTOR ☐ 2 LINE TIGHTNESS TESTING ☐ 3 INTERSTITIAL MONITORING ☐ 99 OTHER

V. TANK LEAK DETECTION

☐ 1 VISUAL CHECK ☐ 2 INVENTORY RECONCILIATION ☐ 3 VADOZE MONITORING ☐ 4 AUTOMATIC TANK GAUGING ☐ 5 GROUND WATER MONITORING ☐ 6 TANK TESTING ☐ 7 INTERSTITIAL MONITORING ☐ 91 NONE ☒ 95 UNKNOWN ☐ 99 OTHER

VI. TANK CLOSURE INFORMATION

1. ESTIMATED DATE LAST USED (MO/DAY/YR)	2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING ____ GALLONS	3. WAS TANK FILLED WITH INERT MATERIAL ? YES ☐ NO ☐

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

APPLICANT'S NAME (PRINTED & SIGNATURE)	DATE
ERIC Harrell Eric Harrell	7-14-92

LOCAL AGENCY USE ONLY

THE STATE I.D. NUMBER IS COMPOSED OF THE FOUR NUMBERS BELOW

STATE I.D.# COUNTY # ☐☐ JURISDICTION # ☐☐☐ FACILITY # ☐☐☐☐☐☐ TANK # ☐☐☐☐☐☐

PERMIT NUMBER	PERMIT APPROVED BY/DATE	PERMIT EXPIRATION DATE

FORM B (7-91) THIS FORM MUST BE ACCOMPANIED BY A PERMIT APPLICATION - FORM A, UNLESS A CURRENT FORM A HAS BEEN FILED.

FOR0034B-R5

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM B

COMPLETE A SEPARATE FORM FOR EACH TANK SYSTEM.

MARK ONLY ONE ITEM: ☐ 1 NEW PERMIT ☐ 2 INTERIM PERMIT ☐ 3 RENEWAL PERMIT ☐ 4 AMENDED PERMIT ☐ 5 CHANGE OF INFORMATION ☐ 6 TEMPORARY TANK CLOSURE ☐ 7 PERMANENTLY CLOSED ON SITE ☒ 8 TANK REMOVED

DBA OR FACILITY NAME WHERE TANK IS INSTALLED: Livermore Valley Joint Unified School District Yard

I. TANK DESCRIPTION

COMPLETE ALL ITEMS -- SPECIFY IF UNKNOWN

A. OWNER'S TANK I. D. # 2900 - 6000 RG	B. MANUFACTURED BY: Unknown
C. DATE INSTALLED (MO/DAY/YEAR) Unknown	D. TANK CAPACITY IN GALLONS: 6,000

II. TANK CONTENTS

IF A-1 IS MARKED, COMPLETE ITEM C.

A. ☒ 1 MOTOR VEHICLE FUEL ☐ 2 PETROLEUM ☐ 3 CHEMICAL PRODUCT ☐ 4 OIL ☐ 80 EMPTY ☐ 95 UNKNOWN

B. ☒ 1 PRODUCT ☐ 2 WASTE

C. ☐ 1a REGULAR UNLEADED ☐ 1b PREMIUM UNLEADED ☒ 2 LEADED ☐ 3 DIESEL ☐ 4 GASAHOL ☐ 5 JET FUEL ☐ 6 AVIATION GAS ☐ 7 METHANOL ☐ 99 OTHER (DESCRIBE IN ITEM D, BELOW)

D. IF (A.1) IS NOT MARKED, ENTER NAME OF SUBSTANCE STORED C. A. S. # :

III. TANK CONSTRUCTION

MARK ONE ITEM ONLY IN BOXES A, B, AND C, AND ALL THAT APPLIES IN BOX D AND E

A. TYPE OF SYSTEM: ☐ 1 DOUBLE WALL ☐ 2 SINGLE WALL ☐ 3 SINGLE WALL WITH EXTERIOR LINER ☐ 4 SECONDARY CONTAINMENT (VAULTED TANK) ☒ 95 UNKNOWN ☐ 99 OTHER

B. TANK MATERIAL (Primary Tank): ☐ 1 BARE STEEL ☐ 2 STAINLESS STEEL ☒ 3 FIBERGLASS ☐ 4 STEEL CLAD W/ FIBERGLASS REINFORCED PLASTIC ☐ 5 CONCRETE ☐ 6 POLYVINYL CHLORIDE ☐ 7 ALUMINUM ☐ 8 100% METHANOL COMPATIBLE W/FRP ☐ 9 BRONZE ☐ 10 GALVANIZED STEEL ☐ 95 UNKNOWN ☐ 99 OTHER

C. INTERIOR LINING: ☐ 1 RUBBER LINED ☐ 2 ALKYD LINING ☐ 3 EPOXY LINING ☐ 4 PHENOLIC LINING ☐ 5 GLASS LINING ☐ 6 UNLINED ☒ 95 UNKNOWN ☐ 99 OTHER
IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL? YES ___ NO ___

D. CORROSION PROTECTION: ☐ 1 POLYETHYLENE WRAP ☐ 2 COATING ☐ 3 VINYL WRAP ☐ 4 FIBERGLASS REINFORCED PLASTIC ☐ 5 CATHODIC PROTECTION ☐ 91 NONE ☒ 95 UNKNOWN ☐ 99 OTHER

E. SPILL AND OVERFILL: SPILL CONTAINMENT INSTALLED (YEAR) _____ OVERFILL PREVENTION EQUIPMENT INSTALLED (YEAR) _____

IV. PIPING INFORMATION

CIRCLE A IF ABOVE GROUND OR U IF UNDERGROUND, BOTH IF APPLICABLE

A. SYSTEM TYPE: A (U) 1 SUCTION A U 2 PRESSURE A U 3 GRAVITY A U 99 OTHER

B. CONSTRUCTION: A U 1 SINGLE WALL A U 2 DOUBLE WALL A U 3 LINED TRENCH A (U) 95 UNKNOWN A U 99 OTHER

C. MATERIAL AND CORROSION PROTECTION: A U 1 BARE STEEL A U 2 STAINLESS STEEL A U 3 POLYVINYL CHLORIDE (PVC) A U 4 FIBERGLASS PIPE A U 5 ALUMINUM A U 6 CONCRETE A U 7 STEEL W/ COATING A U 8 100% METHANOL COMPATIBLE W/FRP A U 9 GALVANIZED STEEL A U 10 CATHODIC PROTECTION A (U) 95 UNKNOWN A U 99 OTHER

D. LEAK DETECTION: ☐ 1 AUTOMATIC LINE LEAK DETECTOR ☐ 2 LINE TIGHTNESS TESTING ☐ 3 INTERSTITIAL MONITORING ☐ 99 OTHER

V. TANK LEAK DETECTION

☐ 1 VISUAL CHECK ☐ 2 INVENTORY RECONCILIATION ☐ 3 VADOZE MONITORING ☐ 4 AUTOMATIC TANK GAUGING ☐ 5 GROUND WATER MONITORING ☐ 6 TANK TESTING ☐ 7 INTERSTITIAL MONITORING ☐ 91 NONE ☒ 95 UNKNOWN ☐ 99 OTHER

VI. TANK CLOSURE INFORMATION

1. ESTIMATED DATE LAST USED (MO/DAY/YR)	2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING ___ GALLONS	3. WAS TANK FILLED WITH INERT MATERIAL? YES ☐ NO ☐

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

APPLICANT'S NAME (PRINTED & SIGNATURE) ERIC Harrell Eric Harrell DATE 7-14-92

LOCAL AGENCY USE ONLY

THE STATE I.D. NUMBER IS COMPOSED OF THE FOUR NUMBERS BELOW

STATE I.D.# COUNTY # JURISDICTION # FACILITY # TANK #

PERMIT NUMBER	PERMIT APPROVED BY/DATE	PERMIT EXPIRATION DATE

FORM B (7-91) THIS FORM MUST BE ACCOMPANIED BY A PERMIT APPLICATION - FORM A, UNLESS A CURRENT FORM A HAS BEEN FILED.

FOR0034B-R5

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM B

COMPLETE A SEPARATE FORM FOR EACH TANK SYSTEM.

MARK ONLY ONE ITEM: ☐ 1 NEW PERMIT ☐ 2 INTERIM PERMIT ☐ 3 RENEWAL PERMIT ☐ 4 AMENDED PERMIT ☐ 5 CHANGE OF INFORMATION ☐ 6 TEMPORARY TANK CLOSURE ☐ 7 PERMANENTLY CLOSED ON SITE ☒ 8 TANK REMOVED

DBA OR FACILITY NAME WHERE TANK IS INSTALLED: Livermore Valley Joint Unified School District Yard

I. TANK DESCRIPTION

COMPLETE ALL ITEMS – SPECIFY IF UNKNOWN

A. OWNER'S TANK I. D. # 2900 - 6000106	B. MANUFACTURED BY: Unknown
C. DATE INSTALLED (MO/DAY/YEAR) Unknown	D. TANK CAPACITY IN GALLONS: 6,000

II. TANK CONTENTS

IF A-1 IS MARKED, COMPLETE ITEM C.

A. ☒ 1 MOTOR VEHICLE FUEL ☐ 2 PETROLEUM ☐ 3 CHEMICAL PRODUCT ☐ 4 OIL ☐ 80 EMPTY ☐ 95 UNKNOWN

B. ☒ 1 PRODUCT ☐ 2 WASTE

C. ☒ 1a REGULAR UNLEADED ☐ 1b PREMIUM UNLEADED ☐ 2 LEADED ☐ 3 DIESEL ☐ 4 GASAHOL ☐ 5 JET FUEL ☐ 6 AVIATION GAS ☐ 7 METHANOL ☐ 99 OTHER (DESCRIBE IN ITEM D. BELOW)

D. IF (A.1) IS NOT MARKED, ENTER NAME OF SUBSTANCE STORED C. A. S. # :

III. TANK CONSTRUCTION

MARK ONE ITEM ONLY IN BOXES A, B, AND C, AND ALL THAT APPLIES IN BOX D AND E

A. TYPE OF SYSTEM: ☐ 1 DOUBLE WALL ☐ 2 SINGLE WALL ☐ 3 SINGLE WALL WITH EXTERIOR LINER ☐ 4 SECONDARY CONTAINMENT (VAULTED TANK) ☒ 95 UNKNOWN ☐ 99 OTHER

B. TANK MATERIAL (Primary Tank): ☐ 1 BARE STEEL ☐ 2 STAINLESS STEEL ☐ 3 FIBERGLASS ☐ 4 STEEL CLAD W/ FIBERGLASS REINFORCED PLASTIC ☐ 5 CONCRETE ☐ 6 POLYVINYL CHLORIDE ☐ 7 ALUMINUM ☐ 8 100% METHANOL COMPATIBLE W/FRP ☐ 9 BRONZE ☐ 10 GALVANIZED STEEL ☒ 95 UNKNOWN ☐ 99 OTHER

C. INTERIOR LINING: ☐ 1 RUBBER LINED ☐ 2 ALKYD LINING ☐ 3 EPOXY LINING ☐ 4 PHENOLIC LINING ☐ 5 GLASS LINING ☐ 6 UNLINED ☒ 95 UNKNOWN ☐ 99 OTHER
IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL ? YES ___ NO ___

D. CORROSION PROTECTION: ☐ 1 POLYETHYLENE WRAP ☐ 2 COATING ☐ 3 VINYL WRAP ☐ 4 FIBERGLASS REINFORCED PLASTIC ☐ 5 CATHODIC PROTECTION ☐ 91 NONE ☒ 95 UNKNOWN ☐ 99 OTHER

E. SPILL AND OVERFILL: SPILL CONTAINMENT INSTALLED (YEAR) _____ OVERFILL PREVENTION EQUIPMENT INSTALLED (YEAR) _____

IV. PIPING INFORMATION

CIRCLE A IF ABOVE GROUND OR U IF UNDERGROUND, BOTH IF APPLICABLE

A. SYSTEM TYPE: A (U) 1 SUCTION A U 2 PRESSURE A U 3 GRAVITY A U 99 OTHER

B. CONSTRUCTION: A U 1 SINGLE WALL A U 2 DOUBLE WALL A U 3 LINED TRENCH A (U) 95 UNKNOWN A U 99 OTHER

C. MATERIAL AND CORROSION PROTECTION: A U 1 BARE STEEL A U 2 STAINLESS STEEL A U 3 POLYVINYL CHLORIDE (PVC) A U 4 FIBERGLASS PIPE A U 5 ALUMINUM A U 6 CONCRETE A U 7 STEEL W/ COATING A U 8 100% METHANOL COMPATIBLE W/FRP A U 9 GALVANIZED STEEL A U 10 CATHODIC PROTECTION A (U) 95 UNKNOWN A U 99 OTHER

D. LEAK DETECTION: ☐ 1 AUTOMATIC LINE LEAK DETECTOR ☐ 2 LINE TIGHTNESS TESTING ☐ 3 INTERSTITIAL MONITORING ☐ 99 OTHER

V. TANK LEAK DETECTION

☐ 1 VISUAL CHECK ☐ 2 INVENTORY RECONCILIATION ☐ 3 VADOZE MONITORING ☐ 4 AUTOMATIC TANK GAUGING ☐ 5 GROUND WATER MONITORING ☐ 6 TANK TESTING ☐ 7 INTERSTITIAL MONITORING ☐ 91 NONE ☒ 95 UNKNOWN ☐ 99 OTHER

VI. TANK CLOSURE INFORMATION

1. ESTIMATED DATE LAST USED (MO/DAY/YR)	2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING ____ GALLONS	3. WAS TANK FILLED WITH INERT MATERIAL ? YES ☐ NO ☐

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

APPLICANT'S NAME (PRINTED & SIGNATURE)	DATE
ERIC Harrell Eric Harrell	7-14-92

LOCAL AGENCY USE ONLY

THE STATE I.D. NUMBER IS COMPOSED OF THE FOUR NUMBERS BELOW

STATE I.D.# COUNTY # ☐☐ JURISDICTION # ☐☐☐ FACILITY # ☐☐☐☐☐☐ TANK # ☐☐☐☐☐☐

PERMIT NUMBER	PERMIT APPROVED BY/DATE	PERMIT EXPIRATION DATE

FORM B (7-91) THIS FORM MUST BE ACCOMPANIED BY A PERMIT APPLICATION - FORM A, UNLESS A CURRENT FORM A HAS BEEN FILED.

