# REMOVAL OF INACTIVE **UNDERGROUND STORAGE TANKS**

460 Grand Avenue Oakland, California

29 January 1991 Project 1132A

TREADWELL & ASSOCIATES, INC.

Consulting Engineers and Scientists

San Francisco, California

JOSEPH A. ADAMS
ATTORNEY AT LAW

100 PINE STREET, 21ST FLOOR SAN FRANCISCO, CALIFORNIA 94ii1

91 JAM SO FIT W. Question 421-9696

January 29, 1991

Mr. Gilbert Wistar Hazardous Material Specialist Alameda County Department of Environmental Health Division of Hazardous Materials 80 Swan Way, Suite 200 Oakland, CA 94621

Re: Removal of Inactive Underground Storage Tanks

460 Grand Avenue Oakland, California

Dear Mr. Wistar:

The enclosed report is submitted on behalf of Falaschi Brothers. The inactive underground storage tanks at the subject site were removed pursuant to your letter dated 31 January 1990 and in accordance with procedures established by your office. If you have any questions, please call me at your convenience.

Very truly yours,

Jøseph A. Adams

JAA:jrs Enclosure

### TREADWELL & ASSOCIATES, INC.

Consulting Engineers and Scientists
353 Sacramento Street, Suite 560
San Francisco, California 94111
(415) 955-9040

29 January 1991 Project 1132A

Falaschi Brothers c/o Joseph A. Adams, Receiver Adams, Sadler & Hovis 100 Pine Street, 21st Floor San Francisco, California 94111

Subject: Removal of Inactive Underground Storage Tanks

460 Grand Avenue Oakland, California

Dear Mr. Adams:

The removal of four inactive underground storage tanks from the property at 460 Grand Avenue in Oakland is described in the enclosed report. The work was performed in accordance with our proposal dated 11 May 1990.

We appreciate the opportunity to provide consulting services to Falaschi Brothers. If you have any questions or require further service, please call.

Sincerely yours,

TREADWELL & ASSOCIATES, INC.

Jon A. Rosso, P.E. Senior Engineer

JAR:DDT:sre Enclosure

Donald D. Treadwell, Ph.D., P.E. Principal Engineer

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460 Grand Avenue Oakland, California

> 29 January 1991 Project 1132A

Consulting Engineers and Scientists San Francisco, California

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#### REMOVAL OF INACTIVE UNDERGROUND STORAGE TANKS

460 Grand Avenue Oakland, California

#### 1.0 INTRODUCTION

The removal of four inactive underground storage tanks from the property at 460 Grand Avenue in Oakland is described in this report. Although the four tanks have been inactive since 1978, three of the tanks were previously used to store gasoline and the fourth was previously used to store waste oil. On behalf of the property owner, the removal of the tanks and associated piping was coordinated and observed by Treadwell & Associates in accordance with the guidelines of the Regional Water Quality Control Board and the Alameda County Department of Environmental Health (ACDEH).

In a letter dated 31 January 1990, the ACDEH notified the property owners (Falaschi Brothers) that the four underground tanks were to be removed. Subsequently, the owners engaged a licensed and experienced contractor (Bay Area Tank and Marine) to remove and dispose of the tanks and associated piping. They also retained Treadwell & Associates to provide consulting services, including coordination and observation of the removal operations, collection and analytical testing of samples of soil and water, and preparation of this report.

#### 1.1 Background

As shown on Figure 1, the property is located at the northeast corner of the intersection of Grand Avenue and Bellevue Avenue in Oakland, California. The property was reportedly first developed

and operated as a service station in the late 1940s by a family partnership and Signal Oil & Gas Company (the successor-in-interest of which is apparently Allied Signal Corporation). From 1949 until 1961, the station was operated by a series of companies until it was purchased by Gulf Oil Corporation. After acquiring the property in 1961, Gulf Oil reportedly installed three new underground gasoline storage tanks to replace the underground tanks originally installed during Signal Oil & Gas Company's partial ownership of the property.

The property was purchased by Falaschi Brothers in August 1978 for commercial development purposes. At the time of purchase, the fuel dispenser units were removed and the underground storage tanks were emptied by the previous owner. Since 1978, the property has reportedly been used as a parking facility and fuel products and oils have not been delivered to, stored at, nor dispensed from the property. The current configuration of the property is shown on Figure 2.

Available historical construction drawings and aerial photographs indicate that a service station was constructed on the site in the late 1940s and subsequently remodelled and/or rebuilt in the 1960s. Construction drawings from the 1940s show three 6,000-gallon underground fuel storage tanks located in the northwestern quadrant of the site.

Building plans for the remodelling of the station in the 1960s show that the previous underground fuel storage tanks were removed and apparently replaced with three larger tanks, each of about 10,000 gallons in volume. The layout and position of the underground fuel storage tanks and pump islands in the 1960s plans are essentially the same as shown in the 1940s building plans.

The underground waste oil tank located north (at the rear) of the existing building is not shown in that position in building plans from the 1940s or the 1960s. The plans for the remodelling in the 1960s specified that a 280-gallon underground waste oil tank with a concrete apron was to have been installed south (at the front) of the existing building. Apparently, the waste oil tank planned in front of the facility was never installed.

#### 2.0 FIELD ACTIVITIES

Field activities associated with the tank removals described in this report were performed between 27 November and 4 December 1990. The tank removal and associated activities, performed by Bay Area Tank and Marine and Treadwell & Associates, included the following:

- o demolition of concrete slabs
- o removal and disposal of liquids from the tanks
- o high pressure washing of tank interiors
- o rendering the tanks inert
- o tank removal, inspection, and disposal
- o piping removal, inspection, and disposal
- o collection of soil and groundwater samples

Prior to beginning the tank removal operations, the required Oakland Fire Department permit was obtained and a closure plan, including a site safety plan, was submitted to and approved by the ACDEH. In addition, a permit/notification form was filed with the Bay Area Air Quality Management District. Copies of the permit and the closure plan are presented in Appendix A and Appendix B, respectively.

Gilbert Wistar of the ACDEH and Gary Collins of the Oakland Fire Department were present during the tank removal activities.

Copies of their field records for 29 November and 30 November 1990 are presented in Appendix C.

#### 2.1 Site Preparation

Site preparation activities at the property began on 27 November 1990. Initially, the concrete slabs overlying the storage tanks, vent lines, and product lines were demolished and removed. The concrete slabs overlying the storage tanks were found to be as thick as 12 inches.

Following demolition and removal of the concrete, the liquid contents of the fuel storage tanks were found to be primarily water about 1 to 2 percent hydrocarbons. A total of about 10,000 gallons of the liquid was removed from the three tanks by vacuum trucks. After liquid removal, the product lines were flushed with water and the interiors of the tanks were triple-rinsed with a high pressure spray unit. Following rinsing, about 235 gallons of rinse water were pumped to completely empty the tanks.

All of the liquids removed from the tanks were transported by licensed haulers under hazardous waste manifests to Refineries Services in Patterson, California. Copies of the uniform hazardous waste manifests for transportation of waste liquids are presented in Appendix D.

Prior to tank removal, dry ice was inserted into each tank to eliminate explosive vapors. Approximately three pounds of dry ice per 100 gallons of tank capacity was used to render each tank inert. An explosivity meter was used to measure the vapor content, expressed as a percent of the lower explosive limit and the oxygen percentage.

Gilbert Wistar of the ACDEH and Gary Collins of the Oakland Fire Department were present during the tank removal activities. Mr. Collins approved the fire protection measures and witnessed the tank stabilization process. Copies of the signed tank removal permits issued by the Oakland Fire Department verifying the satisfactory tank stabilization are presented in Appendix B.

# 2.2 Removal of Inactive Gasoline Tanks

The three underground gasoline storage tanks were of single-wall steel construction and each measured about eight feet in diameter and 27 feet in length. The gasoline tank excavation extended to about 13 feet below adjacent grade with plan dimensions of approximately 30 feet by 30 feet. The limits of excavation and the tank identification numbers are shown on Figure 2.

The gasoline tanks were overlain by 4 to 5 feet of backfill material, which also extended downward at the sides and ends of the tanks. The backfill soil consisted of a brown clayey sand similar to the surrounding native soil, as opposed to inert gravel backfill. At the time of excavation, groundwater was encountered at a depth of about 11 feet (about two feet above the bottom of the tanks) as shown on Figure 3. The gasoline storage tanks were not strapped down or otherwise anchored to offset potential buoyancy effects due to groundwater.

A large excavator unit was used to uncover, excavate, and remove the three gasoline storage tanks. Once removed, the tanks were inspected prior to being loaded on the trucks. In general, the tops of the tanks were found to be in good condition. However, severe and deep pitting of the steel was evident on the bottoms and sides of all three tanks. In addition, many small holes were observed in the tanks, especially in the sides of Tank 2 (the identification numbers of the tanks are shown on Figure 2).

During the excavation process, some apparent petroleum staining was observed near the fill stem of Tank 1. Staining was also observed along the south wall and at the southwest corner of the excavation. The north and east walls of the excavation showed no apparent signs of staining or leaks.

#### 2.3 Removal of Inactive Waste Oil Tank

The inactive waste oil storage tank was of single-wall steel construction and measured about 3.5 feet in diameter and 4 feet in length. The waste oil tank excavation extended to a depth of about 6 feet below adjacent grade with plan dimensions of approximately 12 feet by 5 feet. During the excavation of the waste oil tank, obvious staining and signs of oil leaks were apparent in the sidewalls and in the excavated backfill material. The backfill material consisted of brown clayey sand and gravel and was similar to the surrounding native soil. No free water was observed in the waste oil tank excavation.

The removed waste oil tank was inspected at the surface prior to loading on the truck. Upon inspection, relatively large holes (about 2 to 3 inches in length) were noted in the walls of the tank. These holes were not caused by the excavation and removal activities and appear to be associated with corrosion or previous damage.

Based on the apparent leakage observed in the waste oil tank area, Gilbert Wistar of the ACDEH requested that the property owners file a underground storage tank unauthorized release (leak) and/or contamination site report. The unauthorized release form was submitted to the ACHED on 4 December 1990 and a copy is presented in Appendix E.

#### 2.4 Tank Disposal

All four tanks were transported under uniform hazardous waste manifests by licensed haulers to a certified tank destruction facility (Erickson, Inc. of Richmond, California). The empty tanks were cleaned at the Erickson facility and then destroyed as documented by the Certificates of Destruction. Copies of the uniform hazardous waste manifests and certificates of destruction are presented in the Appendix F and Appendix G, respectively.

#### 2.5 Stockpiles of Excavated Soil

The soil excavated during the tank removal operations was stockpiled on the property and covered by plastic sheeting to prevent direct contact with pavements and rainwater and to minimize volatilization of hydrocarbon constituents into the atmosphere. Approximately 250 to 300 cubic yards of soil were removed from the gasoline tank excavations and approximately 15 cubic yards of soil were removed from the waste oil tank excavation. The locations of the soil stockpiles are shown on Figure 2.

# 2.6 Removal of Associated Piping

The concrete slabs covering the product and vent lines were cut using concrete saws and removed. The product pipelines were covered with approximately one foot of brown clayey sand fill and the fiberglass vent was covered with about one foot of pea gravel. A backhoe was used to remove the piping and to stockpile the pipe in the northeast corner of the site. Observations during product line removal appear to indicate that leakage occurred at the pipeline joints located between the pump islands.

was

#### 3.0 COLLECTION OF SOIL AND WATER SAMPLES

Under the direction of Gilbert Wistar of the ACHED, Treadwell & Associates collected eleven soil samples and one water sample. The samples were collected on 30 November 1990 and 4 December 1990. The sample locations and identification numbers are shown on Figure 2.

