ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

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

February 27, 2014

Site Administrator
Moose Lodge #324
690 Hegenberger Road
Oakland, CA 94621

Subject: Case Closure for Fuel Leak Case No. RO0000105 and GeoTracker Global ID T0600102239, Moose Lodge #324, 690 Hegenberger Road, Oakland, CA 94621

Dear Responsible Party:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25296.10[g]). 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. This case closure letter and the case closure summary can also be viewed on the State Water Resources Control Board's Geotracker website (http://geotracker.swrcb.ca.gov) and the Alameda County Environmental Health website (http://www.acgov.org/aceh/index.htm).

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

Sincerely,

Dilan Roe, P.E.
LOP and SCP Program Manager

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

Cc w/enc.: Leroy Griffin, Oakland Fire Department 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 (sent via electronic mail to lgriffin@oaklandnet.com)

Jerry Wickham, ACEH (*Sent via E-mail to: jerry.wickham@acgov.org*)
Efile, GeoTracker

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
OFFICE OF THE DIRECTOR
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502
(510) 567-6777
FAX (510) 337-9135

REMEDIAL ACTION COMPLETION CERTIFICATION

February 27, 2014

Site Administrator
Moose Lodge #324
690 Hegenberger Road
Oakland, CA 94621

Subject: Case Closure for Fuel Leak Case No. RO0000105 and GeoTracker Global ID T0600102239, Moose Lodge #324, 690 Hegenberger Road, Oakland, CA 94621

Dear Responsible Party:

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 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

Please be aware that claims for reimbursement of corrective action costs submitted to the Underground Storage Tank Cleanup Fund more than 365 days after the date of this letter or issuance or activation of the Fund's Letter of Commitment, whichever occurs later, will not be reimbursed unless one of the following exceptions applies:

- Claims are submitted pursuant to Section 25299.57, subdivision (k) (reopened UST case); or
- Submission within the timeframe was beyond the claimant's reasonable control, ongoing work is required for closure that will result in the submission of claims beyond that time period, or that under the circumstances of the case, it would be unreasonable or inequitable to impose the 365-day time period.

This notice is issued pursuant to subdivision (g) of Section 25296.10 of the Health and Safety Code. Please contact our office if you have any questions regarding this matter.

Sincerely,

Ariu Levi
Director

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

I. AGENCY INFORMATION

Date: February 13, 2014

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: Senior Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Moose Lodge #324		
Site Facility Address: 690 Hegenberger Road, Oakland, CA 94621		
RB Case No.: 01-2430	STiD No.: 5506	LOP Case No.: RO0000105
URF Filing Date: ---	Geotracker ID: T0600102239	APN: 42-4318-3
Current Land Use: Commercial land use		

Responsible Parties	Addresses	Phone Numbers
Site Administrator Moose Lodge #324	690 Hegenberger Road Oakland, CA 94621	No phone number

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
----	10,000 gallons	Gasoline	Removed	8/21/1995
Piping			Removed	8/21/1995

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Release from underground storage tank (UST) system.		
Site characterization complete? ----		
Monitoring wells installed? No	Number: 0	Proper screened interval? ----
Highest GW Depth Below Ground Surface: 17 feet bgs	Lowest Depth: 17 feet bgs	Flow Direction: Flow direction not measured for site. Regional groundwater flow is to the west.
Most Sensitive Current Groundwater Use: Potential drinking water source		

Summary of Production Wells in Vicinity: The nearest water supply well is an industrial water supply well located approximately 350 feet east of the site at the AB&I Foundry. The well was previously used by AB&I Foundry as a source for process (cooling) water for plant operations in conjunction with East Bay Municipal District (EBMUD) water. The well is 495 feet deep and is completed from 176 to 495 feet bgs. The on-site water supply well is sampled periodically for the Groundwater Ambient Monitoring and Assessment (GAMA) program implemented by the State Water Resource Control Board in coordination with the U.S. Geological Survey and Lawrence Livermore National Laboratory. Groundwater samples collected from the on-site water supply well in June 2007 contained low concentrations (<2 ppb) of PCE, TCE, and cis-1,2-DCE. No plume has been identified for the site. Therefore, the industrial water supply well at the AB&I Foundry Based is not expected to be a receptor for the site.

