ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

7 Wickham

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

September 1, 2005

Robert Snodgrass
Alameda County Fire Department
835 East 14th Street
San Leandro, CA 94577

Dear Mr. Snodgrass:

Subject: Fuel Leak Site Case Closure Alco Fire Station #4, 20336 San Miguel Avenue, Castro Valley, CA 94546; Case No. RO0002573

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with 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 Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

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

- Residual concentrations of up to 330 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons as gasoline and 90 mg/kg of total petroleum hydrocarbons as diesel remain in soil at the site.

- Residual concentrations of up to 110 micrograms per liter (µg/L) of total petroleum hydrocarbons as diesel remain in groundwater at the site.

If you have any questions, please call Jerry Wickham at (510) 567-6791. Thank you.

Sincerely,

Donna L. Drogos, P.E.
LOP and Toxics Program Manager

Enclosures:
1. Remedial Action Completion Certificate
2. Case Closure Summary

cc:

Ms. Cherie McCaulou (w/enc)
SF- Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Mr. Toru Okamoto (w/enc)
State Water Resources Control Board
UST Cleanup Fund
P.O. Box 944212
Sacramento, CA 94244-2120

Jerry Wickham (w/orig enc), D. Drogos (w/enc), R. Garcia (w/enc)

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September 1, 2005

Robert Snodgrass
Alameda County Fire Department
835 East 14th Street
San Leandro, CA 94577

REMEDIAL ACTION COMPLETION CERTIFICATE

Dear Mr. Snodgrass:

Subject: Fuel Leak Site Case Closure Alco Fire Station #4, 20336 San Miguel Avenue, Castro Valley, CA 94546; Case No. RO0002573

This letter confirms the completion of a site investigation and remedial action for the underground storage tank(s) formerly located at 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 storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung
Director
Alameda County Environmental Health

CASE CLOSURE SUMMARY
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM

I. AGENCY INFORMATION

Date: July 22, 2005

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6791
Responsible Staff Person: Jerry Wickham	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Alco Fire Station #4		
Site Facility Address: 20336 San Miguel Avenue, Castro Valley, CA 94546		
RB Case No.: --	Local Case No.: --	LOP Case No.: RO0002573
URF Filing Date: 03/06/2003	SWEEPS No.: ---	APN: 084A-0112-017-02

Responsible Parties	Addresses	Phone Numbers
Robert Snodgrass Alameda County Fire Department	835 E. 14th Street San Leandro, CA 94577	510-693-3438

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	1,000	Diesel fuel	Closed in place	05/19/2003
Piping			Vents closed in place; dispensers and fittings removed	05/19/2003

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown		
Site characterization complete? Yes	Date Approved By Oversight Agency: -----	
Monitoring wells installed? No	Number: --	Proper screened interval? --
Highest GW Depth Below Ground Surface: 6 feet	Lowest Depth: 15 feet	Flow Direction: Inferred to southwest based on site topography
Most Sensitive Current Use: Potential drinking water source.		

Summary of Production Wells in Vicinity:
No domestic, irrigation, municipal, or industrial wells were found within a 2,00-foot radius of the site based on a well search conducted by Alameda County Public Works Agency.

Are drinking water wells affected? No	Aquifer Name: Castro Valley Basin
Is surface water affected? No	Nearest SW Name: Unnamed creek 2,640 feet east (cross gradient) from site
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	1 UST	Filling in place with concrete slurry	05/19/2003
Piping	Not reported	Removed	05/19/2003
Free Product	None	--	--
Soil	Not reported	--	--
Groundwater	Not reported	--	--

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP
(Please see Attachments 1 through 4 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	330	330	<50	<50
TPH (Diesel)	90	90	110/85*	110/85*
Oil & Grease	--	--	--	--
Benzene	<0.005	<0.005	<0.5	<0.5
Toluene	<0.005	<0.005	0.53	0.53
Ethylbenzene	<0.005	<0.005	<0.5	<0.5
Xylenes	<0.005	<0.005	0.56	0.56
Heavy Metals	--	--	--	--
MTBE *	<0.005	<0.005	<5**	<5**
Other (8240/8270)	--	--	--	--

* Result after silica gel cleanup
**MTBE; <1 ppb; TBA: <10,000 ppb; TAME: <500 ppb; DIPE: <500 ppb; ETBE: <500 ppb; EBD and EDC not analyzed.