FOR0034B-R5

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM B

COMPLETE A SEPARATE FORM FOR EACH TANK SYSTEM.

MARK ONLY ONE ITEM: ☐ 1 NEW PERMIT ☐ 2 INTERIM PERMIT ☐ 3 RENEWAL PERMIT ☐ 4 AMENDED PERMIT ☐ 5 CHANGE OF INFORMATION ☐ 6 TEMPORARY TANK CLOSURE ☐ 7 PERMANENTLY CLOSED ON SITE ☒ 8 TANK REMOVED

DBA OR FACILITY NAME WHERE TANK IS INSTALLED: Livermore Valley Joint Unified School District Yard

I. TANK DESCRIPTION

COMPLETE ALL ITEMS -- SPECIFY IF UNKNOWN

A. OWNER'S TANK I. D. # 2900 - 10000D	B. MANUFACTURED BY: Unknown
C. DATE INSTALLED (MO/DAY/YEAR) Unknown	D. TANK CAPACITY IN GALLONS: 10,000

II. TANK CONTENTS

IF A-1 IS MARKED, COMPLETE ITEM C.

A. ☒ 1 MOTOR VEHICLE FUEL ☐ 2 PETROLEUM ☐ 3 CHEMICAL PRODUCT ☐ 4 OIL ☐ 80 EMPTY ☐ 95 UNKNOWN

B. ☒ 1 PRODUCT ☐ 2 WASTE

C. ☐ 1a REGULAR UNLEADED ☐ 1b PREMIUM UNLEADED ☐ 2 LEADED ☒ 3 DIESEL ☐ 4 GASAHOL ☐ 5 JET FUEL ☐ 6 AVIATION GAS ☐ 7 METHANOL ☐ 99 OTHER (DESCRIBE IN ITEM D. BELOW)

D. IF (A.1) IS NOT MARKED, ENTER NAME OF SUBSTANCE STORED C. A. S. # :

III. TANK CONSTRUCTION

MARK ONE ITEM ONLY IN BOXES A, B, AND C, AND ALL THAT APPLIES IN BOX D AND E

A. TYPE OF SYSTEM: ☐ 1 DOUBLE WALL ☐ 2 SINGLE WALL ☐ 3 SINGLE WALL WITH EXTERIOR LINER ☐ 4 SECONDARY CONTAINMENT (VAULTED TANK) ☒ 95 UNKNOWN ☐ 99 OTHER

B. TANK MATERIAL (Primary Tank): ☐ 1 BARE STEEL ☐ 2 STAINLESS STEEL ☐ 3 FIBERGLASS ☐ 4 STEEL CLAD W/ FIBERGLASS REINFORCED PLASTIC ☐ 5 CONCRETE ☐ 6 POLYVINYL CHLORIDE ☐ 7 ALUMINUM ☐ 8 100% METHANOL COMPATIBLE W/FRP ☐ 9 BRONZE ☐ 10 GALVANIZED STEEL ☒ 95 UNKNOWN ☐ 99 OTHER

C. INTERIOR LINING: ☐ 1 RUBBER LINED ☐ 2 ALKYD LINING ☐ 3 EPOXY LINING ☐ 4 PHENOLIC LINING ☐ 5 GLASS LINING ☐ 6 UNLINED ☒ 95 UNKNOWN ☐ 99 OTHER
IS LINING MATERIAL COMPATIBLE WITH 100% METHANOL ? YES ___ NO ___

D. CORROSION PROTECTION: ☐ 1 POLYETHYLENE WRAP ☐ 2 COATING ☐ 3 VINYL WRAP ☐ 4 FIBERGLASS REINFORCED PLASTIC ☐ 5 CATHODIC PROTECTION ☐ 91 NONE ☒ 95 UNKNOWN ☐ 99 OTHER

E. SPILL AND OVERFILL: SPILL CONTAINMENT INSTALLED (YEAR) _____ OVERFILL PREVENTION EQUIPMENT INSTALLED (YEAR) _____

IV. PIPING INFORMATION

CIRCLE A IF ABOVE GROUND OR U IF UNDERGROUND, BOTH IF APPLICABLE

A. SYSTEM TYPE	A (U) 1 SUCTION	A U 2 PRESSURE	A U 3 GRAVITY	A U 99 OTHER			
B. CONSTRUCTION	A U 1 SINGLE WALL	A U 2 DOUBLE WALL	A U 3 LINED TRENCH	A (U) 95 UNKNOWN	A U 99 OTHER		
C. MATERIAL AND CORROSION PROTECTION	A U 1 BARE STEEL	A U 2 STAINLESS STEEL	A U 3 POLYVINYL CHLORIDE (PVC)	A U 4 FIBERGLASS PIPE			
	A U 5 ALUMINUM	A U 6 CONCRETE	A U 7 STEEL W/ COATING	A U 8 100% METHANOL COMPATIBLE W/FRP			
	A U 9 GALVANIZED STEEL	A U 10 CATHODIC PROTECTION	A (U) 95 UNKNOWN	A U 99 OTHER			
D. LEAK DETECTION	☐ 1 AUTOMATIC LINE LEAK DETECTOR	☐ 2 LINE TIGHTNESS TESTING	☐ 3 INTERSTITIAL MONITORING	☐ 99 OTHER			

V. TANK LEAK DETECTION

☐ 1 VISUAL CHECK ☐ 2 INVENTORY RECONCILIATION ☐ 3 VADOZE MONITORING ☐ 4 AUTOMATIC TANK GAUGING ☐ 5 GROUND WATER MONITORING ☐ 6 TANK TESTING ☐ 7 INTERSTITIAL MONITORING ☐ 91 NONE ☒ 95 UNKNOWN ☐ 99 OTHER

VI. TANK CLOSURE INFORMATION

1. ESTIMATED DATE LAST USED (MO/DAY/YR)	2. ESTIMATED QUANTITY OF SUBSTANCE REMAINING ____ GALLONS	3. WAS TANK FILLED WITH INERT MATERIAL ? YES ☐ NO ☐

THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERJURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT

APPLICANT'S NAME (PRINTED & SIGNATURE)	DATE
ERIC Harrell Eric Harrell	7-14-92

LOCAL AGENCY USE ONLY

THE STATE I.D. NUMBER IS COMPOSED OF THE FOUR NUMBERS BELOW

STATE I.D.# COUNTY # ☐☐ JURISDICTION # ☐☐☐ FACILITY # ☐☐☐☐☐☐ TANK # ☐☐☐☐☐☐

PERMIT NUMBER	PERMIT APPROVED BY/DATE	PERMIT EXPIRATION DATE

FORM B (7-91) THIS FORM MUST BE ACCOMPANIED BY A PERMIT APPLICATION - FORM A, UNLESS A CURRENT FORM A HAS BEEN FILED.

FOR0034B-R5

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. *Form designed for use on elite (12-pitch) typewriter).*

SEP — 4 92

See Instructions on Back of Page 6 and Front of Page 7

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
CA C0998656			

3. Generator's Name and Mailing Address	A. State Manifest Document Number
LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT 685 E. JACK LONDON BLVD	91025033
4. Generator's Phone (510) 447 9500 x 236 LIVERMORE, CA 94550	B. State Generator's ID
5. Transporter 1 Company Name: WASTE OIL RECOVERY	6. US EPA ID Number: CAD 000626515
	C. State Transporter's ID: 304033
	D. Transporter's Phone: 5105330250
7. Transporter 2 Company Name	8. US EPA ID Number
	E. State Transporter's ID
	F. Transporter's Phone
9. Designated Facility Name and Site Address: DEMENNO KERDOON 2000 N. ALAMEDA COMPTON, CA	10. US EPA ID Number: CAT080013352
	G. State Facility's ID
	H. Facility's Phone: 310 537 7100

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. PETROLEUM OIL N.O.S (WASTE OIL) COMBUSTIBLE LIQUID NA 1270	001	T	00450	G	State 221 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above	K. Handling Codes for Wastes Listed Above	
WASTE MOTOR FUELS & H_2O (RINSATE)	a. 01R	b.
	c.	d.

15. Special Handling Instructions and Additional Information
WEAR PROTECTIVE CLOTHING
SITE ADDRESS
2900 LADD AVE
LIVERMORE CA 94550

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Matt Muster For LVJUSD.	Matthew W. Muster	08	04	92

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
MONICA FALCON		08	04	92

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

Do Not Write Below This Line

DHS 8022 A
EPA 8700—22
(Rev. 6-89) Previous editions are obsolete.

Blue: GENERATOR SENDS THIS COPY TO DOHS WITHIN 30 DAYS
To: P.O. Box 400, Sacramento, CA 95812-0400

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

91025033

ENVIRONMENTAL SERVICES
(DIVISION OF H&H SHIP SERVICE CO., INC.)

220 CHINA BASIN, SAN FRANCISCO, CA 94107 • DAY AND NIGHT: (415) 543-4835 FAX (415) 543-8265

CERTIFICATE OF DISPOSAL

AUGUST 11, 1992

H & H Ship Service Company hereby certifies to *MINTER AND FAHY* that:

1. The storage tank(s), size(s) *ONE (1) 2,000 GALS.*

   removed from the *LIVERMORE VALLEY JT. UNIFIED SCHOOL DIST.*

   facility at *2900 LADD AVENUE*

   LIVERMORE, CALIFORNIA

   were transported to H & H Ship Service Company, 220 China Basin St., San Francisco, California 94107.

2. The following tank(s), H & H Job Number *11112*

   have been steam cleaned, cut with approximately 2' X 2' holes, rendered harmless and disposed of as scrap metal.

3. Disposal site: *SCHNITZER STEEL, OAKLAND, CALIFORNIA.*

4. The foregoing method of destruction/disposal is suitable for the materials involved, and fully complies with all applicable regulatory and permit requirements.

5. Should you require further information, please call (415) 543-4835 or (415) 905-5510.

Very Truly Yours,

Cleveland Valrey
Operations Coordinator

ENVIRONMENTAL SERVICES
(DIVISION OF H&H SHIP SERVICE CO., INC.)

220 CHINA BASIN, SAN FRANCISCO, CA 94107 • DAY AND NIGHT: (415) 543-4835 FAX (415) 543-8265

CERTIFICATE OF DISPOSAL

AUGUST 11, 1992

H & H Ship Service Company hereby certifies to that: ***MINTER AND FAHY***

1. The storage tank(s), size(s) ***ONE (1) 10,000 GALS. AND TWO (2) 6,000 GALS. FIBERGLASS***

   removed from the ***LIVERMORE VALLEY JT. UNIFIED SCHOOL DIST.***

   facility at ***2900 LADD AVENUE***

   LIVERMORE, CALIFORNIA

   were transported to H & H Ship Service Company, 220 China Basin St., San Francisco, California 94107.

2. The following tank(s), H & H Job Number ***11112***

   have been steam cleaned, rendered harmless, demolished and disposed of as general refuse.

3. Disposal site: ***SANITARY FILL COMPANY, SAN FRANCISCO, CALIFORNIA.***

4. The foregoing method of destruction/disposal is suitable for the materials involved, and fully complies with all applicable regulatory and permit requirements.

5. Should you require further information, please call (415) 543-4835 or (415) 905-5510.

Very Truly Yours,

Cleveland Valrey
Operations Coordinator

Please print or type. *Form designed for use on elite (12-pitch typewriter).*

See Instructions on back of page 6.

Department of Health Services
Toxic Substances Control Program
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. C A C 0 1 0 8 6 5 5 1 2 | Manifest Document No. 0 0 0 0 2 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT
685 East Jack London Blvd., Livermore, CA. 94550

4. Generator's Phone (510) 447-9500

A. State Manifest Document Number: 9151027 8

B. State Generator's ID:

5. Transporter 1 Company Name: H & H Ship Service Company
6. US EPA ID Number: C A D 0 1 0 4 7 7 1 1 1 6 8
C. State Transporter's ID: 300932
D. Transporter's Phone: (415) 543-4835

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
H & H Ship Service Company
220 China Basin Street
San Francisco, CA 94107
10. US EPA ID Number: C A D 0 1 0 4 7 7 1 1 1 6 8
G. State Facility's ID: C A D 0 1 0 4 7 7 1 1 1 6 8
H. Facility's Phone: (415) 543-4835

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. RESIDUE UNLEADED GASOLINE TANKS NON-RCRA HAZARDOUS WASTE SOLID	0 0 2	T P	0 6 0 0 0	P	State 512 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
EMPTY 6,000 gallon tanks last containing unleaded gasoline. Tanks inerted with dry ice for transport.
PROFILE #A2022

K. Handling Codes for Wastes Listed Above
a. 03 | b. | c. | d.

15. Special Handling Instructions and Additional Information
JOB #11112
24 Hr. Emergency Contact: H & H #(415) 543-4835
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR.

JOB SITE: LIVERMORE VALLEY J.U.S.D
2900 Ladd Avenue
Livermore, California

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
Matt Minter for LVSD	Matt Minter	0 8	1 0	9 2

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
LANCE D. SMITH	Lance D. Smith	0 8	1 0	9 2

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name	Signature	Month	Day	Year
Cleveland Walker		0 8	1 0	9 2

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

9151027 8

DHS 8022A (12/90)
EPA 8700—22

White: TSDF SENDS THIS COPY TO DHS WITHIN 30 DAYS.
To: P.O. Box 3000, Sacramento, CA 95812

State of California—Health and Welfare Agency

Please print or type. *Form designed for use on elite (12-pitch typewriter).*

See Instructions on back of page 6.