Six of the soil samples (samples T1-1, T1-2, T2-1, T2-2, T3-1, and T3-2) were collected from the sidewalls of the gasoline tank excavation, approximately one foot above the existing water level. One soil sample (sample T4-1) was collected from the bottom of the waste oil tank excavation, approximately 18 inches into native soil.

In addition, four soil samples (samples P-1 through P-4) were collected from the product line trench, approximately 6 inches into the underlying native soil. The soil samples from the product line trench were collected about every 20 lineal feet.

For soil samples collected from the gasoline and waste oil tank excavations, a backhoe bucket was used to retrieve undisturbed soil from the desired sampling locations in the excavation. In the pipeline trench excavation, samples were collected after removal of about 6 inches of native soil from the bottom of the trench. The sampling procedures consisted of removing loose slough to expose an undisturbed soil surface and then pushing or driving a clean brass tube into the soil mass until full. The samples were retrieved and the ends of the full tube were covered with aluminum foil, plastic end caps, and sealed with polyvinyl chloride tape.

One sample (sample W-1) of the standing water in the main tank excavation was collected during tank removal at the location

shown in Figure 2 using a clean disposable plastic bailer. The bailer was lowered and allowed to fill at a point below the water surface. The water sample was retrieved and poured directly from the bailer into the appropriate containers and sealed. The integrity and quality of sealed water samples were observed by Treadwell & Associates and by Gilbert Wistar of the ACDEH. All water sample containers were provided by the laboratory and had been prepared in accordance with standard procedures for each analysis.

All samples were placed in ice-cooled chests from the time of collection until their delivery by Treadwell & Associates to the analytical laboratory. A chain-of-custody record was completed and accompanied each sample shipment (Appendix H).

#### 4.0 ANALYTICAL METHODS

Soil and water samples obtained during tank and pipeline removal activities were analyzed by a state-certified laboratory (Curtis & Tompkins, Ltd. of Berkeley, California, Certification No. 159). The analytical testing program for soil samples from the fuel tank and product pipelines excavations (samples T1-1, T1-2, T2-1, T2-2, T3-1, T3-2, P-1, P-2, P-3, and P-4) included the following:

- o total volatile petroleum hydrocarbons (TVPH)
- o benzene, toluene, xylenes, and ethylbenzene (BTXE)
- o total lead concentrations

The soil sample collected from the waste oil tank excavation (sample T4-1) was analyzed using Regional Water Quality Control Board recommendations, as requested by the ACDEH, and included the following:

- o total volatile petroleum hydrocarbons (TVPH)
- o total extractable petroleum hydrocarbons (TEPH)
- o benzene, toluene, xylenes, and ethylbenzene (BTXE)
- o oil & grease (O&G)
- o volatile organic compounds (VOCs)
- o total metal concentrations of cadmium, chromium, lead, nickel, and zinc

The water sample (sample W-1) obtained from the fuel tank excavation was analyzed for TVPH, TEPH, and BTXE. Detection limits and method numbers for each analysis are included on the laboratory reports presented in Appendix I.

#### 5.0 ANALYTICAL RESULTS

The analytical test results are summarized on Tables 1 through 4. Copies of the Curtis & Tompkins certified laboratory reports (dated 14 December and 17 December 1990) for the analyses described above are presented in Appendix I.

#### 5.1 Underground Gasoline Storage Tanks

Analytical test results for soil samples (samples T1-1, T1-2, T2-1, T2-2, T3-1, and T3-2) collected from the sidewalls of the gasoline tank excavation are summarized in Table 1. The analytical results for the sidewall soil samples indicate no detectable concentrations of ethylbenzene; total xylenes, or petroleum hydrocarbons as gasoline. Toluene was detected in all the sidewall samples at concentrations ranging from 0.063 milligrams per kilogram (mg/kg) to 0.220 mg/kg. Benzene was detected in one sample (sample T2-2) at a concentration of 0.019 mg/kg.

Laboratory results for sample W-1, the standing water in the gasoline tank excavation area, are summarized in Table 2. Petroleum hydrocarbons as gasoline and associated products of benzene, toluene, total xylenes, and ethylbenzene were detected in the water sample at concentrations of 2.3 milligrams per liter (mg/1), 0.053 mg/1, 0.160 mg/1, 0.160 mg/1, and 0.036 mg/1, respectively. Petroleum hydrocarbons as diesel or kerosene were not detected at or above the laboratory reporting limit. The detected concentrations of total lead ranged from <2.5 mg/kg to 3.8 mg/kg in the samples tested.

#### 5.2 Associated Piping

The results of analytical tests on the four samples (samples P-1, P-2, P-3, and P-4) from the product pipeline area are summarized in Table 3. Concentrations of petroleum hydrocarbons as gasoline ranged from <1.0 mg/kg to 1,700 mg/kg and concentrations BTXE ranged from <0.005 mg/kg to 260 mg/kg. The higher concentrations of TVPH as gasoline and BTXE were found beneath the product pipelines between the pump islands at sample location P-1 and to a lesser extent at sample location P-2. Substantially lower concentrations were detected in samples obtained at points closer to the storage tanks.

#### 5.3 Underground Waste Oil Tank

Analytical data for the soil sample (sample T4-1) obtained from the waste oil tank excavation is summarized in Table 4. The laboratory test results indicate O&G, TEPH as diesel, and TVPH as gasoline at concentrations of 24,000 mg/kg, 7,100 mg/kg, and 400 mg/kg, respectively. The concentrations of BTXE ranged from 1.2 mg/kg to 35 mg/kg.

In addition, two volatile organic compounds, tetrachloroethylene and 1,1,1-trichloroethane, were detected at concentrations of 1.0 mg/kg and 0.25 mg/kg, respectively. Total metal concentrations for cadmium, chromium, lead, nickel and zinc were detected at 0.8 mg/kg, 12 mg/kg, 40 mg/kg, 22 mg/kg, and 41 mg/kg, respectively.

#### 6.0 LIMITATIONS

Descriptions of specific field activities and historical events are based on our observations, discussions with others, and information provided by the property owners. The opinions and information presented in this report apply to site conditions and the information available at the time the work was performed and do not apply to changes of which we are not aware or have not had the opportunity to evaluate.

TABLE 1
SIDEWALL SOIL SAMPLE ANALYTICAL DATA

## FUEL TANK EXCAVATION

# 460 Grand Avenue Oakland, California

	TVPH as		,	Total	Ethyl /	
Sample No.	Gasoline (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	Benzene (mg/kg)	Lead 5720=5
T1-1	ND	ND	0.10	ND	ND	NT
T1-2	ND	ND	0.097	ND	ND	3.8
T2-1	ND	ND	0.14	ND	ND	NT
T2-2	ND	0.019	0.065	ND	ND	ND
T3-1	ND	ND	0.220	ND	ND	NT
T3-2	ND	ND	0.063	ND	ND	3.4
Detection Limit	1.0	0.005	0.005	0.005	0.005	2.5

#### Notes:

TVPH = total volatile petroleum hydrocarbons mg/kg = milligram per kilogram ND = not detected at or above reporting limit NT = not tested

but ad holes

#### TABLE 2

## ANALYTICAL DATA FOR WATER SAMPLE W-1

#### FUEL TANK EXCAVATION

#### 460 Grand Avenue Oakland, California

Sample <u>No.</u>	TVPH as Gasoline (mg/l)	TEPH as Diesel (mg/l)	Benzene (mg/l)	Toluene (mg/l)	Total Xylenes (mg/l)	Ethyl Benzene (mg/l)
W-1	2.3 = 2,300ppl	ND	0.053 = 53ppb	0.160	0.160	0,036

#### Notes:

TVPH = total volatile petroleum hydrocarbons

TEPH = total extractable petroleum hydrocarbons

mg/l = milligrams per liter

ND = not detected at or above reporting limit

TABLE 3

PIPELINE TRENCH SOIL SAMPLE ANALYTICAL DATA

460 Grand Avenue Oakland, California

Sample No.	TVPH as Gasoline (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Total Xylenes (mg/kg)	Ethyl Benzene (mg/kg)
P-1	1,700	ND	8.7	260	47
P-2	90	ND	1.7	4.7	0.89
P-3	ND	0.0066	0.18	0.033	0.0053
P-4	ND	ND	0.036	0.0055	ND

Notes:

TVPH = total volatile petroleum hydrocarbons
mg/kg = milligram per kilogram
ND = not detected at or above reporting limit

