

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



January 5, 2009

Mr. Brian Tulloch
Tulloch Construction
3428 Ettie Street
Oakland, CA 94608

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

Subject: Subject: Fuel Leak Case, RO0000128, Global ID T0600101390, Tulloch Construction, 3428 Ettie Street, Oakland, CA 94608

Dear Mr. Tulloch:

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.

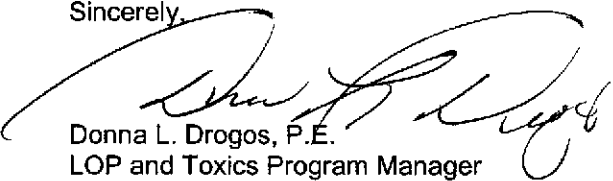
SITE INVESTIGATION AND CLEANUP SUMMARY

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

- Residual pollution remaining in soil beneath the site includes 19 milligrams per kilogram TPH as diesel in soil and 0.6 micrograms per liter toluene in water.
- If site use changes, to residential or other more conservative use, ACEH needs to be notified and the case needs to be reevaluated.
- Case closure is only for the three USTs on-site and does not cover the gasoline AST.
- No EDB or EDC analysis has been performed.

If you have any questions, please call Barbara Jakub at (510) 639-1287. Thank you.

Sincerely,


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

Enclosures:

1. Remedial Action Completion Certificate
2. Case Closure Summary

Mr. Brian Tulloch
January 5, 2008
Page 2

cc:

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

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

Leroy Griffin
Oakland Fire Department
250 Frank H. Ogawa Plaza
Ste. 3341, Oakland
CA 94612-2032

Barbara Jakub (w/orig enc), D. Drogos (w/enc), R. Garcia (w/enc)

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January 5, 2009

Mr. Brian Tulloch
Tulloch Construction
3428 Ettie Street
Oakland, CA 94608

REMEDIAL ACTION COMPLETION CERTIFICATE

Subject: Subject: Fuel Leak Case, RO0000128, Tulloch Construction, 3428 Ettie Street, Oakland, CA

Dear Mr. Tulloch:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks 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,


Ariu Levi
Director
Alameda County Environmental Health

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

I. AGENCY INFORMATION

Date: August 28, 2008

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 639-1287
Responsible Staff Person: Barbara Jakub	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Tulloch Construction, Inc		
Site Facility Address: 3428 Ettie St, Oakland, CA 94608		
RB Case No.: 01-1506	Local Case No.: 3699	LOP Case No.: RO0000128
URF Filing Date: ---	Geotracker ID: T0600101390	APN: 007-0607-019-02
Responsible Parties	Addresses	Phone Numbers
John Tulloch, Tulloch Construction, Inc	3428 Ettie St., Oakland, CA 94608-4018	
William Wendland	3428 Ettie St., Oakland, CA 94608-4018	

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	500	Unleaded gasoline	Removed	5/16/1990
2	500	Regular gasoline	Removed	5/16/1990
3	4,000	Diesel	Removed	3/3/1998
	Piping			

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Suspected overflow as per inspector's notes. No contamination or odor observed in tank pits.		
Site characterization complete? Yes	Date Approved By Oversight Agency: ----	
Monitoring wells installed? Yes	Number: 1	Proper screened interval? Yes
Highest GW Depth Below Ground Surface: 8.57'	Lowest Depth: 12.45'	Flow Direction: East ¹
Most Sensitive Current Use: Potential drinking water source.		

Summary of Production Wells in Vicinity: A well survey was not conducted. Considering the non-migratory residual concentrations of dissolved phase petroleum hydrocarbons in groundwater that is confined to the primary source areas at the Site, no water wells, deeper drinking water aquifers, surface water or other sensitive receptors are likely to be impacted. Therefore, it appears likely that the contaminant plume does not extend beyond the subject property and a well survey does not appear warranted.	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest SW Name: SF Bay
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health and City of Oakland Fire Services

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	1 4,000-gallon diesel 2 500-gallon gasoline	Disposal, Erickson Disposal, H&H Ship Service	3/3/1998 Not reported
Piping	----	----	----
Free Product	----	----	----
Soil	108 cubic yards 100 cubic yards	Disposal, Vasco Rd. Landfill Disposal, East Bay Rubbish Disposal	6/5/1991 10/15 – 10/23, 1990
Groundwater	----	----	----

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

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	<0.7 ¹	<0.7 ¹	<50 ²	<50 ²
TPH (Diesel)	19 ³	19 ³	5,700 ³	<1000 ⁴
Oil and Grease	Not analyzed	Not analyzed	Not analyzed	Not analyzed
Benzene	<0.05 ¹	<0.05 ¹	<0.5 ²	<0.5 ²
Toluene	<0.06 ¹	<0.06 ¹	0.6 ²	0.6 ²
Ethylbenzene	<0.08 ¹	<0.08 ¹	<0.5 ²	<0.5 ²
Xylenes	<0.2 ¹	<0.2 ¹	<0.5 ²	<0.5 ²
Organic Lead	<1 ¹	<1 ¹	Not analyzed	Not analyzed
MTBE	Not analyzed	Not analyzed	Not analyzed	<1 ⁵
Other (8240/8270)	Not analyzed	Not analyzed	Not analyzed	Not analyzed