Department of Health Services
Toxic Substances Control Program
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC000818512 | Manifest Document No. 00001 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
LIVERMORE VALLEY JOINT UNIFIED SCHOOL DISTRICT
685 East Jack London Blvd., Livermore, CA. 94550

4. Generator's Phone (510) 447-9500

A. State Manifest Document Number: 9151027

B. State Generator's ID:

5. Transporter 1 Company Name: H & H Ship Service Company
6. US EPA ID Number: CAD041771168
C. State Transporter's ID: 300954
D. Transporter's Phone: (415) 543-4835

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
H & H Ship Service Company
220 China Basin Street
San Francisco, CA 94107
10. US EPA ID Number: CAD041771168
G. State Facility's ID: CAD041771168
H. Facility's Phone: (415) 543-4835

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. RESIDUE DIESEL TANK NON-RCRA HAZARDOUS WASTE SOLID	001	TP	10000	P	State: 512 EPA/Other:
b. RESIDUE UNLEADED GASOLINE TANK NON-RCRA HAZARDOUS WASTE SOLID	001	TP	02000	P	State: 512 EPA/Other:
c.					State: EPA/Other:
d.					State: EPA/Other:

J. Additional Descriptions for Materials Listed Above
EMPTY 10,000 gallon and 2,000 gallon tanks last containing diesel and unleaded gasoline. Tanks inerted with dry ice for transport.
PROFILE #A2022

K. Handling Codes for Wastes Listed Above
a. 03 b. 01 c. d.

15. Special Handling Instructions and Additional Information
JOB #11112
24 Hr. Emergency Contact: H & H #(415) 543-4835
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR.

JOB SITE: LIVERMORE VALLEY J.U.S.D
2900 Ladd Avenue
Livermore, California

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GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
Matt Minter for LVSD	Matthew W. Minter	08	16	92

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
NORMAN L. BERG	Norman L. Berg	08	16	92

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name	Signature	Month	Day	Year
Charles Vaka		08	16	92

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

9151027

DHS 8022A (12/90)
EPA 8700—22

White: TSDF SENDS THIS COPY TO DHS WITHIN 30 DAYS.
To: P.O. Box 2000, Sacramento, CA 95812

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

80 Swan Way, #200
Oakland, CA 94621
(415) 271-4320
Env.: 271-4530

II, III

Site ID # ____ Site Name Livermore USD Today's Date 11/6/92

Site Address 2900 Ladd

City Livermore Zip 94550 Phone ____

____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:
____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
____ II. Business Plans, Acute Hazardous Materials
X III. Underground Tanks Closure

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

II.A BUSINESS PLANS (Title 19)

___	1. Immediate Reporting	2703
___	2. Bus. Plan Stds.	25503(b)
___	3. RR Cars > 30 days	25503.7
___	4. Inventory Information	25504(a)
___	5. Inventory Complete	2730
___	6. Emergency Response	25504(b)
___	7. Training	25504(c)
___	8. Deficiency	25505(a)
___	9. Modification	25505(b)

II.B ACUTELY HAZ. MAT'LS

___	10. Registration Form Filed	25533(a)
___	11. Form Complete	25533(b)
___	12. RMPP Contents	25534(c)
___	13. Implement Sch. Req'd? (Y/N)	___
___	14. OffSite Conseq. Assess.	25524(c)
___	15. Probable Risk Assessment	25534(d)
___	16. Persons Responsible	25534(g)
___	17. Certification	25534(i)
___	18. Exemption Request? (Y/N)	25536(b)
___	19. Trade Secret Requested?	25538

III. UNDERGROUND TANKS (Title 23)

General

___	1. Permit Application	25284 (H&S)
___	2. Pipeline Leak Detection	25292 (H&S)
___	3. Records Maintenance	2712
___	4. Release Report	2651
___	5. Closure Plans	2670

Monitoring for Existing Tanks

___ 6. Method
1) Monthly Test
2) Daily Vadose
Semi-annual gndwater
One time soils
3) Daily Vadose
One time soils
Annual tank test
4) Monthly Gndwater
One time soils
5) Daily Inventory
Annual tank testing
Cont pipe leak det
Vadose/gndwater mon.
6) Daily Inventory
Annual tank testing
Cont pipe leak det
7) Weekly Tank Gauge
Annual tank tsting
8) Annual Tank Testing
Daily Inventory
9) Other ____

___	7. Precis Tank Test Date: ____	2643
___	8. Inventory Rec.	2644
___	9. Soil Testing.	2646
___	10. Ground Water.	2647

New Tanks

___	11. Monitor Plan	2632
___	12. Access. Secure	2634
___	13. Plans Submit Date: ____	2711
___	14. As Built Date: ____	2635

Rev 6/88

Comments:

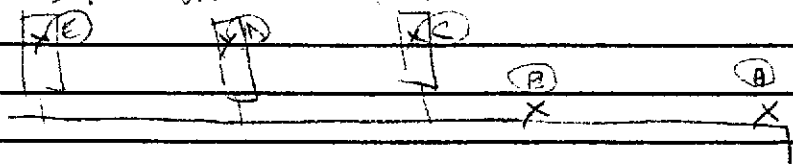
2900 Ladd

3 USTs of fiberglass - Waste oil tank was bottom had failed test in 1991 and decommissioned - Middle - 6000 gal unleaded - tank appears intact w/o holes - some staining on exterior

Easterly tank - 10K diesel appears intact w/o holes some staining on exterior

Pit is mostly pea gravel backfill - slight staining of pea gravel at fill ends (North end) of middle & east tanks

Diesel Unlead Lead



Soil samples taken under dispensers & in trenches

A No obvious odor
B No obvious odor
C gasoline odor
D strong gasoline odor
E gasoline odor

II, III

Contact: ____

Title: ____ Inspector: Eva Chu

Signature: Eric Harrell Signature: Eva Chu

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

80 Swan Way, #200
Oakland, CA 94621
(415) 271-4320

II,III

Site ID # ____ Site Name Livermore USD Today's Date 2/6/92

Site Address 2900 Holl

City Livermore Zip 94550 Phone ____

____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:
____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
____ II. Business Plans, Acute Hazardous Materials
_x_ III. Underground Tanks closure

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

II.A BUSINESS PLANS (Title 19)

___	1. Immediate Reporting	2703
___	2. Bus. Plan Stds.	25503(b)
___	3. RR Cars > 30 days	25503.7
___	4. Inventory Information	25504(a)
___	5. Inventory Complete	2730
___	6. Emergency Response	25504(b)
___	7. Training	25504(c)
___	8. Deficiency	25505(a)
___	9. Modification	25505(b)

II.B ACUTELY HAZ. MATLS

___	10. Registration Form Filed	25533(a)
___	11. Form Complete	25533(b)
___	12. RMPP Contents	25534(c)
___	13. Implement Sch. Req'd? (Y/N)	___
___	14. OffSite Conseq. Assess.	25524(c)
___	15. Probable Risk Assessment	25534(d)
___	16. Persons Responsible	25534(g)
___	17. Certification	25534(f)
___	18. Exemption Request? (Y/N)	25536(b)
___	19. Trade Secret Requested?	25538

III. UNDERGROUND TANKS (Title 23)

General

___	1. Permit Application	25284 (H&S)
___	2. Pipeline Leak Detection	25292 (H&S)
___	3. Records Maintenance	2712
___	4. Release Report	2651
___	5. Closure Plans	2670

Monitoring for Existing Tanks

___ 6. Method
1) Monthly Test
2) Daily Vadose
Semi-annual gndwater
One time soils
3) Daily Vadose
One time soils
Annual tank test
4) Monthly Gndwater
One time soils
5) Daily Inventory
Annual tank testing
Cont pipe leak det
Vadose/gndwater mon.
6) Daily Inventory
Annual tank testing
Cont pipe leak det
7) Weekly Tank Gauge
Annual tank tstng
8) Annual Tank Testing
Daily Inventory
9) Other ____

___	7. Precis Tank Test Date: ____	2643
___	8. Inventory Rec.	2644
___	9. Soil Testing .	2646
___	10. Ground Water.	2647

New Tanks

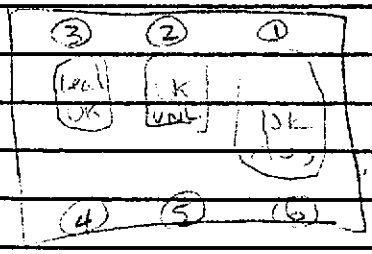
___	11. Monitor Plan	2632
___	12. Access. Secure	2634
___	13. Plans Submit Date: ____	2711
___	14. As Built Date: ____	2635

Rev 6/88

Comments:

UST at bottom is concrete slab where USTs were taken down.
Soil samples were taken at end of slab at an angle.

11'



Soil samples.
(1) strong odor; sample taken at 11½'
(2) No obvious odor at 11½'
(3) strong gasoline odor at 12'
(4) No obvious odor at 11½'
(5) No obvious odor "
(6) No obvious odor "

II, III

Contact: ____

Title: ____ Inspector: ____

Signature: ____ Signature: ____

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

80 Swan Way, #200
Oakland, CA 94621
(415) 271-4320

II,III

Site ID # ____ Site Name Livermore USD Today's Date 8/16/92

Site Address 2801 Ladd

City Livermore Zip 94 Phone ____

____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:
____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
____ II. Business Plans, Acute Hazardous Materials
X III. Underground Tanks Closure

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

II.A BUSINESS PLANS (Title 19)

___	1. Immediate Reporting	2703
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___	8. Deficiency	25505(a)
___	9. Modification	25505(b)

II.B ACUTELY HAZ. MATLS

___	10. Registration Form Filed	25533(a)
___	11. Form Complete	25533(b)
___	12. RMPP Contents	25534(c)
___	13. Implement Sch. Req'd? (Y/N)	___
___	14. OffSite Conseq. Assess.	25524(c)
___	15. Probable Risk Assessment	25534(d)
___	16. Persons Responsible	25534(g)
___	17. Certification	25534(i)
___	18. Exemption Request? (Y/N)	25536(b)
___	19. Trade Secret Requested?	25538

III. UNDERGROUND TANKS (Title 23)

General

___	1. Permit Application	25284 (H&S)
___	2. Pipeline Leak Detection	25292 (H&S)
___	3. Records Maintenance	2712
___	4. Release Report	2651
___	5. Closure Plans	2670

Monitoring for Existing Tanks

___ 6. Method
1) Monthly Test
2) Daily Vadose
Semi-annual gndwater
One time soils
3) Daily Vadose
One time soils
Annual tank test
4) Monthly Gndwater
One time soils
5) Daily Inventory
Annual tank testing
Cont pipe leak det
Vadose/gndwater mon.
6) Daily Inventory
Annual tank testing
Cont pipe leak det
7) Weekly Tank Gauge
Annual tank tstng
8) Annual Tank Testing
Daily Inventory
9) Other ____

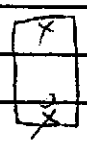
___	7. Precis Tank Test Date: ____	2643
___	8. Inventory Rec.	2644
___	9. Soil Testing	2646
___	10. Ground Water.	2647

New Tanks

___	11. Monitor Plan	2632
___	12. Access. Secure	2634
___	13. Plans Submit Date: ____	2711
___	14. As Built Date: ____	2635

Rev 6/88

Comments:
Rust on all surfaces, some pitting
Fill hole at end of fill end
UST pit at 10' depth



Gas
Soil

2 Soil samples taken about 2' in native soil
No obvious odor

In order to reuse soil / pea gravel as backfill:
Sample 1 discreet / 20 cy for soil
1 discreet / 50 cy for pea gravel

Contact Health Dep - 271-4530 - w/ lab analyses of backfill soil samples prior to backfilling

Present: Eric Harrell; Daniella Stefani, Monty + Filacy

II, III

Contact: ____

Title: ____ Inspector: Eric Chy

Signature: Eric Harrell Signature: ____

SAFETY & ACCIDENT PREVENTION

PROGRAM

GENERAL ENGINEERING CONTRACTOR:
HUNTER & FAHY CONSTRUCTION COMPANY, INC.
411 NORTH BUCHANAN CIRCLE #2
PACHECO, CA 94553

TABLE OF CONTENTS

SUPPLEMENTAL SECTION

Job Name:

Livermore Valley Joint Unified School District

2801 & 2900 Ladd Avenue

Livermore, Ca 94550

Scope of Work:

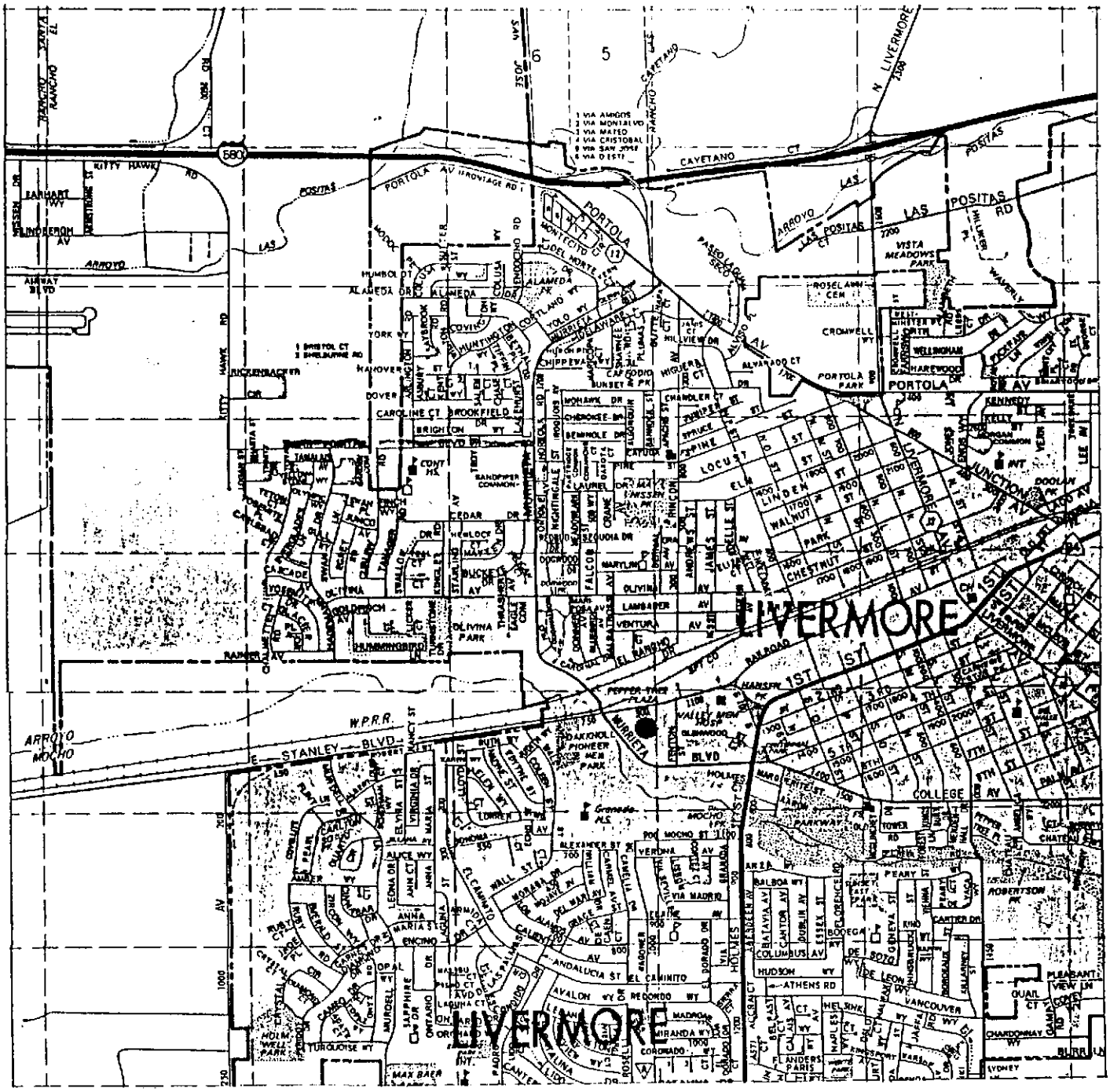
1. Removal of 1-2,000 gallon tank at 2801 Ladd Avenue.
2. Removal of 2-6'000 and 1-10,000 gallon tanks at 2900 Ladd Avenue
3. Obtain soil samples from the bottom of excavation.
4. Restore excavated surface with 2" asphalt.

Safety Officer:

Matthew W. Minter

Phone # 1-510-674-8800

Site Hazards: None



Emergency Hospital Route To:

Valley Memorial Hospital

1111 E. Stanley Blvd.

Livermore , Ca

Emergency Room # 1-510-447-7000

Route to take: From jobsite take Ladd Ave to Junction, left on Junction to Old 1st St., right on Old 1st St. to 1st St., right on 1st St. to E. Stanley Blvd., right on E. Stanley Blvd. the hospital is about ¼ Mile up E. Stanley Blvd. on the left side.

EMERGENCY PHONE NUMBERS:

FOR MOST ALL AREAS THAT MINTER & FAHY CONSTRUCTION COMPANY WORKS, ESPECIALLY THE LOCAL BAY AREA, THE EMERGENCY POLICE, FIRE, AND AMBULANCE CAN BE REACHED BY DIALING:

911

ADDITIONAL PHONE NUMBERS:

OFFICE: 415-674-8800

SERVICE TRUCK: 415-860-0994

JOHN FAHY (HOME) : 415-372-9303

MATT MINTER (HOME) : 415-754-0623

Minter & Fahy Construction Co., Inc.

CONTRACTORS LIC. NO. 477315
411 N. BUCHANAN CIRCLE #2 PACHECO, CALIFORNIA 94553
(415) 674-8800

EMPLOYEE LIST

John Francis Fahy Jr.
131 Clipper Lane
Martinez, CA 94553
(415) 372-0358
License # A0845599
D.O.B. April 21,1953
S.S.# 555-92-0724

Matthew Wayne Minter
2827 Lucena Way
Antioch, CA 94509
(415) 754-0623
License # N5241553
D.O.B. December 19,1956
S.S.# 562-02-8353

James Leslie Minter
2122 Tyler Ct.
Antioch, CA 94509
(415) 757-1338
License # A0533100
D.O.B. June 22,1950
S.S.# 542-54-8445

James Wayne Horn
2122 Livingston Lane
Stockton, CA 95210
(209) 473-4849
License # N3683474
D.O.B. October 9,1957
S.S.# 556-33-5387

William Louis Thweatt Jr.
2819 B Florida Ave.
Stockton, CA 95205
(209) 941-4940
License # N0536800
D.O.B. January 5,1953
S.S.# 551-72-3986

October 1989

Vehicle List

Number	Year	Make	License	Vehicle I.D.
#2	1964	Hopto, Warner & Swasey	2EKQ607	3706
#3	1964	Hopto, Warner & Swasey	SFH087	3723
#6	1968	Ford Dump Truck	1M87097	U85BU835105
#9	1975	GMC Service/Dump Truck	95398X	TCY3357512398
#12	1978	GMC Service Truck	1K43612	TCL348Z509498
#15	1987	Ford F350 Service Truck	3F22121	1FDJF37L8HKA46711
#18	1989	GMC Suburban (M)	2LXV148	1GKGV26K8KF505633
#21	1989	GMC Suburban (J)	2LXL654	1GKGV26K8KF505065
#24	1977	Strongboy Trailer	UB1641	2768

SECTION ONE

SECTION ONE

SAFETY PROGRAM

TO ALL EMPLOYEES:

This manual is hereby distributed as the Minter & Fahy Construction Company Safety Manual. Federal and State safety laws require that a safety manual be written, and used, to see that safe conditions prevail in all of our work areas.

It is company policy that safety always be of prime concern, especially when working on the jobsite. Accidents cost everyone, and benefit no one, with the exception of doctors, attorneys, and morticians.

Minter & Fahy Construction is involved in the removal and the installation of underground fuel tanks. There are several areas where safety problems are the most demanding on our company. They are: excavations, backfill, electrical tools, air compressors, heavy equipment operation, and exposure to hazardous materials. The best way to prevent accidents is to identify and eliminate the causes before they happen. This manual will be used to help identify the causes, and thus prevent accidents from happening at all.

Weekly tailgate meetings shall be carried out by the Safety Officer assigned to each particular job, whenever two or more employees are located on one jobsite. Notifications of the meetings and the topic covered shall be forwarded to the office on the log sheets at the back of this manual.

We are proud of our record and it will take your constant attention to hazards to continue keeping working conditions safe.

SAFE PRACTICE PROGRAM

GENERAL

1. All persons shall follow these rules, render every possible aid to safe operations, and report unsafe conditions or practices to the proper authorities.

2. The foreman shall insist that all employees observe all the safety rules.

3. All employees shall be given frequent accident prevention instructions, once a month at a general meeting, and each week at the jobsite tailgate meetings.

4. Anyone known to be under the influence of intoxicating liquor and/or drugs, will not be allowed on the jobsite, and will be subject to immediate release.

5. Horseplay will be absolutely prohibited on the jobsite.

6. Work shall be planned and supervised to forestall injuries in the handling of heavy materials and in working together with equipment.

7. Employees shall not enter manholes, underground vaults, tanks, open excavations, or other similar places that receive little ventilation.

8. Employees shall be alert to see that all guards and other protective devices are in proper places, and adjusted, and shall report any deficiencies to the foremon.

9. All injuries shall be reported promptly to an authorized person , so that arrangements can be made for first aid.

10. When lifting heavy objects, use the large muscles of the leg, instead of the smaller muscles of the back.

11. Gasoline shall not be used for cleaning purposes.

12. Heavy equipment shall only be operated by employees that have been instructed and trained for such operation.

USE OF TOOLS AND EQUIPMENT

1. Keep faces of hammers in good shape to avoid flying nails and bruised fingers.

2. Hold cold chisels in such a way so that the knuckles will be protected if the hammer misses the hand.

3. Do not use pipe wrenches as a substitute for other wrenches.

4. Files shall be equipped with handles.

5. Do not use a screwdriver for a chisel.

6. Keep hand saws sharp.

7. Do not push a wheelbarow with handles in the upright position.

8. Do not leave the cords of portable electrical tools where cars or trucks can run over them.

9. Do not lift or lower portable tools by means of the cord, use a rope.

10. Do not alter wrench size by the use of a handle extension or a "cheater".

11. All tools and equipment shall be maintained in good condition. Any tool or pice of equipment that is damaged shall be removed from service and tagged "Defective".

12. No burning, welding or other source of ignition shall be applied to any enclosed tank or vessel, even if there are some openings, until it has first been determined that no possibility of explosion exists, and authority for the work is obtained from the foreman or the superintendent. The fire department must be present for these type of operations.

HEAVY EQUIPMENT, MACHINERY, AND VEHICLES

1. Do not operate machinery or equipment without the proper permission, training, and instruction.

2. Machinery shall not be repaired or adjusted while in operation.

3. Do not work under vehicles supported by jacks or chain hoists, without proper blocking.

4. Air hoses should not be disconnected at any end until the hose has been bled.

5. All excavations should be inspected before backfilling operations begin, to insure that it is safe to do so.

6. Excavating equipment shall not be operated near tops of cuts, banks, and cliffs, if employees are working below.

7. Tractors, and heavy equipment shall not be operated where there is a possibility of overturning in dangerous areas like edges of deep fills, cut banks, and steep slopes.

8. At all times, during the operation of heavy equipment, proper protection, such as hard hats, gloves, and steel toed boots shall be worn.

SECTION TWO

SECTION TWO

HEALTH AND SAFETY CONSIDERATIONS

A. Health and Safety Officer

James "Les" Minter is designated as the Health and Safety Officer for this project. He will be responsible for planning, implementing, and auditing the health and safety program for this construction work. He will be on site at all times to insure that the job flows in a safe manner. Les will be conducting weekly fifteen minute safety meetings with all construction personnel. He also will conduct monthly safety meetings with a minimum of one per location in the event that the construction schedule does not require a full month at each location. The Project Inspector may wish to be present at these meetings, so he will be notified in advance. Log sheets for the weekly and the monthly safety meetings can be found in the list of attached plates at the end of this booklet. The Health and Safety Officer shall fill out the sheet for each meeting.

B. Hazardous Substance Description

Light and heavy petroleum hydrocarbons, including benzene, toluene, and xylene may be encountered during the normal course of excavation and removal of the existing underground tanks, the associated piping, and the surrounding soil. These petroleum hydrocarbons will be in the form of gasoline and diesel fuel, withthe BTX (Benzene, Toluene, and Xylene) being the result of the breakdown of these fuels in soil and water. Soil and/or

water samples will be taken at the discretion of the inspecting health officer from the county and/or the environmental health inspector. Appropriate measures will be taken in the event that the soil and or water is found to be contaminated.

C. Chemical Distribution

Petroleum hydrocarbons in the form of gasoline and diesel fuel will have the greatest concentrations at locations adjacent to the tanks and the associated piping, becoming less with distances away from the tank and associated piping. Utmost care will be taken to capture all residual product from the tank and associated piping so that it does not enter the soil or ground water.

D. Chemical Hazards

Potential chemical hazards include skin and eye contact and inhalation or exposure to potentially toxic concentrations of chemical vapors. The identified toxic compounds that could exist at the site are listed below with descriptions of specific effects of each. The list includes the main toxic constituents of gasoline (benzene, toluene, xylene, and ethylbenzene).

1. Benzene
   a. Characteristics: Clear, colorless, highly flammable liquid with characteristic odor.
   b. High exposure levels may cause: Acute restlessness, convulsions, depression, respiratory failure, suspected carcinogen.
   c. Permissible exposure level in the air (PEL) for a time average over an eight hour period: 10ppm

2. Toluene

a. Charateristics: Refractive flammable liquid with benzene like odor.

b. High exposure levels may cause: Headache, nausea, eye irritation, mild macrocytic anemia, but is less toxic than benzene.

c. PEL for an 8 hour TWA: 200 ppm

3. Xylene

a. Characteristics: clear, mobile, flammable liquid

b. High exposure levels may cause: severe eye irritation skin irritation, narcosis.

c. PEL for an 8 hour TWA: 100 ppm

4. Ethylbenzene

a. Characteristics: colorless liquid, aromatic odor, highly flammable

b. High exposure levels may cause: skin, nose, and eye irritation, dizziness, ataxia, loss of conciousness and respiratory failure.

c. PEL for an 8 hour TWA: 100ppm

E. Physical Hazards

Other on site hazards may include physical injuries due to the proximity of workers to engine-driven heavy equipment and tools, Heavy equipment used during the excavation and removal ofthe underground tanks for this project include a Hopto, a rubber-tire mounted excavator, a backhoe, and a tractor. Only trained personnel will operate machines, tools, and equipment; all of which will be kept clean and in good repair. Safety

apparel required around the heavy equipment will include a hard hat. Perimeters of tank holes will be barricaded, flagged, taped, and or fenced. All work will be performed in accordance with OSHA guidelines.

All inspections will be coordinated with the Project Inspector with plenty of notice. Tank holes will not be vacated unless approved by the Project Inspector.

Noise Control: Work hours will be normal working hours of 8:00am to 4:00pm, unless otherwise approved by the Project Inspector. Noise will be kept at a minimum, as far as possible. Ear and eye protection will be provided during jackhammering, cutting, and excavation, where necessary. Explosives will not be permitted under any circumstances.