The Fitchburg well group, which historically consisted of about 20 municipal supply wells, was apparently located approximately 300 feet southwest of the site. The precise locations and the methods used for decommissioning the Fitchburg group are unknown. No other water supply wells have been identified within 1,000 feet of the site.

Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest Surface Water Name: Elmhurst Creek is approximately 170 feet south (presumed cross gradient) of the site
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
Free Product	----	----	----
Soil	60 cubic yards	Soil was stockpiled for re-use on-site. Soil was to be capped with concrete or pavement.	----
Groundwater	----	----	----

LTCP GROUNDWATER SPECIFIC CRITERIA						
LTCP Groundwater Specific Scenario under which case was closed: Scenario 5						
Site Data			LTCP Scenario 1 Criteria (ppb)	LTCP Scenario 2 Criteria (ppb)	LTCP Scenario 3 Criteria (ppb)	LTCP Scenario 4 Criteria (ppb)
Plume Length	No plume *		<100 feet	<250 feet	<250 feet	<1,000 feet
Free Product	No free product		No free product	No free product	Removed to maximum extent practicable	No free product
Plume Stable or Decreasing	No plume *		Stable or decreasing	Stable or decreasing	Stable or decreasing for minimum of 5 Years	Stable or decreasing
Distance to Nearest Water Supply Well	350 feet		>250 feet	>1,000 feet	>1,000 feet	>1,000 feet
Distance to Nearest Surface Water and Direction	170 feet cross gradient		>250 feet	>1,000 feet	>1,000 feet	>1,000 feet
Property Owner Willing to Accept a Land Use Restriction?	Not Applicable		Not applicable	Not applicable	Yes	Not applicable
GROUNDWATER CONCENTRATIONS						
Constituent	Historic Site Maximum (ppb)	Current Site Maximum (ppb)	LTCP Scenario 1 Criteria (ppb)	LTCP Scenario 2 Criteria (ppb)	LTCP Scenario 3 Criteria (ppb)	LTCP Scenario 4 Criteria (ppb)
Benzene	<0.5	<0.5	No criteria	3,000	No criteria	1,000
MTBE	<0.5	<0.5	No criteria	1,000	No criteria	1,000
Scenario 5: If the site does not meet scenarios 1 through 4, has a determination been made that under current and reasonably expected future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame?			Yes			

Notes:

* No groundwater contamination was detected in the only grab groundwater sample collected from the site.

LTCP VAPOR SPECIFIC CRITERIA							
LTCP Vapor Specific Scenario under which case was closed: Scenario 3A							
Active Fueling Station	No						
Site Data		LTCP Scenario 1 Criteria	LTCP Scenario 2 Criteria	LTCP Scenario 3A Criteria	LTCP Scenario 3B Criteria	LTCP Scenario 3C Criteria	LTCP Scenario 4 Criteria
Unweathered NAPL	No NAPL	LNAPL in groundwater	LNAPL in soil	No NAPL	No NAPL	No NAPL	No criteria
Thickness of Bioattenuation Zone Beneath Foundation	>5 feet	≥30 feet	≥30 feet	≥5 feet	≥10 feet	≥5 feet	≥5 feet
Total TPH in Bioattenuation Zone	<100 ppm	<100 ppm	<100 ppm	<100 ppm	<100 ppm	<100 ppm	<100 ppm
Maximum Current Benzene Concentration in Groundwater	<0.5 ppb	No criteria	No criteria	<100 ppb	≥100 and <1,000 ppb	<1,000 ppb	No criteria
Oxygen Data within Bioattenuation Zone	No oxygen data	No criteria	No criteria	No oxygen data or <4%	No oxygen data or <4%	≥4% at lower end of zone	≥4% at lower end of zone
Depth of soil vapor measurement beneath foundation	----	No criteria	No criteria	No criteria	No criteria	No criteria	≥5 feet