Site History and Description of Corrective Actions:
In preparation to close-in-place a 1,000 gallon underground storage tank (UST) located east of Alameda County Fire Station #4, one soil boring was advanced adjacent to the UST. One soil sample was collected from a depth of approximately 1 to 3 feet below the tank invert. Total petroleum hydrocarbons as gasoline (TPHg) and TPH as diesel (TPHd) was detected in the soil sample at concentrations of 300 and 90 ppm, respectively. The UST, which is adjacent to the fire station building, was closed in place by filling with a concrete slurry on May 19, 2003.

A limited subsurface investigation was conducted at the site on January 6, 2004. Four soil borings were advanced to a depth of approximately 15 feet below grade (fbg). A total of eight soil samples and four grab groundwater samples were collected from the four borings. The soil samples were analyzed for TPHg, TPHd, benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tert-butyl ether (MTBE). All soil results were less than laboratory reporting limits. TPHg, benzene, and MTBE were not detected in any of the four grab groundwater samples. TPHd was detected at concentrations of 110 and 72 ppb in two groundwater samples and not detected in the remaining two groundwater samples

IV: CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes No		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes No		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.		
Site Management Requirements: None		
Should corrective action be reviewed if land use changes? No		
Was a deed restriction or deed notification filed? No		Date Recorded: --
Monitoring Wells Decommissioned: No wells installed	Number Decommissioned: --	Number Retained: --
List Enforcement Actions Taken: None.		
List Enforcement Actions Rescinded: None.		

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:
During the most recent subsurface investigation of the site, all chemicals of concern for the site were not detected or were detected at concentrations less than Tier 1 environmental screening levels for residential land use and current or potential use of groundwater as drinking water established in "Screening for Environmental Concerns with Sites with Contaminated Soil and Groundwater," (February 2005).

Conclusion:
Alameda County Environmental Health staff believe that the low levels of residual contamination at the site do not pose a significant threat to water resources, public health and safety, and the environment based upon the information in our files to date. No further investigation or cleanup is necessary. ACEH staff recommend case closure for this site.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Jerry Wickham	Title: Hazardous Materials Specialist
Signature: Jerry Wickham	Date: 07/22/2005
Approved by: Dorine L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: Dorine L. Drogos	Date: 07/27/05

