

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



*File in closed  
LOP file*

September 30, 1997  
StID # 3685

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

REMEDIAL ACTION COMPLETION CERTIFICATION

Mr. Joseph Cotton  
City of Oakland Environmental Services  
1333 Broadway, Suite 330A  
Oakland CA 94612

**RE: Fire Station #29, 1016 66th Ave., Oakland CA 94621**

Dear Mr. Cotton:

This letter confirms the completion of site investigation and remedial action for the one approximately 285 gallon gasoline/diesel underground tank removed from the above described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground tank is greatly appreciated.

Based upon the available information and with provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank releases is required.

This notice is issued pursuant to a regulation contained in Title 23, Division 3, Chapter 16, Section 2721 (e) of the California Code of Regulations.

Please contact Barney Chan at (510) 567-6765 if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung  
Director, Environmental Health

c: [REDACTED] Hazardous Materials Division-files  
Kevin Graves, RWQCB  
Mr. Dave Deaner, SWRCB Cleanup Fund  
Mr. Leroy Griffin, City of Oakland OES, 505 14th St., Suite  
702, Oakland CA 94612

RACC1016

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



October 2, 1997  
StID# 3685

Mr. Joseph Cotton  
City of Oakland Environmental Services  
1333 Broadway, Suite 330A  
Oakland CA 94612

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

**RE: Fuel Leak Site Case Closure- Fire Station #29, 1016 66th Ave., Oakland CA 94621**

Dear Mr. Cotton:

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

**Site Investigation and Cleanup Summary:**

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

\* 1600 parts per million (ppm) Total Petroleum Hydrocarbons as diesel (TPHd) and 3.5 ppm Total Petroleum Hydrocarbons as gasoline (TPHg) remain in the soil at the site.

\* 160 parts per billion (ppb) TPHg and 320 ppb TPHd remain in groundwater at the site.

This site should be included in the City's permit tracking system. Please contact me at (510) 567-6765 if you have any questions.

Sincerely,

  
Barney M. Chan  
Hazardous Materials Specialist

enclosures: Case Closure Letter, Case Closure Summary

c: Mr. L. Griffin, City of Oakland OES, 505 14th St., Suite  
702, Oakland CA 94612

B. Chan, files (letter only)  
trlt1016

**CASE CLOSURE SUMMARY**  
**Leaking Underground Fuel Storage Tank Program**

**I. AGENCY INFORMATION**

**Date:** 06/9/97

**Agency name:** Alameda County-HazMat **Address:** 1131 Harbor Bay Parkway  
Room 250

**City/State/Zip:** Alameda, CA 94502-6577 **Phone:** (510) 567-6700

**Responsible staff person:** Barney Chan **Title:** Hazardous Materials Spec.

**II. CASE INFORMATION**

**Site facility name:** Oakland Fire Station #29

**Site facility address:** 1016 66th Ave., Oakland CA 94621

**RB LUSTIS Case No:** N/A **Local Case No./LOP Case No.:** 3685

**ULR filing date:** 5/15/90 **SWEEPS No:** N/A

**Responsible Parties:                      Addresses:                      Phone Numbers:**

1) Mr. Joseph Cotton                      City of Oakland, Public                      (510) 238-6259  
Works - Env. Services Div.  
Oakland CA 94612

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	285	diesel/gasoline	Removed	5/04/90

**III. RELEASE AND SITE CHARACTERIZATION INFORMATION**

**Cause and type of release:** unknown

**Site characterization complete?** Yes

**Date approved by oversight agency:**

**Monitoring Wells installed?** YES                      **Number:** 4

**Proper screened interval?** Yes, 6-21'

**Highest GW depth:** 4.52'                      **Lowest depth:** 8.6'

**Flow direction:** south-southwesterly

**Leaking Underground Fuel Storage Program**

Most sensitive current use: commercial/industrial

Are drinking water wells affected? no      Aquifer name:

Is surface water affected? no      Nearest affected SW name:

Off-site beneficial use impacts (addresses/locations):

**Treatment and Disposal of Affected Material:**

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment of Disposal w/destination)</u>	<u>Date</u>
Tanks &	1-285 gallon	Disposed by H&H Shipping	5/04/90
Soil	75-80 cy	?	?
Water/liquid	1500 gallons	Disposed by H&H Shipping	5/23/90

