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TMC
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Oregon

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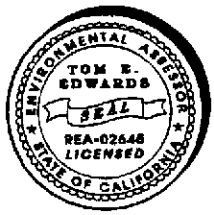
Suite A
Eugene, Oregon 97401
(503) 342-6606 FAX (503) 342-1632

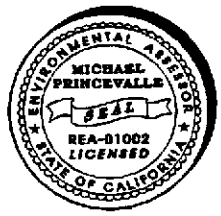
4/25/94

SOURCE REMOVAL REPORT
GASOLINE TANKS
4543 Horton Street
Emeryville, California

Project No. 113093

MANAGEMENT AND CONSULTING





California Registered Environmental Assessors
California Certified Engineering Geologist
Oregon Registered Engineering Geologist
Oregon Registered UST Soil Cleanup Supervisors

"An Environmental Management Company"

SOURCE REMOVAL REPORT

GASOLINE TANKS

Rifkin Realty Properties Case
4543 Horton Street
Emeryville, California

Case STID # 3827
April 25, 1994

Prepared For:
Harvey M. Rifkin, Trustee of the
Harvey M. Rifkin Living Trust
Dated March 11, 1987
Robert Rifkin, Harvey Rifkin, as
Trustee of the Estate of
Beatrice L. Rifkin, deceased,
Robert Kantor and Sandra Kantor

c/o Mr. Frank Satterwhite, Receiver
3220 Monika Lane
Hayward, California 94541

Prepared By
TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, California 94806

Mark Youngkin, Vice President
Project Number 113093

REGISTERED GEOLOGIST
MARK YOUNGKIN
No. 1380
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

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4543 Horton Street, Emeryville, California

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TABLES

ILLUSTRATIONS

Plates are attached to the end of the report.

ATTACHMENTS

SOURCE REMOVAL REPORT
GASOLINE TANKS
4543 Horton Street, Emeryville California

PROJECT SUMMARY

Two underground gasoline storage tanks were excavated and removed from the site in 1988. On July 8, 1988, one 1000 gallon underground gasoline tank was removed by Tank Excavators. The agency inspection form by Mr. Dennis Byrne indicates the 1000 gallon tank was intact and in good condition. No groundwater was observed in the tank pit. Samples from beneath the tank had a gasoline odor. A 550 gallon underground gasoline tank was discovered during this tank removal. The 550 gallon tank was removed by Tank Excavators on September 30, 1988. Safety Specialist, Inc. indicates the 550 gallon tank was intact with no holes.

Soil samples were recovered from beneath the removed storage tanks by Safety Specialist, Inc. Samples from beneath the 1000 gallon tank had 86 ppm at the south end and 616 ppm at the north end of the tank. Samples from beneath the 550 gallon tank had 5 ppm at the south end and 41 ppm at the north end. The inspection form indicates no over excavation occurred and the overburden soil was returned to the tank pits.

A ground water monitoring well, MW-1, was installed through the north end of the tank pit by Safety Specialist, Inc. on November 14, 1988. This well was screened through diesel contaminated soil, 370 ppm, at 9 feet below grade. The well soil samples were not sampled for gasoline. Initial sampling of the well indicated diesel contamination of the groundwater at 7.4 ppm. The well was not sampled for gasoline. Aqua Terra Technologies (ATT) sampled the groundwater in well MW-1 for gasoline during four quarterly periods in 1989. ATT summarized the sampling results in their final quarterly sampling report. Ground water concentrations had decreased to 2.1 ppm gasoline, 0.098 ppm benzene, 0.007 ppm toluene, 0.009 ppm ethylbenzene, and 0.016 ppm total xylenes in November 22, 1989. On November 8, 1993, Alameda County Health Care Services Agency issued a letter requesting further site characterization.

PC Exploration drilling company of San Jose, California drilled out monitoring well MW-1 on January 19, 1994. The well was destroyed to allow over excavation of the former tank pit. Prior to the abandonment, the monitoring well was purged and a groundwater sample recovered. TMC Environmental, Inc. personnel recovered a sample of clear ground water from the well with a disposable bailer. Ground water concentrations were reported at 77 ppm diesel with no detectable gasoline or BTEX

Bay Area Tank Removal, Inc. (BATR) excavated two exploratory trenches at the former location of the 500 gallon gasoline tank on January 26, 1994. The backhoe excavated rubble and fill material to a depth of 8 feet below grade where apparently undisturbed clay-silt soil was encountered. BATR recovered two soil samples from depths of five and eight feet below grade in each trench. No detectable gasoline, diesel, or BTEX was encountered during the exploratory trenching of the former 500 gallon tank location.

BATR over excavated contaminated soil in the 1000 gallon gasoline tank pit on January 26 and 27, 1994. A backhoe removed about 36 cubic yards of sandy clay-silt from the side walls and bottom of the former tank pit area. The bottom of the excavation was at 11.5 feet below grade. Ground water was encountered at 8-10 feet below grade. No sheen or floating product was observed on the water in the pit. The majority of fuel contaminated soil was removed during the over excavation of soil.

Ground water interface contamination of 2140 ppm gasoline occurred at the north end of the tank pit about 9 feet below grade. Interface contamination of 242 ppm diesel occurred at the center of the tank pit at about 9 feet below grade. The south end of the tank pit had no detectable interface contamination. An additional two feet of water saturated sand and clay was excavated below samples 3-16 and 3-17. No additional soil samples could be recovered in the water saturated soil. Gasoline contamination of 128 ppm remains on the east wall of the excavation directly beneath the natural gas utility line. No other significant fuel soil contamination remains on the excavation limits.

On January 27, 1994, TMC recovered hand auger samples from the east wall of the gasoline tank excavation limits. Gasoline contamination of 128 ppm remains on the east wall of the excavation directly beneath the natural gas utility line. One hand augured boring penetrated beneath the adjacent natural gas utility line. Three soil samples came from the boring at two, four, and six feet from the excavation limit at a depth of 5 feet. The sample recovered from the hand augered boring indicates the gasoline extent is limited to beneath the natural gas utility line.

BATR filled the excavation with imported material. Prior to the placement of the fill, about 200 gallons of pit water was evacuated by H & H Ship Service. A four inch observation sump was installed in the excavation during the back filling. The sidewalk was then resurfaced with concrete.

On February 8 and 9, 1994, H & H Ship Service pumped out the pit water in the observation sump prior to groundwater grab sampling. Samples OB-2A & B appear to represent the condition of the ground water. No sheen or floating product was observed on the fresh ground water. The grab water sampling indicates no detectable groundwater concentrations of gasoline or BTEX. Diesel is reported in the ground water at 14-15 ppm. Diesel soil contamination was only found in the ground water interface samples from 9 feet below grade. The origin of the diesel contamination is unknown, possibly from an off site up gradient source to the southeast across Horton Street.

GENERAL SITE INFORMATION

SITE LOCATION

The subject property, called the "Site" in this report, is located at the following address:

4525-4563 Horton Street, City of Emeryville
County of Alameda, State of California
Assessor's Parcel No. 49-1041-005

Reports on file with the local agencies indicate the gasoline tanks were in the sidewalk at 4543 Horton Street.

SITE DESCRIPTION

The site is on Horton Street between 53rd and 45th Streets (see Plate 1, Site Vicinity Map), and is rectangular in configuration. The site is currently developed, with an existing two story, brick walled, commercial building (see Plate 2, Site Plan). The building occupies the majority of the one acre property. The Site is bordered to the north by Chiron International Research Corporation, to the south by the Sherwin Williams Paint Company, to the east by Horton Street and Chiron, and to the west by railroad tracks and the foundation of a dismantled building on a vacant lot. Temescal Creek runs through a culvert beneath the building. Public utilities service the general area. Land use of the surrounding area is commercial and industrial.

PROPERTY OWNER

The property owners for this site are:

Harvey M. Rifkin, Trustee of the Harvey M. Rifkin Living Trust Dated March 11, 1987,
Robert Rifkin, Harvey Rifkin, as Trustee of the Estate of Beatrice L. Rifkin, deceased,
Robert Kantor and Sandra Kantor

c/o Mr. Frank Satterwhite, Receiver
3220 Monika Lane
Hayward, California 94541

CONSULTANT OF RECORD

The consultant of record for this report is:

TMC Environmental Inc.
13908 San Pablo Avenue, Suite 101, San Pablo, California 94806

Mr. Tom Edwards, president or Mr. Mark Youngkin, vice president can be reached at (510) 232-8366.

LEAD IMPLEMENTING AGENCY

The lead implementing agency with jurisdiction over this site is:

County of Alameda, Health Care Services Agency
Department of Environmental Health, UST Local Oversight Program
80 Swan Way, Room 200, Oakland, California
Case number STID 3827

The officer overseeing this case is Ms. Susan Hugo, who can be reached at (510) 271-4320. The work described in this report is part of the requirements specified in the letter from Ms. Hugo to Mr. Harvey Rifkin, dated November 8, 1993.

REPORT CHRONOLOGY

TMC observed the following prior existing reports in the files of the California Regional Water Quality Control Board, San Francisco Bay Section, and the Alameda County Health Care Services Agency:

August 5, 1988, Safety Specialist, Inc., Santa Clara, California, Report to Tank Excavators on Soil Sampling, Report # 530020, report on 1000 gallon underground tank removal

October 31, 1988, Safety Specialist, Inc., Santa Clara, California, Report to Tank Excavators on Soil Sample Collection, Report # 530039, report on 550 gallon underground tank removal

December 2, 1988, Safety Specialist, Inc., Santa Clara, California, Report to Tank Excavators on Monitoring Well Installation, Report # 530050

December 27, 1988, Unauthorized Release Form, submitted by Mr. R. Wayne Schneiter, Aqua Terra Technologies, Walnut Creek, California

February 21, 1989, Aqua Terra Technologies, Walnut Creek, California, First Quarterly Monitoring Report

March, 13, 1989, Aqua Terra Technologies, Walnut Creek, California, summary letter report on tank removals and well installation

June 15, 1989, Aqua Terra Technologies, Walnut Creek, California, Project # 9036, Preliminary Environmental Site Assessment

July 31, 1989, Aqua Terra Technologies, Walnut Creek, California, Third Quarterly Monitoring Report

December 15, 1989, Aqua Terra Technologies, Walnut Creek, California, Final Quarterly Sampling Report, Project # 8107

December 22, 1993, TMC Environmental, Inc., San Pablo, California, Over Excavation Work Plan

March 1, 1994, TMC Environmental, Inc., San Pablo, California, Tank Removal Report: Diesel Tank, Paint Thinner Tank, and Heating Oil Tank, 4525, 4529, & 4549 Horton Street.

April 1, 1994, TMC Environmental, Inc., San Pablo, California, Source Removal Report: Paint Thinner and Heating Oil Tanks, 4529 & 4549 Horton Street.

SITE BACKGROUND

GASOLINE TANK REMOVAL

TMC reviewed the files of the local implementing agencies. The reviewed files indicate the following sequence of activity at the subject property. Two underground gasoline storage tanks were excavated and removed from the site in 1988. On July 8, 1988, one 1000 gallon underground gasoline tank was removed by Tank Excavators. The agency inspection form by Mr. Dennis Byrne indicates the 1000 gallon tank was intact and in

good condition. No groundwater was observed in the tank pit. Samples from beneath the tank had a gasoline odor. A 550 gallon underground gasoline tank was discovered during this tank removal. The 550 gallon tank was removed by Tank Excavators on September 30, 1988. Safety Specialist, Inc. indicates the 550 gallon tank was intact with no holes.

Soil samples were recovered from beneath the removed storage tanks by Safety Specialist, Inc. Samples from beneath the 1000 gallon tank had 86 ppm at the south end and 616 ppm at the north end of the tank. Samples from beneath the 550 gallon tank had 5 ppm at the south end and 41 ppm at the north end. The inspection form indicates no over excavation occurred and the excavated soil was returned to the tank pits. The following table summarizes the 1988 tank removal soil sampling:

TABLE 1 1988 TANK REMOVAL SOIL SAMPLING

Sample Location	TPH gas, mg/L, ppm	Benzene ug/L, ppb	Toluene ug/L, ppb	Ethylbenzene ug/L, ppb	Xylenes ug/L, ppb	Total Lead ppm
1000 Gallon Gasoline Tank						
north end	616	0.35	1.6	158	23	
south end	86	<0.02	1.0	1.7	1.0	
500 Gallon Gasoline Tank						
north end	41	<0.05	<0.1	0.2	1.0	8
south end	4.9	<0.05	<0.1	<0.1	<0.1	9

ND - Not detected above laboratory reporting limit

A ground water monitoring well, MW-1, was installed through the north end of the tank pit by Safety Specialist, Inc. on November 14, 1988. This well was screened through diesel contaminated soil, 370 ppm, at 9 feet below grade (ground water interface). The well soil samples were not sampled for gasoline. Initial sampling of the well indicated diesel contamination of the groundwater at 7.4 ppm. The well was not sampled for gasoline.

Aqua Terra Technologies (ATT) sampled the groundwater in well MW-1 for gasoline during four quarterly periods in 1989. ATT summarized the sampling results in their final quarterly sampling report. The summary of quarterly monitoring results is reproduced below:

TABLE 2 MW1 QUARTERLY SAMPLING SUMMARY TABLE

Well MW-1	TPH gas, mg/L, ppm	Benzene ug/L, ppb	Toluene ug/L, ppb	Ethylbenzene ug/L, ppb	Xylenes ug/L, ppb
2-1-89	**1.9**	**160**	**12**	**16**	**74**
4-25-89	**2.3**	**120**	**11**	**10**	**10**
7-20-89	**2.1**	**35**	**ND**	**ND**	**11**
11-22-89	**2.1**	**98**	**7**	**9**	**16**

ND - Not detected above laboratory reporting limit

Ground water concentrations had decreased to 2.1 ppm gasoline, 0.098 ppm benzene, 0.007 ppm toluene, 0.009 ppm ethylbenzene, and 0.016 ppm total xylenes in November 22, 1989. ATT did not sample the ground water for diesel. The agency files contain no evidence of groundwater sampling since 1989. On November 8, 1993, Alameda County Health Care Services Agency issued a letter requesting further site characterization.

GASOLINE TANK SOURCE REMOVAL

ABANDONMENT OF MONITORING WELL MW-1

The monitoring well MW-1 had been installed following the tank removal in 1988 by Safety Specialists. The well is at the address of 4549 Horton Street, about 3 feet north of the former 1000 gallon gasoline tank and dispenser location (address 4543 Horton Street). The well was installed through contaminated soil in the interface zone at a depth of 9 feet. The well was destroyed to allow over excavation of the former tank pit. Prior to the abandonment, the monitoring well was purged and a groundwater sample recovered. On January 10, 1994, H & H Ship Service pumped about 300 gallons of water from the 2 inch monitoring well. TMC personnel recovered a sample of clear ground water from the well with a disposable bailer. The sampler did not contain floating product or sheen on the water sample. A Geochem mobile laboratory analyzed the water sample. The following table, monitoring well MW-1 sample, shows the laboratory analysis results from the monitoring well prior to abandonment of the well.

TABLE 3 MONITORING WELL MMW-1 WATER SAMPLE

Monitoring Well Address: 4549 Horton Street, Emeryville, CA
Site Name: Rifkin Realty Partners
Sample collection date: January 10, 1994
Type of sample: ground water from well MW-1

Sample ID	Gasoline ppb	Diesel ppb	Benzene ppb	Toluene ppb	Ethyl benzene ppb	Total Xylenes ppb
Detection Limit	50	50	0.5	0.5	0.5	0.5
MW-1	**ND**	**77000**	**ND**	**ND**	**ND**	**ND**

ND - not detected above laboratory reporting limit
BTEX: B-Benzene, T-Toluene, E-Ethylbenzene, X-Total Xylenes
ppb - parts per billion, ug/Kg

PC Exploration Drilling company of Fremont, California drilled out monitoring well MW-1 on January 19, 1994. The resulting hole was filled with cement grout. The abandonment

work commenced under Alameda County Flood Control and Water Conservation District (Zone 7) permit number 94023 for the destruction of well 1S\4W 22B80.

EXPLORATORY TRENCHING OF 500 GALLON GASOLINE TANK PIT

Bay Area Tank Removal, Inc. excavated two exploratory trenches at the former location of the 500 gallon gasoline tank on January 26, 1994. The 500 gallon tank, dispenser, product, and vent lines had been removed during the tank removal in 1988 by Safety Specialists. The Safety Specialists report and the concrete sidewalk patch were used to locate the approximate former position of the gasoline tanks. The backhoe excavated rubble and fill material to a depth of 8 feet below grade where apparently undisturbed clay-silt soil was encountered. BATR recovered two soil samples from depths of five and eight feet below grade in each trench. During the exploratory trenching, a Geochem mobile laboratory was on site to analyze the soil samples. The following table, exploratory trench samples, shows the laboratory analysis results from the exploratory trenches.

TABLE 4 EXPLORATORY TRENCH SAMPLES

Underground Tank Site Address: 4543 Horton Street, Emeryville, CA
Site Name: Rifkin Realty Partners
Sample collection date: January 26, 1994
Type of soil collected in samples: clay-silt

Sample ID	Depth Feet	Gasoline ppm	Diesel ppm	Benzene ppm	Toluene ppm	Ethyl benzene ppm	Total Xylenes ppm	Total Lead ppm
Detection Limit		1	1	0.1	0.1	0.1	0.1	1
3-1	5	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**9**
3-2	8	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**12**
3-3	5	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**28**
3-4	8	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**10**

ND - not detected above laboratory reporting limit
BTEX: B-Benzene, T-Toluene, E-Ethylbenzene, X-Total Xylenes
PPM - parts per million, mg/Kg

Plate 3, gasoline tank source sample location plan, shows the location of the exploratory trenches and samples. No detectable gasoline or diesel was encountered during the exploratory trenching of the former 500 gallon tank location.

OVER EXCAVATION OF GASOLINE TANK PIT

The 500 gallon and 1000 gallon tanks, dispenser, product, and vent lines had been removed during the tank removal in 1988 by Safety Specialists. Bay Area Tank Removal, Inc. over excavated contaminated soil surrounding the former 1000 gallon gasoline tank on January 26 and 27, 1994. A backhoe removed about 36 cubic yards of sandy clay-silt from the side walls and bottom of the former tank pit area. The bottom of the excavation

was at 11.5 feet below grade. Ground water was encountered at 8-10 feet below grade. No sheen or floating product was observed on the water in the pit.