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

VII. REGIONAL BOARD NOTIFICATION

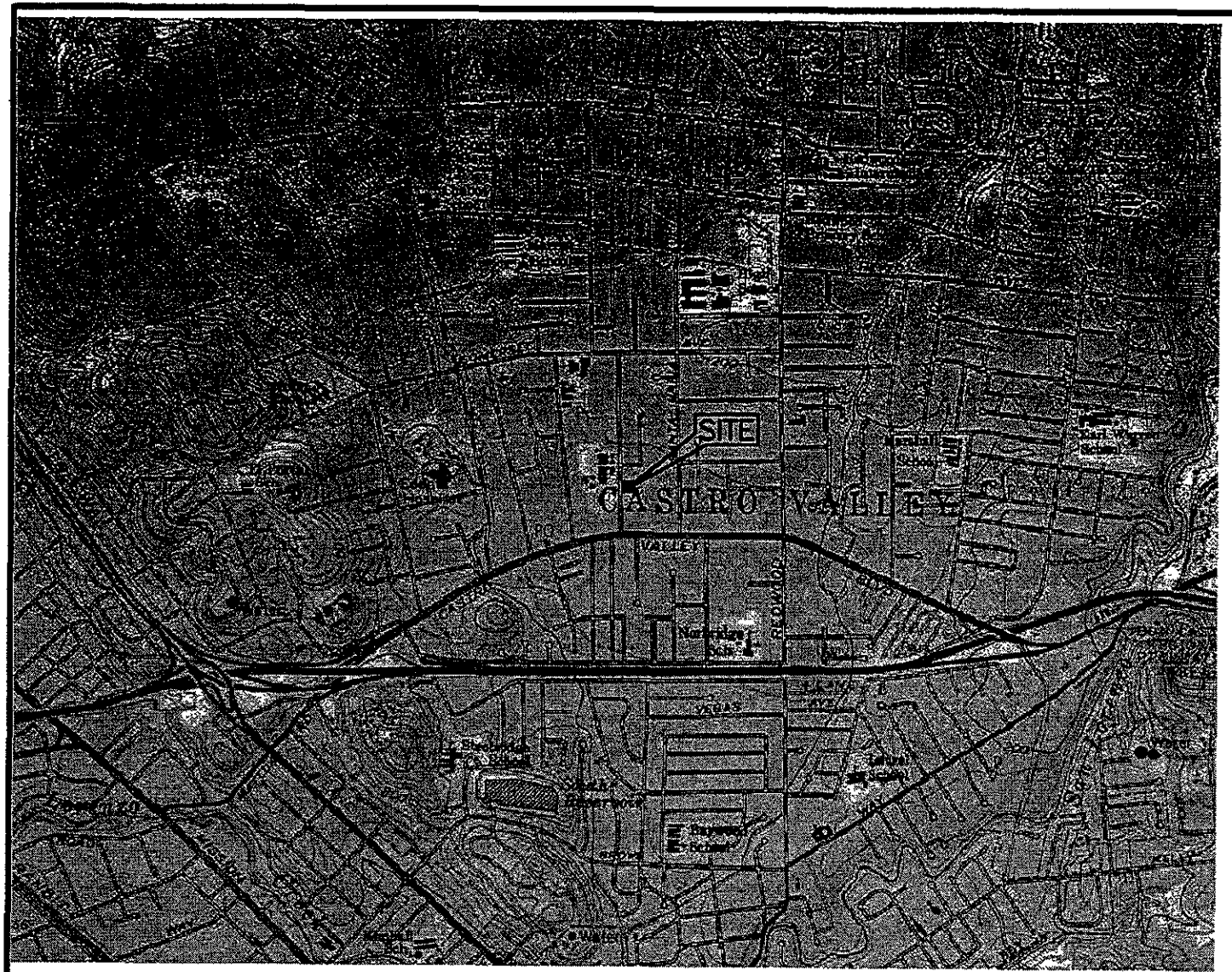
Regional Board Staff Name: Cherie McCaulou	Title: Associate Water Resources Control Engineer
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB: July 28, 2005
Signature: Cherie McCaulou	Date: 8/3/05

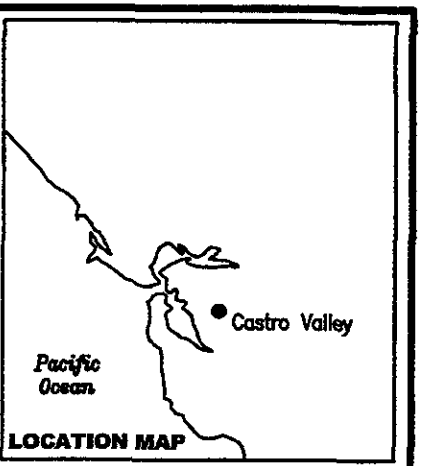
VIII. MONITORING WELL DECOMMISSIONING

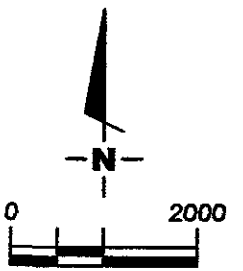
Date Requested by ACEH: --	Date of Well Decommissioning Report: --	
All Monitoring Wells Decommissioned: N/A	Number Decommissioned: --	Number Retained: --
Reason Wells Retained: No wells on site.		
Additional requirements for submittal of groundwater data from retained wells:		
ACEH Concurrence - Signature:		Date:

Attachments:
1. Site Vicinity Map
2. Site Plans (2 pages)
3. Soil Analytical Data (2 pages)
4. Groundwater Analytical Data (2 pages)
5. Boring Logs (4 pages)

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.







Source: National Geographic California Seamless USGS Topographic Maps on CD-ROM.

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6747 Sierra Ct., Suite J
Dublin, CA 94568 (925) 551-7555