**Maximum Documented Contaminant Concentrations - - Before and After Cleanup**

<u>Contaminant</u>	<u>Soil (ppm)</u>		<u>Water (ppb)</u>	
	<u>Before</u>	<u>After<sup>1</sup></u>	<u>2Before</u>	<u>After<sup>3</sup></u>
TPH (Gas)	---	3.5	330,000	160
TPH (Diesel)	240	1600	1,500,000	320
Benzene	ND	ND	ND	ND
Toluene	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND

**Comments (Depth of Remediation, etc.):**

- 1 5/18/90 sampling result
- 2 5/18/90 sampling result
- 3 2/10/97 sampling result

**IV. CLOSURE**

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

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

Does corrective action protect public health for current land use?      YES

Site management requirements: NA

Leaking Underground Fuel Storage Program

Highest GW depth: 4.52'      Lowest depth: 8.6'

Flow direction: south-southwesterly

**Treatment and Disposal of Affected Material:**

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment of Disposal w/destination)</u>	<u>Date</u>
Tanks &	1-285 gallon	Disposed by H&H Shipping	5/04/90
Soil	75-80 cy	?	?
Water/liquid	1500 gallons	Disposed by H&H Shipping	5/23/90

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TPH (Gas)	---	3.5	330,000	160
TPH (Diesel)	240	1600	1,500,000	320
Benzene	ND	ND	ND	ND
Toluene	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND
<i>MIBE</i>				<i>ND</i>

**Comments (Depth of Remediation, etc.):**

- 1 5/18/90 sampling result
- 2 5/18/90 sampling result
- 3 2/10/97 sampling result

**IV. CLOSURE**

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

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

Does corrective action protect public health for current land use?      YES

Site management requirements: NA

**Leaking Underground Fuel Storage Tank Program**

Should corrective action be reviewed if land use changes? Yes

Monitoring wells Decommissioned: NO

Number Decommissioned: 0

Number Retained: 4

List enforcement actions taken: None

List enforcement actions rescinded: None

**V. LOCAL AGENCY REPRESENTATIVE DATA**

Name: Barney M. Chan

Title: Hazardous Materials Specialist

Signature: *Barney M Chan*

Date: 6/13/97

Reviewed by

Name: Tom Peacock

Title: Manager

Signature: *Tom Peacock*

Date: 6-12-97

Name: Susan Hugo

Title: Senior Haz. Mat. Specialist

Signature: *Susan L Hugo*

Date: 5/31/97

**VI. RWQCB NOTIFICATION**

Date Submitted to RB:

RB Response: *Approved*

RWQCB Staff Name: K. Graves

Title: AWRCE

Date: 6/24/97

**VII. ADDITIONAL COMMENTS, DATA, ETC.**

*[Handwritten signature]*

Site Summary, Firehouse #29, 1016 66th Ave., Oakland 94621

This fuel tank supplying Firehouse #29 was installed in the late 1940's. It stored gasoline until 1975, when it was converted to diesel storage.

On May 4, 1990 the 285 gallon tank was removed from the front yard of this fire station. Six soil samples were taken, 1 from beneath each end of the tank at approximately 7' bgs and one four point composite from the spoils. Up to 240 ppm diesel was detected in the end samples and 910 ppm TPHd in the spoils composite. The pit was backfilled with the spoils pending the sample results.

On May 15, 1990 the tank pit was overexcavated to 15' depth and two soil samples taken; one from beneath the tank and one from the stockpile. Both samples were ND for TPHg and BTEX. TPHd was not analyzed on these samples. (no report provided)

On May 18, 1990 three additional soil samples were taken beneath the tank pit; samples 2, 3 and 4, depth uncertain. These samples were composited for analysis. This sample exhibited 1600 ppm TPHd, 3.5 ppm TPHg and ND for BTEX. One grab groundwater sample was also taken for analysis. This sample exhibited 330 mg/l TPHg, 1500 mg/l TPHd and ND for BTEX. Approximately 1500 gallons of water and 75-80 cy of soil was removed from the pit for disposal.