1 Sampled from excavation floor May 16, 1990

2 Sampled June 11, 1992

3 Sampled March 3, 1998

4 Sampled from groundwater March 30, 1998

5 Sampled from groundwater February 16, 2000 (<1 ppb MTBE, TAME, ETBE, DIPE, and TBA.)

Site History and Description of Corrective Actions:

On May 16, 1990, a site visit discovered two 550-gallon gasoline underground storage tanks that had been excavated but still on-site. The tanks were removed without oversight by Alameda County Environmental Health or the Oakland Fire Dept. No obvious holes were observed in the tanks. The tanks were disposed of by H&H Ship Service.

Grab soil samples were collected from the center of each tank pit. No TPHg or BTEX was detected at or above reporting limits.

May 16, 1990, Compositated stockpile soil samples contained 1300 ppm TPHg and 11 ppm benzene.

In July 1990, contaminated soil being aerated off-site in a residential neighborhood generated a complaint. The stockpiled soil was then sampled on August 15, 1990 for TPHg and BTEX. TPHg was detected at 2 ppm.

On June 5, 1992, a boring was drilled less than 10 feet from the former tank pit (to the east based on groundwater flow direction from 3425 Ettie Street) and converted into a monitoring well. An on-site organic vapor meter screened soil samples, none of which generated a reading of above 1 ppm. No soil samples were submitted to the laboratory. Well screen is between 12 and 32 feet bgs with sand to 10 ft bgs. Screen is submerged some of the time.

On March 3, 1998, the 4,000-gallon diesel underground storage tank was removed. No holes were observed upon excavation. Soil sampling detected up to 19 ppm TPH-D and a grab groundwater sample showed up to 5,700 ppb TPHd. The tank pit water was resampled on March 30, 1998. No TPHd was detected above the reporting limit of 1,000 µg/L. However, the tank pit was not reported to have been covered and it rained 2.5 inches in March.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
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: Case closure for the fuel leak site is granted for commercial land use. If a change in land use to residential or other conservative scenario occurs at this property, Alameda County Environmental Health must be notified and the case needs to be re-evaluated. This site is to be entered into the City of Oakland Permit Tracking System due to the residual contamination posing a nuisance for subsurface work.		
Should corrective action be reviewed if land use changes? Yes		
Was a deed restriction or deed notification filed? No		Date Recorded: --
Monitoring Wells Decommissioned: No	Number Decommissioned: 0	Number Retained: 1
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: --		

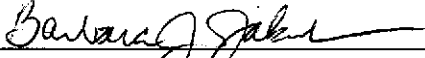
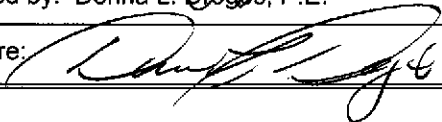
V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:
 Case closure granted for commercial land use.
 EDB and EDC were not analyzed at this site.
 The monitoring well was not redeveloped during the 2000 sampling event.
 This closure is only for the three USTs discussed in this case closure summary and does not cover the gasoline AST reported on the northern portion of the site nor does it cover the other areas of hazardous materials storage or use. Those areas were not investigated and are not part of this closure.
 Monitoring well was not redeveloped before the MTBE sample was collected, and no filed notes were present with the data that indicated the well was purged.

Conclusions:

This closure is for the two 500-gallon gasoline and one 4,000-gallon diesel USTs only. Other areas of hazardous materials storage or use were not investigated and are not part of this closure. This closure does not include a reported gasoline UST that is shown on Figure 3 but not included in any of the consultants' reports or investigations.
 Alameda County Environmental Health staff believes that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment based upon the information available in our files to date and the current commercial land use. No further investigation or cleanup is necessary. ACEH staff recommends case closure for this site.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Barbara Jakub	Title: Hazardous Materials Specialist
Signature: 	Date: 8/28/08
Approved by: Donna L. Droogs, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: 	Date: 08/28/08

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: Engineering Geologist
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB: 8/28/08
Signature: <i>Cherie McCaulou</i>	Date: 9/12/08