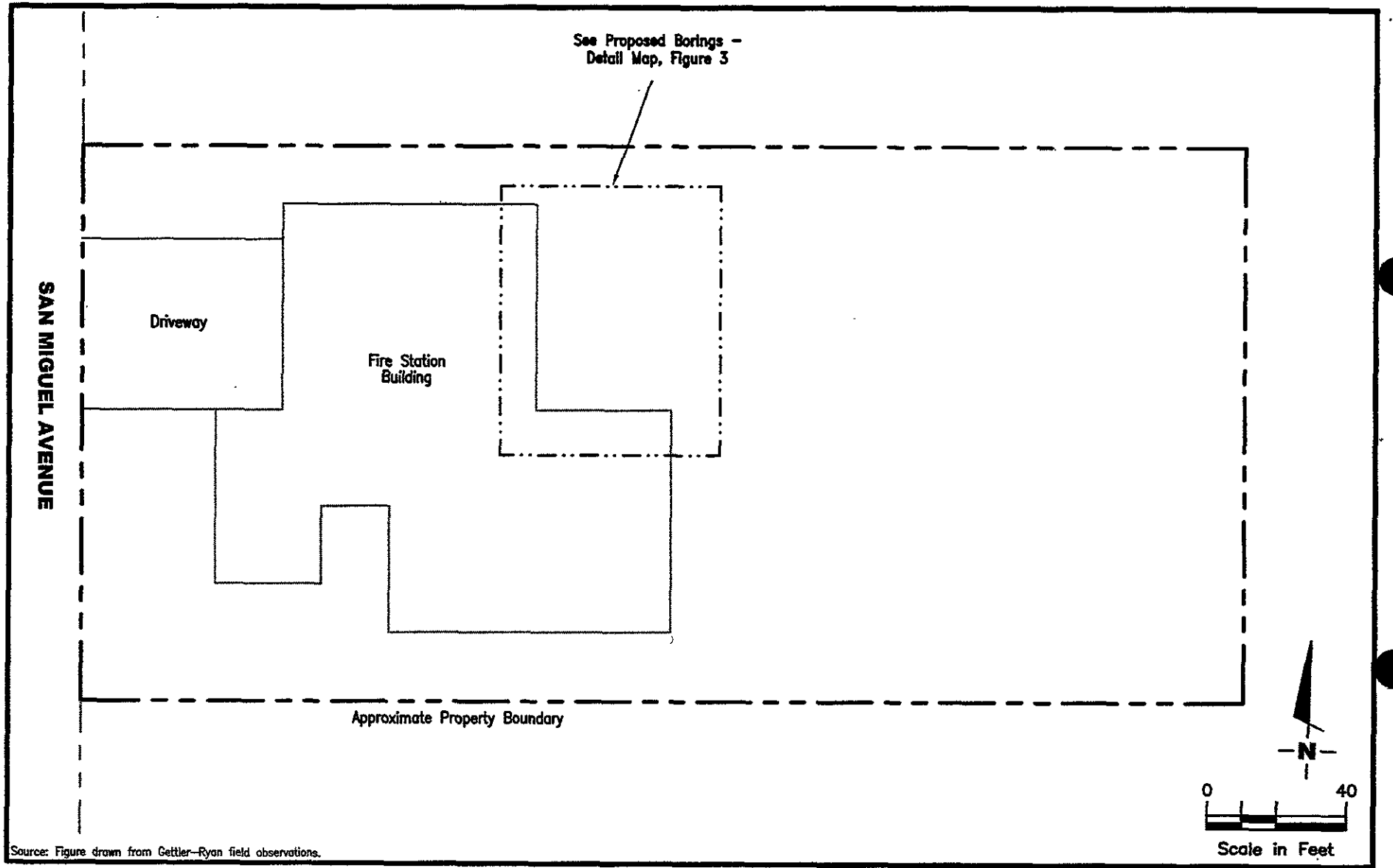
VICINITY MAP
Alameda County Fire Department – Station #4
20336 San Miquel Avenue
Castro Valley, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
948207		11/03	

FILE NAME: P:\ENVIRO\ALAMEDA\FIRE DEPT\STATION 4\VIC-4.DWG | Layout Tab: Vic Map

ATTACHMENT 1



Source: Figure drawn from Gettler–Ryan field observations.