SCENARIO 4 DIRECT MEASUREMENT OF SOIL VAPOR CONCENTRATIONS						
Site Soil Vapor Data			No Bioattenuation Zone		Bioattenuation Zone	
Constituent	Historic Maximum ($\mu g/m^3$)	Current Maximum ($\mu g/m^3$)	Residential	Commercial	Residential	Commercial
Benzene	----	----	<85	<280	<85,000	<280,000
Ethylbenzene	----	----	<1,100	<3,600	<1,100,000	<3,600,000
Naphthalene	----	----	<93	<310	<93,000	<310,000
If the site does not meet scenarios 1 through 4, does a site-specific risk assessment for the vapor intrusion pathway demonstrate that human health is protected?				----		
If the site does not meet scenarios 1 through 4, has a determination been made that petroleum vapors from soil or groundwater will have no significant risk of adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls?				----		

LTCP DIRECT CONTACT AND OUTDOOR AIR EXPOSURE CRITERIA						
LTCP Direct Contact and Outdoor Air Exposure Specific Scenario under which case was closed: Maximum concentrations of petroleum hydrocarbons are less than or equal to those in Table 1 below						
Are maximum concentrations less than those in Table 1 below?		Yes				
Constituent		Residential		Commercial/Industrial		Utility Worker
		0 to 5 feet bgs (ppm)	Volatilization to outdoor air (5 to 10 feet bgs) ppm	0 to 5 feet bgs (ppm)	Volatilization to outdoor air (5 to 10 feet bgs) ppm	0 to 10 feet bgs (ppm)
Site Maximum	Benzene	<0.005	<0.005	<0.005	<0.005	<0.005
LTCP Criteria	Benzene	≤1.9	≤2.8	≤8.2	≤12	≤14
Site Maximum	Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005
LTCP Criteria	Ethylbenzene	≤21	≤32	≤89	≤134	≤314
Site Maximum	Naphthalene	----	----	----	----	----
LTCP Criteria	Naphthalene	≤9.7	≤9.7	≤45	≤45	≤219
Site Maximum	PAHs	----	----	----	----	----
LTCP Criteria	PAHs	≤0.063	NA	≤0.68	NA	≤4.5
If maximum concentrations are greater than those in Table 1, are they less than levels from a site-specific risk assessment?		----				
If maximum concentrations are greater than those in Table 1, has a determination been made that the concentrations of petroleum in soil will have no significant risk of adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls?		----				

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, closure of this site appears to be consistent with the policies established by the State Water Resources Control Board Low-Threat Underground Storage Tank Closure Policy which became effective on August 17, 2012.		
Site Management Requirements: This fuel leak case has been evaluated for closure consistent with the State Water Resources Control Board Low-Threat Underground Storage Tank Closure Policy (LTCP).		
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	Number Decommissioned: 0	Number Retained: 0

V. ADDITIONAL COMMENTS AND CONCLUSION

Additional Comments:

No analyses for MTBE were conducted for soil and groundwater at the site. The former tank was reportedly not used after 1979. Therefore, use of the former tank pre-dates the introduction of MTBE as a commercial gasoline additive. Based on the site history, MTBE analysis is not required.

Naphthalene was not an analyte in shallow soil samples. However, since the release at the site consisted primarily of gasoline and benzene and ethylbenzene concentrations in shallow soil do not exceed media-specific criteria for direct contact, naphthalene concentrations in shallow soil are not likely to exceed the LTCP media-specific criteria.

Conclusion:

Alameda County Environmental Health staff believe that the site meets the conditions for case closure under the State Water Resources Control Board Low-Threat Underground Storage Tank Closure Policy. Based upon the information available in our files to date, no further investigation or cleanup for the fuel leak case is necessary at this time.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Jerry Wickham, P.G.	Title: Senior Hazardous Materials Specialist
Signature: Jerry Wickham	Date: 03/05/14
Approved by: Dilan Roe	Title: LOP and SCP Program Manager
Signature: Dilan Roe	Date: 03/05/2014

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 AND PUBLIC NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
Regional Board Notification Date: 11/19/2013	
Public Notification Date: 11/19/2013	