Job Clean Up: Site excavations will be cleaned on a daily basis so that all stockpiled material from the excavation is clearly marked and barricaded to reduce injury from rubble, dirt, and any unwanted material in walkways and thoroughfares.

SECTION THREE

SECTION THREE

WORK PLAN INSTRUCTIONS

A. Level of Protection

Regular daily surveys of the site and knowledge of the anticipated hazards will determine the level of protection and the proper safety procedures to be employed on a tank by tank basis. During use of heavy equipment and machinery, all construction personnel and site visitors must wear a hard hat. The workers coming into contact with the excavated materials will wear boots, gloves, and a hard hat.

All safety equipment and first aid kits can be found in the service truck which will be located at the site during the normal construction hours. Fire extinguishers and eye wash can also be found on this truck. All construction workers should become familiar with the location of all safety equipment on the jobsite. Construction workers should also be familiar with the location of the nearest phone (station or commercial) at each tank site. There is a phone available in the service truck on the jobsite.

B. Site Entry Procedures

The two general work areas are shown on the site plans at the end of this booklet. Access to each tank hole site will be controlled with barricades, flagging, and caution taping. All personnel entering the work zone of each tank removal will be qualified field personnel wearing the proper level of protection.

Site visitors will be required to wear hard hats which are available from the job superintendent. Eating, drinking, and especially smoking and any other practices which increase the probability of combustion or hand-to-mouth transfer will be prohibited in the work zone. Potable water will be available at the site.

C. Decontamination Procedures and Disposal

All disposable protective clothing will be put into plastic bags and disposed of in a garbage receptacle. Excavated soils will be stockpiled in designated areas until chemical analyses have been performed on the soil samples, or until the health inspector deems the material to be free of potential contamination hazard. The soil will be covered with plastic sheeting in the event that the health inspector suspects there to be a contamination hazard.

In the event of a medical emergency, the injured party will be taken through decontamination procedures, if possible. However, the procedures will be omitted when it may aggravate or cause harm to the injured party. A member of the work team will accompany the injured party to the medical facility to advise on matters concerning chemical exposure.

The Health and Safety officer will be notified if combustible gas vapor levels exceed ambient concentrations in the samples. Excavation will cease, equipment will be shut down, and personnel will withdraw from the area. The Health and Safety Officer will determine when personnel may return to the work area.

SECTION FOUR

SECTION FOUR

EMERGENCY MEDICAL CARE

In the event of an injury or suspected chemical exposure, the first responsibility of the Health and Safety Officer will be to prevent further injury. This objective will normally require an immediate end to work until the situation is rectified. The Health and Safety Officer may order an evacuation of the work party, as discussed in Section Three of this manual.

The Health and Safety Officer's primary responsibility in the event of an accident will be evacuation, first aid, and decontamination of injured team members. The Health and Safety Officer will determine safe evacuation areas and begin first aid.

Emergency numbers can be found in the Supplemental Section of this manual. When in doubt as to which number to call, dial 9-911 on the station phone, or 911 on the commercial phone.

Accident report forms can be found on the following pages. For any accident or injury, regardless of how minor, an accident report will be filled out and presented to the proper representatives of the OICC and the Contractor.

ACCIDENT REPORT SHEET

UNDERGROUND TANK REMOVAL PROJECT

CONTRACT NO.

DATE:_____

PERSON FILING REPORT:_____

LOCATION OF ACCIDENT:_____

NATURE OF ACCIDENT: _____

PERSON/PERSONS INVOLVED:_____

_____

DESCRIPTION OF ACCIDENT:_____

_____

_____

_____

_____

_____

_____

_____

REMEDIAL ACTION TAKEN:_____

_____

_____

_____

_____

_____

_____

_____

SIGNATURE:_____

DATE:_____

ADDITIONAL

COMMENTS:_____

_____

Case or File No. _____ OMB No. 44R 1453

Supplementary Record of Occupational Injuries and Illnesses

EMPLOYER

1. Name _____
2. Mail address _____
   (No. and street) (City or town) (State)
3. Location, if different from mail address _____

INJURED OR ILL EMPLOYEE

4. Name _____ Social Security No. _____
   (First name) (Middle name) (Last name)
5. Home address _____
   (No. and street) (City or town) (State)
6. Age _____ 7. Sex: Male_____ Female_____ (Check one)
8. Occupation _____
   (Enter regular job title, *not* the specific activity he was performing at time of injury.)
9. Department _____
   (Enter name of department or division in which the injured person is regularly employed, even though he may have been temporarily working in another department at the time of injury.)

THE ACCIDENT OR EXPOSURE TO OCCUPATIONAL ILLNESS

10. Place of accident or exposure _____
    (No. and street) (City or town) (State)
    If accident or exposure occurred on employer's premises, give address of plant or establishment in which it occurred. Do not indicate department or division within the plant or establishment. If accident occurred outside employer's premises at an identifiable address, give that address. If it occurred on a public highway or at any other place which cannot be identified by number and street, please provide place references locating the place of injury as accurately as possible.
11. Was place of accident or exposure on employer's premises? _____ (Yes or No)
12. What was the employee doing when injured? _____
    (Be specific. If he was using tools or equipment or handling material, name them and tell what he was doing with them.)
13. How did the accident occur? _____
    (Describe fully the events which resulted in the injury or occupational illness. Tell what happened and how it happened. Name any objects or substances involved and tell how they were involved. Give full details on all factors which led or contributed to the accident. Use separate sheet for additional space.)

OCCUPATIONAL INJURY OR OCCUPATIONAL ILLNESS

14. Describe the injury or illness in detail and indicate the part of body affected. _____
    (e.g.: amputation of right index finger at second joint; fracture of ribs; lead poisoning; dermatitis of left hand, etc.)
15. Name the object or substance which directly injured the employee. (For example, the machine or thing he struck against or which struck him; the vapor or poison he inhaled or swallowed; the chemical or radiation which irritated his skin; or in cases of strains, hernias, etc., the thing he was lifting, pulling, etc.)
16. Date of injury or initial diagnosis of occupational illness _____
    (Date)
17. Did employee die? _____ (Yes or No)

OTHER

18. Name and address of physician _____
19. If hospitalized, name and address of hospital _____

Date of report _____ Prepared by _____
Official position _____

SECTION FIVE

SECTION FIVE

EMERGENCY PROCEDURES

A. Response to an Emergency

In case of an injury, the Health and Safety Officer will use the appropriate first aid kit and contact off-site medical help, if appropriate.

If medical evacuation is required, the escape route will be determined by the Health and Safety Officer and the Project Inspector depending on which tank site the work force is currently operating.

B. Emergency Contacts

Ambulance, Fire : Dial 9-911 or 911

Security : Dial 2555 or 646-2555

Poison Control : Dial 9-242-7631 or 242-7631

C. Acute Exposure Symptoms and First Aid

Exposure	Symptoms	First Aid
Skin	Dermatitis	Wash immediately with soap and water, contact outside help, if required
Eye	Irritated eyes	Flush eyes with water, contact ambulance
Inhalation	Vertigo, tremor	Move person to fresh air, cover source
Ingestion	Nausea, vomiting	Call Poison control

D. Contingency Plan

The following procedures will be used in case of an unpredictable event:

FIRE: Use fire extinguisher if localized and call the fire department if uncontrolled.

CHEMICAL EXPOSURE: Follow first aid treatment specified in previous section.

PHYSICAL INJURY: Provide first aid treatment and contact ambulance for evacuation to hospital, if appropriate.

SECTION SIX

PERMITS

Permits for excavations and or trenches five feet deep or more in which workers must enter can be obtained at our local office :

CAL OSHA

1465 ENEA CIRCLE

BUILDING E SUITE 900

CONCORD, CA 94520

415-676-5333

DIVISION OF OCCUPATIONAL
SAFETY AND HEALTH

DISTRICT OFFICES

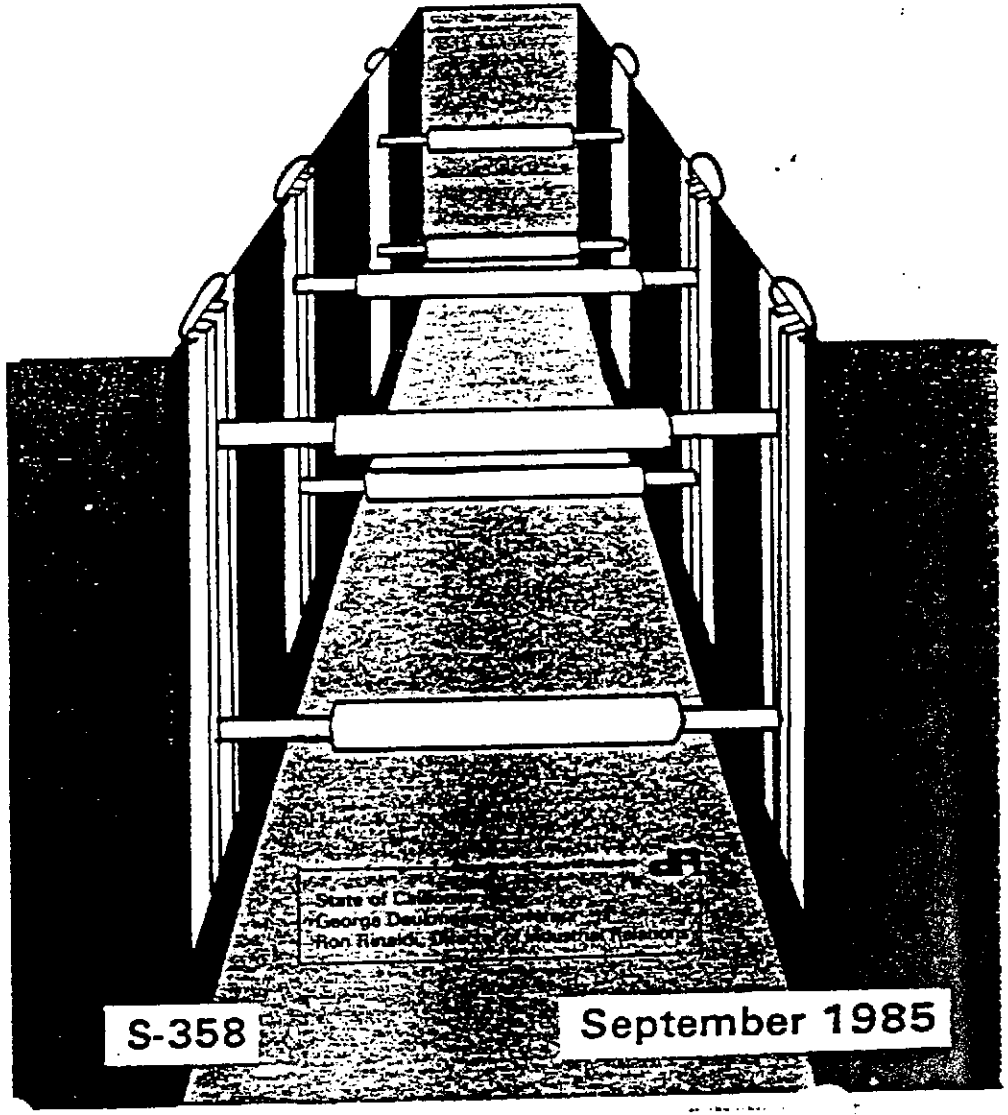
Bakersfield	4800 Stockdale Hwy.	93309	(805) 395-2718
Berkeley	1625 Shattuck Ave.	94709	(415) 540-3030
Concord	1465 Enea Circle	94520	(415) 676-5334
Covina	233 N. Second Ave.	91723	(818) 331-4875
Fresno	2550 Mariposa St.	93721	(209) 445-5302
Long Beach	245 W. Broadway	90802	(213) 590-5035
Los Angeles	3460 Wilshire Blvd.	90010	(213) 736-3041
Modesto	1800 Coffee Rd.	95355	(209) 576-6260
Redding	1421 Court St.	96001	(916) 225-2885
Sacramento	2422 Arden Way	95825	(916) 920-6123
San Bernardino	303 W. Third St.	92401	(714) 383-4321
San Diego	7807 Convoy Court	92111	(619) 237-7325
San Francisco	455 Golden Gate Ave.	94102	(415) 557-1677
San Jose	100 Paseo de San Antonio	95113	(408) 277-1260
San Mateo	1900 So. Norfolk St.	94403	(415) 572-9424
Santa Ana	28 Civic Center Plaza	92701	(714) 558-4141
Santa Fe Springs	14111 E. Freeway Dr.	90670	(213) 802-1711
Santa Rosa	50 "D" St.	95404	(707) 576-2388
Van Nuys	6150 Van Nuys Blvd.	91401	(818) 901-5403
Ventura	5720 Ralston St.	93003	(805) 654-4581
Vernon	2833 Leonis Blvd.	90058	(213) 589-5848

FIELD OFFICES

Chico	555 Rio Lindo Ave.	95926	(916) 345-7131
Eureka	619 Second Ave.	95501	(707) 442-6232
Salinas	21 W. Laurel Dr.	93906	(408) 443-3050
Santa Barbara	3704 State St.	93105	(805) 682-2578
Stockton	31 E. Channel St.	95202	(209) 948-7762
Ukiah	776 S. State St.	95482	(707) 462-8850

CAL OSHA

TRENCH and EXCAVATION SAFETY GUIDE



S-358 September 1985

CAL/OSHA Communications
525 Golden Gate Ave.
San Francisco, CA 94102

CONTENTS

TRENCH AND EXCAVATION SAFETY GUIDE

Each year workers are killed and disabled in excavation and trench cave-ins in California. Almost all of these accidents result from failure to shore or slope the trench or from inadequate shoring or sloping. This pamphlet provides guidelines based on CAL/OSHA standards for shoring, sloping, and benching. The number of cave-in accidents will be reduced if these guidelines and applicable CAL/OSHA standards are followed.