During the over excavation, a Geochem mobile laboratory was on site to analyze soil samples. The following table, gasoline tank: over excavation samples, shows the sample results during the over excavation of soil. Plate 4, gasoline tank source removal plan, shows the location of soil samples collected during the over excavation. Gasoline concentrations up to 2140 ppm TPH as gasoline were encountered during the excavation of soil.

TABLE 5 GASOLINE TANK: OVER EXCAVATION SAMPLES

Underground Tank Site Address: 4543 Horton Street, Emeryville, CA
Site Name: Rifkin Realty Partners
Sample collection date: January 26-27, 1994
Type of soil collected in samples: clay-silt

Sample ID	Depth Feet	Gasoline ppm	Diesel ppm	Benzene ppm	Toluene ppm	Ethyl benzene ppm	Total Xylenes ppm	Total Lead ppm
Detection Limit		1	1	0.1	0.1	0.1	0.1	1
3-5	5	ND	ND	ND	ND	ND	ND	14
3-6	5	128	ND	5.4	11.0	3.8	11.8	50
3-7	5	ND	ND	ND	ND	ND	ND	47
3-8	2	ND	ND	ND	ND	ND	ND	161
3-9	5	ND	ND	ND	ND	ND	ND	86
3-10	8	ND	ND	ND	ND	ND	ND	ND
3-11	9	ND	242	ND	ND	ND	0.1	8
3-12	8	ND	ND	ND	ND	ND	ND	16
3-13	8	ND	ND	ND	ND	ND	ND	10
3-14	7	ND	ND	ND	ND	ND	ND	11
3-15	8	ND	ND	ND	ND	ND	ND	13
3-16	9	ND	9	ND	ND	ND	0.1	9
3-17	9	2140	ND	1.5	3.6	3.8	20.4	6

ND - not detected above laboratory reporting limit
BTEX: B-Benzene, T-Toluene, E-Ethylbenzene, X-Total Xylenes
PPM - parts per million, mg/Kg

The majority of fuel contaminated soil was removed during the over excavation of soil. Ground water interface contamination of 2140 ppm gasoline occurred at the north end of the tank pit about 9 feet below grade. Interface contamination of 242 ppm diesel occurred at the center of the tank pit at about 9 feet below grade. The south end of the tank pit had no detectable interface contamination. An additional two feet of water saturated sand and clay was excavated below samples 3-16 and 3-17. No additional soil samples could be recovered in the water saturated soil. Gasoline contamination of 128 ppm remains on the east wall of the excavation directly beneath the natural gas utility line. No other significant fuel soil contamination remains on the excavation limits.

BATR filled the excavation with imported material. Prior to the placement of the fill, about 200 gallons of pit water was evacuated by H & H Ship Service. A four inch observation sump was installed in the excavation during the back filling. The sidewalk was then resurfaced with concrete.

GASOLINE TANK: HAND AUGURED BORINGS

On January 27, 1994, TMC recovered hand auger samples from the east wall of the gasoline tank excavation limits. Gasoline contamination of 128 ppm remains on the east wall of the excavation directly beneath the natural gas utility line. One hand augured boring penetrated beneath the adjacent natural gas utility line as shown on plate 4, gasoline tank source removal plan. Three soil samples came from the boring at two, four, and six feet from the excavation limit at a depth of 5 feet. The following table, gasoline tank: hand auger samples, shows the results of the soil sampling.

TABLE 6 GASOLINE TANK: HAND AUGER SAMPLES

Underground Tank Site Address: 4543 Horton Street, Emeryville, CA
Site Name: Rifkin Realty Partners
Sample collection date: January 27, 1994
Type of soil collected in samples: clay-silt

Sample ID	Depth Feet	Gasoline ppm	Diesel ppm	Benzene ppm	Toluene ppm	Ethyl benzene ppm	Total Xylenes ppm	Total Lead ppm
Detection Limit		1	1	0.1	0.1	0.1	0.1	1
3-18	5	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**9**
3-19	5	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**15**
3-20	5	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**587**

ND - not detected above laboratory reporting limit
BTEX: B-Benzene, T-Toluene, E-Ethylbenzene, X-Total Xylenes
PPM - parts per million, mg/Kg

The samples recovered from the hand augered boring indicates the gasoline extent is limited to beneath the natural gas utility line.

GASOLINE TANK: GRAB WATER SAMPLING

Groundwater occurred in the excavation at a depth of 8-10 feet below grade. The fresh groundwater, entering the excavation from side wall channels in the sandy clay-silt, had no sheen or floating product. No grab water samples were recovered from the excavation during soil removal. During the back fill of the excavation, a four inch observation sump, OB-2, was installed in the excavation.

On February 8 and 9, 1994, H & H Ship Service pumped out the pit water in the observation sump prior to groundwater grab sampling. H & H Ship Service pumped about 1400 gallons of water from the observation sump in the former excavation. Two grab

water samples (OB-2A and OB-2B) were collected from the sump with a disposable bailer. Sample OB-2A was collected immediately upon dewatering of the pit and sump. Sample OB-2B was collected about 15 minutes later, upon recovery of the water in the sump to 80% of the original water level.

Geochem Environmental Laboratories of San Jose, CA analyzed the water samples. The following table shows the results of the laboratory analysis of the grab water samples:

TABLE 7 GASOLINE TANK: GRAB WATER SAMPLING

Underground Tank Site Address: 4543 Horton Street, Emeryville, CA
Site Name: Rifkin Realty Partners
Sample collection date: February 9, 1994
Type of samples: grab ground water

Sample ID	Gasoline ppb	Diesel ppb	Benzene ppb	Toluene ppb	Ethyl benzene ppb	Total Xylenes ppb
Detection Limit	50	50	0.5	0.5	0.5	0.5
OB-2A	ND	15000	ND	ND	ND	ND
OB-2B	ND	14000	ND	ND	ND	ND

ND - not detected above laboratory reporting limit
BTEX: B-Benzene, T-Toluene, E-Ethylbenzene, X-Total Xylenes
ppb - parts per billion, ug/Kg

Samples OB-2A & B appear to represent the condition of the ground water. No sheen or floating product was observed on the fresh ground water. The grab water sampling indicates no detectable groundwater concentrations of gasoline or BTEX. Diesel is reported in the ground water at 14-15 ppm. Diesel soil contamination was only found in the ground water interface samples from 9 feet below grade. The origin of the diesel contamination is unknown, possibly from an off site up gradient source to the southeast across Horton Street or the sanitary sewer line in Horton Street.

DISPOSAL OF CONTAMINATED WASTE

During the excavation of soil and purging of the observation sump OB-02, about 1400 gallons of pit water was pumped by H & H Ship Service of San Francisco, California. About 36 cubic yards of contaminated soil was transported by Manly & Sons Trucking company to the Browning Ferris Industries landfill in Livermore, California for disposal. Attachment 2, waste manifest, contains the disposal documentation.

AGENCY REVIEW

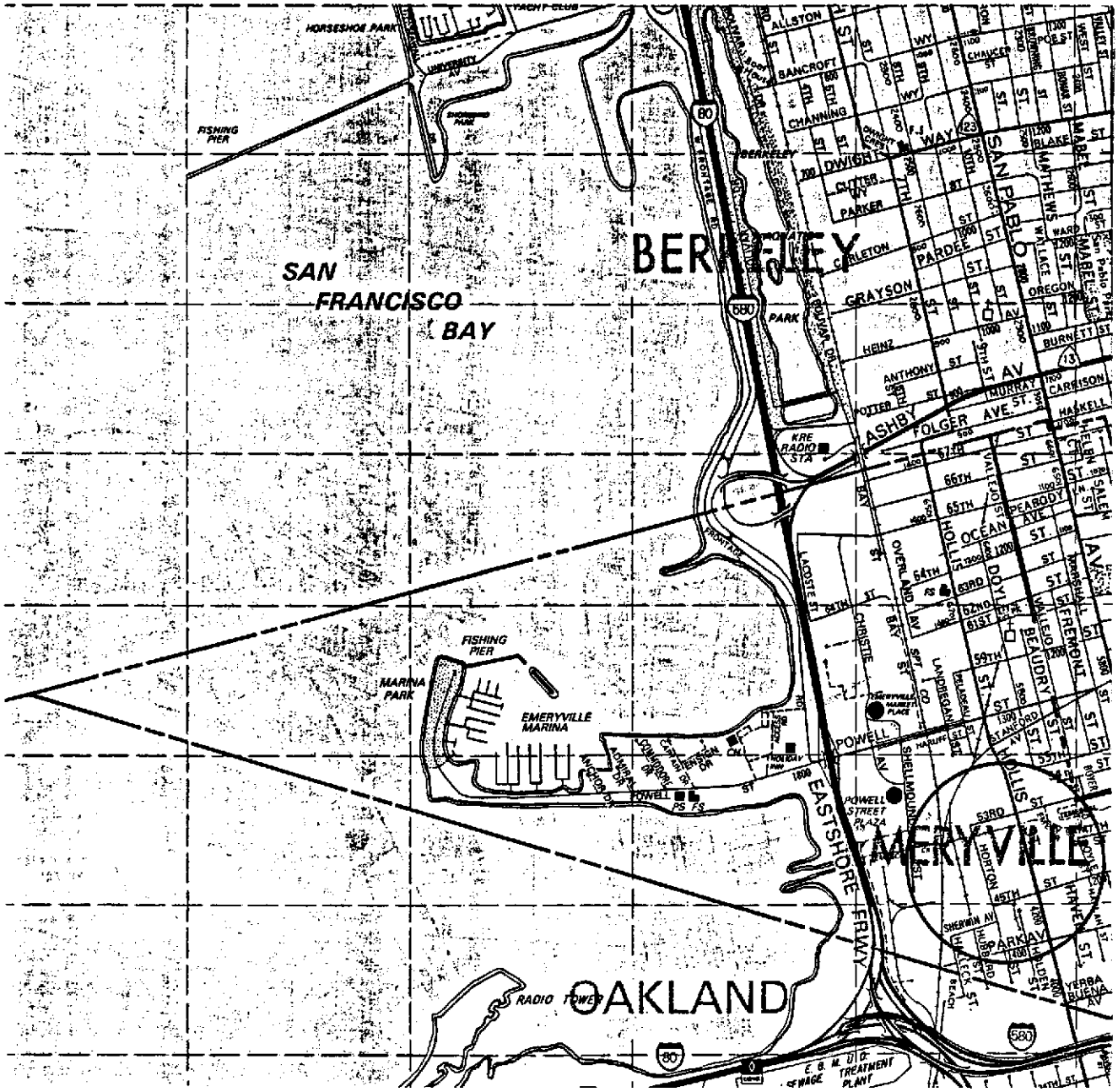
The local agency with jurisdiction for this site is:

County of Alameda, Health Care Services Agency
Department of Environmental Health, UST Local Oversight Program
80 Swan Way, Room 200, Oakland, California

The agency will review the report on a case by case basis using local health regulations and guidelines specified in the Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites, California Regional Water Quality Control Board, San Francisco Bay Region. It is the responsibility of the Underground Tank Program to issue a letter for completion or require additional investigation and clean up for this site.

LIMITATIONS

The procedures and opinions in this work plan agree with professional practice as provided guidelines of the California Regional Water Quality Control Board for addressing fuel leaks from underground tanks. This work plan is only part of the ongoing work required by the lead implementing agency at this site. The lab test results rely on limited data collected at the sampling location only. Budget constraints restrict the amount of testing allowed. The lab test results do not apply to the general site as a whole. Therefore, TMC Environmental Inc. cannot have complete knowledge of the underlying conditions at the conclusion of the work specified in the work plan. Work plans and reports contain information provided to TMC by the client and government agencies. TMC does not warranty the accuracy of reported information. We provide the information in the resulting report to our client so a more informed decision about site conditions can be made. The professional opinion and judgment in the report is subject to revisions in light of new information. We do not state or imply any guarantees or warranties that the subject property is or is not free of environmental impairment.



Base map from Thomas brothers Map Company, Alameda County, 1992

TMC
Environmental, Inc.

SITE VICINITY MAP

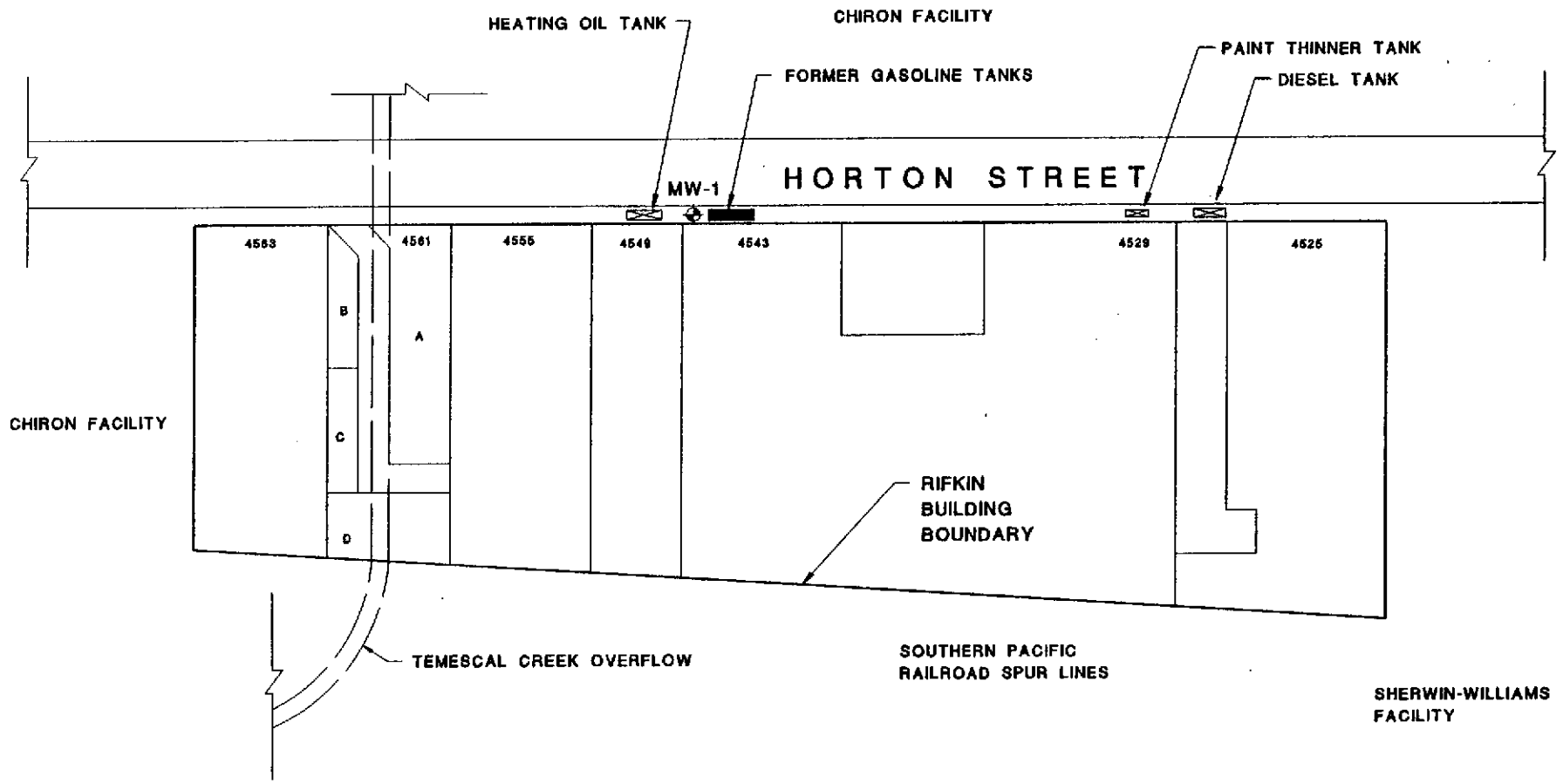
Tank Removal Report

4525-4563 Horton Street
Emeryville, California

Project No. 1-13093 February 1993

PLATE

1



TMC
Environmental, Inc.

TMC ENVIRONMENTAL, INC.