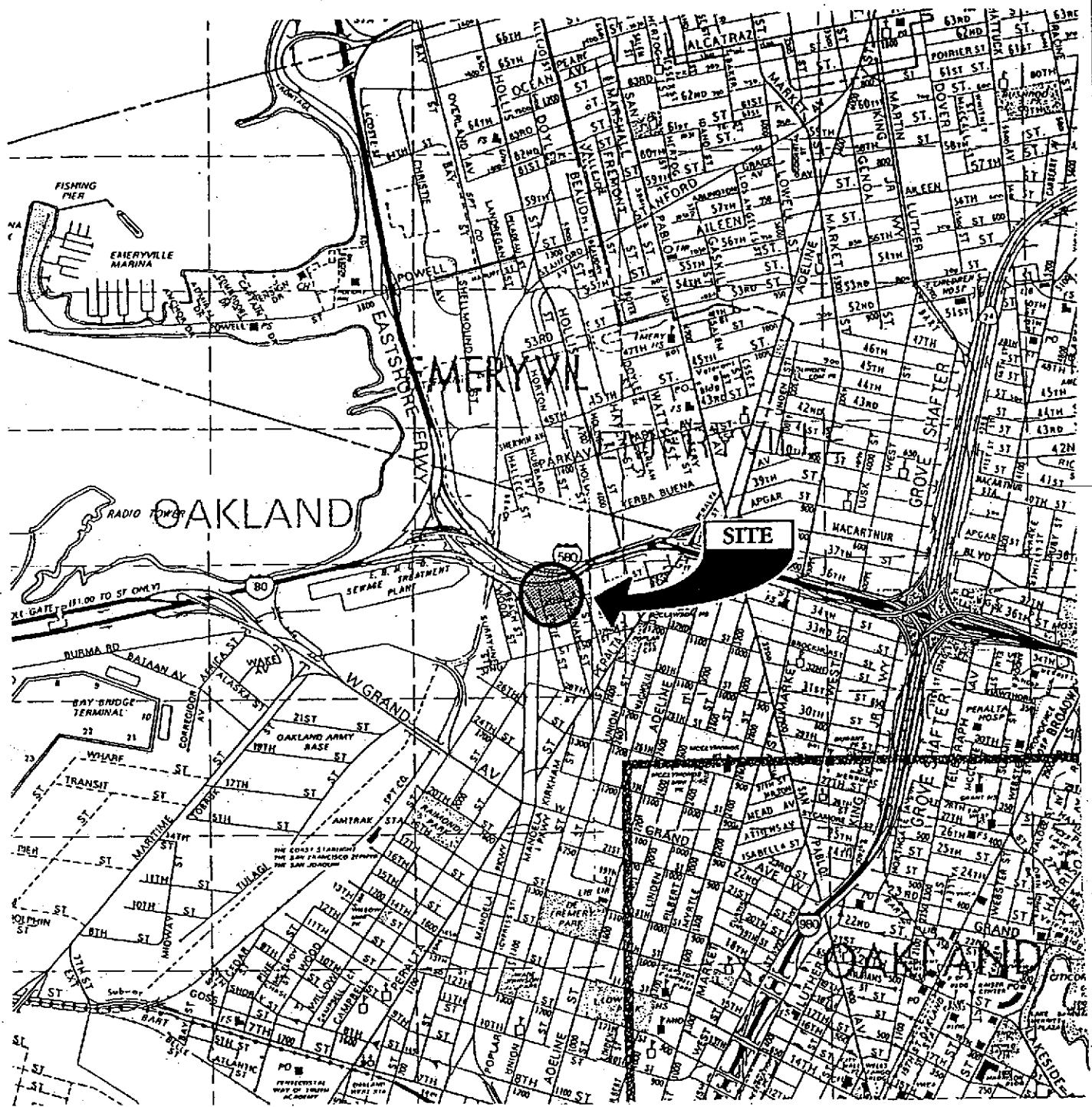
VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: 9/27/2000	Date of Well Decommissioning Report: 10/22/08	
All Monitoring Wells Decommissioned: <input checked="" type="checkbox"/>	Number Decommissioned: 1	Number Retained: 0
Reason Wells Retained: NA		
Additional requirements for submittal of groundwater data from retained wells: -		
ACEH Concurrence - Signature: <i>Barbara J. [Signature]</i>		Date: 1/5/09

Attachments:

1. Site Vicinity Map (pp A-1)
2. Site Plans (pps. A-2, A-3)
3. Soil Analytical Data from 1990 UST Removal (pps. A-5, A-6)
4. Soil Analytical Data from 1998 UST Removal (pp. A-7)
5. Groundwater Analytical Data and Depth to Water (pps. A-8; A-11)
6. Boring Logs (pps. A-12, A-13)

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.



"Reproduced with permission granted by THOMAS BROS. MAPS."

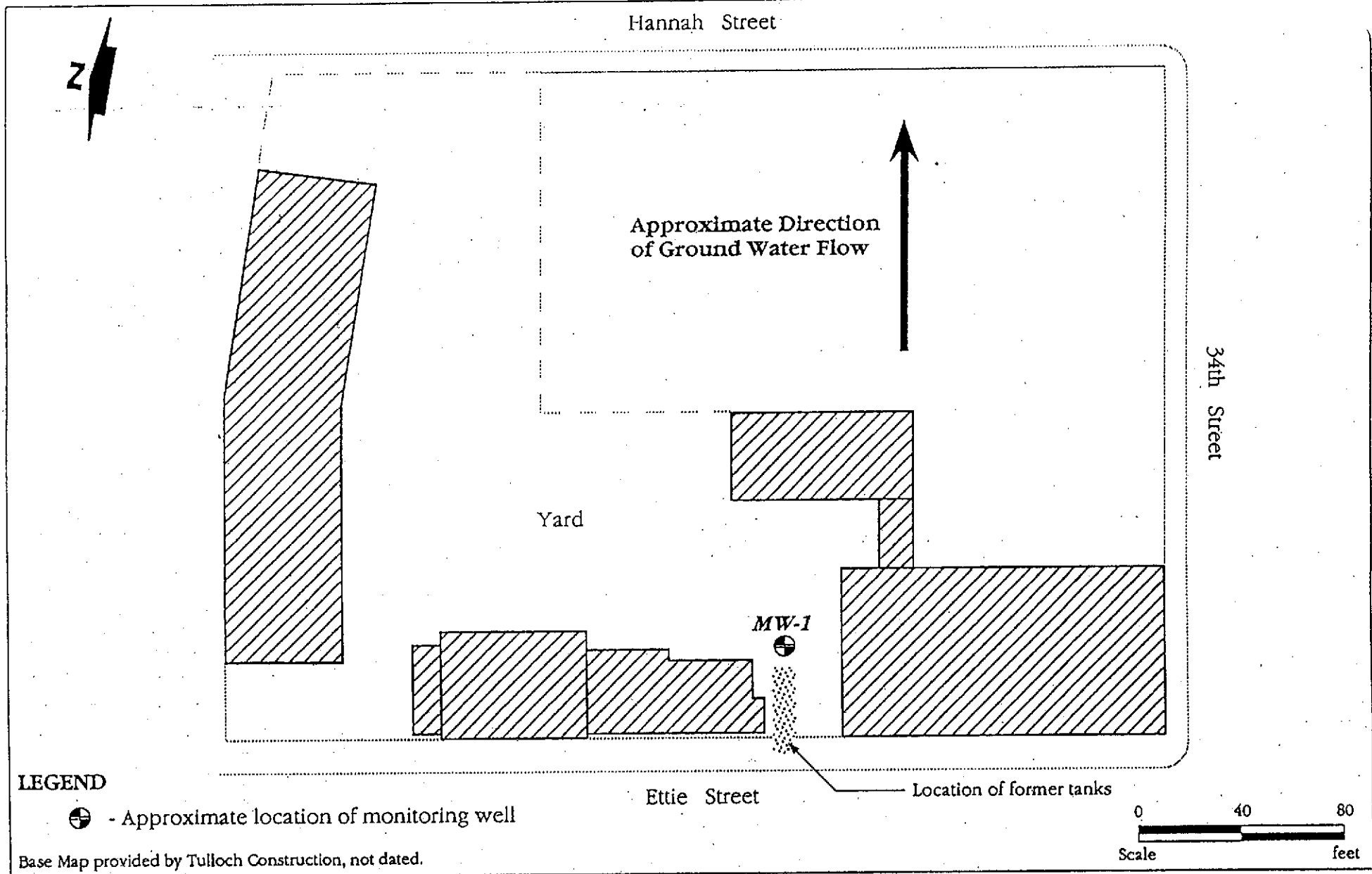
517-19, 6/9 SF:JC

VICINITY MAP
 TULLOCH CONSTRUCTION YARD
 Oakland, California

LOVNEY ASSOCIATES
 Environmental/Geotechnical/Engineering Services

FIGURE 1
 517-19, February 1993

ATTACHMENT 1



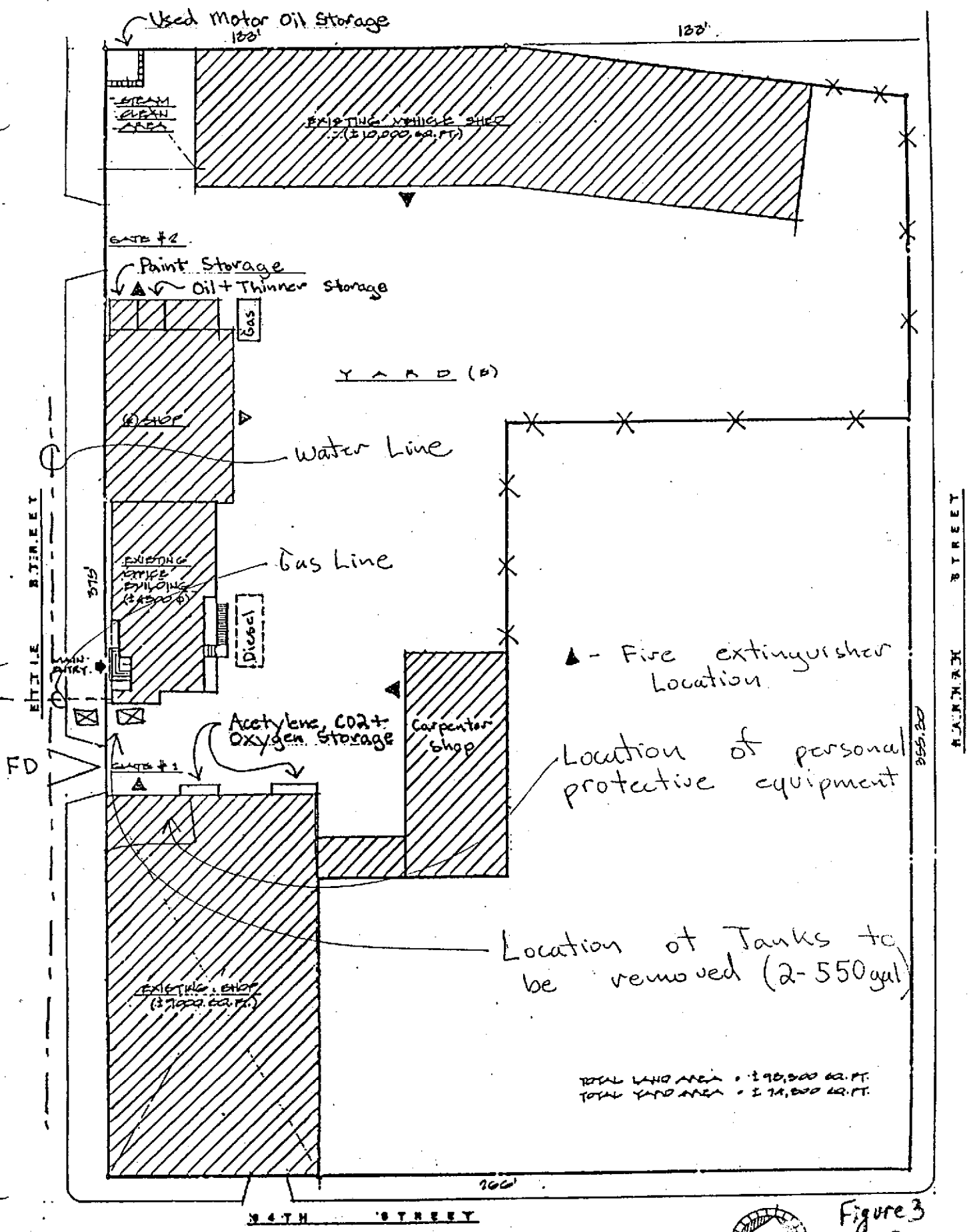
517-19,00 SF/JC

SITE PLAN

TULLOCH CONSTRUCTION YARD
Oakland, California

LOVNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 2
517-19, June 1992



Used Motor Oil Storage
133'

133'

STEAM CLEAN AREA

EXISTING VEHICLE SHOP
(15,000 SQ. FT.)

GATE #2

Paint Storage
Oil + Thinner Storage

Gas

YARD (B)

Water Line

Gas Line

EXISTING WARE BUILDING
(3,300 SQ. FT.)

Diesel

Acetylene, CO2 + Oxygen Storage

Carpenter Shop

▲ - Fire extinguisher Location

Location of personal protective equipment

Location of Tanks to be removed (2-550 gal)

EXISTING SHOP
(3,700 SQ. FT.)

TOTAL LAND AREA = 190,000 SQ. FT.
TOTAL YARD AREA = 174,000 SQ. FT.

100'

4TH STREET

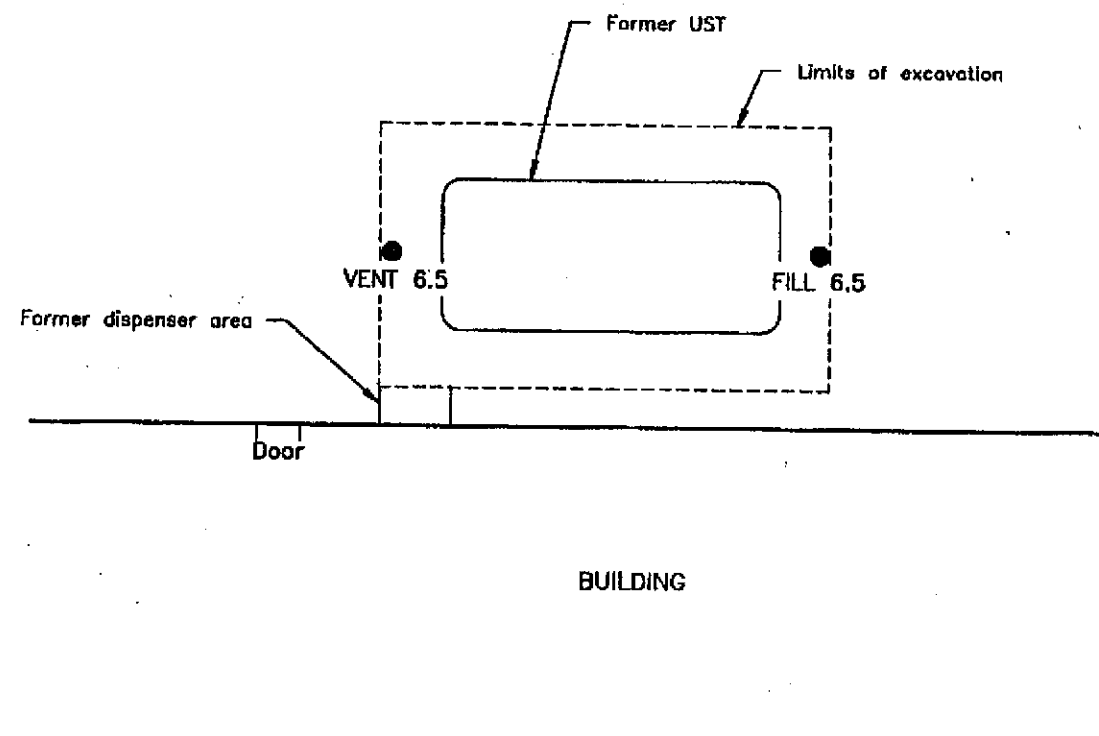
5TH STREET

HANCOCK STREET

SITE PLAN



Figure 3
A-3



LEGEND

● - Approximate location of soil sample



SITE DETAIL MAP
TULLOCH YARD UST REMOVAL
Oakland, California

LOVNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 3
817-34

Figure 3
A-4

4/28/03

VAPOR SCIENCES CORP.
 3065 ATLAS Rd.
 SUITE 109A
 RICHMOND, CA.
 94806

Tel: (415) 524 0827
 FAX: (415) 223 9782

June 8, 1990

Tulloch Construction Inc.
 3428 Ettie Street
 Oakland, Ca. 94608

Attn: William Wendland

Sampled: 5/16/90
 Analyzed: 5/22/90 - 5/31/90

Site: 3428 Ettie Street Grab Samples from Excavation 9.5'B/D

Laboratory: TRACE ANALYSIS
 Log Number: 8690

METHOD	SAMPLE TYPE:	
	SAMPLE #1.	SOIL #2. ALL CONCENTRATIONS ppm
DHS-TPH GASOLINE	ND	ND
EPA 8020 BENZENE	ND	ND
TOLUENE	ND	ND
XYLENES	ND	ND
ETHYL BENZENE	ND	ND
DHS Method Organic Lead	ND	N/A

ND = NOT DETECTED N/A = NOT ANALYZED

DETECTION LIMITS

TPH = 0.7 BENZENE = 0.05 TOLUENE = 0.06 XYLENES = 0.2
 ETHYL BENZENE = 0.08 Organic Lead = 1.0

Robert O'Neill
 R. S. O'Neill Vapor Science

VAPOR SCIENCES CORP.
 3065 ATLAS Rd.
 SUITE 109A
 RICHMOND, CA.
 94806

Tel: (415) 524 0827
 FAX: (415) 223 9782

June 8, 1990

Tulloch Construction Inc.
 3428 Ettie Street
 Oakland, Ca. 94608

Attn: William Wendland

Sampled: 5/16/90
 Analyzed: 5/22/90 - 5/31/90

Site: 3430 Hannah Street Composite Samples 3/1
 (Excavated Soil)
 Laboratory: TRACE ANALYSIS
 Log Number: 8689

METHOD	SAMPLE TYPE:		ALL CONCENTRATIONS ppm
	SAMPLE #A.	SOIL #B.	
DHS-TPH GASOLINE	0.91	1,300	
EPA 8020 BENZENE	ND	14	
TOLUENE	ND	170	
XYLENES	ND	310	
ETHYL BENZENE	ND	47	
DHS Method Organic Lead	ND	ND	

ND = NOT DETECTED

DETECTION LIMITS

TPH = 0.7/3 BENZENE = 0.05/0.2 TOLUENE = 0.06/0.2 XYLENES =
 0.2/1 ETHYL BENZENE = 0.08/0.3

Robert O'Neill
 R. S. O'Neill Vapor Science

signs of leakage were observed. The tank was then transported by Ecology Control Industries / Erickson, Inc. for disposal at their facility in Richmond, California. Copies of the waste manifest and disposal certificate for the tank are included in Appendix A.

Verification soil sampling was conducted under the direction of Mr. Leroy Griffin. Mr. Griffin's site inspection report regarding the tank removal is included in Appendix A. Two soil samples (Vent 6 1/2 and Fill 6 1/2) were collected from the native soil in the excavation sidewalls, approximately 6 1/2 feet below grade, at both ends of the tank. No soil sample was required by Mr. Griffin from beneath the former fuel dispenser since it was located at the east end of the UST. Native soil at the site consisted of dark gray and black, silty clay. Sampling locations are presented on Figure 3.

The soil samples were analyzed for total petroleum hydrocarbons (TPH) as diesel (TPHd) (EPA Test Method 8015M); benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Test Method 8020). Laboratory Analytical results are presented in Table 1 below.

2.3 Confirmation Soil Sampling

2.3.1 Laboratory Analyses

TABLE 1. Analytical Results of Confirmation Soil Samples
(concentrations in ppm)

Sample	TPH Diesel	Benzene	Toluene	Ethylbenzene	Xylenes
Vent 6 1/2	19	< 0.005	< 0.005	< 0.005	< 0.005
Fill 6 1/2	< 1.0	< 0.005	< 0.005	< 0.005	< 0.005
Composite of SS-1,2,3,4	< 1.0	< 0.005	< 0.005	< 0.005	< 0.005

< Not detected above specified laboratory detection limit

TABLE 2. Analytical Results of Water Sample
(concentrations in ppb)

Sample	Date	TPH Diesel	Benzene	Toluene	Ethylbenzene	Xylenes
GW-1	3/3/98	5700	< 0.5	< 0.5	< 0.5	< 0.5
GW-2	3/30/98	< 50	< 0.5	< 0.5	< 0.5	< 0.5

< Not detected above specified laboratory detection limit.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Upon removal, the UST was observed to be in good condition with no holes or deteriorated areas. Laboratory analysis of two verification soil samples collected from the excavation sidewalls detected only low concentrations of TPHd (19 ppm) in the soil sample collected from the north end (vent end) of the UST at a depth of approximately 6 ½ feet. No BTEX compounds were detected above the laboratory detection limits in either of the two samples collected.

Laboratory analysis of the ponded water collected from the UST excavation on March 3, 1998, detected 5700 ppb TPHd. Resampling of the ponded water on March 30, 1998, did not detect TPHd or BTEX compounds above the laboratory detection limits.

Based on the field and analytical data, the soil and groundwater beneath the UST do not appear to be significantly impacted. No further work appears to be required at this time.

TABLE 2. Summary of Ground Water Chemical Analysis
Tulloch Construction Yard
Oakland, California
 (concentration in ppb)

Well	Date	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
MW-1	June 11, 1992	<50	<0.50	0.60	<0.50	<0.50
MW-1	September 16, 1992	<50	<0.50	<0.50	<0.50	1.3
MW-1	December 30, 1992	<50	<0.50	<0.50	<0.50	<0.50
MW-1	March 24, 1993	<50	<0.50	<0.50	<0.50	<0.50
Laboratory Detection Limit		50	0.50	0.50	0.50	0.50
State Action Level ¹		NE	NE	100	NE	NE
Primary Drinking Water Standard ²		NE	1.0	1,000 ³	680	1,750

1. Taken from column 4, "Organic Constituents, Water Quality Goals - Human Health and Welfare" in A Compilation of Water Quality Goals, RWQCB, May 1989.
 2. Taken from Column 1 "Organic Constituents, Water Quality Goals - Human Health and Welfare" in A Compilation of Water Quality Goals, RWQCB, May 1989.
 3. Taken from "Region 9, Environmental Protection Agency, Drinking Water Standards and Health Advisory Table," EPA, August 1991.
- NE Not Established

As presented in Table 2, for the fourth consecutive quarter, total petroleum hydro-carbons as gasoline, benzene, and ethylbenzene were not detected in the on-site monitoring well. Concentrations of petroleum fuel compounds detected in the ground water during the first and second quarterly sampling events were slightly above detection limits and were greater than three orders of magnitude lower (less than 1/1,000th) than drinking water standards. Toluene and xylene were not detected during the last two quarterly sampling rounds. Since these data indicate that the former gasoline storage tanks did not significantly impact ground water at the site, in our opinion, further monitoring is not warranted and case closure should be granted at this time.

Conclusions and Recommendations

located at 3425 Ettie Street (Alameda County Department of Environmental Health [ACDEH], March 31, 1992,) (see Appendix C). According to the ACDEH, this data is sufficient to characterize the ground water flow direction in the vicinity of the site. Measured ground water elevations from the on-site monitoring well, MW-1, are presented in Table 1. Ground water elevation data from the previous sampling round is included for comparison.

TABLE 1. Depth to Ground Water in On-Site Well
Tulloch Construction Yard
Oakland, California

	Depth (feet)
June 11, 1992	11.75
September 15, 1992	12.45
December 30, 1992	9.29
March 24, 1993	8.57

During the March sampling round, ground water from monitoring well MW-1 was sampled and analyzed. As presented below in Table 2, laboratory analysis did not detect total petroleum hydrocarbons as gasoline, benzene, toluene, ethylbenzene, or xylene above laboratory detection limits. Analytical results from the previous sampling event are also presented in Table 2.

Ground Water Quality



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

Ceres Associates 5040 Commercial Circle, Ste F Concord, CA 94520	Client Project ID: #CA693-1	Date Sampled: 02/16/00
		Date Received: 02/16/00
	Client Contact: Craig Hiatt	Date Extracted: 02/18/00
	Client P.O:	Date Analyzed: 02/18/00