#### TABLE 4

#### ANALYTICAL DATA FOR SOIL SAMPLE T4-1

#### WASTE OIL TANK EXCAVATION

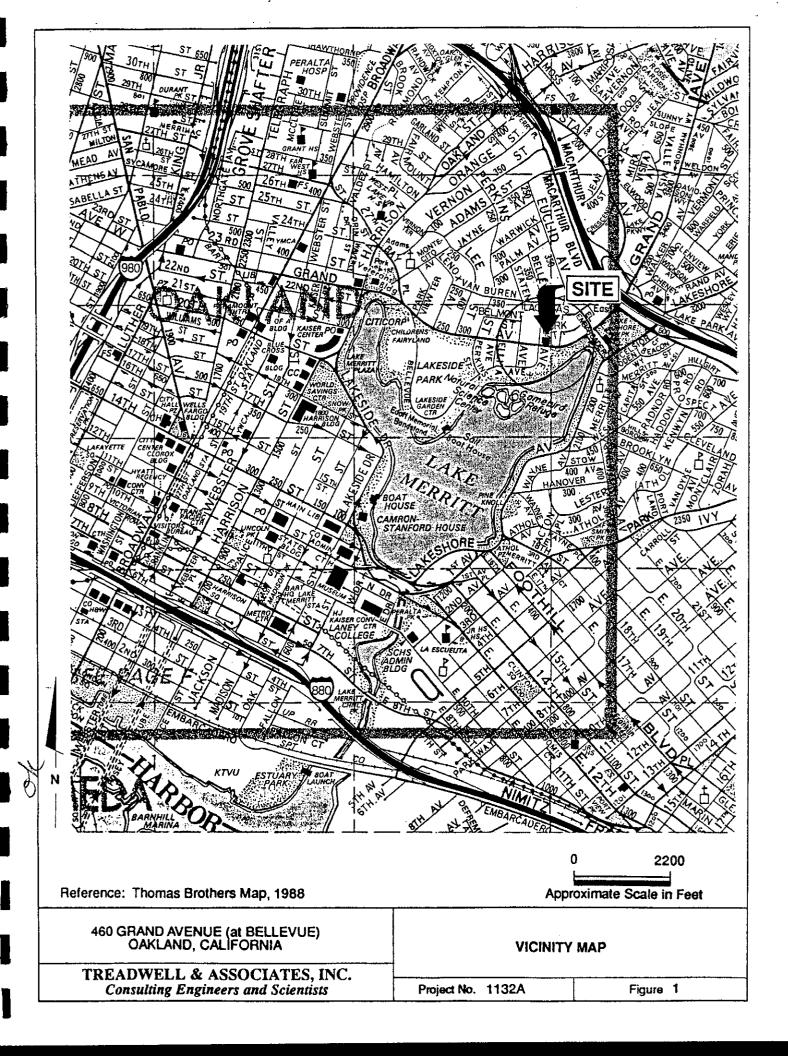
460 Grand Avenue Oakland, California

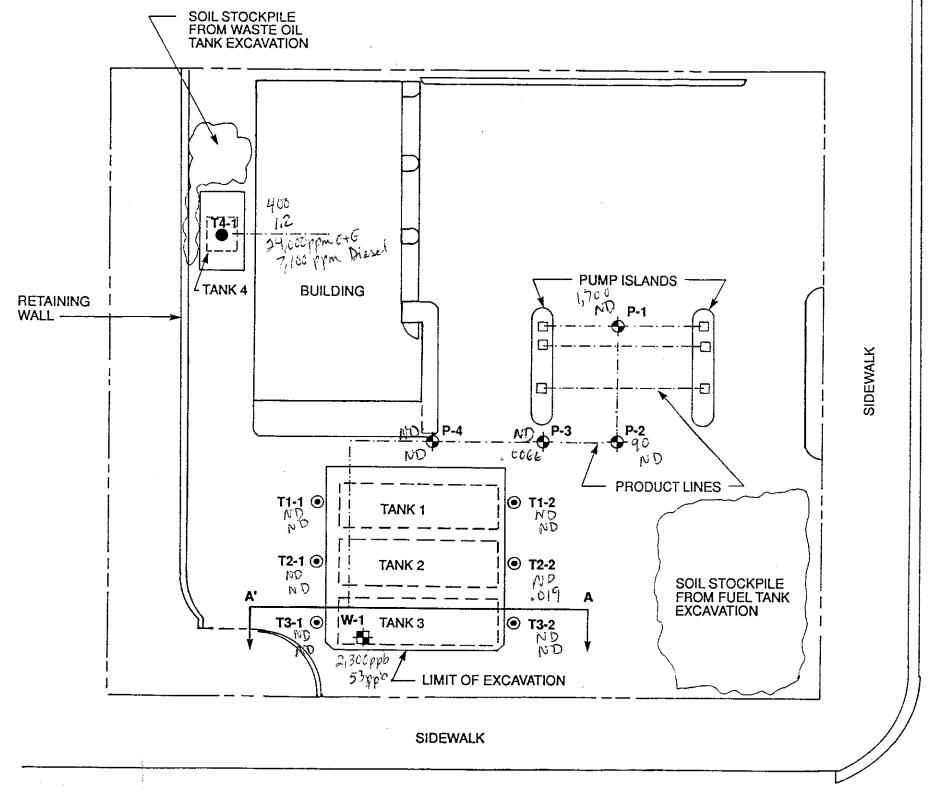
<u>Constituent</u>	Sample T4-1 Concentration (mg/kg)
TVPH as Gasoline	400
TEPH as Diesel	7,100
Oil & Grease	24,000
Tetrachloroethylene	1.0
1,1,1-Trichloroethane	0.25
Benzene	1.2
Toluene	10
Total Xylenes	35
Ethyl Benzene	5.2
Cadmium	0.8
Chromium	12
Lead	40
Nickel	22
Zinc	41

#### Notes:

mg/kg = milligram per kilogram
TVPH = total volatile petroleum hydrocarbons

TEPH = total extractable petroleum hydrocarbons



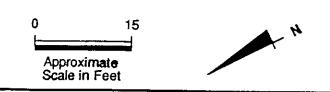


TANK NO.	CAPACITY	CONTENTS
1	10,000 gal.	GASOLINE
2	10,000 gal.	GASOLINE
3	10,000 gal.	GASOLINE
4	250 gal.	WASTE OIL

GRAND AVENUE

#### **EXPLANATION**

- Sidewall Soil Sample
- Pipeline Trench Soil Sample
- Soil Sample Beneath Waste Oil Tank
- Groundwater Sample From Tank Excavation



TPH-g (ppm) benz (ppm)

460 GRAND AVENUE (at BELLEVUE) OAKLAND, CALIFORNIA

SITE PLAN

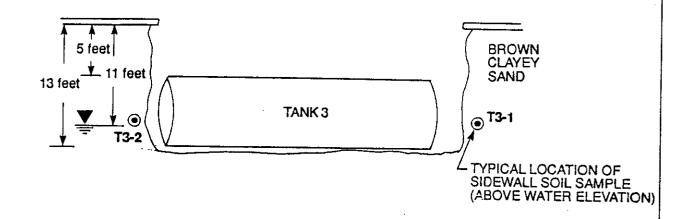
Project No. 1132A

Figure 2

TREADWELL & ASSOCIATES, INC. Consulting Engineers and Scientists

**BELLEVUE AVENUE** 

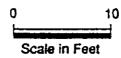
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#### **EXPLANATION**



OBSERVED GROUNDWATER ELEVATION, 11/30/90



460 GRAND AVENUE (at BELLEVUE) OAKLAND, CALIFORNIA

TREADWELL & ASSOCIATES, INC. Consulting Engineers and Scientists

CROSS-SECTION A - A'

Project No. 1132A

Figure 3

# APPENDIX A

CITY OF OAKLAND TANK REMOVAL PERMIT 27 November 1990

	1 ,5	L		•		•	
• **			Excavation Permit	Granted		No_	
	CITY	O F	OAKLA	ND		Tanl	Permit
Permit to Exca	vate and install	, Repair	, or Remove	Inflammabl	e Liquid 1	Tanks. No.	9488
		•	Oakland, Californi	ia,	Nov	<u>ember 27.</u>	<u> </u>
PERMISSION IS HEREBY GR	ANTED TO XXXXXII	remove		tank and excavate			
		Street	,	of			St
on theside of		Aven Siree		Storage			
House No. 460 Grand Avenue				Webster St	reet	 Di	531-1453
Owner Falaschi Brothers	T	Addr		ice Drive U	nit 104	Phase	372-4270
Applicant Bay Area Tank & Marine				Tanks3_	Martine	2 94553°	372-4270 Gallons,
Dimensions of street (sidewalk) surface to be	disturbed	<u> </u>	Number of	Tanks 1	Capacity	500	Qanons,
Remarks:							
Owner hereby Whe	This Permit is grant agrees to remove tanks n installing, removing or	on discontin	uance of use or wh	en notified by the	remises.	ies.	
Owner hereby Whe	agrees to remove tanks n installing, removing or	on discontin	uance of use or wh	en notified by the	City Authoriti remises.	ior. 	
Approved	agrees to remove tanks n installing, removing or Fire	on discontine repairing ter Marshal	uance of use or wh	en notified by the	remises.		
Approved	agrees to remove tanks n installing, removing or	on discontine repairing ter Marshal	uance of use or wh	en notified by the	remises.		
Approved	agrees to remove tanks n installing, removing or Fire Prainage Division Enginee	on discontine repairing ter Marshal	uance of use or wh	en notified by the	remises.		
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Approved  Approved  EXCAVATING  Issued in accordance with Ord. No squere for The receipt of \$	PERMIT  278 CMS, Sec. 6-2.04  160.00 ck#1487	on disconting repairing terms Marshal sring Dept.  ral granted. knowledged.  LICENSES.	CERTIFI Inspected an By 9053 (\$40.00	CATE OF TA	S NK AND E N O T I	C E	Fire Mu st Be Signe



Cash Receipt No 639074

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Cash Receipt Voucher #	CIRL	<u> </u>		1

Cash	1 # 1490
04511	
Check	Mマノゲラン
	<del>XI</del> / / / -

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# APPENDIX B

UNDERGROUND TANK CLOSURE PLANS
Alameda County Department of Environmental Health
25 October 1990

8. Contact Person for Investigation
Name Title
Phone
9. Total No. of Tanks at facility
10. Have permit applications for all tanks been submitted to this office?  Yes No [ ]
11. State Registered Hazardous Waste Transporters/Facilities
a) Product/Waste Tranporter
Name Refineries Service EPA I.D. No. CADO83166728
Address 13331 No. Highway 33
Address 1333/ No. Historyan 33  City Patterson State on Zip 95363
b) Rinsate Transporter
Name ReFineries Services EPA I.D. No (ADO83/66728
Address 13331 N. Highway 33
Address 13331 N. Highway 33  city Datterson state a zip 95363
c) Tank Transporter
Name H-9 H Ship Service EPA I.D. No. CAD 00477 1/68
Address 220 china Basin val
city fan Francisco State (a zip 94107
d) Tank Disposal Site
Name H + H Ship Service EPA I.D. No.
Address 220 china Basin'rd
city Sa Francisco State Con Zip
e) Contaminated Soil Transporter
Name Bay, area Tanke Marin EPA I.D. No. CAL 200027690
Name Bay area ton be Marin EPA I.D. No. CAL 200027690  Address 4851 Sunrise Drive, Unit 109  City Martinez State a zip 94553
city Martinez state a zip 94553

Company of the second s

Name	· Compony repr	c. sartatine	
		+ A580cia	Ceo.
Addr	ess 353 Sacramo	To Sty Sui	te 569
City	Sontrareisco sta	ite Coc Zip 945	1 Phone 955 904
13. Śampli	ng Information for each	tank or area	
	Tank or Area	Material	Location
Capacity	Historic Contents (past 5 years)	sampled	& Depth
10,000	600		
10000	Gas.		
10000	waste oil		
500	Waste OIL		
14. Have ta	nks or pipes leaked in t	the past? Yes [	1 No[] Un Kn
	nks or pipes leaked in t	the past? Yes [	   No[]UnKu
		the past? Yes [	] No[]unKn
		the past? Yes [	No [] un Ku
If yes,	describe.		
If yes,	describe. thods used for rendering	tank inert? Yes	1 ON []
If yes,	thods used for rendering describe.	tank inert? Yes	Dlacelinto
If yes,	thods used for rendering describe.	tank inert? Yes	1 ON []
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If yes,  15. NFPA me  If yes,  Cank  Canaci Antexploation ine  16. Laborato  Name	thods used for rendering describe.  At a rate of 3.  Side of combustible of the services.  Superior (ab. 826 Acrold D.	tank inert? Yes  Will be of  Los dry ice of  gas meter shall be	Dlacelinto Der 100 Gallor

# 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
hks Gasoline, BTEX	5030	EPA 8015, 8020
TPH-gasoline TPH-diesel BTEX Total oil Egrease cl. hydrocarbons	5030 3550 5030	8015 8020 5520 P/F 8010 / 8240

- 18. Submit Site Safety Plan
- 19. Workman's Compensation: Yes [] No []

  Copy of Certificate enclosed? Yes [] No [] on File

  Name of Insurer State Compo Insure Funce already
- 20. Plot Plan submitted? Yes [() No []
- 21. Deposit enclosed? Yes [ 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 understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Saftey and Health Administration) requirements concerning personnel and safety.