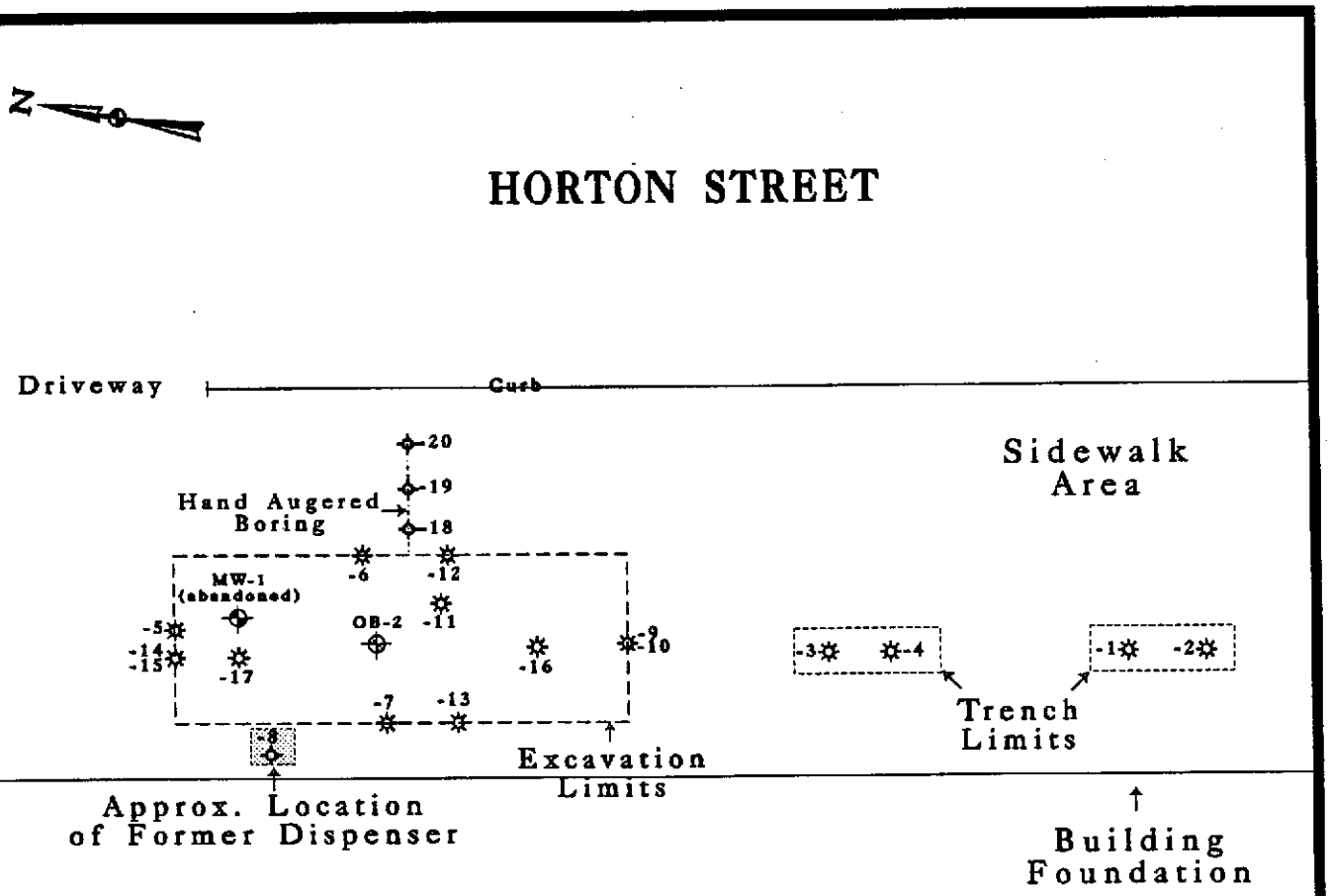
13908 SAN PABLO AVENUE, SUITE 101
SAN PABLO, CALIFORNIA 94806
510-232-8366 FAX 510-232-5133

SITE MAP

RIFKIN PROPERTY
EMERYVILLE, CALIFORNIA

DATE OF DRAWING: FEBRUARY, 1994 JOB NO. 113093

PLATE
2



4543 Horton St.

LEGEND

OB-2 — 4" Observation Well

1-13093 S-6 — Sidewall sample location and I.D.#

1-13093A S-6 EWHA — Hand augered sidewall sample location and I.D.#

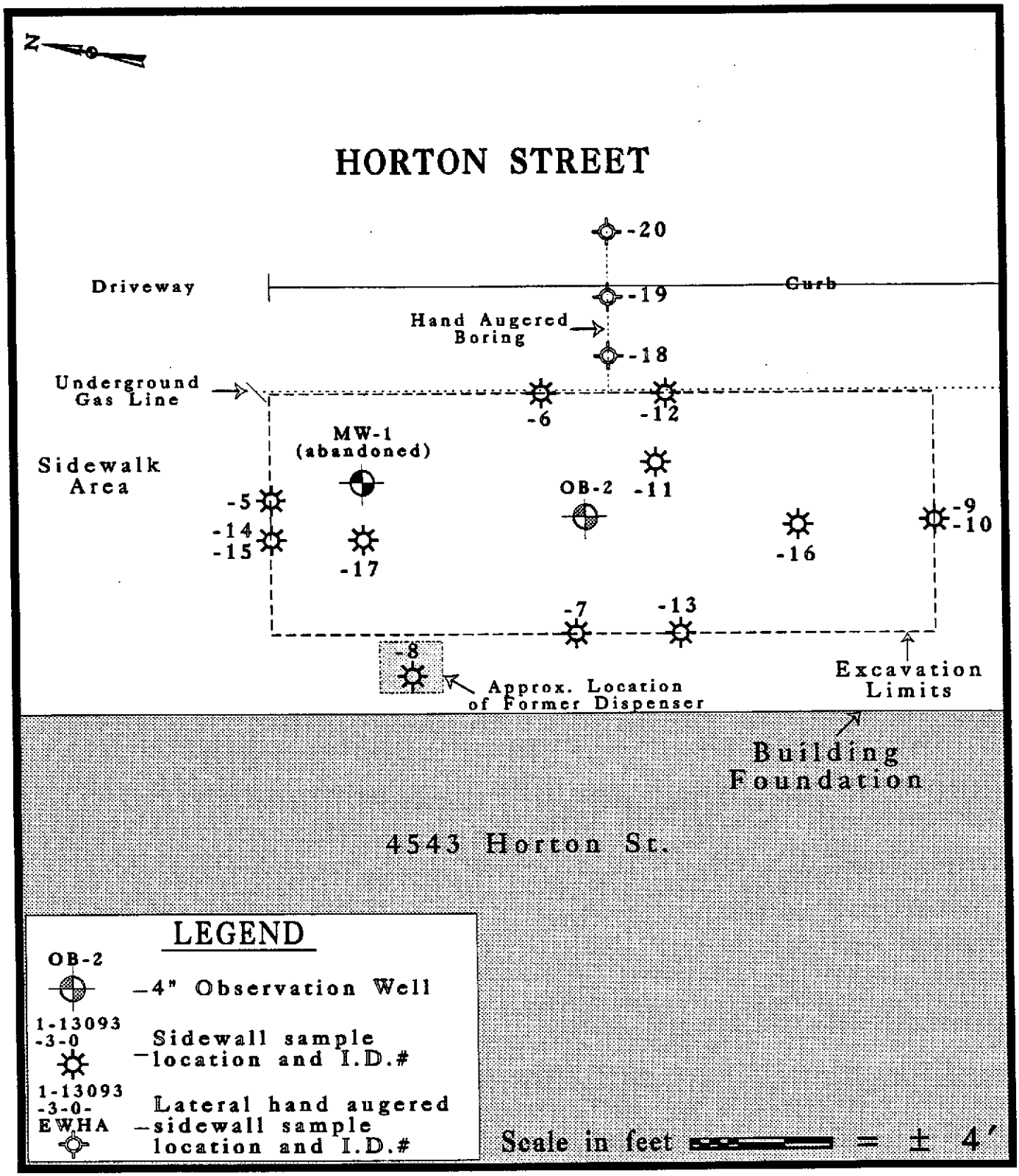
Scale in feet = ± 10'

TMC
Environmental, Inc.

GASOLINE TANK SOURCE REMOVAL
SAMPLE LOCATION PLAN

4543 Horton Street
Emeryville, CA
Project No. 1-13093 April 1994

PLATE
3



TMC
Environmental, Inc.

GASOLINE TANK SOURCE REMOVAL PLAN

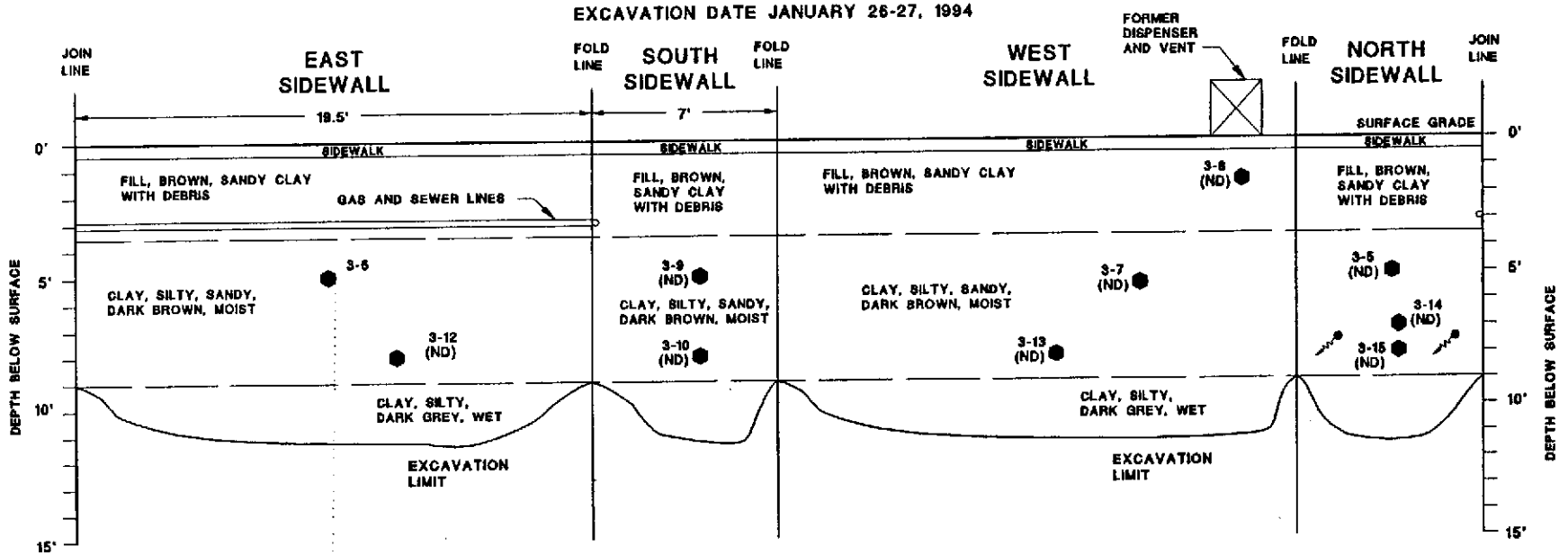
Rifkin Property
4543 Horton Street
Emeryville, CA
Project No. 1-13093 April 1994

PLATE

4

FOLD OUT DIAGRAM OF EXCAVATION SIDEWALLS

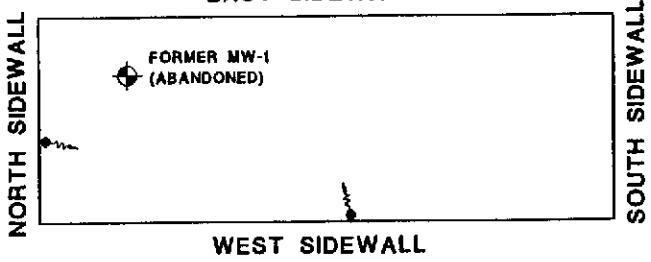
EXCAVATION DATE JANUARY 26-27, 1994



SAMPLE 3-5 JANUARY 26, 1994

DEPTH	GAS	DIE	BENZ	TOL	EB	XYL
5	128	ND	5.4	11.0	3.8	11.8

SURFACE VIEW LOOKING DOWN AT BOTTOM OF EXCAVATION



EXPLANATION OF MAP SYMBOLS

SOIL SAMPLE CHEMICAL ANALYSIS RESULTS IN MG/KG (PPM)

SAMPLE LABEL AND SAMPLE DATE

3-5

DEPTH	GAS	DIE	BENZ	TOL	EB	XYL
DEPTH IN FEET	TPH GAS	TPH DIESEL	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES

ND = NOT DETECTABLE AT OR ABOVE REPORTING LIMIT
NA = NO LABORATORY ANALYSIS OF SOIL SAMPLE
NL = NOT LISTED IN REPORTS

- EXCAVATION LIMIT SOIL SAMPLE WITH LABORATORY RESULTS
- GROUTED FORMER LOCATION OF MONITORING WELL MW-1
- CONTACT BETWEEN SOIL, ROCK, OR FILL MATERIALS
- MAIN SEEPAGE POINTS FOR GROUNDWATER RECHARGE

NOTES AND LIMITATIONS

THE TABLES AND SUMMARIES OF CHEMICAL DATA PROVIDE A QUICK REFERENCE TO THE MORE COMPLETE INFORMATION IN THE TECHNICAL REPORTS AND CERTIFIED LABORATORY REPORTS.

THIS DIAGRAM WAS NOT SURVEYED OR DRAWN BY A STATE LICENSED SURVEYOR. THE PROPERTY AND OTHER BOUNDARIES THAT MAY BE SHOWN CAN NOT BE USED FOR CONSTRUCTION OR CONSTRUCTION DESIGN.

HORZ SCALE = VERT SCALE

SCALE IN FEET

0 5 10

APPROXIMATE

TMC Environmental, Inc.

TMC ENVIRONMENTAL, INC.
13908 SAN PABLO AVENUE, SUITE 101
SAN PABLO, CALIFORNIA 94806
510-232-8366 FAX 510-232-5133

EXCAVATION LIMIT DIAGRAM WITH SAMPLE LOCATIONS

GASOLINE TANK SOURCE REMOVAL
4543 HORTON ST.
EMERYVILLE, CA

DATE OF DRAWING: APRIL 1994 JOB NO. 1-13093

PLATE 5

ATTACHMENT 1

ANALYTICAL LABORATORY REPORTS
CHAIN-OF-CUSTODY FORMS

Geochem ENVIRONMENTAL LABORATORIES

Mobile & In-House Laboratories Certified by State of California
Phone: (408) 955-9988 / FAX: (408) 955-9538

ANALYTICAL REPORT

****

Client: TMC Environmental
13908 San Pablo Ave.,Ste.101
San Pablo, CA 94806
Attn: Marc Edwards

Date Sampled: 01/27/94
Date Received: 01/27/94
Date Analyzed: 01/28/94
Batch:SA-345 Matrix: Soil
Conc. Unit mg/kg (ppm)

Project: 4525-4549 Horton St.

****

"**ND**" means "not detected" at indicated detection limit.
B:benzene, **T**:toluene, **E**:ethylbenzene & **X**:total xylenes.
Samples received at job-site with a chain of custody record.

SAMPLE I.D.	Total Lead	8015M/TPH Diesel	8015M/TPH Gasoline	8020 B / T / E / X
DETECTION LIMIT	1 ppm	1 ppm	1 ppm	0.1 ppm
1-13093-3-16	9	9	ND	ND / ND / ND / 0.1
1-13093-3-17	6	ND	2140	1.5/ 3.6/ 3.8/20.4
1-13093-3-18	9	ND	ND	ND / ND / ND / ND
1-13093-3-19	15	ND	ND	ND / ND / ND / ND
1-13093-3-20	587	ND	ND	ND / ND / ND / ND
1-13093-3-SP (composite)	16	108	ND	ND / ND / ND / 0.4

Reviewed and approved by George Tsai, FEB. 01, 1994
George Tsai, Laboratory Director

TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, California 94806
(415) 232-8366 / FAX 232-5133

CHAIN OF CUSTODY RECORD
ANALYSIS REQUEST FORM

Project No. 1-13093 | Project Name: RIFKIN PROPERTY | Project Contact: MARK YOUNGKIN | Page 1 of 1

Project Address: 4525-4549 HORTON STREET, EMERYVILLE CA | Turnaround Time: days

Sampler: Tom Ghiglieri / MARC EDWARDS | Laboratory Name: Geochem Mobile Lab | Lab No:

LAB ID NO.	DATE	TIME	SOIL	WATER	SAMPLE LABEL	TPH-GAS BTEX	TPH-DIESEL	ORGANIC LEAD	TOTAL LEAD		COMPOSITE TOGETHER	REMARKS ADDITIONAL ANALYSIS
	1/27/94	9:45	X		1-13093-3-16	X	X		X			
	1/27/94	10:10	X		1-13093-3-17	X	X		X			
	1/27/94	12:00	X		1-13093-3-18	X	X		X			
	1/27/94	12:15	X		1-13093-3-19	X	X		X			composite -
	1/27/94	12:26	X		1-13093-3-20	X	X		X			
	1/27/94	1320	X		1-13093-3-SP1	X			X		X	Composite 1-13093-3-SP1,
	1/27/94	1323	X		1-13093-3-SP2	X			X		X	SP2, SP3 & SP4 INTO
	1/27/94	1326	X		1-13093-3-SP3	X			X		X	ONE Sample for Analysis
	1/27/94	1330	X		1-13093-3-SP4	X			X		X	

Relinquished By: (Signature) Tom Ghiglieri	Date: 1/27/94 Time: 1610	Received By: (Signature)	Date: 1/27/94 Time: 1610
Relinquished By: (Signature)	Date: 1/28/94 Time: 1215	Received By: (Signature)	Date: Time:
Relinquished By: (Signature)	Date: Time:	Received By: (Signature)	Date: Time:

Geochem ENVIRONMENTAL LABORATORIES

Mobile & In-House Laboratories Certified by State of California

Phone: (408) 955-9988 / FAX: (408) 955-9538

ANALYTICAL REPORT

Client: Bay Area Tank Removal
254 Clara St.
San Francisco, CA 94107
Attn: M. Youngkin

Date Sampled: 01/26/94
Date Received: 01/26/94
Date Analyzed: 01/26/94
Batch:SA-338 Matrix: Soil
Conc. Unit mg/kg (ppm)

Project: Horton St.

"**ND**" means "not detected" at indicated detection limit.
B:benzene, **T**:toluene, **E**:ethylbenzene & **X**:total xylenes.
Samples received at job-site with a chain of custody record.