This is not a legal interpretation or a restatement of current CAL/OSHA regulations. Refer to Title 8, Sections 1503 and 1539-1547, for current regulations.

BEFORE YOU DIG

Obtain the required permit from the Division of Occupational Safety and Health (DOSH) before constructing trenches or excavations 5 feet deep or more into which a person is required to descend. Contact a DOSH District or Field office for information regarding the permit application procedure.

Determine whether any underground installations such as sewer, water, or fuel lines are likely to be encountered. You can get this information by calling the Underground Service Alert (USA): in Northern California (800) 642-2444 and in Southern California 1-(800) 422-4133.

With the exception of emergency repair work, give owners of underground facilities in the area at least 48 working hours advance notice before you begin excavation work.

SUPERVISION. All work in an excavation must be supervised by a qualified person.

HAZARDS

Remove trees, poles, boulders, and similar objects which may be hazardous to workers.

Do not allow work in or near the excavation until a qualified person has determined that no hazard to workers exists from possible moving ground.

Inspect excavations after rainstorms, thaws, or other events which may affect the stability of the soil and increase hazards before workers are allowed to enter the excavation.

Protect workers who enter excavations 5 feet deep or more with a system of shoring, sloping, benching, or equivalent alternative methods. When necessary, provide similar protection for workers in excavations less than 5 feet deep.

SPOIL. Dump excavated material far enough from the edge of the trench so that it does not fall back. When trenches are 5 feet deep or more, locate the spoil at least 2 feet from the edge. Do not contain the spoil by any method which will disturb the soil already in place (such as driving stakes).

ACCESS. Provide a safe and convenient way for workers to enter and leave the excavation. In trenches 4 feet deep or more, provide a safe means of access within 25 feet of any work area in the excavation.

CROSSINGS. Install crossings with standard guardrails and toeboards when the excavation is more than 7½ feet deep.

UNDERMINING. Do not excavate beneath the level of the base of an adjacent foundation, retaining wall or other structure until a qualified person has determined that the earth work will not create a hazard to workers. Support undermined sidewalks so they will support anticipated loads.

If the excavation endangers the stability of adjoining structures, shore, brace, or underpin those structures.

RETAINING WALLS. Do not use an existing wall or structure as a retaining wall until it has been determined that it will safely support expected loads.

REMOTE WORK LOCATIONS. Provide barriers to prevent workers from falling into excavations.

Barricade or securely cover all wells, pits, shafts, and caissons.

Backfill temporary wells, pits, and shafts when the operation is completed.

WATER ACCUMULATION. Use diversion ditches, dikes, and other effective methods to prevent water from entering the excavation and to drain surrounding areas.

VIBRATIONS OR SUPERIMPOSED LOADS. Use additional bracing to strengthen shoring in excavations located near streets, railroads, or other sources of vibration and external loads. Take similar precautions when excavations are made in areas that have been previously filled.

SHORING, SLOPING, AND BENCHING SYSTEMS

Provide devices which allow the upper cross braces to be set in place from ground level. In deep trenches where additional braces are needed, workers should proceed downward, protected by cross braces already set in place. When removing shoring, use the reverse procedure.

STANDARD SHORING SYSTEM. Install shoring in accordance with Tables 1 and 2 on pages 15 and 16 and diagrams on pages 17 through 21, or according to plans prepared by a civil engineer registered in California.

Shoring must be composed of:

Solid wood sheeting or wood sheet-piling not less than 2 inches thick
Plywood at least 1⅛ inches thick
Wood uprights at least 2 inches by 8 inches
Wood braces and diagonal shores at least 4 inches by 4 inches and not subjected to compressive stress in excess of values given by the following formula:

$S = 1300 - (20L/D)$
Maximum Ratio $(L/D) = 50$
L—length, unsupported (in inches)
D—least side of the timber (in inches)
S—allowable stress (in pounds per square inch of cross section)

Wedge or cleat diagonal shores (struts) at the bulkhead end. If diagonal shores bear on the ground, they should not impose loads in excess of the test-determined soil-bearing values. (Allow for the horizontal component of force.)

Do not place diagonal shores at an angle greater than 45° from the horizontal.

Securely anchor tie rods when they are used to restrain the top of sheeting or other restraining systems.

Assume that there is full loading due to ground water when using tight sheeting or sheet piling (unless full loading is prevented by weep holes, drains, or other methods).

Provide additional stringers, ties, and bracing to allow temporary removal of individual supports.

Thickness of sheeting and spacing of shores:

Minimum Rough Thickness of Sheeting or Lagging	Maximum Spacing of Shores
2 inches	4 feet
3 inches	7 feet

TRENCH SHORING SYSTEMS. Do not slope a shored trench in excess of 15° from the vertical. Make uprights at least 2 inches in nominal thickness. Plywood panels at least ¾ inches thick may be installed behind the uprights to hold loose material not likely to impose heavy loads.

Extend uprights to the top of the trench and to within at least 2 feet of the bottom. If running soil is encountered, extend uprights to the bottom of the trench.

Cross braces—Always use at least two braces. Install one horizontal brace for each 4 foot zone or partial zone measuring 2 feet or more. Use metal screw-type trench jacks with a base on each end or timbers placed horizontally against the uprights or stringers. Hydraulic braces may also be used.

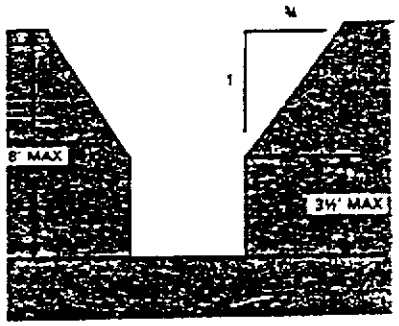
PROTECTIVE SHIELDS AND WELDING HUTS. Plans for protective shields and welding huts must be prepared by a civil engineer registered in California. Construct protective shields and welding huts out of steel or other material providing equivalent strength. They must provide protection equivalent to that afforded by adequate shoring.

BELL OR POT HOLES. Shore and brace bell and pot holes unless protective shields or welding huts are used.

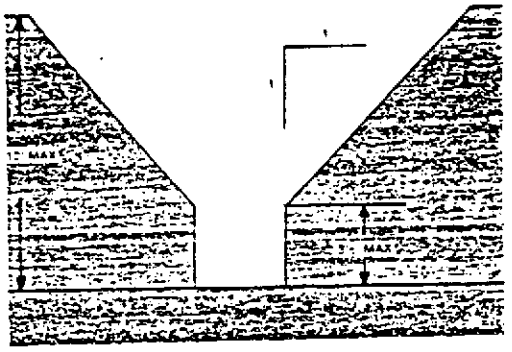
SLOPING OR BENCHING SYSTEMS. When sloping is used as a substitute for shoring, the slope should be at least ¾ horizontal to 1 vertical unless the instability of the soil requires a flatter slope.

Exceptions:

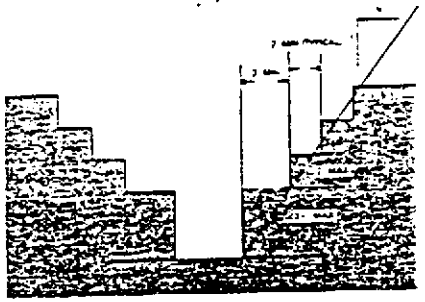
In hard, compact soil where the depth of the excavation or trench is 8 feet or less, make a vertical cut of 3½ feet with a slope of ¾ horizontal to 1 vertical.



In hard, compact soil where the depth of the excavation or trench is 12 feet or less, make a vertical cut of 3½ feet with a slope of 1 horizontal to 1 vertical.



When benching in hard, compact soil, use a slope ratio of ¾ horizontal to 1 vertical, or flatter.



SHAFTS

Retain all wells or shafts over 5 feet deep which workers are allowed to enter with lagging, spiling, or casing. Extend the lagging, spiling, or casing at least 1 foot above the ground, the full length of the shaft, and at least 5 feet into solid rock (if possible).

SMALL SHAFTS IN HARD, COMPACT SOIL. 2 inch cribbing can be used in square shafts not over 4 feet square. Cut half way through the width of the member and dovetail into position so that each member will act as a shore as well as lagging. Nail strips in the corner to prevent boards from dropping down.

SHAFTS IN OTHER THAN HARD, COMPACT SOIL. Use a system of lagging supported by braces and corner posts for square or rectangular shafts. In shafts 4 feet square or smaller, use 4 inch by 4 inch members at intervals of no more than 4 feet. Braces and corner posts in larger shafts should be correspondingly larger. The appropriate size should be determined by a registered civil engineer.

Completely lag round shafts with 2 inch material supported by adjustable rings of metal or timber at intervals of no more than 4 feet or case in a way which provides equivalent protection.

BELL EXCAVATIONS. Include the following to protect workers engaged in belling or enlarging the bottoms of shafts:

- Physical protection from potential ground movement or collapse
- Mechanical ventilation
- A line for instant rescue fastened to a shoulder harness and worn by each worker entering the shaft
- A hoist and platform for lifting and lowering workers in shafts over 50 feet deep
- Barriers to prevent materials from falling into the shaft

EARTHWORK AND EXCAVATING

Install a bench or other method of working if the height and the condition of the face pose a hazard to workers. When a bench method of operation is needed, construct a setback of at least ½ the height of the single face or bank for each section of the face or bank.

The maximum slope of the face depends on:

- The nature of the material being excavated
- The compaction of the material
- The height of the face
- The type and size of the equipment used at the face and the amount of protection this equipment affords the operator
- The safety of workers not protected by such equipment

Do not make the slope steeper than ¾ to 1 when the height of the excavation is greater than the bucket of the excavator or loader can reach and when the face is composed of loose or ravelling material.

Do not allow a slope steeper than ½ to 1 when the height of the excavation is greater than the bucket of the excavator or the loader can reach when the face is composed of material which will stand in place but which is not firmly cemented or consolidated.

OVERBURDEN

Do not allow a person under a face or bank where stripping or any other similar operation constitutes a hazard.

Use barriers, baffle boards, screens, or other devices to protect workers from material rolling or sliding down the slopes.

FACE INSPECTION AND CONTROL

Make daily inspections of faces, banks, and tops where workers are exposed to falling or rolling material, and correct any unsafe conditions. Do not allow anyone to work near an unsafe face.

Prohibit overhanging banks except:

- When material is moved by mechanical equipment with controls at a safe distance
- When the bank is undercut by a stream and the monitor is located a safe distance from the bank

When necessary, station a worker at the face who is instructed to give a warning when loose rock or other materials begin to fall. Provide this worker with the means of giving adequate warning to other workers. While the worker is assigned to this job, do not assign her/him to any other work.

Provide enough illumination for safe night work. Do not allow night work unless the working area is sufficiently illuminated so that movement of workers and equipment can be easily seen.

Keep workers away from dangerous areas that are not work areas by posting KEEP OUT signs or erecting barricades.

PROTECTION OF WORKERS AT THE FACE

Prohibit work above or below workers at the face if such work endangers their safety.

On top of the bank:

- Fence with guardrails or ropes.
- Use a railed platform.
- Have workers use safety belts and life lines.

Exceptions:

When the bank is less than 20 feet high
When the slope is flatter than ¾ to 1
When no work is being done within 10 feet of the edge

On the face:

Remove loose rock from over the working place.

Have workers use safety belts and life lines.
(Life lines used for scaling or inspection should be protected from excessive fraying or damage and made of a minimum of ⅞ inch wire core manila rope.)

Use portable staging.

Use a boatswains chair or skips especially designed for faces. (When using a boatswains chair, also use a safety belt and life line equipped with an effective descent control.)

Assign two or more workers cooperating with each other for drilling, blasting, or removing loose rock.

At the foot of the bank:

Remove loose rock from above the working place.

Maintain a ready exit to a place of safety.

Tables containing specifications for wood shoring and for shoring in running soils are printed in the Safety Orders. This table (1) and the table on the following page (2) cover the most common shoring materials and soil conditions.

TABLE 1

METAL-WOOD SHORING FOR HARD COMPACT SOIL

	UPRIGHTS		BRACES (STRUTS) AT 8' ON CENTERS				STRINGER
			ALUMINUM PIPE		STD. STEEL PIPE		
DEPTH (FEET)	HORIZ. SPACING (FEET)	WOOD SIZE (INCHES)	MIN. ID (INCHES)	MAX. EXCAV. WIDTH (FEET)	MIN. ID (INCHES)	MAX. EXCAV. WIDTH (FEET)	(WALER) (WOOD) SIZE
5	8	3×8	2½ (3½)	8 (10)	1½	3	
to	4	2×10	2½ (3½)	8 (14)	1½	3	4×4
7	2	2×8	2½ (3½)	8 (20)	1½	3	4×4
Over 7	8	4×10	2½ (3½)	6 (8)	2	6	
to	4	3×10	2½ (3½)	9 (11)	2½	12	6×8
10	2	3×8	2½ (3½)	12 (16)	3	15	6×8
Over 10	8	6×8	2½ (3½)	6 (7)	2 (2½)	8 (12)	
to	4	4×8	2½ (3½)	8 (10)	2 (2½)	10 (11)	8×8
12	2	3×8	2½ (3½)	10 (15)	2½ (3)	13 (15)	8×8
Over 12	8	6×8	2½ (3½)	5 (6)	2 (2½)	6 (10)	
to	4	4×10	2½ (3½)	7 (9)	2 (2½)	8 (12)	8×10
15	2	3×10	2½ (3½)	9 (13)	2½ (3)	13 (15)	8×10
Over 15	8	6×10	2½ (3½)	4 (5)	2½ (3)	8 (12)	
to	4	4×12	2½ (3½)	6 (8)	2½ (3)	10 (15)	6×12
20	2	3×12	2½ (3½)	8 (11)	2½ (3)	12 (15)	6×12
Over 20	See Section 1541(a)(6)						

- Metal pipe braces must be schedule 40, standard steel pipe or equivalent.
- Timber must be "selected lumber". See CSO 1504.
- Timber members of equivalent "section modulus" may be used for uprights and stringers shown in these tables.
- See page 17 for screw jack installation.
- Numbers in parentheses indicate maximum safe span for a specified diameter pipe.
- Tables may be modified by a civil engineer. See CSO 1541 (a) (6).
- Metal sheeting or other material equivalent to the strength of the wood members may be used.
- Place stringers to develop maximum strength (long side horizontal).