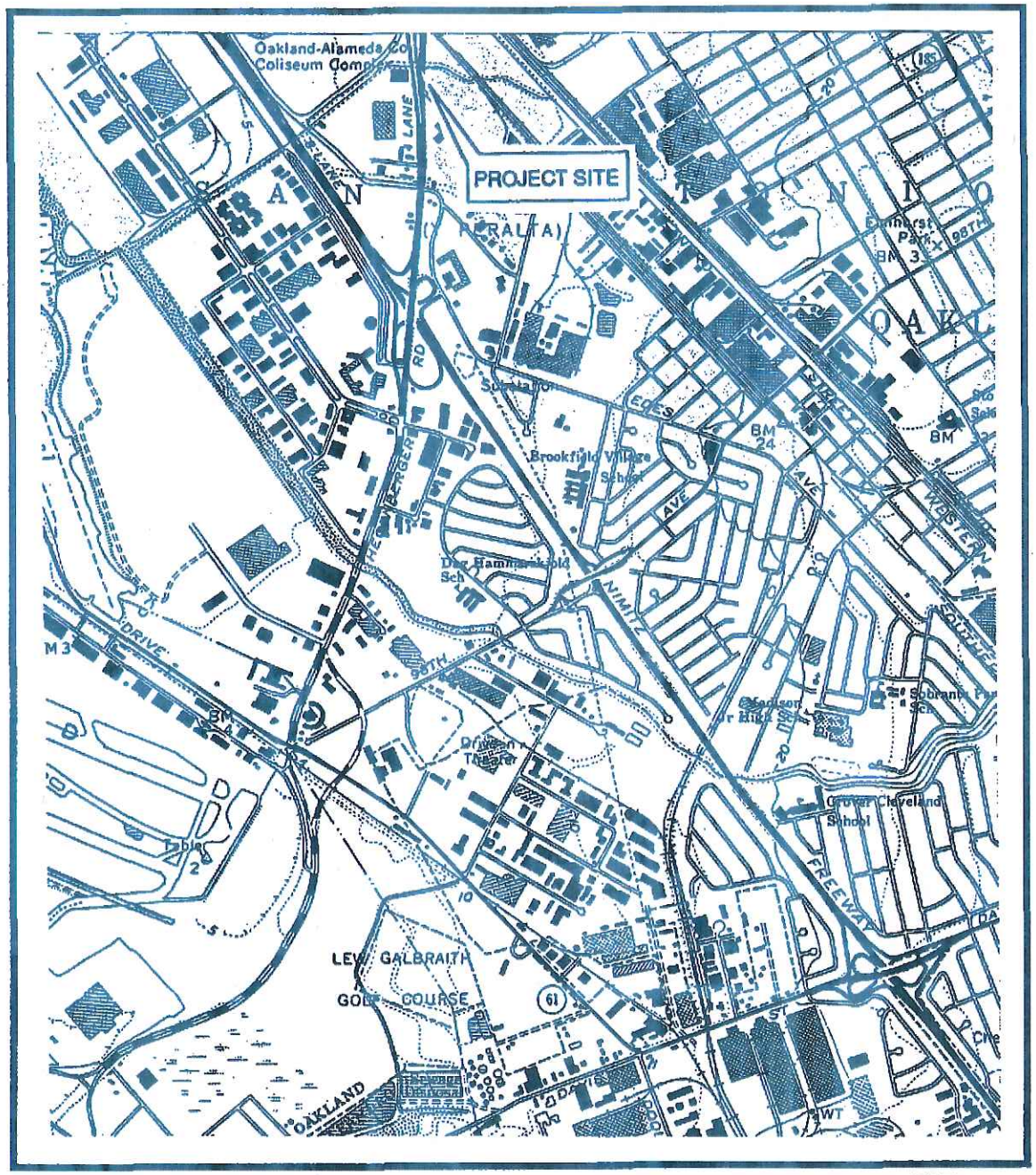
VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: NA	Date of Well Decommissioning Report: NA	
All Monitoring Wells Decommissioned: NA	Number Decommissioned: 0	Number Retained: 0
Reason Wells Retained: NA		
Additional requirements for submittal of groundwater data from retained wells: None		
ACEH Concurrence - Signature: Jerry Wickham		Date: 03/05/14