SAMPLE I.D.	Total Lead	8015M/TPH Diesel	8015M/TPH Gasoline	8020 B / T / E / X
DETECTION LIMIT	1 ppm	1 ppm	1 ppm	0.1 ppm
3-1	9	ND	ND	ND / ND / ND / ND
3-2	12	ND	ND	ND / ND / ND / ND
3-3	28	ND	ND	ND / ND / ND / ND
3-4	10	ND	ND	ND / ND / ND / ND
3-5	14	ND	ND	ND / ND / ND / ND
3-6	50	ND	128	5.4/11.0/ 3.8/11.8
3-7	47	ND	ND	ND / ND / ND / ND
3-8	161	ND	ND	ND / ND / ND / ND
3-9	86	ND	ND	ND / ND / ND / ND
3-10	ND	ND	ND	ND / ND / ND / ND
3-11	8	242	ND	ND / ND / ND / 0.1
3-12	16	ND	ND	ND / ND / ND / ND
3-13	10	ND	ND	ND / ND / ND / ND
3-14	11	ND	ND	ND / ND / ND / ND
3-15	13	ND	ND	ND / ND / ND / ND

Reviewed and approved by George Tsai, Jan. 31, 1994
George Tsai, ~~Laboratory~~ Director

GEOCHEM Environmental Laboratories
780 Montague Expressway, Suite 404
San Jose, CA 95131
(408) 955-9988 • FAX (408) 955-9538

CHAIN OF CUSTODY RECORD

Date 1/26/94 Page 2 of 2

TESTS REQUIRED

CLIENT: TMC ENVIRONMENTAL
ADDRESS: 13908 SAN PABLO AVE #101, SAN PABLO, CA 94806
PROJECT NAME: HORTON ST.
PROJECT MANAGER: MARK YOUNGKIN
PHONE NUMBER: (510) 232-8366

SAMPLE I.D.	LOCATION DESCRIPTION	DATE	TIME	MATRIX: AIR	MATRIX: WATER	MATRIX: SOIL	NO. OF CTNR	418.1/TRPH	8010 (601)	8015 E/TPH-diesel	8015 M/TPH-gasoline	8020 (602) BTEX	7420/Total Lead	Organic Lead			Archive
1-13093-3-11		1/26/94	1344			X	1			X	X	X	X				
1-13093-3-12		1/26/94	1347			X	1			X	X	X	X				
1-13093-3-13		1/26/94	1403			X	1			X	X	X	X				
1-13093-3-14		1/26/94	1405			X	1			X	X	X	X				
1-13093-3-15		1/26/94	1408			X	1			X	X	X	X				

Sampled/Relinquished by: [signature] — Received by: [signature] — Date: 01/26/94 — Time:

Relinquished by: — Received by: [signature] — Date: — Time:

Relinquished by: — Received by: — Date: — Time:

Turnaround time: (24 hr.) 48 hr. Normal (3-5 days)

Special Instructions:

GEOCHEM Environmental Laboratories
780 Montague Expressway, Suite 404
San Jose, CA 95131
(408) 955-9988 • FAX (408) 955-9538

CHAIN OF CUSTODY RECORD

Date 1/26/94 Page 1 of 2

CLIENT TMC ENVIRONMENTAL
ADDRESS 13908 SAN PABLO AVE. #101
SAN PABLO, CA. 94806

PROJECT NAME HORTON STREET
PROJECT MANAGER MARK YOUNGKIN
PHONE NUMBER (510) 232-8366

TESTS REQUIRED

SAMPLE I.D.	LOCATION DESCRIPTION	DATE	TIME	MATRIX: AIR	MATRIX: WATER	MATRIX: SOIL	NO. OF CTNR	418.1/TRPH	8010 (601)	8015 E/TPH-diesel	8015 M/TPH-gasoline	8020 (602) BTEX	7420/Total Lead	Organic Lead			Archive
1-13093-3-1		1/26/94	10:00			X	1			X	X	X	X				
1-13093-3-2		1/26/94	10:05			X	1			X	X	X	X				
1-13093-3-3		1/26/94	1057			X	1			X	X	X	X				
1-13093-3-4		1/26/94	1105			X	1			X	X	X	X				
1-13093 3-5		1/26/94	1258			X	1			X	X	X	X				
1-13093 3-6		1/26/94	1300			X	1			X	X	X	X				
1-13093-3-7		1/26/94	1302			X	1			X	X	X	X				
1-13093-3-8		1/26/94	1306			X	1			X	X	X	X				
1-13093-3-9		1/26/94	1323			X	1			X	X	X	X				
1-13093-3-10		1/26/94	1336			X	1			X	X	X	X				

Sampled/Relinquished by:	Received by:	Date	Time
Tom [signature]	[signature]	01/26/94	
Relinquished by:	Received by: [signature]	Date	Time
Relinquished by:	Received by:	Date	Time

Turnaround time: (24 hr.) 48 hr. Normal (3-5 days)

Special Instructions:

Geochem ENVIRONMENTAL LABORATORIES

Mobile & In-House Laboratories Certified by State of California
Phone: (408) 955-9988 / FAX: (408) 955-9538

ANALYTICAL REPORT

****

Client: TMC Environmental
13908 San Pablo Ave.,Ste.101
San Pablo, CA, CA 94107
Attn: Mark Youngkin

Date Sampled: 01/10/94
Date Received: 01/10/94
Date Analyzed: 01/10/94
Batch:SA-326 Matrix:Water
Conc. Unit ug/L (ppb)

Project: Horton St. (Proj.#1-13094)

****

"**ND**" means "not detected" at indicated detection limit.
B:benzene, **T**:toluene, **E**:ethylbenzene & **X**:total xylenes.
Samples received at job-site with a chain of custody record.

SAMPLE I.D.	8015M/TPH Diesel	8015M/TPH Gasoline	602 B / T / E / X
DETECTION LIMIT	50 ppb	50 ppb	0.5 ppb
MW-1	77000	ND	ND / ND / ND / ND

Reviewed and approved by George Tsai, Jan. 17, 1994
George Tsai, Laboratory Director

GEOCHEM Environmental Laboratories
780 Montague Expressway, Suite 404
San Jose, CA 95131
(408) 955-9988 • FAX (408) 955-9538

CHAIN OF CUSTODY RECORD

Date 1/10/94 Page 1 of 1

TESTS REQUIRED

CLIENT TMC

ADDRESS

PROJECT NAME (#1-13094) HORTON

PROJECT MANAGER Mark Youngkin

PHONE NUMBER

SAMPLE I.D.	LOCATION DESCRIPTION	DATE	TIME	MATRIX AIR	MATRIX WATER	MATRIX SOIL	NO. OF CTNR	418.1/TRPH	8010 (601)	8015 E/TPH-diesel	8015 M/TPH-gasoline	8020 (602) BTEX	7420/Total Lead	Organic Lead			Archive
MW 1	Monitoring well	1/10/94	415		X		3	X		X	X	X					

Sampled/Relinquished by: Tom Thurlow — Received by: — Date 1/10/94 — Time

Relinquished by: — Received by: — Date — Time

Relinquished by: — Received by: — Date — Time

Turnaround time:
24 hr. 48 hr. Normal (3-5 days)

Special Instructions:

Geochem ENVIRONMENTAL LABORATORIES

Mobile & In-House Laboratories Certified by State of Californ

Phone: (408) 955-9988 / FAX: (408) 955-953

ANALYTICAL REPORT

****

Client: TMC Environmental
13908 San Pablo Ave.,Ste.101
San Pablo, CA, CA 94107
Attn: Tom Ghigliotto

Date Sampled: 02/09/94
Date Received: 02/10/94
Date Analyzed: 02/10/94
Batch:SA-351 Matrix:Water
Conc. Unit ug/L (ppb)

Project: 4525-4549 Horton St. (Proj.#1-13093)

****

"**ND**" means "not detected" at indicated detection limit.
B:benzene, **T**:toluene, **E**:ethylbenzene & **X**:total xylenes.
Samples received at job-site with a chain of custody record.

SAMPLE I.D.	8015MTPH Diesel	8015M/TPH Gasoline	602 B / T / E / X
DETECTION LIMIT	50 ppb	50 ppb	0.5 ppb
OB-1A	ND		ND / ND / ND / ND
OB-2A		ND	ND / ND / ND / ND
OB-1B	ND		ND / ND / ND / ND
OB-2B		ND	ND / ND / ND / ND

Reviewed and approved by George Tsai, FEB. 11, 1994
George Tsai, ~~Laboratory~~ Director

Geochem ENVIRONMENTAL LABORATORIES

Mobile & In-House Laboratories Certified by State of California
Phone: (408) 955-9988 / FAX: (408) 955-9538

ANALYTICAL REPORT

****

Client: TMC Environmental
13908 San Pablo Ave.,Ste.101
San Pablo, CA, CA 94107
Attn: Tom Ghigliotto

Date Sampled: 02/09/94
Date Received: 02/10/94
Date Analyzed: 02/10/94
Batch:SA-351 Matrix:Water
Conc. Unit ug/L (ppb)

Project: 4525-4549 Horton St. (Proj.#1-13093)

****

"**ND**" means "not detected" at indicated detection limit.
B:benzene, **T**:toluene, **E**:ethylbenzene & **X**:total xylenes.
Samples received at job-site with a chain of custody record.

SAMPLE I.D.	8015MTPH Diesel
DETECTION LIMIT	50 ppb
OB-2A	15000
OB-2B	14000

Reviewed and approved by George Tsai, April 21, 1994
George Tsai, ~~Laboratory~~ Director

ADDITIONAL REQUESTS:

CHAIN OF CUSTODY RECORD
ANALYSIS REQUEST FORM
FOR
ENVIRONMENTAL SAMPLING

JOB #	JOB ADDRESS:	SAMPLER: TOM GHIGLIOTTO
1-13093	4525-4549 Horton St. Emeryville, CA	
LABORATORY NAME:	GEOCHEM ENVIRONMENTAL LABORATORIES, SAN JOSE,CA 95131	

LAB ID NO.	SAMPLE NUMBER	SOIL	WATER	DATE	TIME	TVH-GAS BTEX	TEH-DIESEL	TOTAL LEAD		
	1-13093-OB2-2/8/94 D		X	2/9/94	1140	X				
	EQB-1-13093 D		X	2/9/94	1255	HOLD				
	1-13093-OB1-2/9/94 D		X	2/9/94	1310	X	X			

Relinquished By: **Recieved By:**

(Print Name) Tom Ghigliotto (Signature) Tom Ghigliotto	Date: 2/10/94 Time: 1120	(Print Name) (Signature)
(Print Name) (Signature)	Date: Time:	(Print Name) (Signature)
(Print Name) (Signature)	Date: Time:	(Print Name) (Signature)
(Print Name) (Signature)	Date: Time:	(Print Name) (Signature)

LABORATORY NOTES: _____ DAYS TURNAROUND TIME FOR ANALYSIS RESULTS
PLEASE INCLUDE SAMPLE CONDITION REPORT WITH RESULTS

PLEASE FAX A COPY OF THE ANALYTICAL RESULTS TO THE FOLLOWING:

BAY AREA TANK REMOVAL AT (415) 512-0680

TMC ENVIRONMENTAL, INC. AT (510) 232-5133

ADDITIONAL REQUESTS:

CHAIN OF CUSTODY RECORD
ANALYSIS REQUEST FORM
FOR
ENVIRONMENTAL SAMPLING

JOB #	JOB ADDRESS:	SAMPLER: TOM GHIGLIOTTO
1-13093	4525-4549 Horton St. Emeryville, CA	

LABORATORY NAME: GEOCHEM ENVIRONMENTAL LABORATORIES, SAN JOSE,CA 95131

LAB ID NO.	SAMPLE NUMBER	SOIL	WATER	DATE	TIME	TVH-GAS BTEX	TEH-DIESEL	TOTAL LEAD		
	1-13093-0B2 a		X	2/9/94	1125	X				
	EQB 1a		X	2/9/94	1135	HOLD				
	1-13093-0B1		X	2/9/94	1245	X	X			

Relinquished By:

Recieved By:

(Print Name) Tom Ghigliotto (Signature)	Date: 2/9/94 Time: 1118	(Print Name) (Signature)
(Print Name) (Signature)	Date: Time:	(Print Name) (Signature)
(Print Name) (Signature)	Date: Time:	(Print Name) (Signature)
(Print Name) (Signature)	Date: Time:	(Print Name) (Signature)

LABORATORY NOTES: _____ DAYS TURNAROUND TIME FOR ANALYSIS RESULTS
PLEASE INCLUDE SAMPLE CONDITION REPORT WITH RESULTS

PLEASE FAX A COPY OF THE ANALYTICAL RESULTS TO THE FOLLOWING:

BAY AREA TANK REMOVAL AT (415) 512-0680

TMC ENVIRONMENTAL, INC. AT (510) 232-5133

RECORD OF WATER SAMPLE COLLECTION

WELL LABEL: MW1	DATE COLLECTED: 1-10-93	JOB NUMBER: 1-13093
JOB NAME: RIFKIN PROPERTY	SAMPLERS NAME: TOM GHIGLIOTTO	
LOCATION: 4549 HORTON STREET, EMERYVILLE, CALIFORNIA		

WELL HEAD COND.:

TIME MEASURED						
DEPTH IN FEET (Measure to 0.01')						

WELL PURGING RECORD

TOTAL DEPTH OF WELL: 22'	DEPTH TO WATER: 11	DIAMETER: 2"

PURGE VOLUME = TOTAL DEPTH - WATER DEPTH X VOLUME FACTOR X 3 VOLUMES = GALLONS
VOLUME FACTOR = 0.17 FOR 2" CASING; 0.65 FOR 4" CASING; 1.47 FOR 6" CASING

PURGE METHOD: H & H VACUUM TRUCK	OVA-FID VAPOR READING, ppm : 0

WELL PURGING PARAMETERS

GALLONS	TIME	TEMPERATURE degrees F	CONDUCTIVITY x 1000	VISUAL TURBIDITY	pH
0-300	H & H	PURGED ABOUT	300 GALLONS	@ 3 GAL./MIN. RATE	AFTER 30
MINUTES,	RECHGE, I	SAMPLED WELL	SAME TYPE OF	H20 AS IN BARRELS.	
ample- 300	400	56.0	0.60	CLEAR	6.46

SAMPLING METHOD: DISPOSABLE BAILER	TIME COLLECTED: 16:15
SAMPLE TURBIDITY: 02.3	

RECORD OF WATER SAMPLE COLLECTION

WELL LABEL: OB-2	DATE COLLECTED: 2-9-94	JOB NUMBER: 1-13093
JOB NAME: Rifkin Property	SAMPLERS NAME: Tom Ghigliotto	
LOCATION: 4525 Horton Street, Emeryville, California		

WELL HEAD COND.:

TIME MEASURED	8:50	9:10				
DEPTH IN FEET (Measure to 0.01')	6.12	6.12				

WELL PURGING RECORD

TOTAL DEPTH OF WELL: 11.04	DEPTH TO WATER: 6.12	DIAMETER: 4"

PURGE VOLUME = TOTAL DEPTH - WATER DEPTH X VOLUME FACTOR X 3 VOLUMES = GALLONS
VOLUME FACTOR = 0.17 FOR 2" CASING; 0.65 FOR 4" CASING; 1.47 FOR 6" CASING

PURGE METHOD: H & H Vacuum Truck	OVA-FID VAPOR READING, ppm : 0

WELL PURGING PARAMETERS

GALLONS	TIME	TEMPERATURE degrees F	CONDUCTIVITY x 1000	VISUAL TURBIDITY	pH
0	9:02	52.3	0.26	Cloudy, Sheen/odor	8.64
~100	9:13	52.6	0.20	Cloudy, Sheen/odor	8.45
~400	9:25	52.8	0.20	Cloudy, Sheen/odor	8.18
~600	9:54	53.2	0.19	Slt. Cloudy, less sheen	8.18
~1000	10:15	53.6	0.20	Slt. Cloudy, less sheen	7.97
1125	10:45	54.3	0.20	Slightly Cloudy	7.96
~1200	11:22	54.6	0.22	Slightly Cloudy	7.91

SAMPLING METHOD: Disposable Bailer	TIME COLLECTED: 11:25 and 11:40
SAMPLE TURBIDITY: 188.4 and 177.6	

ATTACHMENT 2

WASTE MANIFESTS

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-94)
Please print or type. *Form designed for use on elite (12-pitch) typewriter.*

See Instructions on back of page 6.

Department of Toxic Substances Control
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.
CAC000895208	92219018		

3. Generator's Name and Mailing Address
HARVEY RIFKIN / c/o FRANK SATTERWHITE
3220 Monika Lane, Hayward, CA. 94541

4. Generator's Phone (510) 727-0283

5. Transporter 1 Company Name	6. US EPA ID Number
H&H SHIP SERVICE COMPANY	CAD004771158

7. Transporter 2 Company Name	8. US EPA ID Number

9. Designated Facility Name and Site Address	10. US EPA ID Number
PBC PATTERSON 13331 N. Highway 33 Patterson, CA 95363	CAD083156728

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
OIL AND WATER NON RCRA HAZARDOUS WASTE LIQUID	001	TT	00200	G
b.			E.M.P 00200	
c.				
d.				

15. Special Handling Instructions and Additional Information
JOB #13980 Profile #A4052
24 Hr. Emergency Contact: H&H#(415)543-4835
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR

JOB SITE: HARVEY RIFKIN
4549 Horton Street
Emeryville, California

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of the 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 federal, state and international laws.

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
[illegible]	[signature]	02	08	94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
ESTEBAN M. PENALVER	[signature]	02	08	94

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
Glenn Shipman	[signature]	02	14	94

DO NOT WRITE BELOW THIS LINE.

GENERATOR

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

92219018

DTSC 8022A (12/91)
EPA 8700—22

Green: HAULER RETAINS

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-94)
Please print or type. *Form designed for use on elite (12-pitch) typewriter.*

See Instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

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

92219022

UNIFORM HAZARDOUS WASTE MANIFEST

GENERATOR

1. Generator's US EPA ID No.: C A C 0 0 0 8 9 6 3 0 8

Manifest Document No.: 1 9 0 2 2

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
HARVEY RIFKIN / c/o FRANK SATTERWHITE
3220 Monika Lane, Hayward, CA. 94541

4. Generator's Phone (510) 727-0282

5. Transporter 1 Company Name: H&H SHIP SERVICE COMPANY

6. US EPA ID Number: C A D 0 0 4 7 7 1 1 5 8

7. Transporter 2 Company Name:

8. US EPA ID Number:

9. Designated Facility Name and Site Address
PRC PATTERSON
13331 N. Highway 33
Patterson, CA 95363

10. US EPA ID Number: C A D 0 8 8 1 5 5 7 2 8

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
a. OIL AND WATER NON RCRA HAZARDOUS WASTE LIQUID	001	TT	02400	G
b.				
c.				
d.				

15. Special Handling Instructions and Additional Information
JOB #13980 Profile #A4052
24 Hr. Emergency Contact: H&H#(415)543-4835
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR

JOB SITE: HARVEY RIFKIN
4549 Horton Street
Emeryville, California

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of the 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 federal, state and international laws.

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
Tom [illegible]	[signature]	02	09	94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
ESTEBAN M. PENALVER	[signature]	02	09	94

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
Glenn [illegible]	[signature]	02	10	94

DO NOT WRITE BELOW THIS LINE.

DTSC 8022A (12/91)
EPA 8700—22

Green: HAULER RETAINS

BFI Waste Systems™
BROWNING-FERRIS INDUSTRIES

No. 889965

NON-HAZARDOUS SPECIAL WASTE MANIFEST

GENERATOR

Generator Name: HARVEY RIFKIN
Address: 3220 MONIKA LANE
HAYWARD, CA. 94541
Phone No.: 510-7270282

Generating Location:
Address: 4525-4549 HORTON STREET
EMERYVILLE, CA. 94608
Phone No.: 510-2328366

BFI Waste Code: CA 405 020194 64355

Description of Waste	Quantity	Units	Containers No.	Containers Type
NON REGULATED PETROLEUM CONTAMINATED SOIL	18	Y		
NON DOT/RCRA REGULATED				

Type: D - Drum; C - Carton; B - Bag; T - Truck; P - Pounds; Y - Yards; O - Other

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

MARC EDWARDS FOR OWNER — Generator Authorized Agent Name
Signature
02029 4 — Shipment Date

TRANSPORTER

Truck No.: M-7
Phone No.: (916) 381-6864
Transporter Name: MANLEY & SONS TRUCKING
Driver Name (Print): RON FRANK
Address: 8896 ELDER CREEK ROAD
SACRAMENTO, CA 95828
Vehicle License No./State: 9C06230
Vehicle Certification:

I hereby certify that the above named material was picked up at the generator site listed above.