TABLE 2
HYDRAULIC SHORING, FOR HARD COMPACT SOIL

	UPRIGHTS		STRINGERS (WALER)		BRACES (STRUTS)			
DEPTH (FEET)	HORIZONTAL SPACING (FEET)	SIZE ALUMINUM RAIL	SIZE ALUMINUM RAIL	VERTICAL SPACING (FEET)	HYDRAULIC CYLINDERS	HORIZ. SPACING (FEET)	MAX EXCV WIDTH (FEET)	
5 to 7	8	8" Wide Standard	6" Wide Standard	5	2" ID-2½" OD	8 cc	12	20
	*	***	***					**
Over 7 to 12	8	8" Wide Standard	6" Wide Standard	5	2" ID-2½" OD	8 cc	9	20
	*	***	***					**
Over 12 to 16	6	8" Wide Standard or HD	6" Wide Standard or 8" Wide HD	5	2" ID-2½ OD	6 cc	9	20
	*			5	2" ID-2½" OD			**
Over 16 to 20	6	8" Wide Standard or HD	6" Wide Standard or 8" Wide HD	4	2" or 3" ID or 2½" or 3½" OD	4 cc	9	20
	*			4				**

Over 20 See Section 1541(a)(6)

* Plywood may be used behind uprights.

** Use a 3½ × 3½ × 3/16" steel oversleeve to Std. 2" ID. No steel oversleeve required on 3" ID.

*** See Hydraulic Shoring Association Manual for strength of rails.

• If wooden members are used, refer to Tables 1 or 3 in GISO 1541.

• Tables may be modified by a civil engineer. See GISO 1541 (a) (6).

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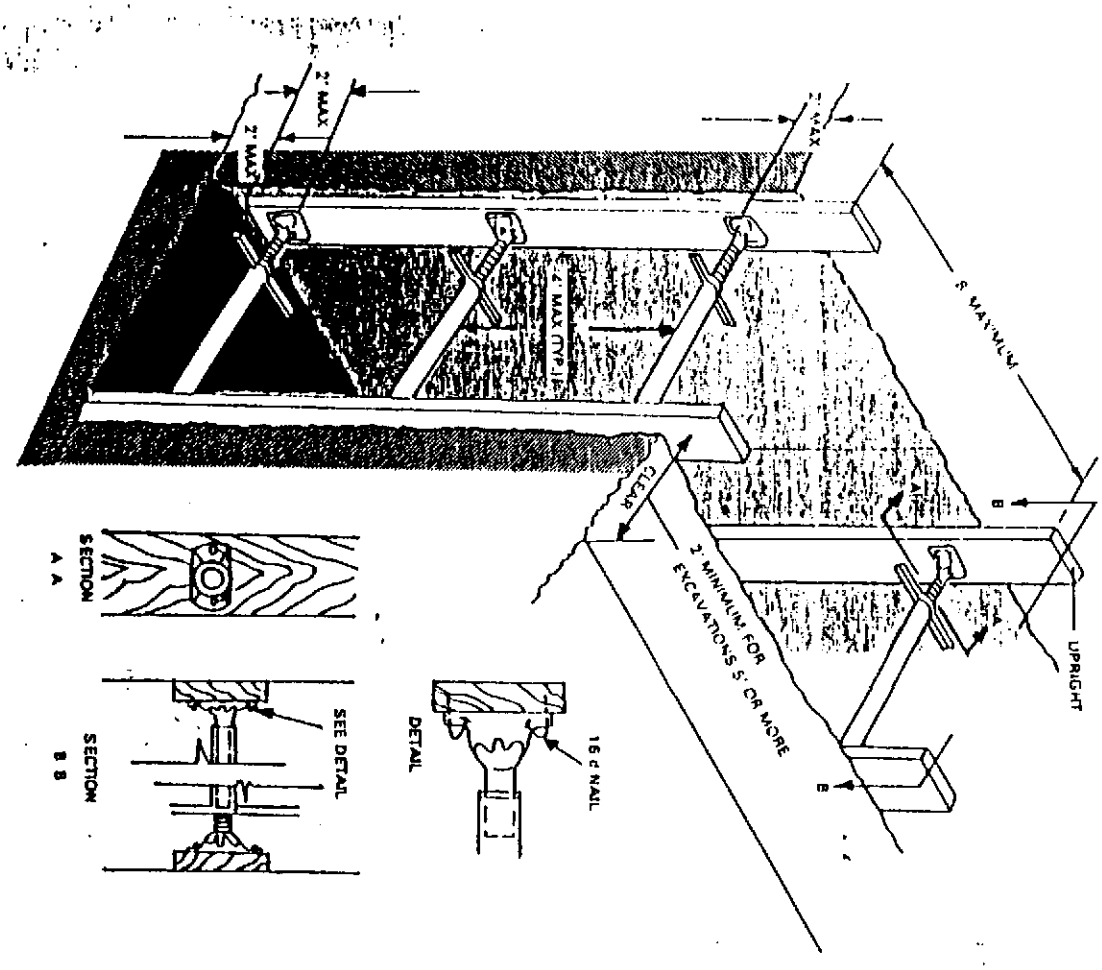
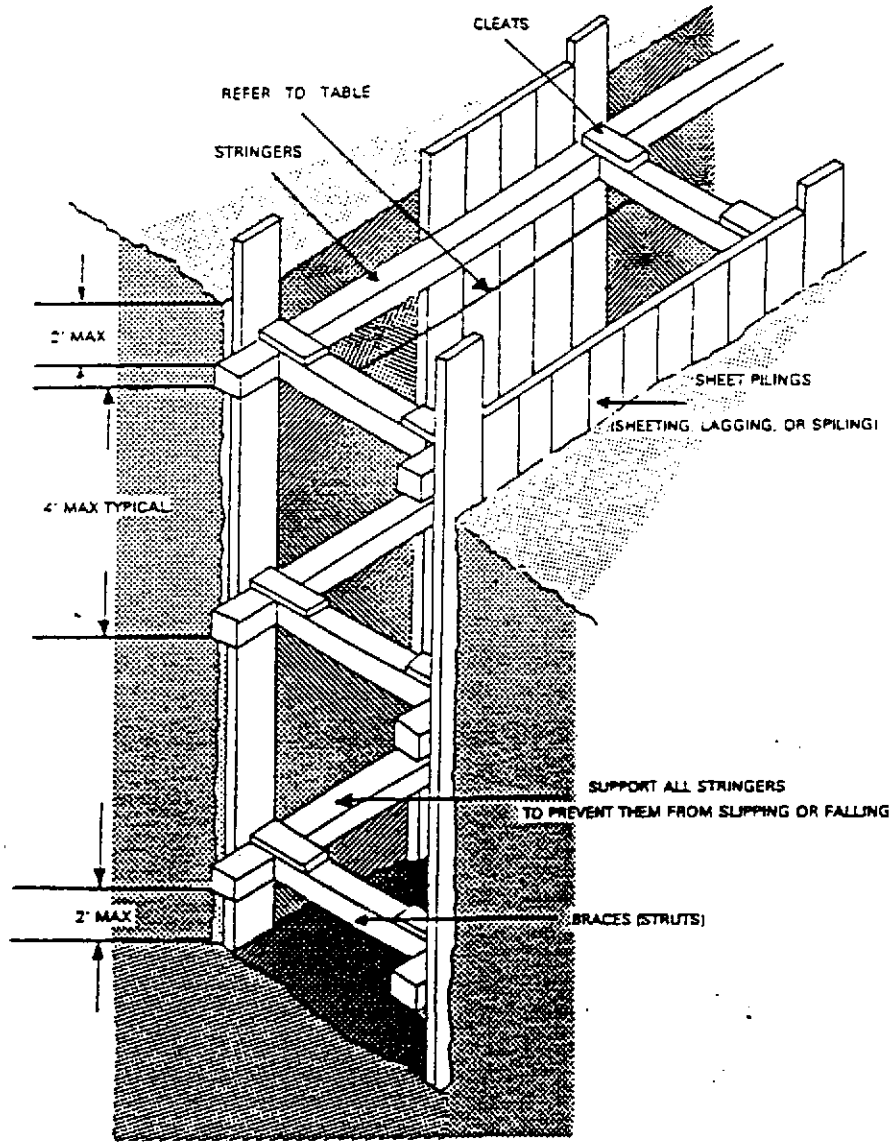


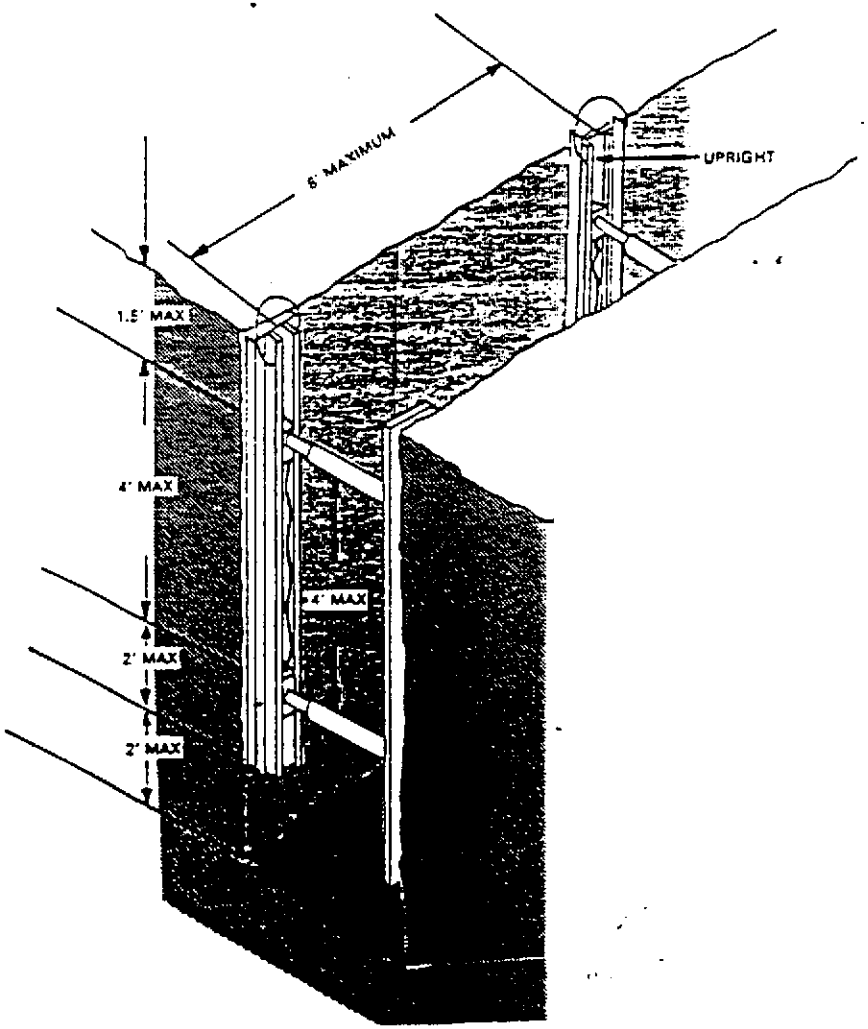
MINIMUM SHORING REQUIREMENT IN HARD COMPACT SOIL

17

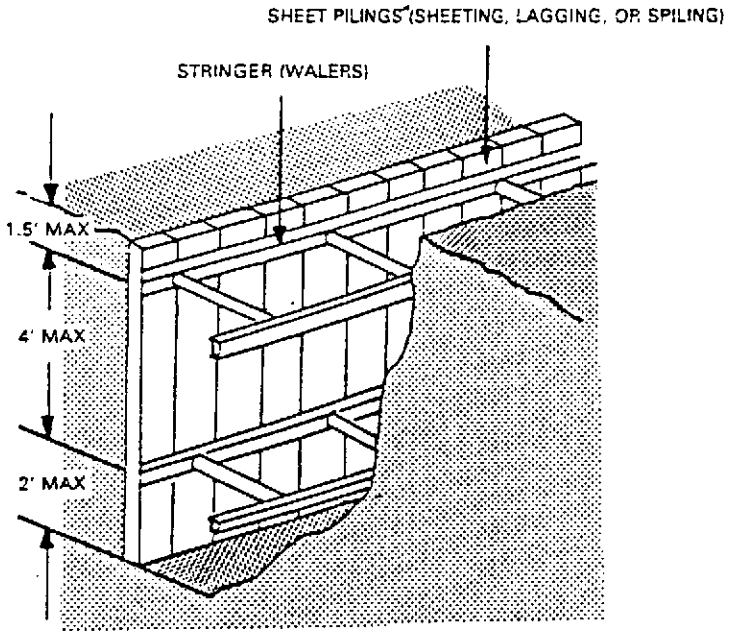
CLOSE SHEETING METHOD IN RUNNING SOIL



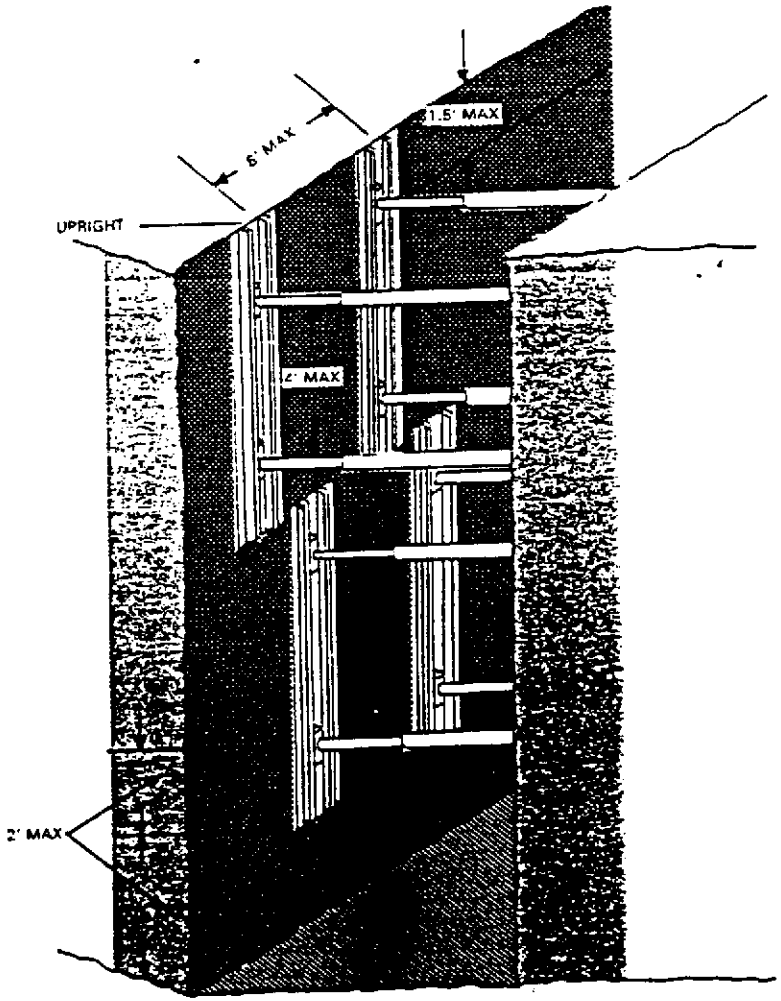
MINIMUM SHORING REQUIREMENT IN HARD COMPACT SOIL—HYDRAULIC



CLOSE SHEETING METHOD IN RUNNING SOIL HYDRAULIC



TYPICAL INSTALLATION IN HARD COMPACT SOIL— HYDRAULIC



SUPPLEMENTAL SECTION

SITE SPECIFIC HEALTH AND SAFETY PLAN

PROJECT:

_____

_____

_____

SOILS INVESTIGATION, AIR MONITORING, ENGINEER:

_____

_____

_____

AIR, SOIL, AND PERSONNEL MONITORING WILL BE PROVIDED BY THE SOILS INVESTIGATION FIRM NAMED ABOVE THRU THE USE OF A GASTECH MONITORING DEVICE. INSTRUMENTATION AND CALIBRATION DATA CAN BE PROVIDED UPON REQUEST FOR EACH UNIT.

AN UNDERGROUND TANK REMOVAL PERSONAL PROTECTIVE EQUIPMENT KIT WILL BE ON SITE WITH THE FOLLOWING ITEMS: FIT TESTED RESPIRATORS AND DISPOSABLE COVERALLS. THESE WILL BE AVAILABLE FOR ON SITE EMPLOYEES. DOCUMENTATION FOR SITE WORKERS TRAINING TO MEET 29CFR 1910.120 CAN BE FOUND IN THIS SECTION ALSO. VISITORS WITHOUT PROOF OF THIS TRAINING WILL BE DETAINED IN THE SAFE ZONE.

SITE HEALTH AND SAFETY PLAN

SIGN IN SHEET

I have read, understand, and will comply with the site Health and Safety plan for the following project:

_____

_____

_____

signed:

_____ date: _____

_____

_____

_____

_____

_____

Contractor:

Minter & Fahy Construction Company, Inc.

411 N. Buchanan Circle #2

Pacheco, CA 94553

415-674-8800

RESPIRATOR TRAINING AND FIT TEST CERTIFICATION

Photo of Employee During Fit Test (optional)

Employee: Matthew W. Minter

Work Area(s): Hazardous waste site work

Company: Minter & Fahy Construction

Date: 4-27-90

Type of Respirator(s): Brand & Model:

Size: WILSON M ½ face air purifying

Conditions of Use: To protect against soil and water contaminants on hazardous waste sites. Site safety and health plan will specify cartridge and when respirators must be worn.

Estimated Frequency of Cartridge/Filter or Disposable Respirator Replacement: Cartridges to be replaced upon evidence of breakthrough, daily, or as directed in site safety and health plan.

Emergency Procedures: If cartridge breakthrough or high monitoring results: leave work area immediately. Reenter as directed by supervisor and site safety officer.

I understand that I am responsible for:

- Regular use of my respirator whenever there is possibility I may be exposed to air contaminants
- Cleaning, inspection and proper storage of my respirator at the end of each workday
- Reporting respirator malfunction to my supervisor

562-02-8353
Social Security Number

Matthew W. Minter
Employee Signature

TRAINING

- [X] Respirator Use
- [X] How to fit
- [X] Cleaning
- [X] Inspection
- [X] Maintenance
- [X] Types & Levels of Contaminants

This is to certify that I have been trained in the above (X) areas.

4-27-90
Date

Matthew W. Minter
Employee Signature

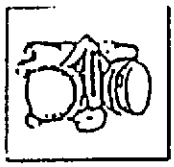
FIT TESTING RECORD

This is to certify a fit test in an "atmosphere" of isoamyl acetate was performed and passed:

4-27-90
Date

Check

Robin Donaldson
Approval



RESPIRATOR TRAINING AND FIT TEST CERTIFICATION

Photo of Employee During Fit Test (optional)

Employee: JAMES L. MINTER

Work Area(s): Hazardous waste site work

Company: MINTER & FAHY Const.

Date: 4/27/90

Type of Respirator(s): Brand & Model:

Size: WILSON M; face air purifying

Conditions of Use: To protect against soil and water contaminants on hazardous waste sites. Site safety and health plan will specify cartridge and when respirators must be worn.

Estimated Frequency of Cartridge/Filter or Disposable Respirator Replacement: Cartridges to be replaced upon evidence of breakthrough, daily, or as directed in site safety and health plan.

Emergency Procedures: If cartridge breakthrough or high monitoring results: leave work area immediately. Reenter as directed by supervisor and site safety officer.

I understand that I am responsible for:

- Regular use of my respirator whenever there is possibility I may be exposed to air contaminants
- Cleaning, inspection and proper storage of my respirator at the end of each workday
- Reporting respirator malfunction to my supervisor

542-54-8445
Social Security Number

James L Minter
Employee Signature

TRAINING

- [X] Respirator Use
- [X] How to fit
- [X] Cleaning
- [X] Inspection
- [X] Maintenance
- [X] Types & Levels of Contaminants

This is to certify that I have been trained in the above (X) areas.

4/27/90
Date

James L Minter
Employee Signature

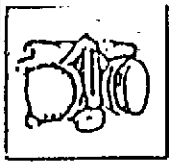
FIT TESTING RECORD

This is to certify a fit test in an "atmosphere" of isoamyl acetate was performed and passed:

4-27-90
Date

Check

Galen Donaldson
Approval



RESPIRATOR TRAINING AND FIT TEST CERTIFICATION

Photo of Employee During Fit Test (optional)

Employee: William L. Thweatt

Work Area(s): Hazardous waste site work

Company: Minter & Fahy Construction

Date: May 4, 1990

Type of Respirator(s): Brand & Model:

Size: Wilson M. ½ face air purifying

Conditions of Use: To protect against soil and water contaminants on hazardous waste sites. Site safety and health plan will specify cartridge and when respirators must be worn.

Estimated Frequency of Cartridge/Filter or Disposable Respirator Replacement: Cartridges to be replaced upon evidence of breakthrough, daily, or as directed in site safety and health plan.

Emergency Procedures: If cartridge breakthrough or high monitoring results: leave work area immediately. Reenter as directed by supervisor and site safety officer.

I understand that I am responsible for:

- Regular use of my respirator whenever there is possibility I may be exposed to air contaminants
- Cleaning, inspection and proper storage of my respirator at the end of each workday
- Reporting respirator malfunction to my supervisor

551-72-3986
Social Security Number

William L Thweatt
Employee Signature

TRAINING

- [X] Respirator Use
- [X] How to fit
- [X] Cleaning
- [X] Inspection
- [X] Maintenance
- [X] Types & Levels of Contaminants

This is to certify that I have been trained in the above (X) areas.

5-4-90
Date

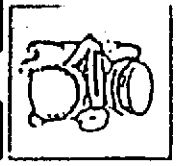
William L Thweatt Jr.
Employee Signature

FIT TESTING RECORD

This is to certify a fit test in an "atmosphere" of isoamyl acetate was performed and passed:

5-4-90
Date

Matthew W. Minter
Approval



RESPIRATOR TRAINING AND FIT TEST CERTIFICATION

Photo of Employee During Fit Test (optional)

Employee: John F. Fahy

Work Area(s): Hazardous waste site work

Company: Minter & Fahy Construction

Date: May 04, 1990

Type of Respirator(s): Brand & Model:

Size: Wilson M. ½ face air purifying

Conditions of Use: To protect against soil and water contaminants on hazardous waste sites. Site safety and health plan will specify cartridge and when respirators must be worn.

Estimated Frequency of Cartridge/Filter or Disposable Respirator Replacement: Cartridges to be replaced upon evidence of breakthrough, daily, or as directed in site safety and health plan.

Emergency Procedures: If cartridge breakthrough or high monitoring results: leave work area immediately. Reenter as directed by supervisor and site safety officer.

I understand that I am responsible for:

- Regular use of my respirator whenever there is possibility I may be exposed to air contaminants
- Cleaning, inspection and proper storage of my respirator at the end of each workday
- Reporting respirator malfunction to my supervisor

555-92-0724
Social Security Number

Employee Signature

TRAINING

- [X] Respirator Use
- [X] How to fit
- [X] Cleaning
- [X] Inspection
- [X] Maintenance
- [X] Types & Levels of Contaminants

This is to certify that I have been trained in the above (X) areas.

May 04 1990
Date

Employee Signature

FIT TESTING RECORD

This is to certify a fit test in an "atmosphere" of isoamyl acetate was performed and passed:

Date | Check | Approval

Matthew W. Minter

Certificate

This is to certify that:

MATTHEW W. MINTER

has received eight hours of training as specified in the OSHA Hazardous Waste Operations and Emergency Response Standard [29 CFR 1910.120(e)] consistent with the function and responsibilities of:

Supervising Operations at Hazardous Waste Sites

MAY 2, 1990
Date

James T. Dufour, Attorney at Law
Certified Industrial Hygienist
American Board of Industrial Hygiene
Certificate No. 1068

Certificate

This is to certify that:

MATTHEW W. MINTER

has received training as specified in the OSHA Hazardous Waste Operations and Emergency Response Standard [29 CFR 1910.120(e)] consistent with the function and responsibilities of:

Investigation and Remedial Actions at Hazardous Waste Sites

This training level has been achieved by a combination of on-the-job training, work experience, prior safety training, and satisfactory completion of a comprehensive training program under my direction. This is the equivalent of 40 hours of initial and three days of supervised, actual field experience.

MAY 2, 1990

Date

James T. Dufour, Attorney at Law
Certified Industrial Hygienist
American Board of Industrial Hygiene
Certificate No. 1068

Certificate

This is to certify that:

JOHN F. FAHY, JR.

has received training as specified in the OSHA Hazardous Waste Operations and Emergency Response Standard [29 CFR 1910.120(e)] consistent with the function and responsibilities of:

Investigation and Remedial Actions at Hazardous Waste Sites

This training level has been achieved by a combination of on-the-job training, work experience, prior safety training, and satisfactory completion of a comprehensive training program under my direction. This is the equivalent of 40 hours of initial and three days of supervised, actual field experience.

MAY 2, 1990

Date

James T. Dufour, Attorney at Law
Certified Industrial Hygienist
American Board of Industrial Hygiene
Certificate No. 1068

Certificate

This is to certify that:

LES MINTER

has received training as specified in the OSHA Hazardous Waste Operations and Emergency Response Standard [29 CFR 1910.120(e)] consistent with the function and responsibilities of:

Investigation and Remedial Actions at Hazardous Waste Sites

This training level has been achieved by a combination of on-the-job training, work experience, prior safety training, and satisfactory completion of a comprehensive training program under my direction. This is the equivalent of 40 hours of initial and three days of supervised, actual field experience.

MAY 2, 1990

Date

James T. Dufour, Attorney at Law
Certified Industrial Hygienist
American Board of Industrial Hygiene
Certificate No. 1068

Certificate

This is to certify that:

WILLIAM L. THWEATT, JR.

has received training as specified in the OSHA Hazardous Waste Operations and Emergency Response Standard [29 CFR 1910.120(e)] consistent with the function and responsibilities of:

Investigation and Remedial Actions at Hazardous Waste Sites

This training level has been achieved by a combination of on-the-job training, work experience, prior safety training, and satisfactory completion of a comprehensive training program under my direction. This is the equivalent of 40 hours of initial and three days of supervised, actual field experience.

MAY 2, 1990

Date

James T. Dufour, Attorney at Law
Certified Industrial Hygienist
American Board of Industrial Hygiene
Certificate No. 1068

DIPLOMA

OF SAFETY TRAINING

ERIC HARRELL

has successfully completed the

SAFETECH

Hazardous Waste Operations and Emergency Response

29 CFR 1910.120/Cal OSHA GISO 5192

8 Hour Recertification Training Course

TRAINING DIRECTOR

4011

CERTIFICATE NUMBER

SAFETECH

(408) 441-6363

EXPIRES 5-5-93