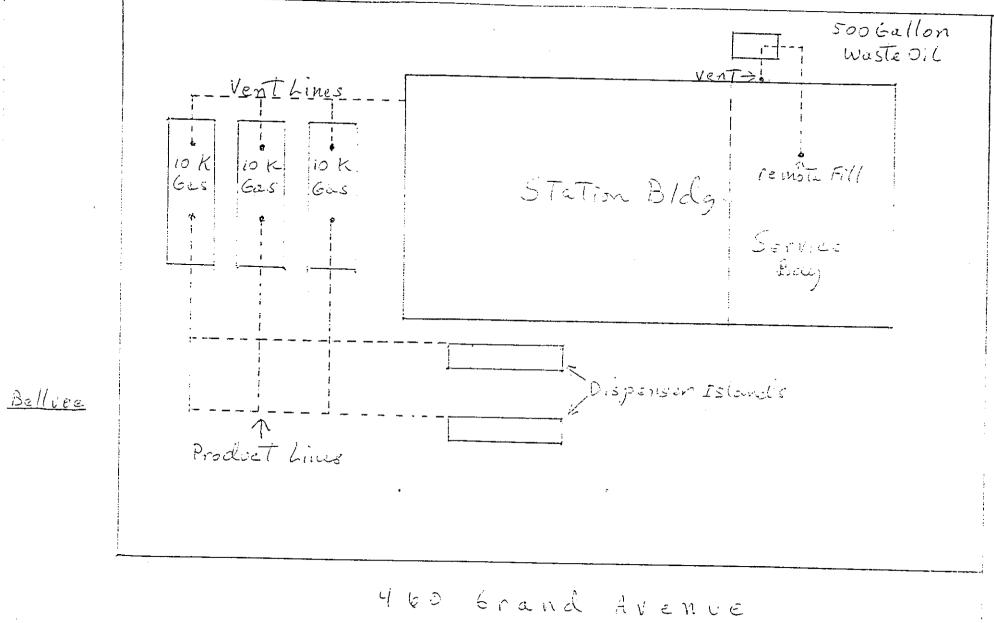
I will notify the Department of Environmental Health at least two (2) working days (48 hours) after approval of this closure plan in advance to schedule any required inspections. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility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

Name (please type) Fornest Canutt	
Signature A	
Date 10/16/90	

Signature of Site Owner or Operator

Signature of Contractor

Name (please type)	FALASCHI BROTHERS	
Signature _ John	Exem	
Date 10/22/90 (		



<u>:-</u>	Contractors	Site Address:	Property Owner:
17.07	Bay Crea Tank & Marine	Former Service Station	Mr. Robert Falaschi
To Co. 10	4851 Sunvise Do, UniT104	460 Grand Avenue	1940 Webster
Scale	Martinez, Ca 94553	Dakting Ce	04 Con 2 G 94412
***************************************			

#### SCOPE OF WORK

the scope of work for this project is to: obtain the tank removal permits; pump and dispose of the liquids in the tank as a hazardous waste; breaking and disposal of the concrete islands and pads over the tanks; excavation; removal and disposal of the tanks, pumps and piping at a licensed TSDF; sampling and analysis of the soil beneath each tank; backfill and compaction of the excavations; resurfacing Oβ the excavations with asphalt. (optional work: Clean the trench in the car wash; appropriately dispose of collected wastes; clean the separator sump; break and remove the sump; seal piping leading to the sewer; backfill and compact the excavation; resurface with asphalt to match extisting conditions.

#### MORK PLAN

Bay Area Tank & Marine will perform the tank removal services in accordance with all applicable codes and regulations. The services performed will include the following items:

#### 1.0 Permits:

Bay Area Tank & Marine will obtain the permits necessary for removal of the underground tanks. The permits required will include Fire Department and Public Health Department.

# 2.0 Site Preparation:

The site will be prepared for excavation of the tanks by: pumping all liquids from the tank and transporting the liquids as a waste to a licensed TSDF; inerting the tanks; securing the work area with barricades or fencing; posting the applicable warning signs; locating utilities; shutting off the electrical current to the pumps and any other

electrically operated apparatus in the work area.

# 3.0 Tank Excavation:

The underground tanks will be removed by breaking the concrete cover over the gasoline tanks and the concrete dispenser islands using a back-hoe mounted concrete breaker or other device. The rubble that is generated from the breaking will be loaded onto trucks and transported to a recycler or class 3 landfill for disposal. Once the cover is removed, the back fill material around the tanks will removed using an excavator or back-hoe. The backfill will be field tested as it is excavated using combustible gas meters and offactory senses to identify and separate any contaminated material that may be encountered.

# 4.0 Tank removal and disposal:

Once the back fill has been excavated from around the tanks, the tanks will be lifted from the excavation using an excavator or crane, cleaned off for inspection by the attending regulating agency(s), and loaded onto trucks for transportation and disposal (under manifest) at a licensed TSDF. Documentation of the tanks final destination will be provided at the completion of the project.

# 5.0 Sampling and analysis:

After the tanks have been removed from the excavation, an excavator or back hoe will be used to obtain soil from the excavation and piping trenches for sampling (from areas specified by the health department inspector). The samples will be taken, transported and analyzed at a DOHS approved laboratory. The method of analysis and material to be analyzed will be determined by the Health Department. The analytical results will be transmitted to the Health Deptartment for evaluation within the time limits described in the tank removal permit.

# 6.0 Backfill and compaction:

The tank excavation will be backfilled and compacted using the following material: Drain rock will be placed in the excavation if it contains ground water, otherwise a sandy fill will be placed and compacted in twelve inch lifts to within nine inches from grade and base rock will be placed and compacted from nine inches to three inches from grade.

The state of the s

#### 7.0 Resurfacing:

The area around each tank excavation will be saw cut and resurfaced with a three inch layer of asphalt.

#### 8.0 Report:

At the completion of the project, a report will be provided that describes the field activities, and includes: sample analysis results; chain of custodies; documentation of disposal of the tanks.

#### 9.0 Timetable:

Bay area Tank & Marine Inc. can begin work on this project within five days of notification to proceed. The estimated completion time from start of work is 30 calendar days.

# ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY DEPARTMENT OF ENVIRONMENTAL HEALTH HAZARDOUS MATERIALS DIVISION 80 SWAN WAY, ROOM 200 OAKLAND, CA 94621 PHONE NO. 415/271-4320

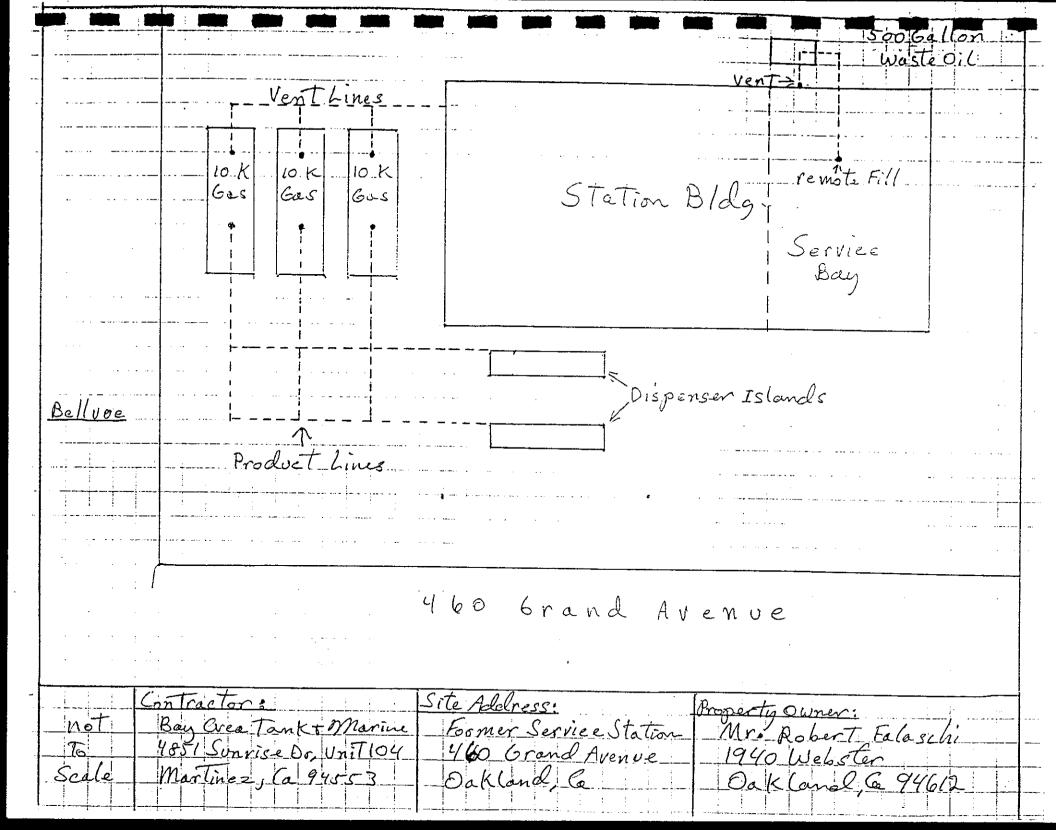
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#### UNDERGROUND TANK CLOSURE/MODIFICATION PLANS

1.	Business Name Fortier Service Station
	Business Owner <u>Closes</u>
2.	site Address 460 Grand Avenue
	city Oak Canal zip 94612 Phone None
3.	Mailing Address 1940 Webster
	city Oak (and zip 996/2 Phone 45)531-1453
4.	Land Owner Falaschi Brothers a partnership
	Address 1940 Welster City, State Oakland (a. Zip 94612
	EPA I.D. No. CAC 000530544
6.	Contractor Bay Over Tank & Marine inc.
	Address 1851 Sonvise Drive, Unit 104
	city Martinez (a. 94553 Phone (45)372-4220
	License Type 4 ID# 572244
7.	consultant Treadwell + Associates
	Address 353 Secramento Sto, Svite 569
	City San Francisco Ca. 94111 Phone (415) 955-9040





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

# CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

April 20, 1989

POLICY NUMBER CERTIFICATE EXPIRES

1098627-88 10-1-90

1

1.

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

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

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

This certificate of distinance is not an distrance policy and does not amend, extend or after the coverage afforded by the hobicies listed began. Notwithstanding any requirement, term, or condition of any contract or other document with espect to which this certificate of distinance may be issued or may pertain, the resurance afforded by the policies lescribed began is subject to all the terms, exclusions and conditions of such policies.

PRESIDENT

EMPLOYER

Bay Area Tank & Marine 2681 Over Look Drive Wainut Creek, CA 94596

#### SCOPE OF WORK

the scope of work for this project is to: obtain the tank removal permits; pump and dispose of the Liquids in the tank as a hazardous waste; breaking and disposal of the concrete islands and pads over the tanks; excavation; removal and disposal of the tanks, pumps and piping at a licensed TSDF; sampling and analysis of the soil beneath each tank; backfill and compaction of the excavations; resurfacing of the excavations with asphalt. (optional work: Clean the trench in the car wash; appropriately dispose of collected wastes; clean the separator sump; break and remove the sump; seal piping leading to the sewer; backfill and compact the excavation; resurface with asphalt to match extisting conditions.

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#### 7.0 Resurfacing:

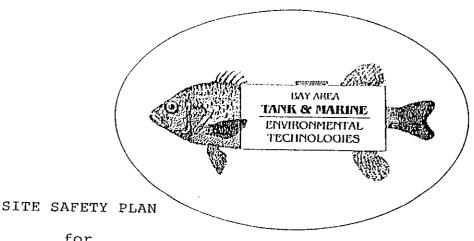
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#### 8.0 Report:

At the completion of the project, a report will be provided that describes the field activities, and includes: sample analysis results; chain of custodies; documentation of disposal of the tanks.