On 2/7 and 2/8/91 monitoring wells MW1-3 were installed at the site. TPH contamination was detected only in soil samples from MW2, the well within 10 feet of the former tank in the downgradient direction. The boring at 8.5-9' from MW-2 exhibited 2800 ppm TPHd, 600 ppm TPHg, and ND, 0.38, 0.76, 2.2 ppm BTEX respectively.

Groundwater monitoring occurred on 2/15/91 for MWs 1-3. Petroleum contamination was detected only in MW-2 which exhibited 5.5 mg/l TPHg, 1.3 mg/l TPHd and 6.4, 5.8, 81 and 16 ug/l BTEX, respectively. After determining groundwater gradient, MW-4 was installed on 4/3/91 further downgradient of MW-2. The soil samples from MW-4 (9-9.5') depth detected only 1.3 ppm TPHg and ND TPHd and BTEX.

After nearly four years of inactivity, the four wells were monitored on January 31, 1997 using the non-purge method and on February 10, 1997 using the pre-purge method. These results indicate that low levels of TPHg and TPHd remain in MW-2, and very little contamination elsewhere, supporting the belief that natural attenuation has occurred.

Site summary 1016 66th Ave.  
StID # 3685  
Page 2.

Unfortunately, reports for the early excavation activities were not produced, therefore, there are some questions and inconsistencies in the historical data. It is apparent, however, that approximately 75-80 cy of soil was excavated from beneath the former tank pit and 1500 gallons of water removed from the same pit. Considerable source contamination was, therefore, removed. Residual soil contamination, TPHg and TPHd remains in the area immediately downgradient of the tank pit but groundwater has not been significantly impacted.

Site closure is recommended for this low risk soil and groundwater site based upon:

1. Adequate site characterization;
2. Source removal; and
3. Absence of BTEX in soil and groundwater.

ssum1016



Print  
 Copy  
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LOG NO.: 8639  
 DATE SAMPLED: 5/4/90  
 DATE RECEIVED: 5/4/90  
 DATE EXTRACTED: 5/4/90  
 DATE ANALYZED: 5/5/90 and 5/7/90  
 DATE REPORTED: 5/8/90

CUSTOMER: R.S. Eagan and Company  
 REQUESTER: Jim Nichols  
 PROJECT: Firehouse 29

*original tank pull results*

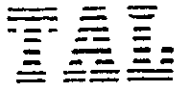
Sample Type: Soil

Method and Constituent	Units	No. 1		No. 2		3 Composite	
		Concentration	Detection Limit	Concentration	Detection Limit	Concentration	Detection Limit
DHS Method:							
Total Petroleum Hydrocarbons as Diesel	mg/kg	< 3.	3	240	20	910	20
Total Petroleum Hydrocarbons as Gasoline	mg/kg	< 0.7	0.7	< 0.7	0.7	< 0.7	0.7
Modified EPA Method 8020:							
Benzene	mg/kg	< 0.05	0.05	< 0.05	0.05	< 0.05	0.05
Toluene	mg/kg	< 0.05	0.05	< 0.05	0.05	< 0.05	0.05
Xylenes	mg/kg	< 0.2	0.2	< 0.2	0.2	< 0.2	0.2
Ethylbenzene	mg/kg	< 0.05	0.05	< 0.05	0.05	< 0.05	0.05

*Louis W. DuPuis*

Louis W. DuPuis  
 Quality Assurance/Quality Control Manager

MAY 15 10 57 AM '90  
 GENERAL SERVICES



LOG NO.: 8693  
 DATE SAMPLED: 5/18/90  
 DATE RECEIVED: 5/18/90  
 DATE EXTRACTED: 5/18/90  
 DATE ANALYZED: 5/18/90 and 5/19/90  
 DATE REPORTED: 5/21/90

CUSTOMER: R.S. Eagan and Company

*After overexcavation*

REQUESTER: Robert S. Eagan

PROJECT: No. 9-204, Firehouse No. 29, 1016 66th Avenue, Oakland, CA

<u>Method and Constituent</u>	<u>Units</u>	<u>Sample Type: Soil</u>	
		<u>Concentration</u>	<u>Detection Limit</u>
		Composite of No.2, No.3, No.4	
DHS Method:			
Total Petroleum Hydrocarbons as Diesel	mg/kg	1,600	3
Total Petroleum Hydrocarbons as Gasoline	mg/kg	3.5	0.7
Modified EPA Method 8020:			
Benzene	mg/kg	< 0.05	0.05
Toluene	mg/kg	< 0.06	0.06
Xylenes	mg/kg	< 0.2	0.2
Ethylbenzene	mg/kg	< 0.08	0.08