Attachments:

1. Site Vicinity Map (1 p)
2. Site Plan (1 p)
3. Groundwater Contour and Historical Sampling Locations (2 pp)
4. Soil and Groundwater Analytical Data (3 pp)

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



SCALE 1:24,000

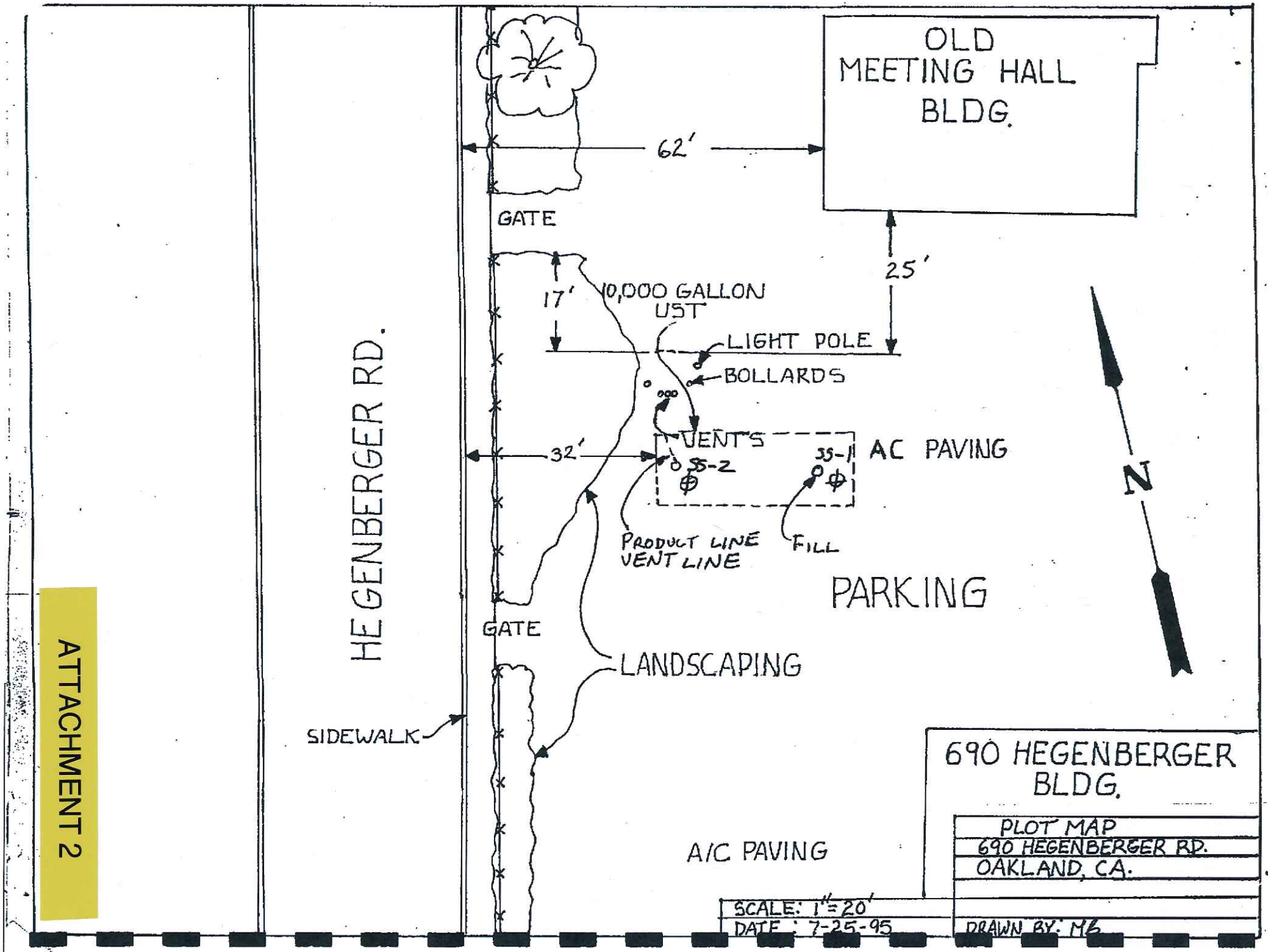
Source: U.S.G.S. Map
Hayward Quadrangle
California
7.5 Minute Series