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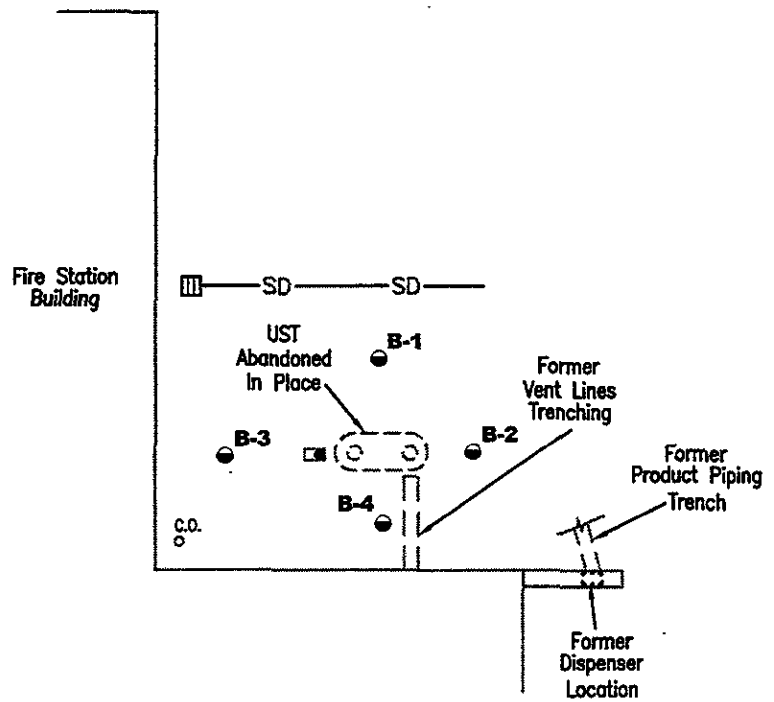
EXTENDED SITE PLAN
Alameda County Fire Department – Station #4
20336 San Miquel Avenue
Castro Valley, California

FIGURE 2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
948207.1		11/03	

FILE NAME: P:\ENVRO\ALAMEDA\FIRE DEPT\STATION 4\A03–4.DWG | Layout Tab: Work Plan 11–03

ATTACHMENT 2



EXPLANATION

- Soil sample collected 2/13/03
- Geoprobe boring
- Storm drain
- C.O. Sanitary sewer cleanout

UNDERGROUND UTILITIES

—SD— Storm drain

N

0 20

Scale in Feet

Source: Figure drawn from Gettler-Ryan field observations.

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SITE PLAN - DETAIL MAP
Alameda County Fire Department - Station #4
20336 San Miquel Avenue
Castro Valley, California

FIGURE 3

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
948207.1		1/04	

FILE NAME: P:\ENVIRO\ALAMEDA\FIRE DEPT\STATION 4\A03-4.DWG | Layout Tab: Detail 1-04

ATTACHMENT 2

Table 1
Soil Chemical Analytical Results
Alamada County Fire Department Station #4
20336 San Miguel Avenue
Castro Valley, California

Sample ID	Sample Depth (ft)	Sample Date	TPHg (ppm)	TPHd (ppm)	B (ppm)	T (ppm)	E (ppm)	X (ppm)	MtBE (ppm)
B1-10	10	1/6/04	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B1-16	16	1/6/04	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B2-10	10	1/6/04	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B2-16	16	1/6/04	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B3-10	10	1/6/04	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B3-15	15	1/6/04	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B4-10	10	1/6/04	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B4-16	16	1/6/04	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Explanation:

ft = feet
ppm = parts per million
NA = Not Analyzed
TPHg = Total Petroleum Hydrocarbons as gasoline
TPHd = Total Petroleum Hydrocarbons as diesel
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total xylenes
MtBE = Methyl tert-butyl ether

Analytical Laboratory:
Kiff Analytical LLC (ELAP# 2236)

Analytical Methods:
TPHg/BTEX/MtBE by EPA Method 8260B
TPHd by EPA Method 8015 Modified

TPH Gasoline in Soil

Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
12062	San Miguel	TPH/Gasoline	330	50

Date Sampled: 02/13/03
Date Received: 02/13/02
Date Analyzed: 02/14/03
Method: EPA 8015M
QC Batch #: 3224

Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
[illegible]	Villa Real	TPH/Gasoline	ND	1.0

Date Sampled: 02/13/03
Date Received: 02/13/02
Date Analyzed: 02/14/03
Method: EPA 8015M
QC Batch #: 3224

TPH Diesel in Soil

Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
12062	San Miguel	TPH/Diesel	90 ①	5.0

Date Sampled: 02/13/03
Date Received: 02/13/03
Date Extracted: 02/13/03
Date Analyzed: 02/14/03
QC Batch #: 3218
Method: EPA 3550/8015M

Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
[illegible]	Villa Real	TPH/Diesel	ND	5.0

Date Sampled: 02/13/03
Date Received: 02/13/03
Date Extracted: 02/13/03
Date Analyzed: 02/14/03
QC Batch #: 3218
Method: EPA 3550/8015M

① The sample chromatogram does not exhibit a pattern characteristic of diesel. Higher boiling point constituents of weathered gasoline are present in the early boiling point range associated with diesel.