Methyl tert-Butyl Ether *

EPA method 8260 modified

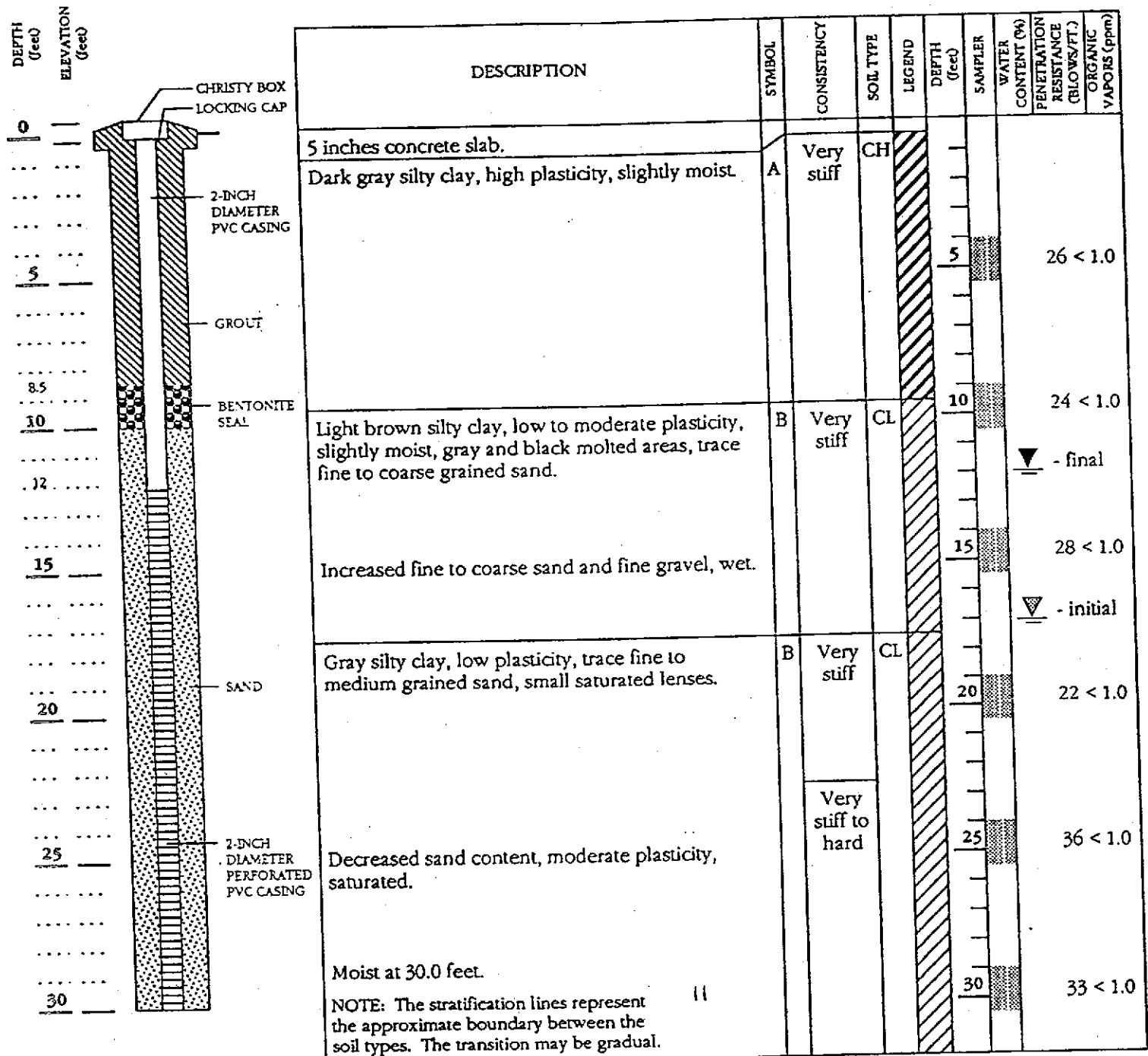
Lab ID	Client ID	Matrix	MTBE*	% Recovery Surrogate
31250	MW-1	W	ND	111
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	1.0 ug/L		
	S	5.0 ug/kg		

* water samples are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe and all TCLP / STLC / SPLP extracts in ug/L
h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) sample diluted due to high organic content

DHS Certification No. 1644

 Edward Hamilton, Lab Director

A-11



517-19,69 SF JC

MONITORING WELL LOG - MW-1
TULLOCH CONSTRUCTION YARD
Oakland, California

DRILL RIG: CME-75

SURFACE ELEVATION: -

LOGGED BY: SF

DEPTH TO GROUNDWATER: Not encountered

BORING DIAMETER: 8 inch

DATE DRILLED: 6/5/92

DEPTH (feet) ELEVATION (feet)

30

32

34

35

35.5

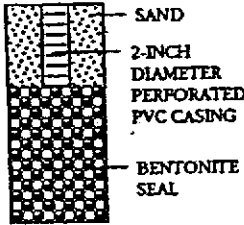
40

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DESCRIPTION	SYMBOL	CONSISTENCY	SOIL TYPE	LEGEND	DEPTH (feet)	SAMPLER	WATER CONTENT (%)	PENETRATION RESISTANCE (BLOWS/FT.)	ORGANIC VAPORS (ppm)
Gray silty clay (continued)	B	Very stiff to hard	CL	[Hatched Pattern]				33 < 1.0	
Moist at 35.0 feet.		Very stiff			35			25 < 1.0	
Bottom of Boring = 35.5 feet Completed Well Depth = 32.0 feet									
					40				
					45				
					50				
					55				
					60				

NOTE: The stratification lines represent the approximate boundary between the soil types. The transition may be gradual.

517-19,6/9 SF JC

MONITORING WELL LOG - MW-1
TULLOCH CONSTRUCTION YARD
Oakland, California