Firehouse #29  
1016 66th Avenue  
Oakland, CA

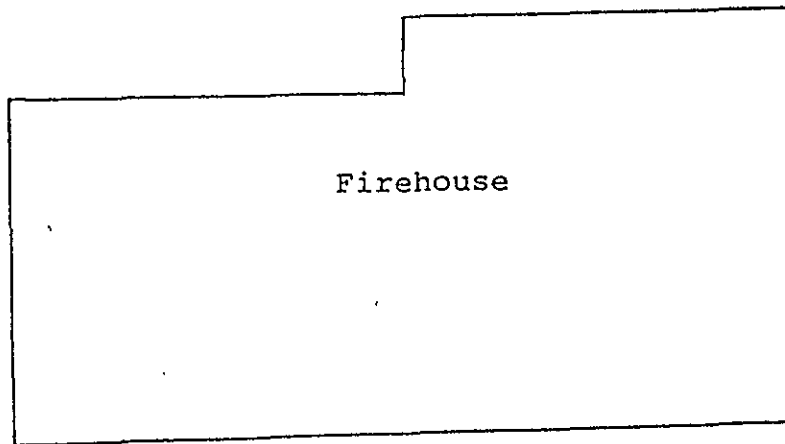


66th

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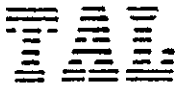
#2  
#1 #4  
#3

250 gallon diesel



Soil sample taken at the waterline, about 6.5' deep.


5/18/90



LOG NO.: 8675  
DATE SAMPLED: 5/15/90  
DATE RECEIVED: 5/15/90  
DATE ANALYZED: 5/16/90  
DATE REPORTED: 5/16/90

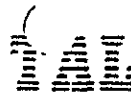
CUSTOMER: R.S. Eagan and Company *After overexcavation*  
REQUESTER: Bob Eagan  
PROJECT: No. 9.204, City of Oakland F.H. No. 29

Method and Constituent	Units	Sample Type: Soil			
		No.1 Stockpile		No.2 Tank Pit	
		Concen- tration	Detection Limit	Concen- tration	Detection Limit
DHS Method:					
Total Petroleum Hydro- carbons as Gasoline	mg/kg	< 0.7	0.7	< 0.7	0.7
Modified EPA Method 8020:					
Benzene	mg/kg	< 0.05	0.05	< 0.05	0.05
Toluene	mg/kg	< 0.06	0.06	< 0.06	0.06
Xylenes	mg/kg	< 0.2	0.2	< 0.2	0.2
Ethylbenzene	mg/kg	< 0.08	0.08	< 0.08	0.08

  
Louis W. DuPuis  
Quality Assurance/Quality Control Manager

RECEIVED  
MAY 20 1990

EAGAN & COMPANY



LOG NO.: 8693  
 DATE SAMPLED: 5/18/90  
 DATE RECEIVED: 5/18/90  
 DATE EXTRACTED: 5/18/90  
 DATE ANALYZED: 5/20/90 and 5/21/90  
 DATE REPORTED: 5/21/90  
 PAGE: Two *Grab SW*

Sample Type: Water

<u>Method and Constituent</u>	<u>Units</u>	<u>No. 1</u>	
		<u>Concen- tration</u>	<u>Detection Limit</u>
DHS Method:			
Total Petroleum Hydrocarbons as Diesel	mg/l	330	0.5
Total Petroleum Hydrocarbons as Gasoline	mg/l	1,500	1
Modified EPA Method 8020:			
Benzene	mg/l	< 0.2	0.2
Toluene	mg/l	< 0.1	0.1
Xylenes	mg/l	< 0.6	0.6
Ethylbenzene	mg/l	< 0.2	0.2

*Louis W. DuPuis*  
 \_\_\_\_\_  
 Louis W. DuPuis  
 Quality Assurance/Quality Control Manager



NET Pacific, Inc.

Client No: 495  
Client Name: Blymyer Engineers, Inc  
NET Log No: 6053

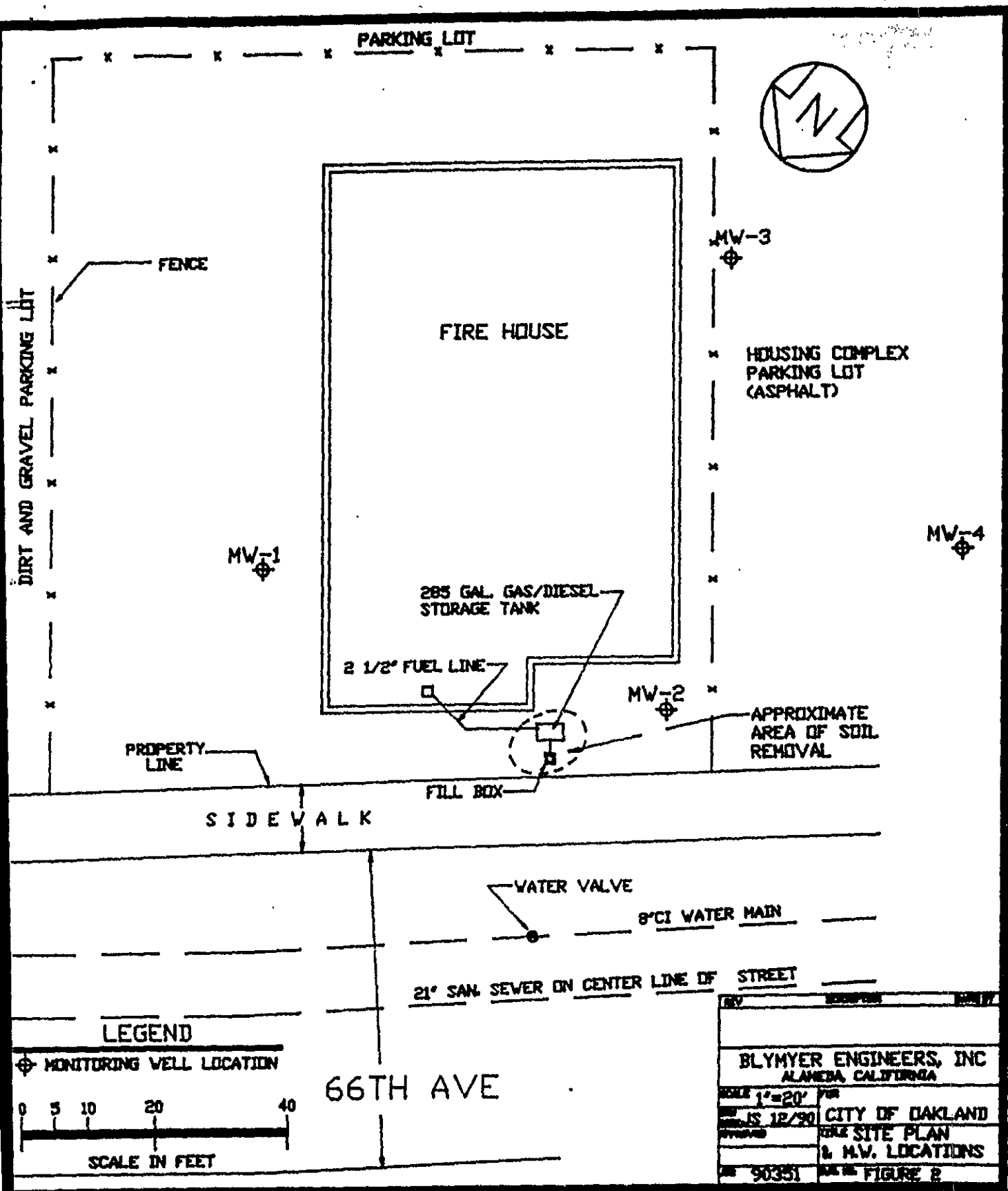
Date: 02-28-91

Page: 4

Ref: Oakland Firehouse No. 29, Project: 90351

Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	MW-2 5-5.5	MW-2 8.5-9	Units
			02-08-91 0900	02-08-91 0915	
			75624	75625	
PETROLEUM HYDROCARBONS					
VOLATILE (SOIL)			--	--	
DILUTION FACTOR *			1	100	
DATE ANALYZED			02-22-91	02-22-91	
METHOD GC FID/5030			--	--	
as Gasoline	1		ND	600	mg/Kg
METHOD 8020			--	--	
DILUTION FACTOR *			1	100	
DATE ANALYZED			02-22-91	02-22-91	
Benzene	2.5		ND	ND	ug/Kg
Ethylbenzene	2.5		ND	380	ug/Kg
Toluene	2.5		ND	760	ug/Kg
Xylenes, total	2.5		ND	2,200	ug/Kg
PETROLEUM HYDROCARBONS					
EXTRACTABLE (SOIL)			--	--	
DILUTION FACTOR *			1	100	
DATE EXTRACTED			02-20-91	02-20-91	
DATE ANALYZED			02-21-91	02-25-91	
METHOD GC FID/3550			--	--	
as Diesel	1		38	2,800	mg/Kg



⊕ MONITORING WELL LOCATION  
 0 5 10 20 40  
 SCALE IN FEET

66TH AVE

REV	DESCRIPTION	DATE
BLYMYER ENGINEERS, INC ALAMEDA, CALIFORNIA		