Lab Project #: 3021302

CA Lab Accreditation #: 2303

ATTACHMENT 3

Table 2
Groundwater Chemical Analytical Results
Alamada County Fire Department Station #4
20336 San Miguel Avenue
Castro Valley, California

Sample ID	Sample Date	TPHg (ppb)	TPHd (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MtBE (ppb)
B-1	1/6/04	<50	110/85[1]	<0.50	0.53	<0.50	0.56	<5.0
B-2	1/6/04	<50	<50	<0.50	<0.50	<0.50	<0.50	<5.0
B-3	1/6/04	<50	72/<50[1]	<0.50	<0.50	<0.50	0.56	<5.0
B-4	1/6/04	<50	<50	<0.50	<0.50	<0.50	0.51	<5.0

Explanation:

ft = feet
ppb = parts per billion
NA = Not Analyzed
TPHg = Total Petroleum Hydrocarbons as gasoline
TPHd = Total Petroleum Hydrocarbons as diesel
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total xylenes
MtBE = Methyl tert-butyl ether

Analytical Laboratory:
Kiff Analytical LLC (ELAP# 2236)

Analytical Methods:
TPHg/BTEX/MtBE by EPA Method 8260B
TPHd by EPA Method 8015 Modified

Notes:
[1] Result after silica gel cleanup

Volatile Hydrocarbons by GC/MS In Water

Lab #	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
12062	San Miguel	benzene	ND ②	500
		toluene	ND	500
		ethyl benzene	ND	500
		m,p-xylene	ND	500
		o-xylene	ND	500
		Oxygenated Gasoline Additives		
		tert-butyl alcohol (TBA)	ND	10,000
		methyl tert-butyl ether (MTBE)	ND	500
		di-isopropyl ether (DIPE)	ND	500
		ethyl tert-butyl ether (ETBE)	ND	500
		tert-amyl methyl ether (TAME)	ND	500

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)	19.2*	96.0	70 – 130
toluene-d_8 (20)	19.6	98.0	70 – 130
4-bromofluorobenzene (20)	20.4	102	70 – 130

Date Sampled: 02/13/03
Date Received: 02/13/03
Date Analyzed: 02/14/03
Method: EPA 8260B
QC Batch #: 3214

② A dilution was necessary due to the presence of significant amounts of non-target hydrocarbons.

Lab Project #: 3021302

CA Lab Accreditation #. 2303

ATTACHMENT 4

Gettler-Ryan, Inc.

Log of Boring B-1

PROJECT: *Alameda County Fire Deptartment Station #4*	LOCATION: *20336 San Miguel Avenue, Castro Valley, CA*
GR PROJECT NO.: *948207.1*	SURFACE ELEVATION:
DATE STARTED: *01/06/04*	WL (ft. bgs): *15* DATE: *01/06/04* TIME: *09:27*
DATE FINISHED: *01/06/04*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. Geoprobe (direct push)*	TOTAL DEPTH: *16 feet*
DRILLING COMPANY: *Vironex Drilling*	GEOLOGIST: *Geoffrey Risse*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Concrete – 6 inches thick.	
						Gravel – 6 inches thick.	
					CL	CLAY WITH SILT (CL) – dark brown (7.5YR 3/2), moist, low plasticity; 80% clay, 15% silt, 5% fine sand.	Boring backfilled with neat cement from the bottom to ground surface.
3							
	0	B1-5				At 5 feet color changes to brown (7.5YR 4/2).	
6							
						CLAY WITH SAND (CL) – brown (7.5YR 4/2), moist; 80% clay, 15% fine sand, 5% silt.	
9							
	0	B1-10					
12							
						▽	
15	0	B1-16 B-1			SM	SILTY SAND (SM) – brown (7.5YR 4/2), saturated; 80% fine to medium sand, 20% silt.	Grab groundwater sample B-1.
						Bottom of boring at 16 feet bgs.	
18							
21							

JOB NUMBER: *948207.1*

ATTACHMENT 5

Gettler-Ryan, Inc.