RON FRANK — Driver Signature
2 2 94 — Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

RON FRANK — Driver Signature
2 2 94 — Delivery Date

DESTINATION

Site Name: BROWNING-FERRIS INDUSTRIES
Phone No.: 510-4497049 1
Address: 4001 NORTH VASCO ROAD LIVERMORE, CA 94550

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent
Signature
2 2 94 — Receipt Date

PASS CODE

10/86

BFI260-720

UNLOADING AREA COPY

BFI Waste Systems™
BROWNING-FERRIS INDUSTRIES

No. 1024747

NON-HAZARDOUS SPECIAL WASTE MANIFEST

GENERATOR

Generator Name: HARVEY RIFKIN
Address: 3220 MONIKA LANE
HAYWARD, CA. 94541
Phone No.: 510-727-0282

Generating Location
Address: 4525-4549 HORTON STREET
EMERYVILLE, CA 94608
Phone No.: 510-232-8366

BFI Waste Code: CA 405 020194 643555

Description of Waste	Quantity	Units	Containers No.	Containers Type
NON REGULATED PETROLEUM CONTAMINATED SOIL.	1.8	T		
NON DOT / RCRA REGULATED				

Type: D - Drum, C - Carton, B - Bag, T - Truck, P - Pounds, Y - Yards, O - Other

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

MARC EDWARDS FOR HARVEY — Signature — Shipment Date: 02-02-94
Generator Authorized Agent Name

TRANSPORTER

Truck No.:
Phone No.: (96) 381-6864
Transporter Name: MANLEY & SONS TRUCKING
Driver Name (Print): BILL FRANCE
Address: 8896 ELDER CREEK RD.
SACRAMENTO, CA. 95828
Vehicle License No./State: 9C06229
Vehicle Certification:

I hereby certify that the above named material was picked up at the generator site listed above.
Driver Signature: Bill France — Shipment Date: 2-3-94

I hereby certify that the above named material was delivered without incident to the destination listed below.
Driver Signature: Bill France — Delivery Date: 2-3-94

DESTINATION

Site Name: BROWNING-FERRIS INDUSTRIES
Phone No.: 510-447-0491
Address: 4001 N VASCO RD. LIVERMORE, CA. 94550

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent — Signature — Receipt Date: 2-3-94

PASS CODE

10/86

BFI260-720

UNLOADING AREA COPY

FORWARD INC.

NON-HAZARDOUS WASTE MANIFEST
WASTE TREATMENT AND DISPOSAL FACILITY

JOB ACCEPTANCE NO. 94 - 697

TO BE COMPLETED BY THE GENERATOR

GENERATOR: HARVEY RIFKIN
MAILING ADDRESS: 3220 MONIKA LANE
CITY, STATE, ZIP: HAYWARD, CA.
PHONE: (510) 727-0282
CONTACT PERSON: HARVEY RIFKIN
SIGNATURE OF AUTHORIZED AGENT / TITLE: * SOILS COORDINATOR
DATE: 2/2/94

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☒ GLOVES ☒ GOGGLES ☐ RESPIRATOR ☐ HARD HAT
☐ TY-VEK ☐ OTHER

SPECIAL HANDLING PROCEDURES:
LEVEL "D" PROTECTION

WASTE TYPE
☒ TREATMENT SOIL
☐ DISPOSAL SOIL
☐ CONSTRUCTION SOIL
☐ SLUDGE
☐ NON-FRIABLE ASBESTOS
☐ WOOD
☐ ASH
☐ OTHER

GENERATING FACILITY: WHERE HOUSE

RECEIVING FACILITY
FORWARD INC. LANDFILL
9999 SOUTH AUSTIN ROAD
MANTECA, CALIFORNIA 95336
(209) 982-4298 PHONE
(209) 982-1009 FAX

TRANSPORTER HAULER MUST COMPLETE

NAME: MANLEY & SONS TRUCKING
ADDRESS: 8896 ELDER CREEK RD.
CITY, STATE, ZIP: SACRAMENTO, CA. 95
PHONE: (916) 381-6864
SIGNATURE OF AUTHORIZED AGENT OR DRIVER: * Ron Frank
DATE: 2-2-94

NOTES:

TRUCK NUMBER: M-7

☒ END DUMP ☐ BOTTOM DUMP ☐ TRANSFER
☐ ROLL-OFF(S) ☐ FLAT-BED ☐ VAN ☐ DRUMS

FACILITY REQUIREMENTS

FORWARD INC. LANDFILL

Forward shall have no obligation to accept the waste if weather or other conditions impair the safe and effective disposal of the waste or if the waste impairs the safe and effective operation of the Landfill. Forward shall use reasonable efforts to promptly notify Disposer of its inability to accept the waste for any reason. If Forward's refusal to accept the waste is based on weather or other site conditions, Forward shall notify the Disposer when site conditions are expected to change such that Forward will be able to accept the waste.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT: * C. Dillon
DATE: 2-2-94

CUBIC YARDS: 18

DISPOSAL METHOD: (TO BE COMPLETED BY FORWARD)

	DISPOSE	BIO	AERATE	STOCKPILE	OTHER
☒ ~~SOIL~~					
☐ SLUDGE					
☐ NON-FRIABLE ASBESTOS					
☐ WOOD					
☐ ASH					
☐ OTHER					

SCHEDULING MUST BE MADE PRIOR TO 4:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.
TO SCHEDULE CALL (209) 982-4298

MANIFEST # 20407

GENERATOR COPY

FORWARD INC.

NON-HAZARDOUS WASTE MANIFEST
WASTE TREATMENT AND DISPOSAL FACILITY

JOB ACCEPTANCE NO. 94-697

TO BE COMPLETED BY THE GENERATOR

GENERATOR: HARVEY RIFKIN
MAILING ADDRESS: 3220 MONIKA LANE
CITY, STATE, ZIP: HAYWARD, CA. 94541
PHONE: (510) 727-0282
CONTACT PERSON: HARVEY RIFKIN
SIGNATURE OF AUTHORIZED AGENT / TITLE: * SOILS COORDINATOR
DATE: 2/2/94

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☒ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☐ HARD HAT
☐ TY-VEK ☐ OTHER

SPECIAL HANDLING PROCEDURES:
LEVEL "D" PROTECTION

WASTE TYPE
☒ TREATMENT SOIL
☐ DISPOSAL SOIL
☐ CONSTRUCTION SOIL
☐ SLUDGE
☐ NON-FRIABLE ASBESTOS
☐ WOOD
☐ ASH
☐ OTHER

GENERATING FACILITY: WHERE HOUSE

RECEIVING FACILITY
FORWARD INC. LANDFILL
9999 SOUTH AUSTIN ROAD
MANTECA, CALIFORNIA 95336
(209) 982-4298 PHONE
(209) 982-1009 FAX

TRANSPORTER HAULER MUST COMPLETE

NAME: MANLEY & SONS TRUCKING
ADDRESS: 8896 ELDER CREEK ROAD
CITY, STATE, ZIP: SACRAMENTO, CA. 95828
PHONE: (916) 381-6864
SIGNATURE OF AUTHORIZED AGENT OR DRIVER: * Bill Faure
DATE: 2-2-94

NOTES:

TRUCK NUMBER: M-3

END DUMP ☒ BOTTOM DUMP ☐ TRANSFER ☐
ROLL-OFF(S) ☐ FLAT-BED ☐ VAN ☐ DRUMS ☐

FACILITY REQUIREMENTS

FORWARD INC. LANDFILL

Forward shall have no obligation to accept the waste if weather or other conditions impair the safe and effective disposal of the waste or if the waste impairs the safe and effective operation of the Landfill. Forward shall use reasonable efforts to promptly notify Disposer of its inability to accept the waste for any reason. If Forward's refusal to accept the waste is based on weather or other site conditions, Forward shall notify the Disposer when site conditions are expected to change such that Forward will be able to accept the waste.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT: * C. Dell
DATE: 2-2-94

CUBIC YARDS: 18

DISPOSAL METHOD: (TO BE COMPLETED BY FORWARD)

	DISPOSE	BIO	AERATE	STOCKPILE	OTHER
☒ SOIL					
☐ SLUDGE					
☐ NON-FRIABLE ASBESTOS					
☐ WOOD					
☐ ASH					
☐ OTHER					

SCHEDULING MUST BE MADE PRIOR TO 4:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.
TO SCHEDULE CALL (209) 982-4298

MANIFEST # 20405

GENERATOR COPY

ATTACHMENT 3

SUPPLEMENTAL DOCUMENTATION

Tank Excavators and Safety Specialist, Inc., Tank Removal Reports
Well Destruction Permit, Alameda County Flood Control and Water Conservation District

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
5997 PARKSIDE DRIVE • PLEASANTON, CALIFORNIA 94588 • (510) 484-2600

19 January 1994

TMC Environmental, Inc.
13908 San Pablo Avenue, Ste. 101
San Pablo, CA 94806

Gentlemen:

Enclosed is drilling permit 94023 for the destruction of well 1S/4W 22B80 at 4563 Horton Street in Emeryville for Frank Satterwhite.

Please note that permit condition A-2 requires that a well destruction report be submitted after completion of the work. The report should include a description of methods and materials used to destroy the well, location sketch, date of destruction and permit number.

If you have any questions, please contact Wyman Hong at extension 235 or me at extension 233.

Very truly yours,

Craig A. Mayfield

Craig A. Mayfield
Water Resources Engineer III

WH:mm
Enc.

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE ♦ PLEASANTON, CALIFORNIA 94588 ♦ (415) 484-2600

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 4563 HORTON STREET
EMERYVILLE, CA
Abandon Well MW-1

CLIENT
Name FRANK Satterwhite, Receiver
Address 3220 Monika Lane Phone
City Hayward CA Zip 94541

APPLICANT
Name TMC ENVIRONMENTAL, INC.
13908 San Pablo, Ave., S. 101
Address Phone 510-232-8366
City San Pablo, CA Zip 94806

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection		General	
Water Supply		Contamination	
Monitoring		Well Destruction	X

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. C57 265556

WELL PROJECTS
Drill Hole Diameter ___ in. Maximum
Casing Diameter ___ in. Depth ___ ft.
Surface Seal Depth ___ ft. Number ___

GEOTECHNICAL PROJECTS
Number of Borings ___ Maximum
Hole Diameter ___ in. Depth ___ ft.

ESTIMATED STARTING DATE 1/17/94
ESTIMATED COMPLETION DATE 1/17/94

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Mark Tompkin Date 1/12/94

FOR OFFICE USE

PERMIT NUMBER 94023
LOCATION NUMBER 1S/4W 22B80

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

(E.) WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 13 Jan 94
Wyman Hong

519

SAFETY SPECIALISTS, Inc.
The Full Service Environmental, Health & Safety Corporation

P.O. Box 4420, Santa Clara, CA 95054
Telephone (408) 988-1111
Contractor's License No. 460905

AUG 16 RECD

August 5, 1988

Mr. Bob Smith
Tank Excavators
P.O. Box 8402
Santa Cruz, CA 95061

Reference: Safety Specialists, Inc. Project No. 530020
4549 Horton Street, Emeryville, California

Dear Mr. Smith:

Safety Specialists, Inc. is pleased to present this report documenting soil sample collection performed on July 8, 1988 at 4549 Horton Street, Emeryville, California. Also enclosed are laboratory analytical results for the soil samples. A site map is presented as Figure 1.

On July 8, 1988, Tank Excavators excavated and removed a 1,000 gallon gasoline underground storage tank at 4549 Horton Street, in Emeryville, California. The tank was visually inspected at the time of removal, and no holes were noted in the tank. The tank was loaded onto a H&H trailer for disposal. H&H is a registered waste hauler. Dennis Byrne of the Alameda County Health Agency specified depth and location of soil sample collection. Soil samples were collected by Safety Specialists, Inc., Hydrogeologist Paul King. Soil sample collection locations are shown in Figure 1.

Soil for Soil Sample S-1 was excavated into the bucket of a backhoe from the south end of the excavation at a depth of 9 1/2 feet. The soil was then collected into a 6" long, 2" diameter brass sleeve. Before use, the brass sleeve and plastic end caps were washed in a trisodium phosphate solution followed by a distilled water rinse. The ends of the brass sleeve were capped with aluminum foil followed by plastic caps. The brass sleeve was then labeled, and placed in a cooler with ice.

Soil for Soil Sample S-2 was excavated into the bucket of a backhoe from the north end of the excavation at a depth of 9 feet. Soil Sample S-2 was collected in a manner identical to the collection of Soil Sample S-1. Gasoline petroleum hydrocarbon odors were noted in both samples.

The soil samples were transported to Fireman's Fund Laboratories in Petaluma, California, a State-certified hazardous waste testing laboratory. Chain of custody procedures were followed.

Laboratory analysis was performed on both soil samples for low boiling point Total Petroleum Hydrocarbons (TPH), and benzene, toluene, ethylbenzene and xylene using EPA Methods 5020, 8015, and 8020.

Laboratory analysis of Soil Sample S-1 detected 86.0 milligrams per kilogram (mg/kg) TPH as gasoline, 1.0 mg/kg toluene, 1.7 mg/kg xylene and 1.0 mg/kg ethylbenzene. Laboratory analysis of Soil Sample S-2 detected 616.0 mg/kg TPH as gasoline, 0.35 mg/kg benzene, 1.6 mg/kg toluene, 158 mg/kg xylenes and 23 mg/kg ethylbenzene.

The chain of custody record and laboratory analytical results are presented with this report.

If you have any questions, please do not hesitate to contact us.

Sincerely,

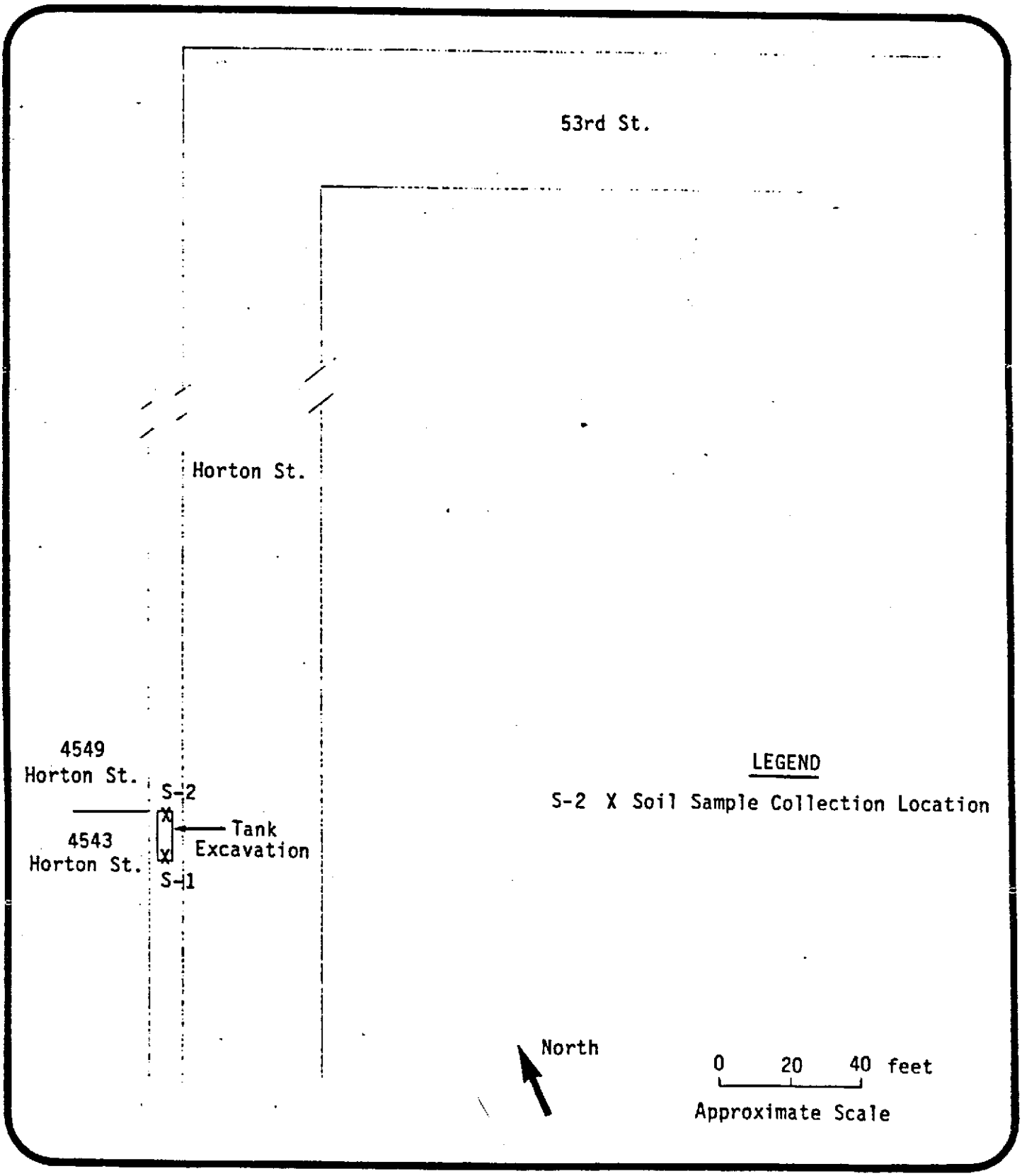
SAFETY SPECIALISTS, INC.

Paul King

Paul King
Hydrogeologist
Environmental Engineering Services

PK:mt

Enclosures



SAFETY SPECIALISTS INC.
SANTA CLARA, CA.