#### 9.0 Timetable:

Bay area Tank & Marine Inc. can begin work on this project within five days of notification to proceed. The estimated completion lime from start of work is 30 calendar days.



for Underground Tank Removals At 460 Grand Avenue, Oakland, Ca.

The following site safety plan has been prepared to address the health and safety requirements for the removal of underground tanks at Grand Avenue in the city of Oakland, California.

#### 1.0 FACILITY BACKGROUND

Located at the south corner of Bellvue and Grand Avenue in the city of Oakland is a former automotive service station. The building and fueling system have not been removed from the site. The fueling system consists of three 10,000 gallon underground gasoline storage tanks (the tanks are located parallel to Bellvue and are contained in a single excavation) and one 500 gallon underground waste oil tank (located behind building along the estern border of the property).

#### 2.0 SCOPE OF WORK:

The scope of work to: obtain permits; remove tanks according to the site specific work plan; sample and analyze the excavation; backfill and resurface the exavation as required; perform all work without threat to the environment, public, and workers.

# 3.0 KEY PERSONNEL AND RESPONSIBILITIES:

The key personnel and responsibilities for this project are as follows: Forrest Canutt, Project manager, Bay Area Tank & Marine inc., responsible for safety of public and workers, performance of tasks and adherence to health and safety

requirements; Treadwell & Associates Inc., Property owners representative, contact for regulatory and technical information.

Telephone numbers of key responsible parties:

Bay Area Tank & Marine Inc.: (415) 944-9219

Treadwell & Associates Inc.: (415) 955-9040

#### 4.0 JOB HAZARD ANALYSIS

The potential chemical and physical hazards at this site are as follows:

#### 4.1 PHYSICAL HAZARDS:

- 4.1.1 slip, trip, fall hazards due to uneven work area
- 4.1.2 noise, eye and bodily hazards while operating equipment
- 4.1.3 hazards to hands and feet when handling heavy or sharp materials or equipment
- 4.1.4 exposure to heat or cold stress
- 4.1.5 Moving heavy equipment
- 4.1.6 Steps to Minumize Hazards: Wear proper protective equipment, familiarize workers with site conditions, monitor for heat and cold stress, operate equipment in a safe manner and designate restricted work zones before starting work.

#### 4.2 CHEMICAL HAZARDS:

4.2.1 Gasoline contamination may be present at the site. The exposure limits of the petroleum contaminants are as follows:

NAME	WARNING CONCENTRATION	ON TLV	IDLH
Gasoline	.005-10 PPM	300 PPM	-
Benzene	4.68 PPM	10 PPM 2	К РРМ

Ethyl Benzene 0.25-200 PPM 100 PPM 2K PPM Toluene .17-40 PPM 100 PPM 2K PPM Xylene 0.05-200 100 PPM 10K PPM

#### 4.2.2 ROUTES OF EXPOSURE:

Inhalation: Gas, BTEX Ingestion: Gas, BTEX Absorption: Gas, BTEX

#### 5.0 RISK ASSESSMEN'T

- 5.1 General Public: The site is fenced and restricted from public access.
- 5.2 Other Workers: All work being performed by others is being conducted outside of the work area and is unrelated to the work being performed.
- 5.3 Surrounding Property: There are no structures in the area that will be impaired by the treatment operation.
- 5.4 Workers Performing Services: The risks associated with the remediation operation can be minumized by safe work practices and proper protective equipment.

#### 6.0 EXPOSURE MONITORING PLAN:

- 6.1 Hazardous Vapors: The work site will be monitored using a Draeger and or combustible gas meter. Meter and or Draeger readings will be taken and documented before and during work.
- 6.2 Heat and Cold Stress: These will be monitored by measuring the ambient temperature with a thermometer and will be recorded during work at regular times.

# 7.0 PERSONNEL PROTECTIVE EQUIPMENT:

7.1 Laborers and supervisors -- Level D protective equipment:

Hard Hat Coveralls or poly-tyvec Half-face cartridge respirator if needed Organic vapor cartridges if needed safety glasses PVC gloves and steel toe boots Goggles

7.2 Consultant or Project Manager -- Level D protective equipment:
Hard Hat
Coveralls
Half-face cartridge respirator if needed
Organic vapor cartridges if needed
Safety glasses
PVC gloves and steel toe boots

#### 8.0 WORK ZONES AND SECURITY MEASURES:

Three work zones will be established before proceeding with work:

- 8.1 Support or Security Zone: Will be the property border, barricades and or other device will be used to to restrict public access.
- 8.2 Contamination Reduction Zone: An area designated at the site will be used to don and doff protective equipment.
- 8.3 Exclusion Zone: Will be the area where work is being conducted. Only workers or authorized persons wearing the proper protective equipment will be allowed into the exclusion zone.

#### 9.0 DECONTAMINATION PROCEDURES:

Decontamination Procedures will be conducted as follows:

- 9.1 Personnel will remove protective equipment in the contamination reduction zone. Expendable items such as tyvecs, gloves and respirator cartridges will be placed in drums for disposal with other contaminated materials.
- 9.2 Bathrooms are located across the street and there will be waterless hand cleaner at the site to wash hands when necessary.

#### 10.0 GENERAL SAFE WORK PRACTICES

No horse play.

No smoking.

No eating.

Operate all equipment properly. Plan ahead. Follow instructions and adhere to safety guidelines.

#### 11.0 STANDARD OPERATING PROCEDURES:

- 11.1 All personnel will don and doff protective equipment while in the contamination reduction zone.
- 11.2 Remove protective clothing in the following order: Tyvec suit, boots, respirator, gloves.
- 11.3 Hard hat, safety glasses and steel toe boots are to be worn on site at all times.

#### 12.0 CONTINGENCY PLAN:

- 12.1 All hospital, fire and emergency telephone numbers will be posted near the work area with directions to the hospital.
- 12.2 Personnel currently trained in first aid, CPR and CFR 1910.120:

Project Manager; First Aid, CPR, CFR 1910.120 Work crews; CFR 1910.120 Consultant; Unknown

12.3 Personnel injured in the exclusion zone will be moved to the contamination reduction zone(if possible) where personnel protective equipment will be removed in order to administer first aid.

#### 13.0 TRAINING REQUIREMENTS:

- 13.1 All personnel working in areas considered potentialy hazardous will have had, as a minimum, forty hours' training in the hazards and protections associated with handling hazardous waste (per CFR 1910.120).
- 13.2 Tailgate safety meetings will be conducted at the beginning of each shift, and will highlight the hazards that may be encountered during the shift.

#### 14.0 MEDICAL SURVEILLANCE:

- 14.1 All personnel working at the site will have had a thorough physical examination within one year of performing work.
- 14.2 Minimal exposure risk during the project does not merit base-line physicals before and after the project.

#### 15.0 RECORD KEEPING:

All documentation pertaining to this project, e.g., exposure monitoring, temperature, safety meetings, etc., will be recorded and maintained at the office of the general contractor:

Bay Area Tank & Marine, Inc. 2681 Overlook Drive Walnut Creek, Ca. 94596



### BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 EUUS STHEET SAMERANGISCO CACH ORUM 94 109 14 FSI 77 USOOD REGULATION 8, RULE 40
Aeration of Contaminanted Soil and
Removal of Underground Storage Tanks

# NOTIFICATION FORM

Removal or Replacement of Tanks

| Contaminated Soil

# SITE INFORMATION

	- (/ /)
CHY, STATE, ZIP Och (2) and	Fred Arence
OWNER HAME R. Local For Co	2011
SPECIFIC LOCATION OF PROJECT	Lises to Grand Aux Oak Co.
TAHK BEMQYAL	CONTAMINATED SOIL EXCAVATION
SCHEDULED STANTUR DATE	30 SCHEDULED STARTUP DATE 1/10/90
VAPORS REMOVED BY:	STOCKPILES WILL BE COVERED? YES NO
J. WATER WASH	ALTERHATIVE METHOD OF ACHATION (DESCRIBE BELOW):
[ ] VAPON ENERING (CO2)	
[ ] VERUICATION	(MAY REQUIRE PERMIT)
to the second of	
	CONTINCTOR INFORMATION
Cort, State, 219 March State Con Contract	G 77553
	CONSULTANT INFORMATION (IF APPLICABLE)
Iraaa	(IF APPLICABLE)
NAME	(IF APPLICABLE)
Iraaa	(IF APPLICABLE)
NAME	(IF APPLICABLE)
NAME	(IF APPLICABLE)
NAME	(IF APPLICABLE)
NAME AUUNESS CITY, STATE, ZIP FOR OFFICE USE ONLY	(IF APPLICABLE)  CONTACT  PHONE ( )
NAME AUURESS CITY, STATE, ZIP FOR OFFICE USE ONLY DATE RECEIVED	(IF APPLICABLE)  CONTACT  PHORE ( )  BY  (IRIT.)
NAME ADDRESS CHY, STATE, ZIP FOR OFFICE USE ONLY DATE RECEIVED CC: WareCTON NO	(IF APPLICABLE)  CONTACT  PHONE ( )  BY  (IRIT.)  DATE  DATE  (IRIT.)
NAME AUURESS CITY, STATE, ZIP FOR OFFICE USE ONLY DATE RECEIVED	(IF APPLICABLE)  CONTACT  PHONE ( )  BY  (IRIT.)  DATE  DATE  (IRIT.)

#### APPENDIX C

FIELD RECORDS
Gilbert Wistar, Alameda County
Gary Collins, City of Oakland

white -env.health yellow -facility pink -files

# ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

**Hazardous Materials Inspection Form** 

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

11,111

		***************************************	Site ID #	Site No	ame (7)	bandone	l gas	Salvai	Today's	179190
II.A	A BUSINESS PLANS (Title 19) 1. Immediate Reporting	2703	Site	Address	460	Thand	,			30 90
	2. Bus. Plan Stas. 3. RR Cars > 30 days 4. Inventory Information 5. Inventory Complete 6. Emergency Response	25503(b) 25503.7 25504(a) 2730 25504(b)	City _	Oxlan	R	Zlp <b>94</b>	1610	Phone	**************************************	
•	2 Training 5. Deficiency 9. Modification	25504(c) 25505(a) 25505(b)		MAX	AMT stored	> 500 lbs,	, 55 gal., :	200 cft.?		
II.B	ACUTELY HAZ, MAT'LS  10. Registration Form Filed 11. Form Complete	25533(a) 25533(b)	-	I. Haz. H. Busir	ion Catego Mat/Wast ness Plans, a erground To	e GENERATO Acute Haza	OR/TRAN Irdous Me	ISPORTER aterials		
	12, RMPP Contents 13, implement Sch. Regid? (Y.	25534(c) /N)			orground n	ai ino				
1	14. OffSite Conseq. Assess, 15. Probable Risk Assessment 16. Persons Responsible	25524(c) 25534(d) 25534(g)	• Call	f. Administra	illon Code	(CAC) or the	e Health	& Safety (	Code (HS&C	)
,	17. Certification 18. Exemption Request? (Y/N) 19. Trade Secret Requested?	25534(f) 25536(b)	Comm	ients:	imoval	L 4	imle	) Managing	1 Fails	Erom
WI.	UNDERGROUND TANKS (TI	le 23)	Done		see Ta		ife a		.773	and concre
General	1. Permit Application 2. Pipeline Leak Detection 3. Records Maintenance	25284 (H&S) 25292 (H&S) 2712	AP 3	1000	00- gal	Ron tank	`			allon
9	4. Rélease Report 5. Closure Plans	2651 2670	~000(e)	oil tax	e,	X	14 WA	STEOIL		
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#### APPENDIX D