Log of Boring B-2

PROJECT: *Alameda County Fire Deptartment Station #4*	LOCATION: *20336 San Miguel Avenue, Castro Valley, CA*
GR PROJECT NO. : *948207.1*	SURFACE ELEVATION:
DATE STARTED: *01/06/04*	WL (ft. bgs): *6.5* DATE: *01/06/04* TIME: *10:10*
DATE FINISHED: *01/06/04*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. Geoprobe (direct push)*	TOTAL DEPTH: *16 feet*
DRILLING COMPANY: *Vironex Drilling*	GEOLOGIST: *Geoffrey Risse*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Concrete – 8 inches thick.	
						Gravel – 6 inches thick.	Boring backfilled with neat cement from the bottom to ground surface.
3					CL	CLAY (CL) – black (7.5YR 2.5/1), moist; 90% clay, 10% silt.	
					SM	SILTY SAND (SM) – very dark brown (7.5YR 2.5/3), moist; 80% fine to medium sand, 20% silt.	
6	0	B2-5				▽	
					CL	CLAY (CL) – gray (7.5YR 6/1), saturated; 80% clay, 10% silt, 10% fine sand.	
9							
	0	B2-10					
12							
15	0	B2-16 B-2			SC	CLAYEY SAND (SC) – brown (7.5YR 4/3), saturated; 80% fine to medium sand, 20% clay.	Grab groundwater sample B-2.
						Bottom of boring at 16 feet bgs.	
18							
21							

JOB NUMBER: *948207.1*

ATTACHMENT 5

Gettler-Ryan, Inc.

Log of Boring B-3

PROJECT: *Alameda County Fire Deptartment Station #4*	LOCATION: *20336 San Miguel Avenue, Castro Valley, CA*
GR PROJECT NO. : *948207.1*	SURFACE ELEVATION:
DATE STARTED: *01/06/04*	WL (ft. bgs): *11* DATE: *01/06/04* TIME: *10:55*
DATE FINISHED: *01/06/04*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. Geoprobe (direct push)*	TOTAL DEPTH: *15 feet*
DRILLING COMPANY: *Vironex Drilling*	GEOLOGIST: *Geoffrey Risse*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Concrete – 6 inches thick.	
						Gravel – 6 inches thick.	
					CL	CLAY (CL) – black (7.5YR 2.5/1), moist; 90% clay, 10% silt.	Boring backfilled with neat cement from the bottom to ground surface.
3							
	0	B3-5				CLAY WITH SAND (CL) – brown (7.5YR 4/2), moist; 80% clay, 20% fine sand.	
6							
9							
	0	B3-10				▽ Color changes to brown (7.5YR 4/3), becomes saturated; 70% clay, 30% fine sand.	
12					SC	CLAYEY SAND (SC) – brown (7.5YR 4/4), saturated; 80% fine to medium sand, 20% clay.	
	0	B3-15 B-3					Grab groundwater sample B-3.
15						*Bottom of boring at 15 feet bgs.*	
18							
21							

JOB NUMBER: *948207.1*

ATTACHMENT 5

Gettler-Ryan, Inc.

Log of Boring B-4

PROJECT: *Alameda County Fire Deptartment Station #4*	LOCATION: *20336 San Miguel Avenue, Castro Valley, CA*
GR PROJECT NO. : *948207.1*	SURFACE ELEVATION:
DATE STARTED: *01/06/04*	WL (ft. bgs): *12* DATE: *01/06/04* TIME: *11:45*
DATE FINISHED: *01/06/04*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. Geoprobe (direct push)*	TOTAL DEPTH: *16 feet*
DRILLING COMPANY: *Vironex Drilling*	GEOLOGIST: *Geoffrey Risse*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Concrete – 6 inches thick.	
						Gravel – 6 inches thick.	
					CL	CLAY (CL) – black (7.5YR 2.5/1), moist; 90% clay, 10% silt.	Boring backfilled with neat cement from the bottom to ground surface.
3							
						CLAY WITH SAND (CL) – brown (7.5YR 4/2), moist; 85% clay, 15% fine sand.	
	0	B4-6					
6							
9							
	0	B4-10					
12						▽ Becomes saturated.	
15	0	B4-16 B-4			SC	CLAYEY SAND (SC) – brown (7.5YR 4/4), saturated; 80% fine to medium sand, 20% clay.	Grab groundwater sample B-4.
						Bottom of boring at 16 feet bgs.	
18							
21							

JOB NUMBER: *948207.1*

ATTACHMENT 5