VICINITY MAP

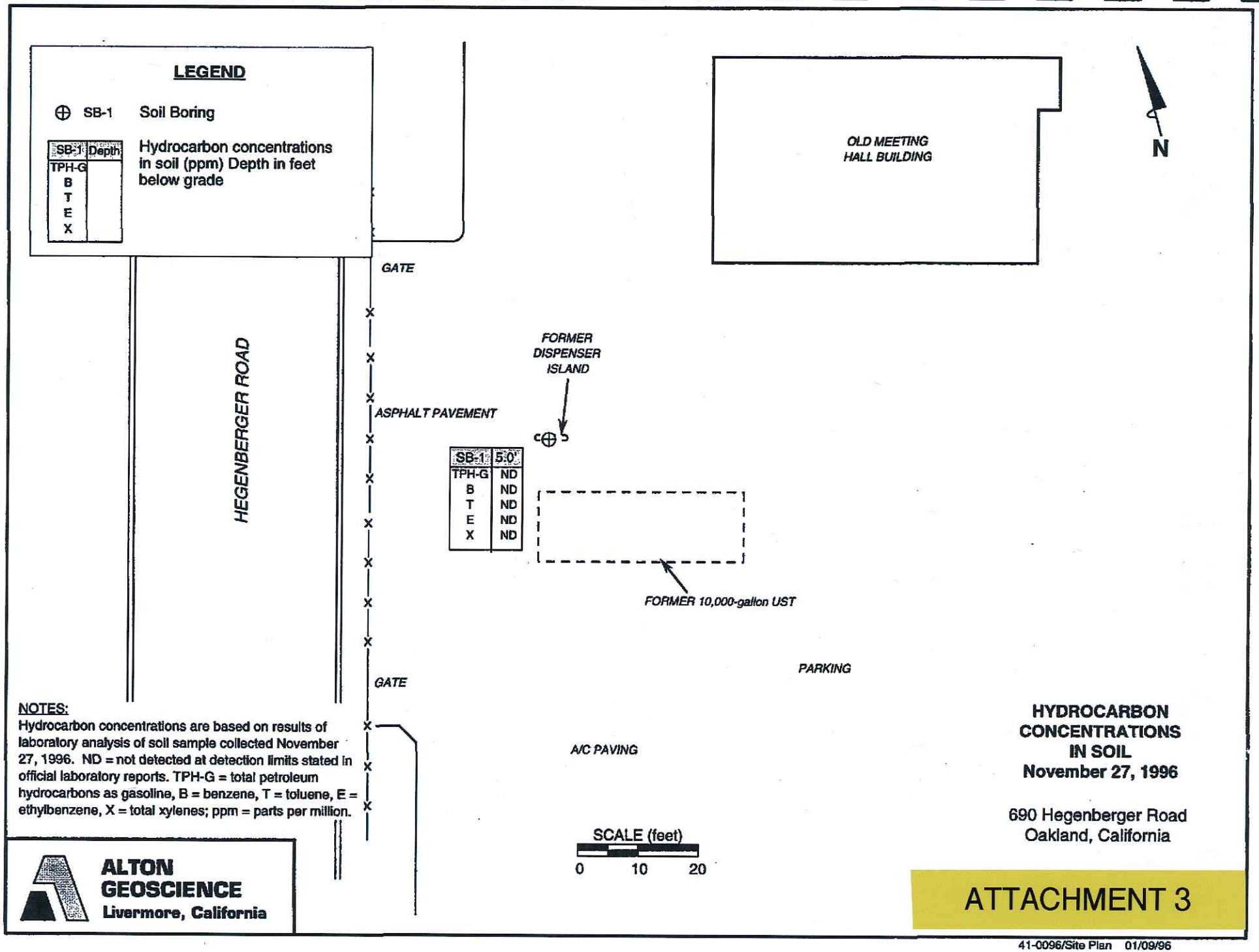
690 Hegenberger Road
Oakland, California