SCALE	1"=20'	FOR
DATE	IS 12/90	CITY OF OAKLAND
PROJECT	SITE PLAN & M.W. LOCATIONS	
NO	90351	SHEET FIGURE 2

**TABLE I. SUMMARY OF SOIL AND WATER SAMPLE ANALYTICAL RESULTS**  
 Oakland Firehouse No. 29, Oakland, California

Sample Identification		EPA Method 8020 (parts per billion)				Modified EPA Method 8015 (parts per million)	EPA Method 8015 (parts per million)
		Benzene	Toluene	Ethylbenzene	Xylenes	TPH as gasoline	TPH as diesel
MW1 5.5-6.0 feet bgs	Soil	<2.5	<2.5	<2.5	<2.5	<1	240
MW1 9.0-9.5 feet bgs		<2.5	<2.5	<2.5	<2.5	<1	33
MW2 5.0-5.5 feet bgs		<2.5	<2.5	<2.5	<2.5	<1	38
MW2 8.5-9.0 feet bgs		<2.5	380	760	2,200	600 ✓	2,800 ✓
MW3 5.0-5.5 feet bgs		<2.5	<2.5	<2.5	<2.5	<1	12
MW3 10.0-10.5 feet bgs		<2.5	<2.5	<2.5	<2.5	<1	13
MW4 5.5-6.0 feet bgs		<2.5	<2.5	<2.5	<2.5	<1	<1
MW4 9.0-9.5 feet bgs		<2.5	<2.5	<2.5	<2.5	1.3	<1
MW1	Water	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
MW2		6.4	81	5.8	16	<0.05	1.3
MW3		<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
MW4		<0.5	<0.5	<0.5	<0.5	<0.05	<0.05