SITE PLAN
Soil Sample Collection
4549 Horton St.
Emeryville, California

Figure No. 1

530020
Project No.

Job # 3075-8

SAFETY SPECIALISTS, Inc.
The Full Service Environmental, Health & Safety Corporation

P.O. Box 4420, Santa Clara, CA 95054
Telephone (408) 988-1111
Contractor's License No. 460905

CHAIN OF SAMPLE CUSTODY RECORD

Collector: Paul King Date Sampled: 7/8/88 Time: 1010

Location of Sampling: 4519 Horton St.
Emeryville, CA

Project Number: 530020 Survey Number: E-214-88

Sample Type:

Container Type and Condition:

Contract Laboratory Record/Name: Firemen's Fund, Petaluma

Sample ID	Field Information		
S-1	6" brass sleeve	Date 7/8/88	Time 1010
S-2	6" brass sleeve	7/8/88	1010

Analysis Requested:

S-1	Low boil TPH (gasoline) & BTEX	5020/8015/8020
S-2	Low boil TPH (gasoline) & BTEX	5020/8015/8020

Results Needed By: Normal turnaround

Travel Blank:	☐ Yes ☒ No	Travel Blank to be Analyzed Separately:	☐ Yes ☒ No
Duplicate Samples:	☐ Yes ☒ No	Duplicates to be Analyzed Separately:	☐ Yes ☒ No
Field Blank:	☐ Yes ☒ No	Field Blank to be Analyzed Separately:	☐ Yes ☒ No
Background Soil Sample:	☐ Yes ☒ No	Background Soil Sample to be Analyzed Separately:	☐ Yes ☒ No

Chain of Custody:

1. Paul King (Field Personnel)	7/11/88 (Date)	
2. (Courier)	(Date)	
3. Fitz Env. (Lab)	7-12-88 (Date)	

FIREMAN'S FUND
INSURANCE COMPANIES
Environmental Laboratory
3700 Lakeville Highway
Petaluma, CA 94952
800-FFIC-LAB

ENVIRONMENTAL LABORATORY

Paul King
Safety Specialists, Inc.
Environmental Department
3060 Raymond Street
Santa Clara, CA 95054

L A B O R A T O R Y R E S U L T S

Supply/Order No.:
Client's Survey No.: E214-88
Contract/PO No.: 4549 WARTON ST. EMERYVILLE CA.
Release No.: 530020

Laboratory Job No.: 883275
Date Received: 07/12/88
Date Reported: 07/29/88
Client Code: SSPE18

ASSAY:TPH/GASOLINE & BTEX EPA/5020/8015/8020
MATRIX:SOIL

LABNO	SMPLNO-ID	RESULTS	DET.LIM
38387	S1		
	GASOLINE	86.0 mg/kg	2.0 mg/kg
38388	S2		
	GASOLINE	616.0 mg/kg	10.0 mg/kg

ANALYST:JEAN M.BONITE

FIREMAN'S FUND
INSURANCE COMPANIES
Environmental Laboratory
3700 Lakeville Highway
Petaluma, CA 94952
800-FFIC-LAB

ENVIRONMENTAL LABORATORY

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 883275

ASSAY:
MATRIX:

LABNO SMPLNO-ID	RESULTS		DET.LIM	
38387 S1				
BENZENE	<0.02	mg/kg	0.02	mg/kg
TOLUENE	1.0	mg/kg	0.02	mg/kg
XYLENE	1.7	mg/kg	0.02	mg/kg
ETHYLBENZENE	1.0	mg/kg	0.02	mg/kg
38388 S2				
BENZENE	0.35	mg/kg	0.10	mg/kg
TOLUENE	1.6	mg/kg	0.10	mg/kg
XYLENE	158	mg/kg	0.10	mg/kg
ETHYLBENZENE	23	mg/kg	0.10	mg/kg

ANALYST:JEAN M.BONITE

Form Approved OMB (Expires 9 30 88)

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

Texas Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC000923411 | Manifest Document No. 511289 | Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Rifkin Investment Co. Harry Rifkin
61 Lansing ST. Suite 106
San Francisco Ca. 94105

4. Generator's Phone (415 546-7977

A. State Manifest Document Number 87851289

B. State Generator's ID

5. Transporter 1 Company Name: H&H Ship Service Co. | 6. US EPA ID Number: CAD042717168 | C. State Transporter's ID 902438 | D. Transporter's Phone 415-543-4825

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 Service Co.
220 China Basin ST.
San Francisco Ca. 94107 | 10. US EPA ID Number: CAD042717168 | G. State Facility's ID 138-0091-738 | H. Facility's Phone 415-543-0909

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	L Waste No.
a. Empty underground Tank, waste Flammable Liquid UN 1203	001	TP		1000 G	State 512 / EPA/Other 2001
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
Empty Underground Gasoline Storage Tank with less than 1 gallon residue in tank (Inerted Dry Ice)

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

15. Special Handling Instructions and Additional Information
Gloves

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: Dwaine J Pierzina | Signature | Month Day Year: 10 19 88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Edward C Milano | Signature: Edward C Milano | Month Day Year: 10 19 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

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: Howard Yolen | Signature | Month Day Year: 10 20 88

GENERATOR — TRANSPORTER — FACILITY

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

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

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

INSTRUCTIONS ON THE BACK

H & H
SHIP SERVICE COMPANY
W. J. HARRIS

220 CHINA BASIN, P.O. BOX 77363 · SAN FRANCISCO, CA 94107 · DAY AND NIGHT: 543-4835

CERTIFICATES OF DISPOSAL

12 JULY 1988

H & H Ship Service Company certifies to EACAN & COMPANY that:

1. The storage tank(s), size(s) 1 - 1,000 gallon

   removed from the RIFKIN INVESTMENT COMPANY

   facility at 4549 HORTON STREET

   EMERYVILLE, CALIFORNIA

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

2. The following tank(s), H & H Job Number: 8231 have been steamed cleaned, cut with approximately 2' X 2' holes, rendered harmless and disposed of as scrap metal.

3. Disposal site: LEVIN METALS CORPORATION, RICHMOND, 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 contact (415) 543-4835.

Very Truly Yours,

Cleveland Varney
Q.A. & Safety Coordinator

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
470 - 27TH ST., RM. 322
OAKLAND, CA 94612
PHONE NO. 415/874-7237

RECEIVED
AUG 16 1988
HAZARDOUS MATERIALS/
WASTE PROGRAM
Project # U52452
Fee Paid $300.00
Date 8/16/88

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 change 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 meet the requirements of State and local laws.

Notify this Department at least 48 hours prior following required inspections:

___ 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 FINANCIAL PENALTY FOR NOT OBTAINING THESE INSPECTIONS.

Note: Contaminated Soil Transporter must be identified before soil is removed. L.S. 8/25/88

UNDERGROUND TANK CLOSURE/MODIFICATION PLANS

1. Business Name Rifkin Investment Co.
   Business Owner Harvey Rifkin
2. Site Address 4549 Horton St.
   City Emeryville Ca. Zip ___ Phone ___
3. Mailing Address 81 Lansing St. Suite 106
   City San Francisco Zip 94105 Phone 415-546-7977
4. Land Owner Same as above
   Address ___ City, State ___ Zip ___
5. EPA I.D. No. CAC000092341
6. Contractor Tank Excavators
   Address 230 Mt. Hermon Road Suite 206
   City Scotts Valley Ca 95066 Phone 408-438-1622
   License Type A ID# 423958
7. Other (Specify) ___
   Address ___
   City ___ Phone ___

RECEIVED '88

8. Contact Person for Investigation

Name Harvey Rilkin Title Owner

Phone 415-546-7477

9. Total No. of Tanks at facility 1

10. Have permit applications for all tanks been submitted to this office? Yes [X] No [ ]

11. State Registered Hazardous Waste Transporters/Facilities

a) Product/Waste Tranporter

Name _____ EPA I.D. No. _____

Address _____

City _____ State ____ Zip _____

b) Rinsate Transporter

Name _____ EPA I.D. No. _____

Address _____

City _____ State ____ Zip _____

c) Tank Transporter

Name H&H Shipservices EPA I.D. No. CAD004771168 0334

Address 220 China Basin S.F.

City San Francisco State Ca. Zip 94107

d) Contaminated Soil Transporter

Name _____ EPA I.D. No. _____

Address _____

City _____ State ____ Zip _____

12. Sample Collector

Name _____

Company Safety Specialists

Address 3060 Raymond St.

City Santa Clara State Ca Zip 95054 Phone 408-988-1111

RECEIVED
SEP 19 '88
G. - S.

13. Sampling Information for each tank or area

Tank or Area		Material sampled	Location & Depth
Capacity	Historic Contents (past 5 years)		
1000	gasoline		

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

If yes, describe. unknown

15. NFPA methods used for rendering tank inert? Yes [X] No [ ]

If yes, describe. 30# of Dry Ice per 1000 gallons.

16. Laboratories

Name Friemans Fuel

Address 3700 Solesville Hiway

City Petaluma State Ca. Zip 94957

State Certification No. 109

17. Chemical Methods to be used for Analyzing Samples

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Number
Sour Boiler T.P.H. B.T.X.& E.	3500 or 3508	8020 or 8240 for soil 602 & 624 for water

18. Site Safety Plan submitted? Yes [X] No [ ]

19. Workman's Compensation: Yes [X] No [ ]

Copy of Certificate enclosed? Yes [ ] No [ ]

Name of Insurer _____

20. Plot Plan submitted? Yes [X] No [ ]

21. Deposit enclosed? Yes [X] No [ ]

22. Please forward to this office the following information within 60 days after receipt of sample results.

a) Chain of Custody Sheets

b) Original Signed Laboratory Reports

c) TSD to Generator copies of wastes shipped and received

d) Attachment A summarizing laboratory results

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 will notify the Department of Environmental Health at least two (2) working days (48 hours) in advance to schedule any required inspections. I understand that site and worker safety are soley the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Signature of Contractor

Name (please type) Robert Smith

Signature Robert Smith

Date Aug 16 1988

Signature of Site Owner or Operator

Name (please type) HARVEY RIFKIN

Signature Harvey Rifkin

Date 8-16-88

NOTES:

1. Any changes in this document must be approved by this Department.
2. Any leaks discovered must be submitted to this office on an underground storage tank unauthorized leak/contamination site report form within 5 days of its discovery.
3. Three (3) copies of this plan must be submitted to this Department. One copy must be at the construction site at all times.
4. A copy of your approved plan must be sent to the landowner.

SAFETY SPECIALISTS, Inc.
The Full Service Environmental Health & Safety Corporation

P.O. Box 4420, Santa Clara, CA 95054
Telephone (408) 988-1111
Contractor's License No. 460905

October 31, 1988

Mr. Bob Smith
Tank Excavators
P.O. Box 8402
Santa Cruz, CA 95061

Reference: Safety Specialists, Inc., Project No. 530039
4549 Horton Street, Emeryville, California

Dear Mr. Smith:

Safety Specialists, Inc. is pleased to present this report documenting soil sample collection performed on September 30, 1988 at 4549 Horton Street, Emeryville, California. Also enclosed are laboratory analytical results and chain-of-custody documentation for the soil samples. A site map is presented as Figure 1.

On July 8, 1988, Tank Excavators excavated and removed a 1,000 gallon gasoline underground storage tank at 4549 Horton Street, in Emeryville, California. The results of the analysis performed on soil collected from the excavation were presented in Safety Specialists, Inc. report Number 53020 dated August 5, 1988.

On September 30, 1988 Tank Excavators excavated and removed a 550 gallon gasoline tank adjacent to the location of the 1,000 gallon tank that was excavated on July 8, 1988. The tank was visually inspected at the time of removal, and no holes were noted in the tank. The tank was loaded onto a H&H trailer for disposal. H&H is a registered waste hauler. Dennis Byrne of the Alameda County Health Agency specified depth and location of soil sample collection. Soil samples were collected by Safety Specialists, Inc.'s personnel. Soil sample collection locations are shown in Figure 1.

Soil for Soil Sample X-1 was excavated into the bucket of a backhoe from the south end of the excavation at a depth of 12 feet. The soil was then collected into a 6" long, 2" diameter brass sleeve. Before use, the brass sleeve and plastic end caps were washed in a trisodium phosphate solution followed by a distilled water rinse. The ends of the brass sleeve were capped with aluminum foil followed by plastic caps. The brass sleeve was then labeled, and placed in a cooler with ice.

Soil for Soil Sample X-2 was excavated into the bucket of a backhoe from the north end of the excavation at a depth of 12 feet. Soil Sample X-2 was collected in a manner identical to the collection of Soil Sample X-1. Gasoline petroleum hydrocarbon odors were noted in both samples.

The soil samples were transported to Sequoia Laboratories in Redwood City, California, a State-certified hazardous waste testing laboratory. Chain-of-Custody procedures were followed.

Laboratory analysis was performed on both soil samples for low boiling point Total Petroleum Hydrocarbons (TPH) as gasoline, and benzene, toluene, ethylbenzene and xylene, using EPA Methods 5020, 8015, and 8020 and total lead using EPA Method 7421.

Laboratory analysis of Soil Sample X-1 detected 4.9 milligrams per kilogram (mg/kg) TPH as gasoline, and 9.5 mg/kg lead. Laboratory analysis of Soil Sample X-2 detected 41 mg/kg TPH as gasoline, 1.0 mg/kg xylenes, 0.20 mg/kg ethylbenzene, and 8.1 mg/kg lead.

The chain-of-custody record and laboratory analytical results are presented with this report.

If you have any questions, please do not hesitate to contact us.

Sincerely,

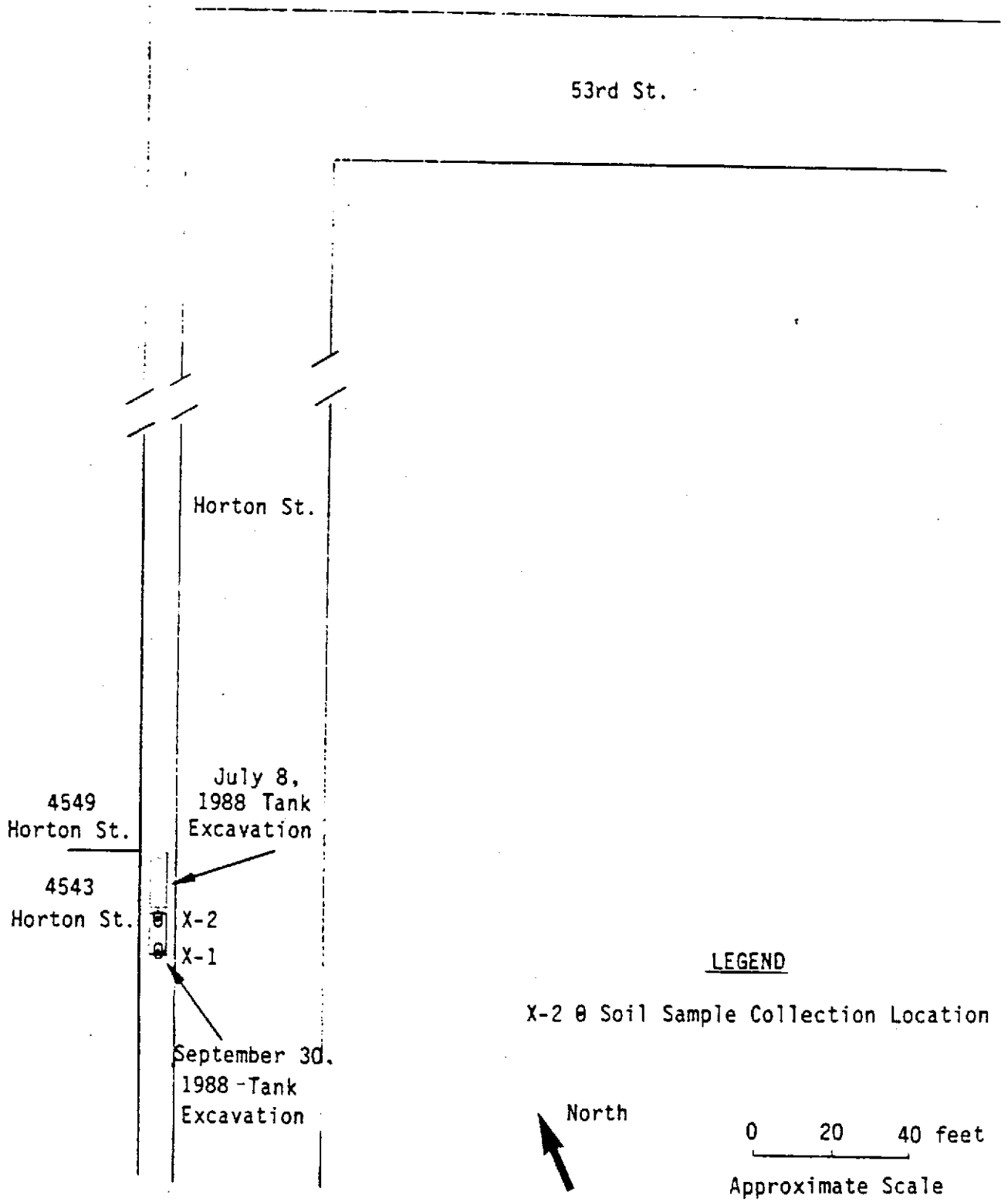
SAFETY SPECIALISTS, INC.

Paul King

Paul H. King
Hydrogeologist
Environmental Engineering Services

PHK:mw

Enclosures



SAFETY SPECIALISTS INC.
SANTA CLARA, CA.

SITE PLAN
Soil Sample Collection
4549 Horton St.
Emeryville, California

Figure No. 1

530039
Project No.

SAFETY SPECIALISTS, Inc.
The Full Service Environmental, Health & Safety Corporation

P.O. Box 4420, Santa Clara, CA 95054
Telephone (408) 988-1111
Contractor's License No 460905

CHAIN OF SAMPLE CUSTODY RECORD

Collector: Youssef Date Sampled: 9/30/88 Time: 11:00

Location of Sampling: – Emeryville –

Project Number: 530039 Survey Number: 283-88

Sample Type: Soil

Container Type and Condition: brass sleeve

Contract Laboratory Record/Name:

Sample ID	Field Information
X-1	sample from beneath the tank away from gate
X-2	sample from beneath the tank close to gate

Analysis Requested: Analyse each sample for TPH (gasoline + BTEX) using EPA 5030/8015/8020 + Lead (Total)

Results Needed By: Normal

Travel Blank:	☐ Yes	☒ No	Travel Blank to be Analyzed Separately:	☐ Yes	☒ No
Duplicate Samples:	☐ Yes	☒ No	Duplicates to be Analyzed Separately:	☐ Yes	☒ No
Field Blank:	☐ Yes	☒ No	Field Blank to be Analyzed Separately:	☐ Yes	☒ No
Background Soil Sample:	☐ Yes	☒ No	Background Soil Sample to be Analyzed Separately:	☐ Yes	☒ No

Chain of Custody:

	Signature	Date
1. Field Personnel	Y. Shan Day	9/30/88
2. Courier	Y. S. [illegible]	10/3/88
3. Lab	Ray [illegible]	10/3/88 1:35 PM

SEQUOIA ANALYTICAL

680 Chesapeake Drive · Redwood City, CA 94063
(415) 364-9222 · FAX (415) 364-9233

Safety Specialists, Inc.
P.O. Box 4420
Santa Clara, CA 95054
Attn: Youssef

Date Sampled: 09/30/88
Date Received: 10/03/88
Date Analyzed: 10/14/88
Date Reported: 10/20/88

Project: #530039, Survey #283-88

TOTAL PETROLEUM FUEL HYDROCARBONS WITH BTEX DISTINCTION

Sample Number	Sample Description Soil	Low to Medium Boiling Point Hydrocarbons ppm	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm
8100010	X-1	4.9	N.D.	N.D.	N.D.	N.D.
8100011	X-2	41	N.D.	N.D.	0.20	1.0
Detection Limits:		1.0	0.05	0.1	0.1	0.1

Method of Analysis: EPA 5030 or 3810/8015/8020

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

SEQUOIA ANALYTICAL

680 Chesapeake Drive · Redwood City, CA 94063
(415) 364-9222 · FAX (415) 364-9233

Safety Specialists, Inc.
P.O. Box 4420
Santa Clara, CA 95054
Attn: Youssef

Date Sampled: 09/30/88
Date Received: 10/03/88
Date Reported: 10/20/88
Project #530039, Survey #283-88

LABORATORY ANALYSIS

Analyte: Lead

Sample Number	Sample Description Soil	Detection Limit mg/kg	Sample Result mg/kg
8100010	X-1	0.05	9.5
8100011	X-2	0.05	8.1

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

SAFETY SPECIALISTS, Inc.
The Full Service Environmental, Health & Safety Corporation

P.O. Box 4420, Santa Clara, CA 95054
Telephone (408) 988-1111
Contractor's License No. 460905

File

December 2, 1988

NEW

DEC 0 6 1988

QUALITY CONTR

4543 Horton St.
Emeryville

Mr. Bob Smith
Tank Excavators
PO Box 8402
Santa Cruz, CA 95061

Reference: Safety Specialists, Inc., Project No. 530050

Dear Mr. Smith:

Safety Specialists, Inc., is pleased to submit this report documenting the collection and analysis of soil and water samples and the installation of one monitoring well in Emeryville, California.

Soil samples from monitoring well MW-1 at the 9 to 9 1/2 foot sample interval proved to have 370 parts per million (ppm), total petroleum hydrocarbons (TPH) as diesel. Water samples from monitoring well MW-1 proved to have 7400 parts per billion (ppb) TPH as diesel. Therefore, as of the date of this submittal, it is the opinion of this office that the above mentioned site should be considered to have contaminated groundwater. We suggest notification of the Regional Water Quality Control Board and recommend that the existing well be monitored on a quarterly basis to gather data upon which further decisions may be based. For details and complete laboratory results, refer to the text of this report and Appendix D.

If you have any questions or require further data, please contact our office at your convenience.

Sincerely,

SAFETY SPECIALISTS, INC.

Curtis Payton
Staff Geologist
Environmental Engineering Services

Kenneth L. Meleen, P.E.
Civil Engineer C17487
Environmental Engineering Services

CP/KLM:mw

Enclosure

REGISTERED PROFESSIONAL ENGINEER
KENNETH LEROY MELEEN
C017487
Exp. 6/30/89
CIVIL
STATE OF CALIFORNIA

TABLE OF CONTENTS

FIGURES

APPENDICES

4549? my

INTRODUCTION

This report documents the installation and sampling of one groundwater monitoring well for the purpose of collecting soil and water samples for petroleum hydrocarbon analysis, at 4543 Horton Street in Emeryville, California. A vicinity map is presented as Figure 1, and a site plan is presented as Figure 2.

SITE HISTORY

As described in Safety Specialists, Inc., Reports, Nos. 530020 and 530039, dated August 5 and October 31, 1988 respectively (Appendix A), a 1000-gallon gasoline underground storage tank and a 550-gallon gasoline tank were excavated from the front (Horton Street side) of the subject — @ 4543 site. Soil samples obtained from beneath the tanks proved to be sufficiently contaminated to raise concern regarding the groundwater. A monitoring well was installed to establish whether any hydrocarbon contamination had impacted the groundwater.

MONITORING WELL CONSTRUCTION

Before drilling operations began, Safety Specialists, Inc., secured all necessary permits and had underground utilities located in the vicinity of the monitoring well. All work was performed under the direct supervision of Kenneth L. Meleen, Professional Engineer, C 17487.

The borehole for the monitoring well was drilled on November 14, 1988, under the supervision of Safety Specialists, Inc.'s, Staff Geologist, Mr. Curtis Payton (See Figure 2 for monitoring well location.) The drilling firm Hew Drilling of East Palo Alto, California was subcontracted to drill the boreholes using 8-inch outside diameter hollow stem augers with a truck-mounted auger rig. The borehole was extended 15 feet below the first encountered water level. For logging purposes, soil samples were collected every five feet using a modified California split-spoon sampler driven into the bottom of the borehole with an automatic 140 pound hammer falling 30 inches. One soil sample for chemical analysis was collected at each of the first three sampling intervals using a modified California split-spoon sampler lined with six-inch long brass sleeves. The sample intervals were at 5 to 5 1/2 feet, 9 to 9 1/2 feet and 15 to 15 1/2 feet below the surface.

The ends of the brass sleeves containing the soil samples were wrapped in aluminum foil and sealed with plastic end caps. The samples were labeled, placed in a cooler with ice and transported by courier to Fireman's Fund

Laboratories in Petaluma, California, a State-certified hazardous waste waste testing laboratory. Chain of custody procedures were observed. The soil samples from boring MW-1 were separately analyzed for total petroleum hydrocarbons (TPH) as diesel and for benzene, toluene, ethylbenzene and xylene using EPA methods 3550, 8015 and 8020.

Drill cuttings were stored in sealed 55-gallon open-head, DOT approved drums until soil analysis results were available to determine the proper method of disposal. Upon completion of drilling, the borehole was converted to a monitoring well by the installation of a two-inch diameter Schedule 40, factory threaded and factory slotted, PVC casing and screen. Monitoring Well MW-1 was constructed with 0.010 inch slot. The slotted interval extended to 4 1/2 feet above groundwater to allow for collection of floating product, and in anticipation of seasonal fluctuations of groundwater levels. The filter sand extended to one foot above the top of the slotted interval, and 1/4 foot of bentonite pellets was placed above the sand. The pellets were hydrated with clean water and allowed to set up. The remaining annulus was filled with neat cement and 5% bentonite powder mixture poured from the surface. The top of the monitoring well was enclosed in locking field cover with the top set slightly above grade to prevent surface water infiltration, contamination or vandalism. Copies of the exploratory boring logs and monitoring well construction as-built diagrams are presented in Appendix B.

The monitoring well was developed on November 22, 1988 by overpumping until the discharged water was clear. Water discharged from the monitoring

well was stored in a 30-gallon open head DOT-approved drum. The water was kept in the drum until water quality analysis results were available to determine the proper method of disposal.

GROUNDWATER SAMPLE COLLECTION

Prior to sampling, the monitoring well was purged. Care was taken during purging not to lower the water level in the monitoring wells more than two to three feet in order to minimize potential aeration of the sand pack or aquifer. The field parameters of pH, electrical conductivity, and temperature were monitored and recorded during purging. After the field parameters had been observed to stabilize and a minimum of three casing volumes of water had been removed, the monitoring wells were sampled. Water discharged during purging operations was stored in a 30-gallon open head DOT-approved drum until it could be disposed of properly. A copy of the monitoring well purge data sheet is presented in Appendix C.

A water sample was collected on November 22, 1988, using a clean Teflon bailer and cotton cord. The water sample was placed in a 40 ml volatile organic analysis container (VOA) sample bottle which was provided by the laboratory, placed in a cooler with ice, and transported by the field technician to Sequoia Analytical Laboratory in Redwood City, California, a State-certified hazardous waste testing laboratory. Chain of custody procedures were observed. The bailer was decontaminated before use by washing in a trisodium phosphate solution followed by a distilled water rinse.

Laboratory analysis was performed on the water sample using EPA methods 3510 and 8015 for total petroleum hydrocarbons as diesel and method 602 for petroleum hydrocarbons as benzene, toluene, ethylbenzene and xylene (BTEX) constituents.

LABORATORY ANALYTICAL RESULTS

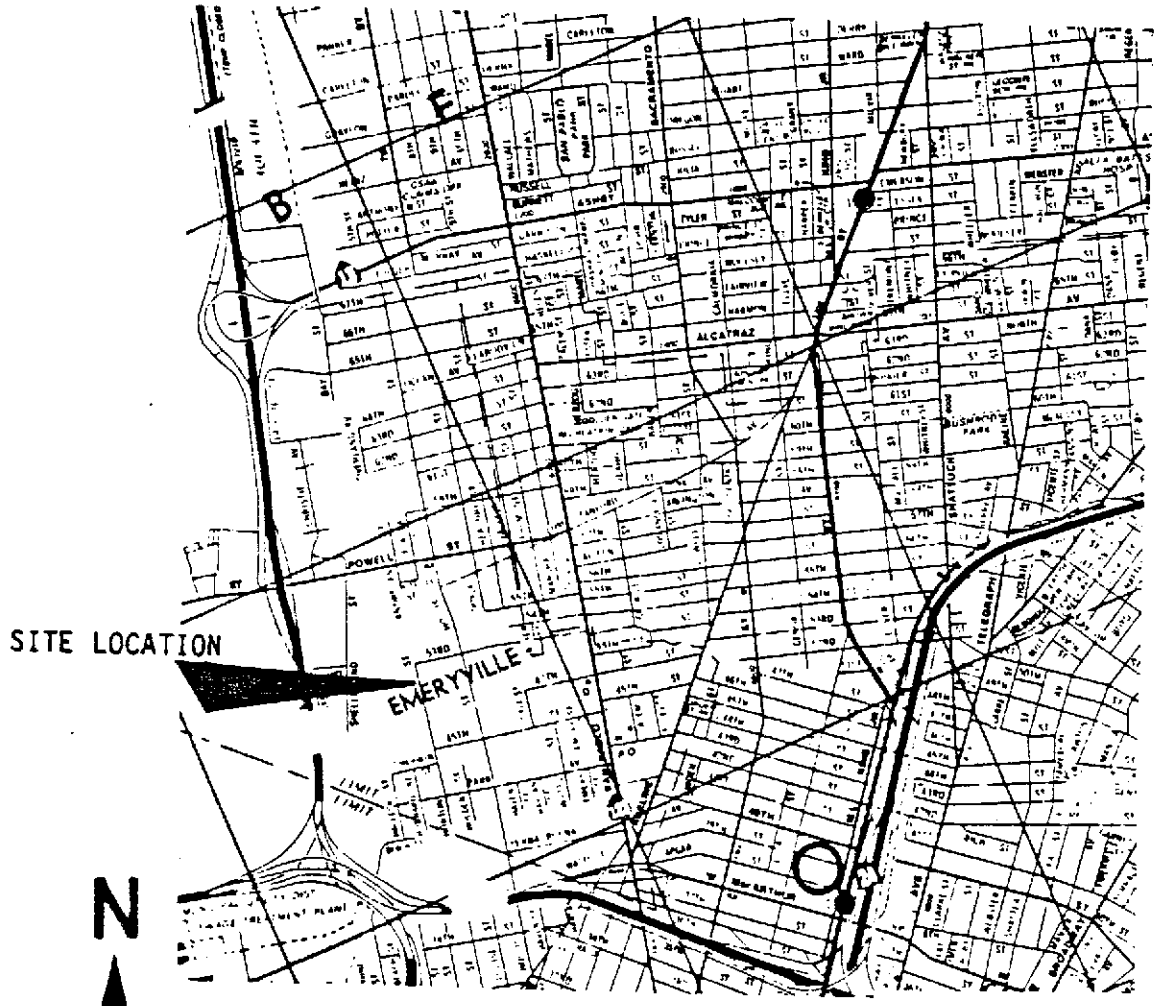
Copies of the laboratory analytical results and the chain of custody documentation are provided in Appendix D. TPH as diesel registered in soil sample MW-1-9-9 1/2' at 370 ppm. Soil sample MW-1-9-9 1/2' also proved to have 13 ppm and 22 ppm of toluene and xylene respectively. The water sample from MW-1 proved to have 7400 ppb of TPH as diesel and between 11 ppb and 53 ppb for BTEX constituents. Table 1 summarizes the laboratory analytical results for soil and water.

CONCLUSIONS AND RECOMMENDATIONS

Laboratory results confirm contamination in both the soil and water immediately downgradient of the tank excavation. It is likely that the Regional Water Quality Control Board may require the implementation of a groundwater cleanup program. A quarterly groundwater monitoring program should be established to observe any changes and gather data upon which further decisions can be made.

SOIL AND WATER DISPOSAL

Soil cuttings, and groundwater from well construction, development and purging were contained on site. They will be disposed of properly within the next two weeks.



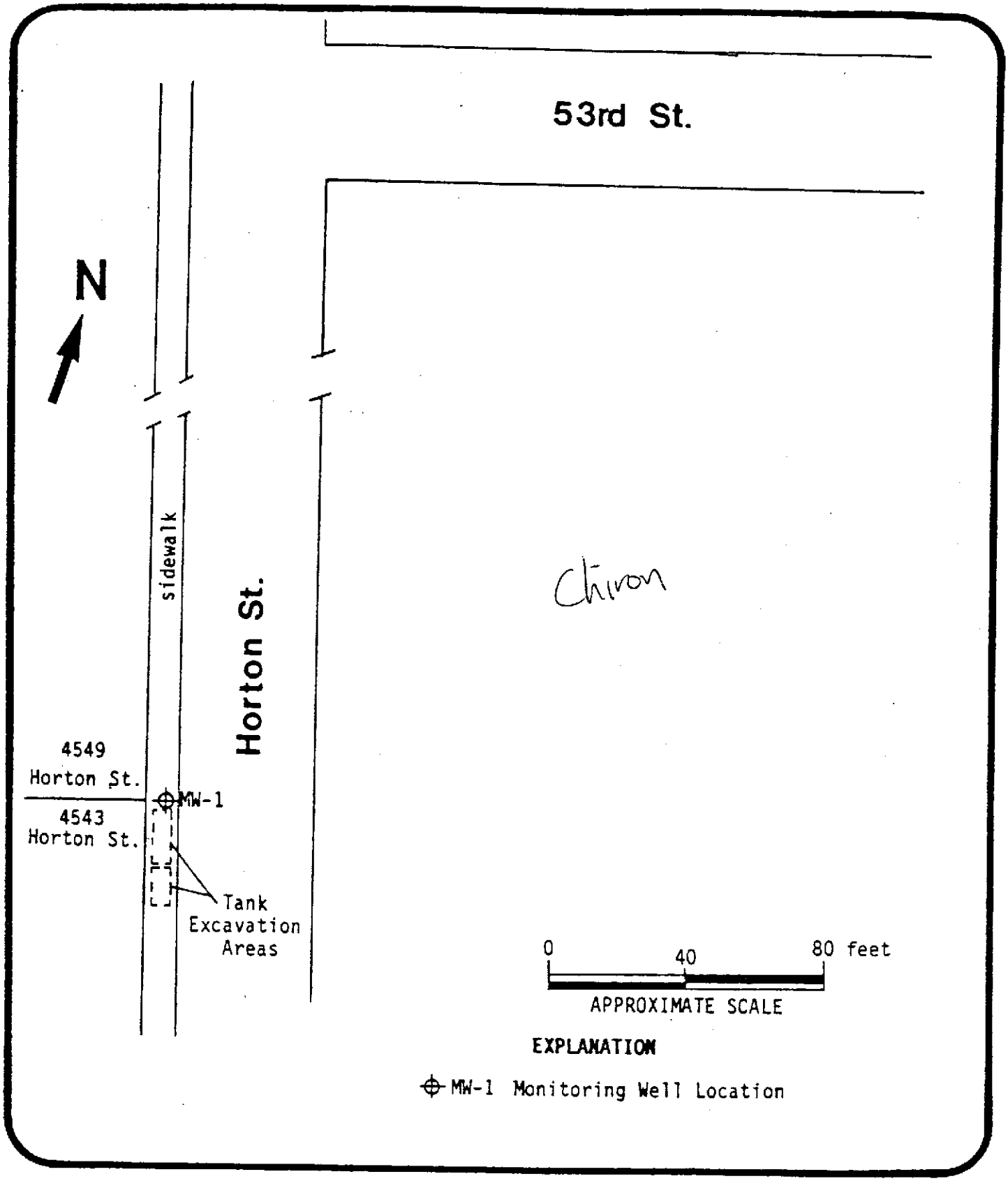
SAFETY SPECIALISTS INC.
SANTA CLARA, CA.

VICINITY MAP
4543 Horton Street
Emeryville, California

Bob Smith, Tank Excavators

Figure No. 1

530050
Project No.



SAFETY SPECIALISTS INC.
SANTA CLARA, CA.

SITE PLAN
4543 Horton Street
Emeryville, California

Bob Smith, Tank Excavators

Figure No. 2

530050 Project No.

LOG OF EXPLORATORY BORING

Project No. 530050
Client: Bob Smith
By: RCP Date: 11/14/88

Boring No. MW-1
Page 1 of 2

TORVANE (TSF)	POCKET PENETROMETER (TSF)	PENETRATION (Blows/Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
				1–4		CL	0-4½ ORANGE BROWN CLAY (CL); 15-20% fine gravel and coarse sand, damp to moist, stiff, no petroleum hydrocarbon (PHC) odor
		14 8 8		5–6		CL	4½-6½ DARK BROWN TO BLACK CLAY (CL); trace to 5% fine to coarse sand, moist, stiff, moderate PHC odor
				7–8		CL	6½-8½ BLUISH GREY CLAY (CL); some silt, wet, very stiff, strong PHC odor
		11 15 14	▼ 13:50 11/14 1988 @9½'	9–11		GC	8½-11 BLUISH GREY CLAYEY GRAVEL (GC); fine grained gravel, 10-15% fine to coarse sand, saturated, medium dense, strong PHC odor
				11–13		CL	11-13 BLUISH GREY CLAY (CL); 5-10% medium sand, saturated, very stiff, no PHC odor
		5 7 14		13–17		CL	13-17 BROWN CLAY (CL); some silt, trace coarse sand and fine gravel, wet, hard, no PHC odor
				17–20		ML	17-23 OLIVE BROWN SILT (ML); some clay, wet, very stiff, no PHC odor
		7 12					

KRM

REMARKS Boreholes constructed using a truck mounted CME-75 drilling rig with 8-inch outer diameter (O.D.) hollow-stem augers. Samples collected by driving a 2½-inch O.D. California modified split-spoon sampler using a 140 lb. hammer with a 30-inch drop.

SAFETY SPECIALISTS, Inc.