ALTON GEOSCIENCE
Livermore, California

ATTACHMENT 1



ATTACHMENT 2



NOTES:
Hydrocarbon concentrations are based on results of laboratory analysis of soil sample collected November 27, 1996. ND = not detected at detection limits stated in official laboratory reports. TPH-G = total petroleum hydrocarbons as gasoline, B = benzene, T = toluene, E = ethylbenzene, X = total xylenes; ppm = parts per million.

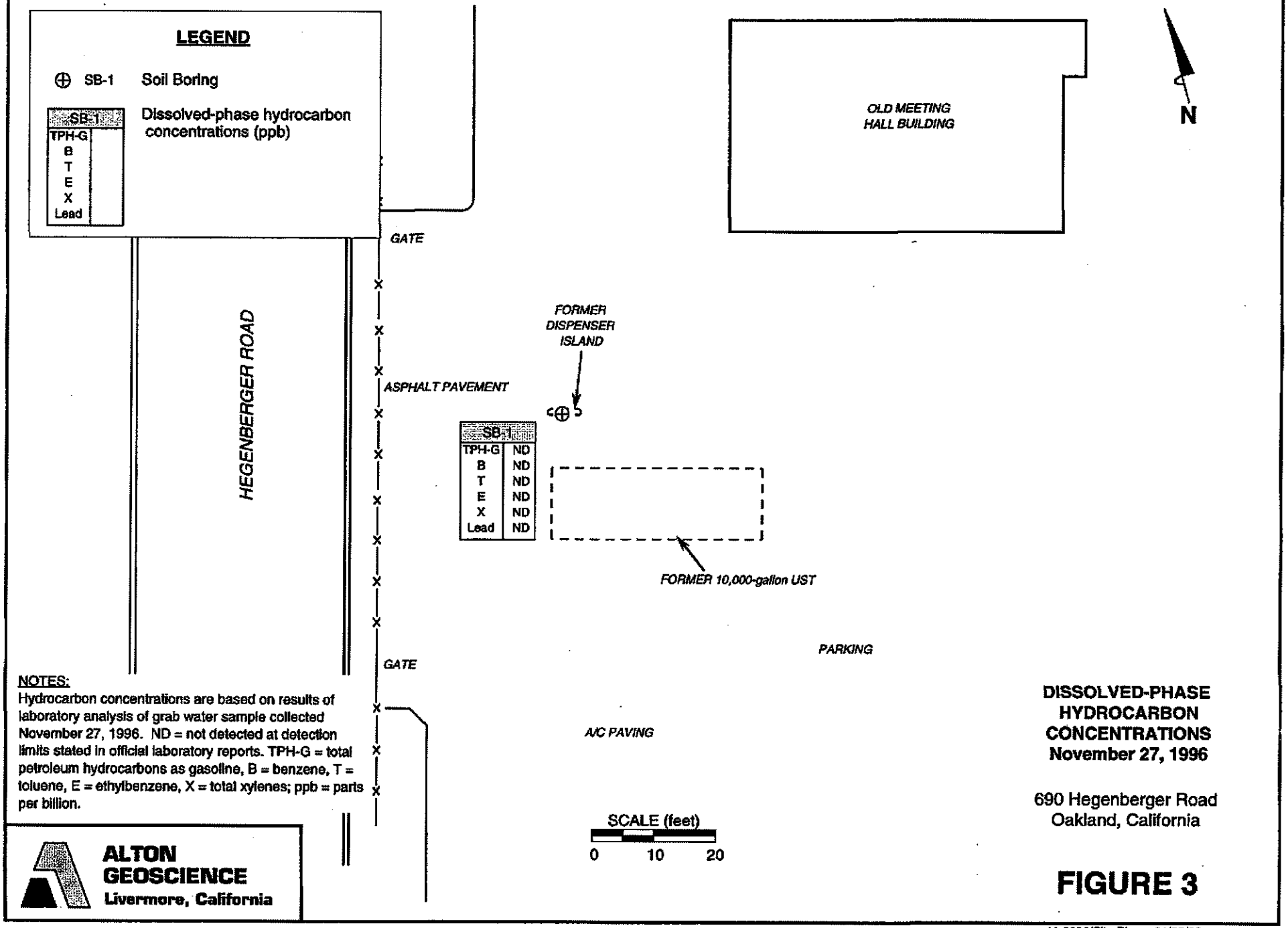
ALTON GEOSCIENCE
Livermore, California

HYDROCARBON CONCENTRATIONS IN SOIL
November 27, 1996

690 Hegenberger Road
Oakland, California

ATTACHMENT 3

41-0096/Site Plan 01/09/96



NOTES:
Hydrocarbon concentrations are based on results of laboratory analysis of grab water sample collected November 27, 1996. ND = not detected at detection limits stated in official laboratory reports. TPH-G = total petroleum hydrocarbons as gasoline, B = benzene, T = toluene, E = ethylbenzene, X = total xylenes; ppb = parts per billion.

ALTON GEOSCIENCE
Livermore, California

DISSOLVED-PHASE HYDROCARBON CONCENTRATIONS
November 27, 1996

690 Hegenberger Road
Oakland, California

FIGURE 3

41-0096/Site Plan 01/09/96

An estimated 60 cubic yards of excavation soil spoils was transported from the front of parking area to the rear of the building adjacent to new meeting facility. Final determination of these soil spoils is pending review of work plan to encapsulate said soils on property.

TABLE OF
SOIL ANALYSIS FOR GASOLINE CONSTITUENTS

sample number	TPH as gasoline (PPM)	constituents as benzene (PPB)	toluene (PPB)	xylenes (PPB)	ethylbenzene (PPB)
SS-1	170	ND	810	670	570
SS-2	16	60	36	160	210