2/5/91

4/2/91

TPH = Total Petroleum Hydrocarbons      bgs = below grade surface





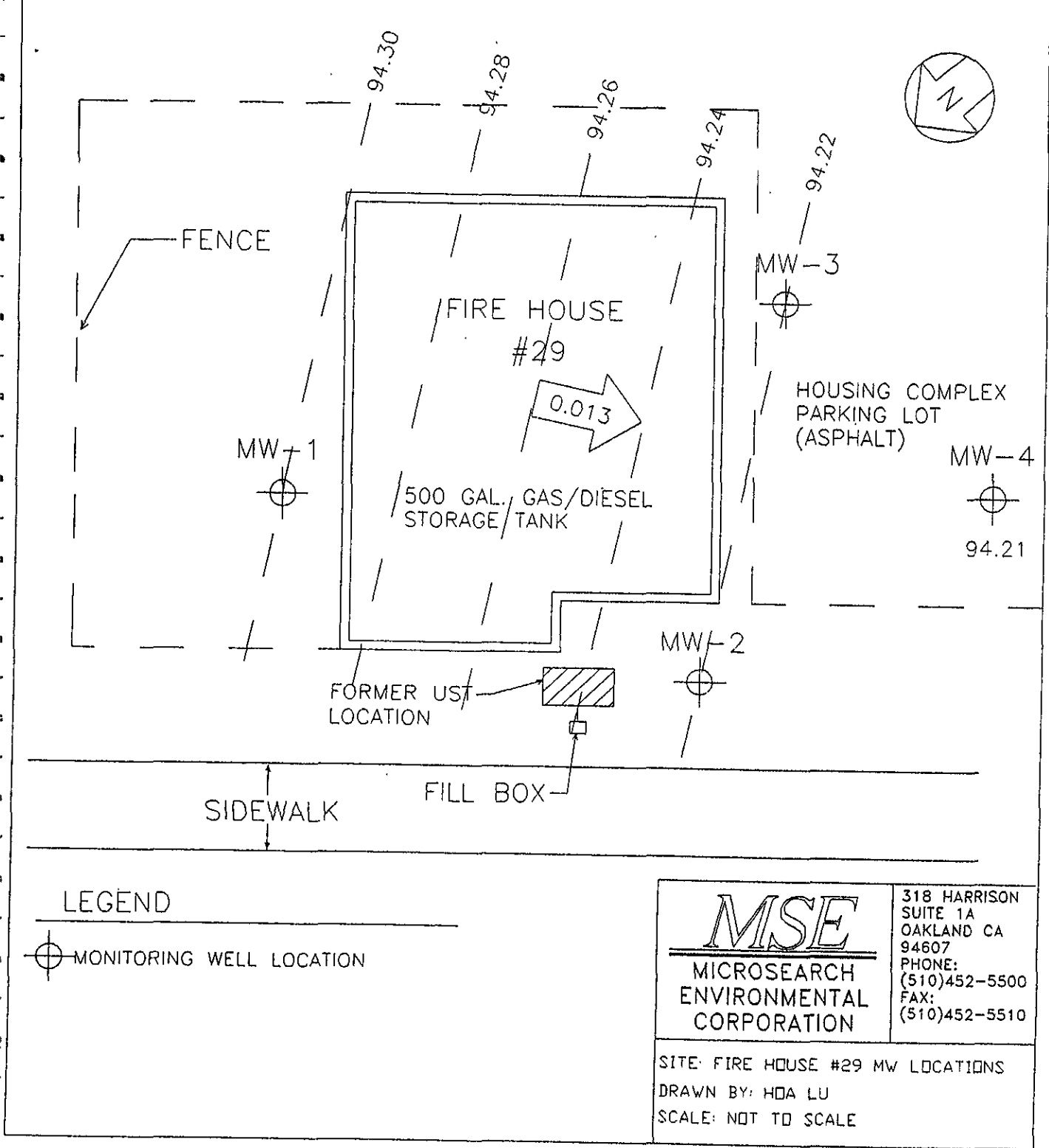


Figure 3  
 Groundwater Flow Direction Map  
 February 10, 1997

Table 2

Summary of Groundwater Laboratory analytical for Oakland Fire Station #29 on January 31, 1997

Analysis	Concentration unit	Detection Limit	Groundwater Sample ID		
			FIRE H#29- MW1	FIRE H#29- MW2	FIRE H#29- MW4
TPHd	µg/L	50	ND	160	ND
TPHg	µg/L	50	ND	ND	ND
BENZENE	µg/L	0.50	ND	ND	ND
TOLUENE	µg/L	0.50	ND	ND	ND
ETHYL BENZENE	µg/L	0.50	ND	ND	ND
XYLENES	µg/L	0.50	ND	ND	ND
MTBE	µg/L	5	ND	ND	ND

Summary of Groundwater Laboratory analyses for Oakland Fire Station #29 on February 10, 1997

Analysis	Concentration unit	Detection Limit	Groundwater Sample ID			
			FIRE H#29- MW1	FIRE H#29- MW2	FIRE H#29- MW3	FIRE H#29- MW4
TPHd	µg/L	50	88	320	ND	ND
TPHg	µg/L	50	ND	160	ND	ND
BENZENE	µg/L	0.50	ND	ND	ND	ND
TOLUENE	µg/L	0.50	ND	ND	ND	ND
ETHYL BENZENE	µg/L	0.50	ND	ND	ND	ND
XYLENES	µg/L	0.50	ND	ND	ND	ND
MTBE	µg/L	5	ND	ND	ND	ND

ND = Not Detected