UNIFORM HAZARDOUS WASTE MANIFESTS

Transportation of Waste Liquids

	UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA	1 1 1 1 1	Manifest Document No.	2. Pa	Inioi		he shaded are
j	3. Generator's Name and Mailing Address		<del></del>	<u>ا او او او</u>	01			by Federal la
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	SLUDGE APPROXS  SLUDGE APPROXS  15. Special Handling Instructions and Addition	nal information			c.		d.	
	WEAR GLOVES, GOGGLES, IN CASE OF SPILL CALL 800-874-4444 OR (200)	& FROTEGRAVE O	Levilling Pontes					
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UNIFORM HAZARDOUS 1. Generator's US EPA ID No. Manifest 2. Page 1 Information in the shaded areas WASTE MANIFEST of is not required by Federal law. 3. Generator's Name and Mailing Address A. State Manifest Document Number FALASCHI BA 8<u>98024</u> 4. Generator's Phone (4/5) B. State Generator's ID 5. Transporter 1 Company Name US EPA ID Number C. State Transporter's ID <u>Yal (200</u>) tage ta D. Transporter's Phone 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 US EPA ID Number G. State Facility's ID Refinerics Sections H. Facility's Phone 1333) H. HMY. 😘 Pateurous 13 12. Containers 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) 13. Total 14. Unit Quantity Waste No. Type NON RORA ANTENDER YOUR TO State EPA/Other J. Additional Descriptions for Materials Listed Above WATER APPRICARON Apply-130 15. Special Handling Instructions and Additional Information Para Oliver Gogether Same province and a real THE ASE OF ENGREENING STEEL AND A SHOW THE EXPERIMENT CONTRACTOR OF SHOWS 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 Day Year 1. 17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Signature Year 18. fransporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name Signature Day 19. Discrepancy Indication Space 20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name Signature Month Day Year Do Not Write Below This Line

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EPA 8700—22 (Rev. 9-88) Previous editions are obsolete.

#### APPENDIX E

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE REPORT

4 December 1990

1		UNDERGROUND STORAGE TANK UNAUTHORIZE	D RELEASE (LEAK) / CONTAMINATION	ON SITE REPORT
•	[	MERGENCY HAS STATE OFFICE OF EMERGENCY SERVICES  REPORT BEEN FILED?  YES XX NO	FOR LOCAL AGENCY USE ONLY  I HEREBY CERTIFY THAT I AM & DESIGNATED COVERNI	(C)D Tital over
}		PORT DATE CASE #	THE HEALTH AND SAFTY CODE.	URSUANT TO SECTION 25180.7 OF
	) BY	Joseph A. Adams (415	1) 421-9696 SIGNATURE	Color O
1	REPORTED	REPRESENTING WMERVOPERATOR REGIONAL BOARD  LOCAL AGENCY OTHER  ADDRESS	COMPANY OR AGENCY NAME Falaschi Br Joseph A. Adams, Receive	Cothers by er
1	<u> </u>	100 Pine Street, 21st Floor	San Francisco CA	94111 ZIP
	RESPONSIBLE PARTY	To be determined UNKNOWN	Joseph A. Adams	(415) 421-9696
1	RESF	100 Pine Street, 21st Floor FACILITY NAME (IF APPLICABLE)	San Francisco CA	
	NO	N/A	OPERATOR N/A	PHONE
	SITE LOCATION	ADDRESS 460 Grand Avenue STREET	Oakland Alam	eda 94612
		Bellevue Avenue		. 41
	IMPLEMENTING AGENCIES	Alameda County Department of Environmental Health REGIONAL BOARD	CONTACT PERSON Gilbert M. Wistar	PHONE (415) 430-4530
				PHONE ( )
	SUBSTANCES	Waste Oil from 500-gallon tank	0	UANTITY LOST (GALLONS)  X UNKNOWN
		DATE DISCOVERED HOW DISCOVERED INVENT	TORY CONTROL SUBSURFACE MONITORING	UNKNOWN UNKNOWN UNKNOWN
	ERY/ABATEMENT	DAY DISCUSSION	REMOVAL OTHER OTHER CHECK ALL THAT APP	. 1
	DISCOVERY	M M 0 0 V V X UNKNOWN HAS DISCHARGE BEEN STOPPED ?	REPAIR TANK REPAIR PIPING	CLOSE TANK CHANGE PROCEDURE
-	SOURCE	X YES NO FYES, DATE 1 1 3 0 9 0 V SOURCE OF DISCHARGE  X TANK LEAK UNKNOWN OVER	X ones Removed tank C	
L		PIPING LEAK OTHER CORR	IPLL RUPTURE/FAILURE OSKON X UNKNOWN	SPILL OTHER
	TYPE TYPE	CHECK ONE ONLY  X UNDETERMINED SOIL ONLY GROUNDWATER	DRINKING WATER - (CHECK ONLY IF WATER WELLS HAV	TE AOT MANAGEMENT
	STATUS	CHECK ONE ONLY  NO ACTION TAKEN PRELIMINARY SITE ASSESSMENT WO  LEAK BEING CONFIRMED PRELIMINARY SITE ASSESSMENT UND  REMEDIATION PLAN CASE CLOSED (CLEANUP COMPLETE)	POLLUTION CHARACTER POST CLEANUP MON	TERIZATION HTORING IN PROGRESS
	ACTION	CHECK APPROPRIATE ACTION(S)  INSERTION OF THE BELL OF	PEMOVE FREE PRODUCT (FP) EN PUMP & TREAT GROUNDWATER (GT) RE	HANCED BIO DEGRADATION (IT) PLACE SUPPLY (RS) NT SOIL (VS)
		A Signature is for reporting purpose Legal actions have been initiate Station has not been used since waste oil and water.	20 to 20 in	consible party"

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#### APPENDIX F

UNIFORM HAZARDOUS WASTE MANIFESTS
Transportation of Stabilized Storage Tanks

print of type.' (Form designed for use on elite (12-pitch typewriter).							
UNIFORM HAZARDOUS 1. Generator's US EPA ID CA (こう)	305447	Manifest cument Nov.	Ι .	of			he shaded areas by Federal law.
3. Generator's Name and Mailing Address 1940 Use ESTE R			<del> </del>	ate Manife S		JIV	87
CAKLAND, CA.			B. Sta	ite Genera	itor's ID		
4. Generator's Phone (415) 531 - 1453				للل			
5. Transporter 1 Company Name 6.	US EPA ID Number ノンパンコンコンフ	mag		ete Transp		1 0	337-2212
JACK PARKER TRUCK (1)	US EPA ID Number	11/2/1	<del></del>	te Transp			a a r - prantant
1   1	1 1 1 1 1	1 1 1		nsporter's			
9. Designated Facility Name and Site Address 10.	US EPA ID Number	<del>l.                                  </del>	G. Sta	te Facility	r's ID	<del>, , ,</del> -	
Erickson, Inc. 255 Parr Blvd.			H. Fac	l	пе		r +202
Richmond, Ca. 94801	7777466	3 7 7	Ī		(41:	) 23	5-1393
11. US DOT Description (including Proper Shipping Name, Hazard Class		12. Conti	ainers Type	13, Te Qu	otal iantily	14. Unit Wt/Vol	I. Waste No.
a. Waste Empty Storage (200)							State 512
NOR-RCFA Hazardous Basto Collid.		002	r y	/ <sub>(*)</sub> \$	1 1	£,	EPA/OthenONE
b.		<del></del>		<del>                                     </del>			Stale
							EPA/Other
						ļ	
С.				}			State
•			١.				EPA/Other
· d.		<del> </del>					State
				-			
		1 1 1	1	1 1	1 1		EPA/Other
J. Additional Descriptions for Materials Listed Above			K, Ha	indling Co	des for V	Vastes L I b.	isted Above
Oty. 2 Empty Storage Tank (s) #5	127,5/30,		u.				
Oty. 2 Empty Storage Tank (s) #5  Tank (s) have been in  Dry Ice par 1000 Gal. Capacity.	skied affu 13	108+	C.			d.	
15. Special Handling Instructions and Additional Information					<del></del> .	<u> </u>	
Keep away from sources of lentition.	Always wear	hardhat	.s :01	een vo	rista	יין די	brut
11.9.7.18							
16.							
GENERATOR'S CERTIFICATION: I hereby declare that the content and are classified, packed, marked, and labeled, and are in all resp	ts of this consignment are ects in proper condition f	e fully and ac or transport b	curately by highw	y describe vay accord	d above ling to as	by prope opticable	er shipping name international and
national government regulations.							
If I am a large quantily generator, I certify that I have a program in p to be economically practicable and that I have selected the practics present and future threat to human health and the environment; OR, generation and select the best waste management method that is a	ible method of treatment, if I am a small quantity g	storage, or o enerator, I ha	disposal	i currently	available	o lo m <del>e</del> v	vnich minimizes the
Printed/Typed Name	Signature -			·, •			Month Day Year
Low CANDELLA COLOR DE RELEASE	Jane Sand						112010
17. Transporter 1 Acknowledgement of Receipt of Materials	_1						
Printed/Typed Name  Ditarial Plants	Signature	$\mathcal{U}_{\mathcal{O}^{\times}}$					Month Day Year
18. Transporter 2 Acknowledgement of Receipt of Materials							11-11 5 C
Printed/Typed Name	Signature						Month Day Year
19. Discrepancy Indication Space	1						<u> </u>
Tal. Sissispans, material spans							
20. Facility Owner or Operator Certification of receipt of hazardous mat-	crials covered by this ma	nifest except	as not	ed in Item	19.		
Printed/Typed Name	Signature	<del></del> .			•		Month Day Year
				<del></del>			
A (1/88) Do Not	Write Below This Lir						

	Manifest cument No.	2. 1	Page 1			he shaded areas by Federal law.
3. Generator's Name and Mailing Address FALASCH. Contract 1940 WESSITE CONTRACT CONTRACT PROPERTY OF THE TOTAL CONTRACT		A. Sta	ate Manite	at Docum	jeni Nur	08
1940 WEBSTER MARKET CHE 19612			ite Genera			
4. Generator's Phone (1/5 ) 53 / - 1/153  5. Transporter 1 Company Name 6. US EPA ID Number		C SI	ate Transp	orter's H		2492
	IUpA		naporter's			39-12/2
Sinck Printers (CITI O IO	<del></del>		ite Transp		السابساسة	
			nsporter's			·
<ul> <li>Designated Facility Name and Site Address 10. US EPA ID Number</li> <li>Erickson, Inc.</li> </ul>			ite Facility		1	
255 Parr Blvd.	000	H. Fac	cility's Pho			
Richmond, Ca. 66501 PAPAPA	12. Cont	ainers	13. T	olai	14. Unit	5-1393 I. Waste No.
1. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	No.	Туре		antily	WI/Vol	
eagree cmbr A Dectador (1940)						31.2
TOR-PORA Hagardoug Caste Calley	0 10 12	i r	1 121	1111	ļ ;·	EPA/Other
	3		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	·		State
						EPA/Other
					<u> </u>	State
	111	1	11	1 1		EPA/Other
						State
Additional Descriptions for Materials Listed Above	<u></u>	a.	ndling Co	l   dea for W	ь.	EPA/Other sted Above
Additional Descriptions for Materials Listed Above  Qty. 2 Empty Storage Tank (s) #5/17, 5/18  Tank (s) have been inerted with 15  Dry Ice per 1000 Gal. Capacity.	lbs.		ndling Cor	dee for W	/astea L b. d.	
Additional Descriptions for Materials Listed Above  Qty. 2 Empty Storage Tank (s) #5/17, 5/18  Tank (s) have been inerted with 15  Dry Ice per 1000 Gal. Capacity.		a. c.			b.	sted Above
Additional Descriptions for Materials Listed Above  Qty. 2 Empty Storage Tank (s) #5/17, 5/18  . Tank (s) have been inerted with 13  Dry Ice per 1000 Gal. Capacity.  5. Special Handling Instructions and Additional Information  Keep away from sources of ignition. Always wear U.S.T.'s  6.  GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are and are classified, packed, marked, and labeled, and are in all respects in proper condition in allocal government regulations.	hardhat e fully and ac for transport t	c. solu	en to r describe ray accord	rking d above ting to ap	d.	sted Above
Additional Descriptions for Materials Listed Above  Qty. 2 Empty Storage Tank (s) #5/10.5/18  . Tank (s) have been inerted with 13  Dry Ice per 1000 Gal. Capacity.  5. Special Handling Instructions and Additional Information  Keep away from sources of ignificant Always wear  U.S.T. 's  6.  GENERATOR'S CERTIFICATION: Thereby declare that the contents of this consignment ar and are classified, packed, marked, and labeled, and are in all respects in proper condition.	hardhat e fully and ac for transport t ne and toxicity , storage, or generator, I h	curately by highw	en to	rking,	d.	sted Above  Uncl r shipping name international and I have determined thich minimizes the
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Additional Descriptions for Materials Listed Above  Qty Empty Storage Tank (s) #5/1/. 5/1/  - Tank (s) have been inerted with 15  Dry Ice per 1000 Gal. Capacity.  5. Special Handling Instructions and Additional Information  Keep away from sources of ignition. Always west U.S.T.'s  6.  GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment ar and are classified, packed, marked, and labeled, and are in all respects in proper condition in allocal government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volum to be economically practicable and that I have selected the practicable method of treatment present and future threat to human health and the environment; OR, if I am a small quantity generation and select the best waste management method that is available to me and that I finted/Typed Name  Signature  Finited/Typed Name  Signature  Signature  Signature  Signature  Signature	hardhat te fully and ac for transport to the and toxicity , storage, or generator, I h can afford.	curately by highw	en to	rking,	d.	r shipping name international and  I have determined thich minimizes the imize my waste  Month Day You Month Day Y
Additional Descriptions for Materials Listed Above  Qty. 2 Empty Storage Tank (s) #512, 512,  Tank (s) have been inerted with 15  Dry Ice per 1000 Gal. Capacity.  6. Special Handling Instructions and Additional Information  Keap away from sources of ignificon. Always year  U.S.T. 19  6.  GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are and are classified, packed, marked, and labeled, and are in all respects in proper condition in national government regulations.  If I am a large quentity generator, I certify that I have a program in place to reduce the volum to be economically practicable and that I have selected the practicable method of treatment present and future threat to human health and the environment; OR, II I am a small quantity generation and select the best waste management method that is available to me and that I winted/Typed Name  Frinted/Typed Name  Signature  Signature  Signature  Signature  Signature  9. Obscrepancy Indication Space	hardhat re fully and ac for transport t me and toxicity, storage, or generator, I h can afford.	c. c. curately by highw of was disposal ave mad	en to	rking, d above thing to ap ted to the available faith effo	d.	r shipping name international and Thave determined thich minimizes the imize my waste  Month Day Ye
15. Special Handling Instructions and Additional Information  KCOP AWRY From SOURCES OF IGNETION. Always WORT  U.S.T.*9  16.  GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are and ere classified, packed, marked, and labeled, and are in all respects in proper condition in national government regulations.  If I am a large quentity generator, I certify that I have a program in place to reduce the volum to be economically practicable and that I have selected the practicable method of treatment present and future threat to human health and the environment; OR, II am a small quantity generation and select the best waste management method that is available to me and that I have a program in place to reduce the volum to be economically practicable and that I have selected the practicable method of treatment present and future threat to human health and the environment; OR, II am a small quantity generation and select the best waste management method that is available to me and that I are a small quantity of the practicable and that I are a small quantity of generation and select the best waste management method that is available to me and that I are a small quantity of the practicable and that I are a small quantity of generation and select the best waste management method that is available to me and that I are a small quantity of generation and select the best waste management method that is available to me and that I are a small quantity of generators. Signature  Printed/Typed Name  Signature  18. Transporter 1 Acknowledgement of Receipt of Materials  Signature  19. Olscrepancy Indication Space	hardhat re fully and ac for transport t me and toxicity, storage, or generator, I h can afford.	c. c. curately by highw of was disposal ave mad	en to	rking, d above thing to ap ted to the available faith effo	d.	r shipping name international and thave determined which minimizes the imize my waste    Month Day Year
Oty. 2 Empty Storage Tank (s) #5/1, 5/1.  Tank (s) have been inerted with 15  Dry Ice per 1000 Gal. Capacity.  15. Special Handling Instructions and Additional Information  Keep away from sources of ignition. Always year U.S.T.'s  16.  GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are and are classified, packed, marked, and labeled, and are in all respects in proper condition in national government regulations.  If I am a large quentity generator, I certify that I have a program in place to reduce the volum to be economically practicable and that I have selected the practicable method of treatment present and future threat to human health and the environment; OR, If I am a small quantity generation and select the best waste management method that is available to me and that I reinted/Typed Name  Signature  Signature  Frinted/Typed Name  Signature  Signature  Signature  Signature	hardhat re fully and ac for transport t me and toxicity, storage, or generator, I h can afford.	c. c. curately oy highw of was disposal ave mad	en to	rking, d above thing to ap ted to the available faith effo	d.	r shipping name international and thave determined which minimizes the imize my waste  Month Day Year Month Day

CASE OF AN EMERGENCY OR SPILL.

APPENDIX G
CERTIFICATES OF TANK DESTRUCTION

Nº 5127 - 734/84 Bay Areca Tank & Mitronia

# CERTIFICATE

Certified Services Company 255 Parr Boulevard Richmond, California 94801

Day or Night Telephone (415) 235-1393

For: Fricken Inc			(415) 235-1393
Tank No.	o.(s.) 5127#	Location:Richmond :	- Profession (All Andrews of Managers and Andrews of
Test Method: Visual Castech/1314 SMPN		Last Product: Code	Date: 12-04-90 Time: 10:00
			700
This is to certify that I have personally determined that the are in accordance with the American Petroleum Institute and of each to be in accordance with its assigned designation	tank(s) in the following list ad have found the condition in. This certificate is based	on conditions existing at the time issued subject to compliance w	me the inspection herein set forth was completed ar with all qualifications and instructions.
Tank(s)		Condition	,
1- 10/00 dal. Tank	Safe For Fire		0xy 20.97
		<u> </u>	aEL less than 0.12
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
Remarks:			
n the event of any physical account to the			
In the event of any physical or atmospheric changes affecting the above tanks, or if in any doubt immediately stop all he	I the gas-free condition of not work and contact the	undersigned. This permit is va changes occur.	valid for 24 hours if no physical or atmosphe
Standard Safety Designation: Safe for Men: Means that in the compartment or space so decontent of the atmosphere is at least 19.5 percent by volumaterials in the atmosphere are within permissable concerudgment of the Inspector, the residues are not capable of punder existing atmospheric conditions while maintained as directificate.	nume; and that (b) Toxic entrations; and (c) In the producing toxic materials directed on the Inspector's	limit; and that (b) in the judgmen producing a higher concentration the in the presence of fire and while mand further, (c) All adjacent spaces spread of fire, are satisfactorily ine deemed necessary by the inspect.	e compartment so designated (a) The concentration imosphere is below 10 percent of the lower explosion of the Inspector, the residues are not capable than permitted under existing atmospheric condition maintained as directed on the Inspector's certificates have either been cleaned sufficiently to prevent the test, or in the case of fuel tanks, have been treated as the condition of the Inspector.
The undersigned representative acknowledges	s receipt of this certificate an	and understands the conditions and life	limitations under which it was issued.

Title

5128—73484
Pay AREA TAIN & MARINE CERTIFICATE
Certified Services Company

255 Parr Boulevard Richmond, California 94801

Day or Night Telephone (415) 235-1393

This is to certify that I have personally determined the are in accordance with the American Petroleum Institute of each to be in accordance with its assigned decided.	that the tank(s) in the following lit	st on conditions e	At) [eador]	Ciac	
3,000 0031	ignation. This certificate is based	n issued subject t d	existing at the time the into compliance with all q	spection herein set to ualifications and inst	irth was completed ructions.
Tank(s)			Condition		
1- Consequent					
1- 10,00 Bal. Tank	Safe For Fire		0xy 20	.9%	
			LEL-Le	ss than 0.1%	
emarks:			•		
	<u> </u>				
	. 18				
the event of any physical or atmospheric changes af le above tanks, or if in any doubt immediately sto					
The state of the s	fecting the gas-free condition of p all hot work and contact the	undersigned. The changes occur.	his permit is valid for	24 hours if no ph	ysical or atmosp
andard Safety Designation: Safe for Men: Means that in the compartment or space of the atmosphere is at least 19.5 percent.				rtment so designated	

under existing atmospheric conditions while maintained as directed on the Inspector's

in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and fimitations under which it was issued.

Representative

Title

Nº 5129-73484 Bay Alea tank & Marie

# CERTIFICATÉ

Certified Services Company 255 Parr Boulevard Richmond, California 94801

Day or Night
Telephone
(415) 235-1393

	,	(415) 235-1393
For: Prickson, Inc. Tank N	No te 1 5170	
Test Method:Visual_Castech/1314_SMDN	0.(0.)	Location:
	· · · · · · · · · · · · · · · · · · ·	Last Product: Unleaded Gas
This is to cartify that I have neverally determined to		
This is to certify that I have personally determined that the are in accordance with the American Petroleum Institute a coffeech to be in accordance with its assigned designation.	ne tank(s) in the following list and have found the condition tion. This certificate is based	on conditions existing at the time the inspection herein set forth was completed and issued subject to compliance with all qualifications and instructions.
Tank(s)		Condition
1- /CyCO Gal. Tank	Safe Por Fire	
		0xy 20.9%
		The train cong
lemarks:		
the event of any physical or atmospheric changes effect		
n the event of any physical or atmospheric changes affection he above tanks, or if in any doubt immediately stop all	ng the gas-free condition of I hot work and contact the	undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.
Safe for Men: Means that in the compartment or space so content of the atmosphere is at least 19.5 percent by volaterials in the atmosphere are within permissable concludement of the inspector, the residues are not capable of order existing atmospheric conditions while maintained as extificate.	volume; and that (b) Toxic neentrations; and (c) In the of producing toxic materials s directed on the Inspector's	Safe for Fire: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive producing a higher concentration than permitted under existing atmospheric condition in the presence of fire and while maintained as directed on the Inspector's certificate and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the deemed necessary by the Inspector.
The undersigned representative acknowledge	ges receipt of this certificate a	and understands the conditions and limitations under which it was issued.
Presentative		id understands the conditions and limitations under which it was issued.

Nº

5130-73484
BOY AREO TONK & MCK Certified Services Company
255 Parr Boulevard
Richmond, California 94801

Day or Night Telephone (415) 235-1393

For: Tank N	o.(s.) 5130	Location: Richmond Date: 12-04-90 Time 8:00 a.m.
Test Method: Visual Castach/1314 SMPN	-	Last Product: LINGE O
This is to certify that I have personally determined that the are in accordance with the American Petroleum Institute of each to be in accordance with its assigned designation	Provided for a constant of the	on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.
Tank(s)		Condition
	<i>A</i>	OUNCERON
1	Safe For Fire	Oxy 20.9%
		LEL-Less than 0.1%
Remarks:		
in the event of any physical or atmospheric changes affecti the above tanks, or if in any doubt immediately stop all	ng the gas-free condition of hot work and contact the	undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.
Standard Safety Designation:  Safe for Men: Means that in the compartment or space so content of the atmosphere is at least 19.5 percent by waterials in the atmosphere are within permissable conjudgment of the Inspector, the residues are not capable ounder existing atmospheric conditions white maintained as certificate.	colume; and that (b) Toxic centrations; and (c) In the producing toxic materials directed on the Inspector's	Safe for Fire: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) In the judgment of the Inspector, the residues are not capable of producing a higher concentration than permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.
The undersigned representative acknowled	ges receipt of this certificate a	nd understands the conditions and limitations under which it was issued.

APPENDIX H
CHAIN-OF CUSTODY RECORDS

NEW : UPDATED REQUEST

# TREADWELL & ASSOCIATES, INC. 353 Sacramento Street, Suite 560 San Francisco, California 94111 (415) 955-9040

# CHAIN OF CUSTODY RECORD

Project	#: 11324	Pro	ect Na	me. Z	March.	And Ballering	e: 11-30-90 Page: 1- of /
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# TREADWELL & ASSOCIATES, INC.

353 Sacramento Street, Suite 560 San Francisco, California 94111 (415) 955-9040

# CHAIN OF CUSTODY RECORD

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APPENDIX I

ANALYTICAL LABORATORY REPORTS



# Curtis & Tompkins, Ltd., Analytical Laboratories. Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

# RECEIVED

DEC 2 0 1990

TREADWELL & ASSOCIATES

DATE RECEIVED: 11/30/90 DATE REPORTED: 12/17/90

LAB NUMBER: 102416

CLIENT: TREADWELL & ASSOCIATES

REPORT ON: 7 SOILS SAMPLES & 1 WATER SAMPLE

PROJECT #: 1132A

LOCATION: GRAND AVE @ BELLEVUE

RESULTS: SEE ATTACHED

QA/QC Approval



LAB NUMBER: 102416

CLIENT: TREADWELL & ASSOCIATES

PROJECT # : 1132A

LOCATION: GRAND AVE @ BELLEVUE

DATE RECEIVED: 11/30/90

DATE ANALYZED: 12/04/90

DATE REPORTED: 12/17/90

ANALYSIS: HYDROCARBON OIL AND GREASE

METHOD: SMWW 17:5520EF

LAB ID	SAMPLE	ID	RESULT	UNITS	REPORTING LIMIT
102416-8	T4-1		24,000	mg /Kg	5 0

ND = Not detected at or above reporting limit

QA/QC SUMMARY

RPD, %

RECOVERY, %



LABORATORY NUMBER: 102416-8 CLIENT: TREADWELL & ASSOCIATES

PROJECT ID: 1132A

LOCATION: GRAND AVE @ BELLEVUE

DATE RECEIVED: 11/30/90

DATE EXTRACTED: 12/07/90

DATE ANALYZED: .12/13/90

DATE REPORTED: 12/17/90

# Extractable Petroleum Hydrocarbons in Soils & Wastes California DOHS Method LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
102416-8	T4-1	ND	7,100	1,000

ND = Not Detected at or above reporting limit.

\*Reporting limit applies to all analytes.

#### QA/QC SUMMARY

RPD, %

RECOVERY, %

83



LABORATORY NUMBER: 102416

CLIENT: TREADWELL & ASSOCIATES

PROJECT ID: 1132A

DATE RECEIVED: 11/30/90
DATE ANALYZED: 12/03/90
DATE REPORTED: 12/17/90

ANALYSIS: LEAD

ANALYSIS METHOD: EPA7420

LAB ID SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
102416-2 T1-2	3.8	mg/Kg	2.5
102416-5 T2-2	ND	mg/Kg	2.5 .
102416-7 T3-2	3.4	mg/Kg	2.5
102416-8 T4-1	4 0	mg/Kg	2.5

QA/QC SUMMARY

RPD, %

RECOVERY, %

91



LABORATORY NUMBER: 102416-8

CLIENT: TREADWELL & ASSOCIATES

PROJECT ID:1132A SAMPLE ID: T4-1

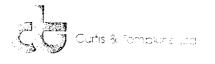
DATE RECEIVED: 11/30/90 DATE ANALYZED: 12/04/90

DATE REPORTED: 12/17/90

PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
CADMIUM	0.8	mg/Kg	0.5	EPA 6010
CHROMI UM	12	mg/Kg	0.5	EPA 6010
NICKEL	22	mg /Kg	0.5	EPA 6010
ZINC	41	mg/Kg	0.5	EPA 6010

#### QA/QC SUMMARY

C-1 CO CONTINUE		
CARMANNA	RPD, %	RECOVERY, %
CADMIUM	3	91
CHROMI UM	<1	98
NICKEL	6	99 '
ZINC	1	95
	=======================================	



LABORATORY NUMBER: 102416-8 CLIENT: TREADWELL & ASSOCIATES

PROJECT ID: 1132A SAMPLE ID: T4-1

DATE RECEIVED: 11/30/90 DATE ANALYZED: 12/06/90 DATE REPORTED: 12/17/90

EPA 8010: Volatile Halocarbons in Soil & Wastes Extraction Method: EPA 5030 - Purge & Trap

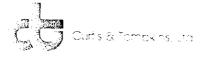
Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
chloromethane		
bromome than e	ND	. 40
vinyl chloride	ND	40
chloroethane	ND	40
methylene chloride	ND	40
trichlorofluoromethane	ND	20
l, I-dichloroethene	ND	20
l, l-dichloroethane	ND	20
1,2-dichloroethene (total)	ND	20
CHIOPOIORM	ND	20
freon 113	ND	20
1,2-dichloroethane DCA	ND	20
l, l, l-trichloroethane	ND	20
carbon tetrachloride	250	20
bromodich loromethane	ND	20
1,2-dichloropropane COV	ND	20
cis-1,3-dichloropropene	ND	20
richloroethylene	ND	
, 1, 2-trichloroethane	ND	200
rans-1,3-dichloropropene	ND	200
ibromochloromethane	ND	20(
-chloroethylvinyl ether	ND	200
romoform	ND	200
etrachloroethylene	ND	400
, 1, 2, 2-tetrachloroethane	1,000	200
hlorobenzene	ND	200
, 3 - dichlorobenzene	ND	200
,2-dichlorobenzene	ND	200
, 2-dichlorobenzene , 4-dichlorobenzene	ND	200
, . Grenroropenzene	ND	200
D = Not dotate	1457	200

ND = Not detected at or above reporting limit.

#### QA/QC SUMMARY

Duplicate: Relative % Difference Spike: Average % Recovery

6 % 93 %



LABORATORY NUMBER: 102416

CLIENT: TREADWELL & ASSOCIATES

PROJECT ID: 1132A

JOB LOCATION: GRAND AVE @ BELLEVUE

DATE RECEIVED: 11/30/90 DATE ANALYZED: 12/07/90

DATE REPORTED: 12/17/90

Total Volatile Hydrocarbons with BTXE in Soils & Wastes TVH by California DOHS Method/LUFT Manual October 1989 BTXE by EPA 5030/8020

LAB ID	SAMPLE	ID	TVH AS GASOLINE	BENZENE	TOLUENE		TOTAL
• • • • • • • • •			(mg/Kg)	(ug/Kg)	( u g / Kg )	BENZENE (ug/Kg)	XYLENES (ug/Kg)
102416-1	T1 - 1		ND(1.0)	ND(5.0)	100	ND(5.0)	ND(5.0)
102416-2	T1-2		ND(1.0)	ND(5.0)	97	ND(5.0)	ND(5.0)
102416-4	T2-1		ND(1.0)	ND(5.0)	140	ND(5.0)	ND(5.0)
102416-5	T2 - 2		ND(1.0)	19	65	ND(5.0)	ND(5.0)
102416-6	T3 - 1		ND(1.0)	ND(5.0)	220	ND(5,0)	ND(5.0)
102416-7	T3 - 2		ND(1.0)	ND(5.0)	63		ND(5.0)
102416-8	T4-1		400	1,200	10,000	5,200	35,000

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

#### QA/QC SUMMARY



LABORATORY NUMBER: 102416

CLIENT: TREADWELL & ASSOCIATES

PROJECT ID: 1132A

JOB LOCATION: GRAND AVE & BELLEVUE

DATE RECEIVED: 11/30/90

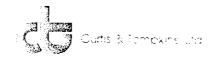
DATE ANALYZED: 12/05/90

DATE REPORTED: 12/17/90

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions TVH by California DOHS Method/LUFT Manual October 1989 BTXE by EPA 5030/8020

LAB ID	SAMPLE	ID TVH AS GASOLINE	BENZENE	TOLUENE	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)
			(ug/L)	(ug/L)		
102416-9	W-1	2,300	53	160	36	160

QA/QC SUMMARY



LABORATORY NUMBER: 102416-9 CLIENT: TREADWELL & ASSOCIATES

JOB #: 1132A

LOCATION: GRAND AVE @ BELLEVUE

DATE RECEIVED: 11/30/90 DATE EXTRACTED: 12/05/90 DATE ANALYZED: 12/13/90

DATE REPORTED: 12/17/90

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT* (ug/L)
102416-9	W1	ND	ND	50

ND = Not detected at or above reporting limit.

\*Reporting limit applies to all analytes.

#### QA/QC SUMMARY



# Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 9471O, Phone (415) 486-0900

DATE RECEIVED: 12/04/90 DATE REPORTED: 12/14/90

DEC 2 0 1990

TREADWELL & ASSOCIATES

LAB NUMBER: 102454

CLIENT: TREADWELL AND ASSOCIATES

REPORT ON: FOUR SOIL SAMPLES

PROJECT #: 1132A

LOCATION: GRAND AVENUE AT BELLEVUE

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Berkeley

Wilmington

Los Angeles



LABORATORY NUMBER: 102454

CLIENT: TREADWELL AND ASSOCIATES

PROJECT ID: 1132A

JOB LOCATION: GRAND AVE. AT BELLEVUE

DATE RECEIVED: 12/04/90
DATE ANALYZED: 12/06/90
DATE REPORTED: 12/14/00

DATE REPORTED: 12/14/90

Total Volatile Hydrocarbons with BTXE in Soils & Wastes
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
102454-1	P - 1	1,700	ND (400)	8,700	47,000	260,000
102454-2	P - 2	9 0	ND (400)	1,700	890	4,700
102454-3	P - 3	ND (1.0)	6.6	180	5.3	33
102454-4	P - 4	ND (1.0)	ND (5.0)	36	ND (5.0)	5.5

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

#### QA/QC SUMMARY

RPD, %	3			
RECOVERY, %	8 7			