PLATE A

LOG OF EXPLORATORY BORING

Project No. 530050
Client: Bob Smith
By: RCP Date: 11/14/88

Boring No. MW-1
Page 2 of 2

TORVANE (TSF)	POCKET PENETROMETER (TSF)	PENETRATION (Blows/Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
		10		21		ML	as above
				22			23-25½ LIGHT OLIVE BROWN CLAY (CL); some silt, wet, very stiff, no PHC odor
				23			
				24		CL	
		9		25			Sample hole backfilled with bentonite pellets from 24 to 25½ feet. Borehole terminated at 24 feet. Groundwater first encountered at 9½ feet; stabilized at 9½ feet. Borehole converted to monitoring well 11/14/88 by installing a 2-inch schedule 40 PVC casing.
		12		26			
		16		27			
				28			
				29			
				30			

REMARKS

SAFETY SPECIALISTS, INC.

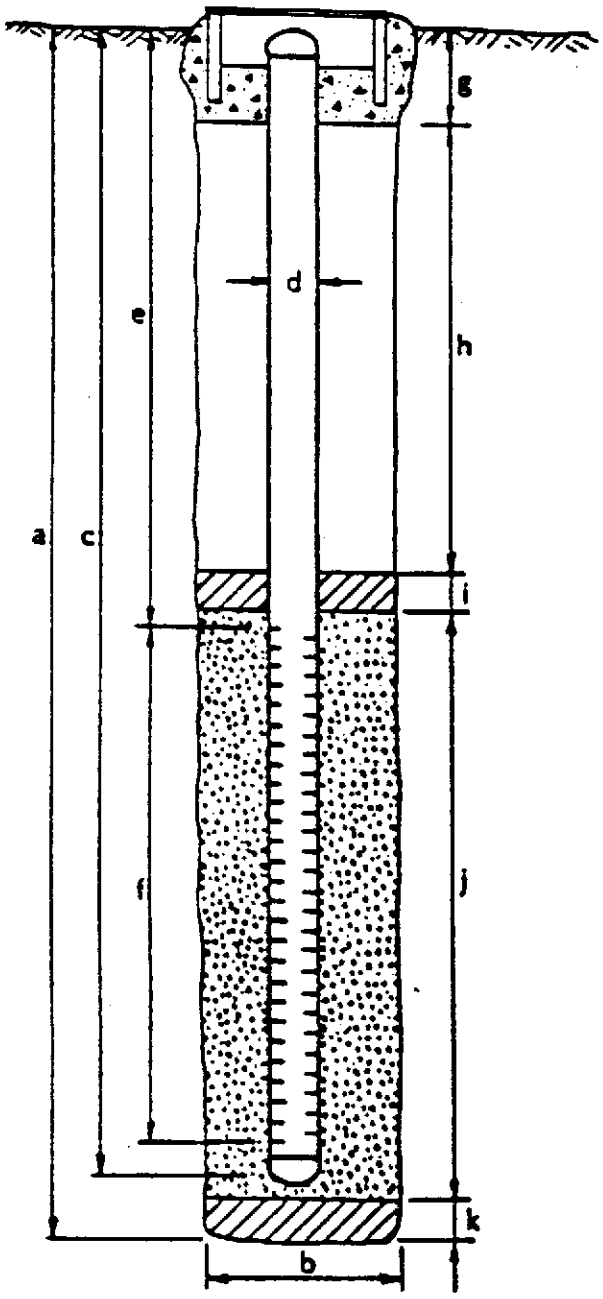
PLATE A (cont)

WELL DETAILS

PROJECT NUMBER 530050
PROJECT NAME Bob Smith/Emeryville
COUNTY Alameda
WELL PERMIT NO. not applicable

BORING / WELL NO. MW-1
TOP OF CASING ELEV.
GROUND SURFACE ELEV.
DATUM

C-5 vault box (Std.)



EXPLORATORY BORING

a. Total depth 25.5 ft.
b. Diameter 8.0 in.
Drilling method Hollow stem auger

WELL CONSTRUCTION

c. Casing length 22.0 ft.
Material Schedule # 40 PVC
d. Diameter 2.0 in.
e. Depth to top perforations 5.0 ft.
f. Perforated length 17.0 ft.
Perforated interval from 5.0 to 22.0 ft.
Perforation type Factory slot
Perforation size 0.010 inches
g. Surface seal 3.75 ft.
Seal material Type I-II Portland ~~Cement with 5% bentonite~~ powder
h. Backfill 0 ft.
Backfill material
i. Seal 0.25 ft.
Seal material Bentonite pellets
j. Gravel pack 4 to 24 ft. 20.0 ft.
Pack material Lonestar #3 sand
k. Bottom seal 1.5 ft.
Seal material Bentonite pellets

PLATE B

SAMPLING LOCATION 4543 Horton EMERYVILLE / MW-1
WATER LEVEL - INITIAL 9.33
WATER LEVEL - FINAL
WELL DEPTH 22.0
WELL CASING VOLUME
WELL CASING VOLUMES PURGED
PURGE RATE
WEATHER CONDITIONS Raining

DATE(S) PURGED 11/22/88
PURGE METHOD Bladder Pump
DATE & TIME SAMPLED 11/22/88 -
SAMPLING METHOD Teflon Bailer
SAMPLE TYPE - ( )GRAB ( )COMPOSITE
CONTAINERS 40ml voa & 1L amber
PRESERVATIVES none
BY C. Payton

TIME	VOLUME REMOVED (gal)	ELECTRICAL CONDUCTIVITY (µmhos/cm)	pH	TEMPERATURE (°C)	TURBIDITY (NTU)
8:45		1490	5.78	20.0	
8:55		1440	5.30	19.8	
9:05		1410	6.11	20.0	
9:10		1420	6.23	20.0	
9:15		1410	6.25	19.9	
9:20		1420	6.28	20.0	
9:25		1420	6.28	19.9	

NOTES

project # 530050

SAFETY SPECIALISTS INC.
SANTA CLARA, CA.

PURGING/SAMPLING DATA SHEET

FIGURE

SAFETY SPECIALISTS, Inc.
The Full Service Environmental, Health & Safety Corporation

P.O. Box 4420, Santa Clara, CA 95054
Telephone (408) 988-1111
Contractor's License No. 460905

CHAIN OF SAMPLE CUSTODY RECORD

Collector: C. Payton Date Sampled: 11/14/88 Time: 12 - 3 pm
Location of Sampling: 4549 Horton St. Emeryville

Project Number: 530050 Survey Number: E314 - 88
Sample Type: SOIL
Container Type and Condition: BRASS LINER / sealed w/ aluminum foil + plastic ends /
Contract Laboratory Record/Name: Firemans Fund / Petaluma

Sample ID	Field Information
MW-1 5-5½	Soil Sample from boring of Monitoring Well MW-1 at 5-5½ feet
MW-1 9-9½	" " " " " " " " 9-9½ "
MW-1 15-15½	" " " " " " " " 15-15½ "

Analysis Requested: All 3 samples analyzed separately using EPA methods ~~5030 / 8015 / 8020~~ 3550 / 8015 / 8020 TPH Diesel plus BTEX

Results Needed By: 5 DAY RUSH 11/23/88

Travel Blank:	☐ Yes ☒ No	Travel Blank to be Analyzed Separately:	☐ Yes ☒ No
Duplicate Samples:	☐ Yes ☒ No	Duplicates to be Analyzed Separately:	☐ Yes ☒ No
Field Blank:	☐ Yes ☒ No	Field Blank to be Analyzed Separately:	☐ Yes ☒ No
Background Soil Sample:	☐ Yes ☒ No	Background Soil Sample to be Analyzed Separately:	☐ Yes ☒ No

Chain of Custody:

1. Field Personnel: Curtis Payton	11/16/88	Date
2. Courier: Bill Payton	11/16/88	Date
3. Lab		Date

FIREMAN'S FUND
INSURANCE COMPANIES
Environmental Laboratory
3700 Lakeville Highway
Petaluma, CA 94952
800-FFIC-LAB

ENVIRONMENTAL LABORATORY

Curtis Payton
Safety Specialists, Inc.
Environmental Department
3060 Raymond Street
Santa Clara, CA 95054

Client Code: SSPE23
Survey # E314-88
Project/Release # PROJ. 530050

L A B O R A T O R Y R E S U L T S

Date Extracted: 11/17/88
Date Analyzed: 11/17/88

Laboratory Job No.: 885439
Date Received: 11/17/88
Date Reported: 11/22/88

ASSAY:TPH/DIESEL EPA 3550/8015
MATRIX:SOIL

LABNO SMPLNO-ID	RESULTS	DET.LIM
80388 MW5		
DIESEL	ND	10 mg/kg
80389 MW9		
DIESEL	370 mg/kg	30 mg/kg
80390 MW15		
DIESEL	ND	10 mg/kg

#=Detected below accurate method quantitation limit(below 3.3-det.lim.).
ANALYST:JEAN M.BONITE

THIS REPORT HAS BEEN REVIEWED
AND APPROVED FOR RELEASE.

FIREMAN'S FUND
INSURANCE COMPANIES
Environmental Laboratory
3700 Lakeville Highway
Petaluma, CA 94952
800-FFIC-LAB

ENVIRONMENTAL LABORATORY

L A B O R A T O R Y R E S U L T S

Date Extracted: 11/18/88
Date Analyzed: 11/19/88

Laboratory Job No.: 885439
Date Received: 11/17/88
Date Reported: 11/22/88

ASSAY:BTEX EPA 5020/8020
MATRIX:SOIL

LABNO SMPLNO-ID	RESULTS	DET.LIM
80388 MW-1-5-5.5		
BENZENE	ND	0.040 mg/kg
TOLUENE	ND	0.040 mg/kg
ETHYLBENZENE	ND	0.040 mg/kg
XYLENE	ND	0.040 mg/kg
80389 MW-1-9-9.5		
BENZENE	ND	0.39 mg/kg
TOLUENE	13 mg/kg	0.39 mg/kg
ETHYLBENZENE	ND	0.39 mg/kg
XYLENE	22 mg/kg	0.39 mg/kg
80390 MW-1-15-15.5		
BENZENE	ND	0.040 mg/kg
TOLUENE	ND	0.040 mg/kg
ETHYLBENZENE	ND	0.040 mg/kg
XYLENE	ND	0.040 mg/kg

#=Detected below accurate method quantitation limit(below 3.3-det.lim.).
ANALYST:ROBERT REMLINGER

SAFETY SPECIALISTS, Inc.
The Full Service Environmental, Health & Safety Corporation

P.O. Box 4420, Santa Clara, CA 95054
Telephone (408) 988-1111
Contractor's License No. 460905

CHAIN OF SAMPLE CUSTODY RECORD

Collector: C Payton Date Sampled: 11/22/88 Time: 10:30AM

Location of Sampling: 4543 Horton Ave, EMERYVILLE

Project Number: 5300550 Survey Number: E-320-88

Sample Type: WATER

Container Type and Condition: 2-40ml VOA / 1L amber – both cold –

Contract Laboratory Record/Name:

Sample ID	Field Information
MW-1 40ml	WATER SAMPLE FROM MONITORING WELL MW-1
MW-1 1L amber	" " " " " "

Analysis Requested: For 40ml VOA EPA 602 (BTEX)

For 1L amber EPA 3510/8015 (TPH DIESEL)

Results Needed By: 5 DAY RUSH

Travel Blank:	☐ Yes ☑ No	Travel Blank to be Analyzed Separately:	☐ Yes ☑ No
Duplicate Samples:	☑ Yes ☐ No	Duplicates to be Analyzed Separately:	☑ Yes ☐ No
Field Blank:	☐ Yes ☑ No	Field Blank to be Analyzed Separately:	☐ Yes ☑ No
Background Soil Sample:	☐ Yes ☑ No	Background Soil Sample to be Analyzed Separately:	☐ Yes ☑ No

Chain of Custody:

1. C Payton (Field Personnel) — 11/22/88 15:59 (Date)
2. n/a (Courier) — (Date)
3. [illegible] (Lab) — 11/22/88 (Date) 4:10 PM

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9222 • FAX (415) 364-9233

Safety Specialists, Inc.	Client Project ID:	#530080, Survey #E320-88	Sampled: November 22, 1988
P.O. Box 4480	Matrix Description:	Water	Received: November 22, 1988
Santa Clara, CA 95054	Method of Analysis:	EPA 3510/8015	Analyzed: December 2, 1988
Attention: Curtis Payton	First Sample Number:	811-2719	Reported: December 2, 1988

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons ug/L (ppb)
811-2719	MW-1	7,400

Detection Limits:	50.0

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Arthur G. Burton
Laboratory Director

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9222 • FAX (415) 364-9233

Safety Specialists, Inc.	Client Project ID:	#530080, Survey #E320-88	Sampled: November 22, 1988
P.O. Box 4420	Sample Description:	Water, MW-1	Received: November 22, 1988
Santa Clara, CA 95054	Method of Analysis:	EPA 8030/8020	Analyzed: November 30, 1988
Attention: Curtis Payton	Lab Sample Number:	811-2719	Reported: December 2, 1988

BTEX DISTINCTION (EPA 8020)

Analyte	Detection Limit ug/L (ppb)	Sample Results ug/L (ppb)
Benzene	0.5	53
Toluene	0.5	27
Ethyl Benzene	0.5	11
Xylenes	0.5	46

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Arthur G. Burton
Laboratory Director

ATTACHMENT 4

EXCAVATION SOIL SAMPLING PROTOCOL

1.0 SOIL SAMPLING

1.1 The soil sampling will commence at selected depths below surface grade as decided by the supervising field geologist or agency representative. If applicable, soil samples will be recovered from lithologic changes, obvious soil contamination areas, from soil-groundwater interface, or from each side wall, and bottom face of the excavation.

1.2 Soil samples recovered from the excavation limits (bottom and side walls) of non shored excavations, are recovered in the bucket of a backhoe. Care will be taken to recover relatively non-disturbed soils from the excavation sample points. A representative bucket of soil will be brought to the surface to recover a soil sample. A clean brass liner will be driven, with a clean mallet, into relatively non-disturbed soils in the backhoe bucket. The liner will be driven into the soil materials until no head space remains in the liner. The liner will be immediately sealed with a Teflon circle (or equivalent), capped with a plastic end cap, then sealed with Teflon tape or placed in a plastic bag with a sealing top. The samples will be labeled and immediately delivered to the on site mobile analytical laboratory. Sample jars provided by the laboratory will be used in loose material.

1.3 Soil samples from weathered or fractured bedrock will be recovered with the backhoe bucket. A representative bucket of ripped bedrock will be brought to the surface to recover a soil sample. A clean metal liner tube or sample jar provided by the laboratory will be filled by hand with clay fracture filling or small pieces of rock. The liner tube will be filled with clay until no head space remains. The sample will be immediately sealed with a Teflon circle (or equivalent), capped with a plastic cap, then sealed with Teflon tape or placed in a plastic bag with a sealing top. The samples will be labeled and immediately delivered to the analytical laboratory.

1.4 A representative sample will be field screened with an organic vapor analyzer, OVA-FID. A small amount of material will be placed in a plastic bag and sealed. The material in the bag will be broken up by hand and allowed to sit for about five minutes. The probe of the OVA will penetrate the plastic bag and sample the material for hydrocarbon vapors. If vapors are detected, then a carbon filter will be placed on the instrument and the measurement repeated to test for methane gas. If a mobile laboratory is present, then the sample recovered for field screening will be immediately delivered to the laboratory for analysis of total recoverable petroleum hydrocarbons (TRPH by EPA method 418.1).

1.5 Existing tank pits are commonly found in hard and competent Franciscan Formation bedrock consisting of sandstone, shale, chert, and serpentine. When the bedrock is sufficiently fractured or weathered, soil samples will be collected with the backhoe equipment. No samples will be recovered in hard and competent bedrock that refuses penetration of the backhoe equipment.

1.6 Soil samples from debris boxes, stockpiles, behind vault walls, and shored excavations will be recovered with hand sampling techniques. Care will be taken to recover representative samples of the stockpiled soil. A clean liner tube will be driven, with a clean mallet into the loose soil of the exterior of the pile or side walls of the excavation. The liner will be driven into the soil materials until no head space remains in the liner. The liner tube will be immediately sealed with a Teflon circle (or equivalent), capped with a plastic end cap, then sealed with aluminized tape. Samples from the interior of the pile will be recovered with a pile sampler and placed in a glass sample jar or liner tube by hand. Two to four discrete samples will be recovered from each pile, about one sample for each twenty cubic yards of soil. Samples from behind vault walls will be sampled with a 10 pound sample hammer and 2" x 3" modified California sampler. The samples will be labeled and stored on blue ice for delivery to the analytical laboratory as described above.

1.7 All samples retained for chemical analysis will be stored on blue ice in a clean, covered cooler-box for transport to the laboratory. Duplicate samples (if any) will also be transported to the laboratory and refrigerated. Samples will be delivered to the laboratory within 24 hours of sampling.

1.8 All samples submitted for analysis by a on site mobile laboratory will be immediately delivered to the lab for sample extraction. Extraction of the sample will be performed immediately. Analysis of the sample will be performed within two hours of extraction.

2.0 WATER SAMPLING FIELD PROCEDURES

2.1 The water sampling will commence at a selected depths below surface grade as determined by the supervising field geologist or agency representative according to the leaking underground fuel tank (LUFT) manual guidelines.

2.2 Water samples from the excavation bottom will be recovered in a new and disposable PVC bailer dedicated to this project. Care will be taken to recover relatively non-disturbed water from the excavation sample point. A representative bailer of water will be brought to the surface to recover a water sample. For analysis by a mobile laboratory, the water will be poured into two 40 ml VOA sample bottles with no head-space then sealed with Teflon lined caps. For analysis by an off site laboratory, then an additional one liter bottle supplied by the laboratory will be filled from the bailer. The samples will be labeled and stored on ice for delivery to the analytical laboratory.

2.3 Samples analyzed on site will immediately be delivered the mobile laboratory for extraction. All samples retained for off site chemical analysis will be stored on blue ice in a clean, covered cooler-box for transport to the laboratory. Duplicate samples (if any) will also be transported to the laboratory and refrigerated. Samples will be delivered to the laboratory within 24 hours of sampling.

3.0 SAMPLE RECORDS AND CHAIN OF CUSTODY

3.1 Sample records for each sample will contain information on sample type and source; sampling date; location; significant conditions that may impact the sampling; laboratory name; and sampling method.

3.2 A chain of positive, signature custody, and transference will be strictly maintained at all times. A hard copy of the laboratory sample results and the completed chain of custody will be provided with the technical report.