CS-1,-2	ND	ND	ND	ND	ND
CS-3,-4	1	ND	18	21	7

TABLE OF
WATER ANALYSIS FOR GASOLINE CONSTITUENTS

sample number	TPH as gasoline (PPB)	constituents as benzene (PPB)	toluene (PPB)	xylenes (PPB)	ethylbenzene (PPB)
WS-1	280	ND	3.3	ND	1.5

TABLE OF
SOIL ANALYSIS FOR TOTAL (?) LEAD

sample number	Lead (mg/Kg)
SS-1	N.D.
SS-2	3.6
CS-1,-2	41
CS-3,-4	41

Samples SS-1 to SS-2 were discreet soil samples taken from the tank pit. Samples CS-1,-2 and CS-3,-4 were composited soil samples taken from excavated soil piles.

PPM: parts per million
PPB: parts per billion.

ATTACHMENT 4

ALTON GEOSCIENCE

SAMPLE ID: SB-1
AEN LAB NO: 9611402-01A
AEN WORK ORDER: 9611402
CLIENT PROJ. ID: -

DATE SAMPLED: 11/27/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/17/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	**EPA 8020**				
Benzene	71-43-2	ND	5	ug/kg	12/10/96
Toluene	108-88-3	ND	5	ug/kg	12/10/96
Ethylbenzene	100-41-4	ND	5	ug/kg	12/10/96
Xylenes, Total	1330-20-7	ND	5	ug/kg	12/10/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	12/10/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

ALTON GEOSCIENCE

SAMPLE ID: WS-1
AEN LAB NO: 9611402-04A
AEN WORK ORDER: 9611402
CLIENT PROJ. ID: -

DATE SAMPLED: 11/27/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/17/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	**EPA 8020**				
Benzene	71-43-2	ND	0.5	ug/L	12/09/96
Toluene	108-88-3	ND	0.5	ug/L	12/09/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	12/09/96
Xylenes, Total	1330-20-7	ND	2	ug/L	12/09/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	12/09/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit