

REPORT

Pre-Demolition Asbestos and Hazardous Materials Survey

Former Sausalito Police Station (29 Caledonia Street) and Sausalito Fire Station #1 (300 Johnson Street), Sausalito, CA.

1 December 2005

Project Number: 05421

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SECTION I - INTRODUCTION

I. INTRODUCTION

This inspection report presents the results of our asbestos and hazardous materials survey for the following structures on the subject properties.

- 1) 29 Caledonia Street – Former Sausalito Police Station Facility; and
- 2) 300 Johnson Street – City of Sausalito Fire Station #1

It is our understanding that the purpose of the asbestos and hazardous material survey was to identify asbestos-containing building materials and/or other hazardous materials prior to demolition of the subject structures. Mr. Bob Gerhold, a Cal/OSHA Certified Asbestos Consultant (92-0157) and California Register Environmental Assessor performed the asbestos and hazardous materials inspection on 14 and 15 November 2005. Our scope of work as outlined in our proposal dated 8 August 2005 included the following tasks:

- Task 1)** A pre-demolition asbestos survey to include the identification of suspect asbestos containing building materials (ACBM), in particular, any suspect asbestos-containing flooring materials, exterior/interior surfacing materials, heating insulation, and roofing materials;
- Task 2)** Bulk sampling and laboratory analysis of suspected ACBM to verify the presence/absence of asbestos;
- Task 3)** Observe and record presence of possible PCB-containing fluorescent lighting fixture ballasts and mercury light tubes/switches, and provide recommendations for management in place and/or for removal in accordance with state and federal regulations. Observe and record presence of other potentially regulated hazardous materials, such as petroleum based products, cleaning fluids or other hazardous processes that will impact renovation/demolition of the subject structures;
- Task 4)** Generation of an pre-demolition asbestos and hazardous materials survey report of findings to include, but not limited to, regulatory review, site observations, summary of laboratory results and conclusions/recommendations for compliance with present federal and state regulations, if necessary.

II. REGULATORY REVIEW

The oversight regulatory agencies, which may govern the maintenance and/or removal of asbestos-containing materials at the subject structure, are as follows:

FEDERAL

Environmental Protection Agency - NESHAPS Notification - 40 CFR 61.140, revised 11/20/90

- Requires notification in all demolition/demolition operations whether a building contains asbestos or does not contain asbestos. Requires notification when renovation/demolition involves greater than 160 square feet or 260 linear feet of friable asbestos materials.

STATE

Bay Area Air Quality Management District (BAAQMD) - Enforcement of EPA (NESHAPS) Regulations - Regulation 11, Rule 2

- Requires removal of friable and non-friable asbestos-containing materials (ACM) before renovation/ demolition if exceeding 100 square or linear feet.

- Requires notification for removal of 100 square or linear feet of friable ACM.

Cal/OSHA - Enforcement of Federal OSHA Standards - 8 CCR, Article 110, Sections 5208, 5144 (Existing Asbestos Standards - General Industry)

- Asbestos-containing material (friable or non-friable) exceeding 100 square or linear feet requires removal by registered Cal/OSHA abatement contractor (8 CCR, Section 341.6-341.14) and licensed by the State Contractors License Board (SCLB).

AB 2791 - NESHAPS Notification

- Requires all planning agencies to see proof of NESHAPS notification before renovation/demolition permit is issued.

III. ASBESTOS/LEAD SURVEY PROCEDURES

A. Asbestos Sampling Guidelines

Asbestos inspection protocols are partially based on guidelines established by the US Environmental Protection Agency (USEPA) for school buildings (40 CFR, Part 763, Asbestos Hazard Emergency Response Act (AHERA), 1987). Since no state or local regulatory guidelines currently exist for residential or commercial asbestos building inspections, the USEPA guidelines were adopted to provide reliable inspection procedures and sample collection.

B. Asbestos Sampling Methodology

The objective of our bulk sampling was to verify the presence or absence of suspect asbestos-containing building materials as determined through laboratory analysis. Prior to sample collection, all building materials were categorized into distinct areas of homogeneity or material type. A homogenous area represents an area delineated by visual and functional similarity and may be further defined by its location within a building, the age of the building, or building materials of the same visual appearance. After homogeneous material areas have been identified, representative bulk sample(s) were collected for laboratory analysis. Because lead/asbestos-containing building materials have compositional variability, it is possible to obtain different laboratory results for samples from the same homogeneous area. Therefore, a homogeneous area with at least one positive sample for asbestos (greater than 1% by volume) will result in the entire homogeneous area being designated as an asbestos-containing material.

The sampling location for each sample is noted in our field logs during the field inspection phase. The sample's condition and approximate square footage is also noted in our field logs. Upon completion of the inspection, the samples are listed on our standard chain of custody/request for analysis form and submitted under chain-of-custody for Polarized Light Microscopy (PLM) analysis.

IV. INSTRUMENTATION AND LABORATORY ANALYSIS INTERPRETATION

A. Bulk Asbestos Analysis and Report Interpretation

Bulk asbestos samples have been examined by Polarized Light Microscopy (PLM) in accordance with EPA Test Method 600/R-93/116, "Method for the Determination of Asbestos in Bulk Building Materials".

The lower limit of reliable detection for components of a mixture examined by PLM is 1% by volume. When asbestos is not reported, it should be interpreted as meaning that asbestos was not observed in the sample. When asbestos or other materials are observed in concentrations we believe to be less than the reliable limit of detection (less than 1% by volume), we will report the concentration as "Trace".

V. DEFINITIONS

A. Asbestos Hazardous Waste Definition

The State of California Department of Health Services (DHS) has classified friable waste material containing greater than 1.0% asbestos as hazardous waste. Non-friable asbestos-containing wastes are considered to be non-hazardous (regardless of asbestos content), and are not subject to regulation under Title 22, Division 4, Chapter 30. The management of such waste remains subject to any requirements or restriction, which

may be imposed by other regulatory agencies operating under separate authority. Asbestos containing materials are not presently regulated as hazardous waste under the Resource Conservation and Recovery Act (RCRA), and therefore, are considered "non-RCRA" waste.

B. Friability

Classification of a material's friability is based on the following EPA's NESHAPS definition: A friable asbestos material is any material containing more than 1% asbestos by volume that can crumble, pulverize, or reduce to powder by hand pressure when dry (40 CFR 61, Subpart 61.141). This definition may also apply to those asbestos containing materials that when torn, have the potential to release fibers. This also includes non-friable asbestos containing materials that have been damaged to the extent they can be crumbled or pulverized with hand pressure.

C. PCB-Containing Fluorescent Light Ballasts

California regulates PCBs as a hazardous waste in liquid format concentrations equal to or above 5 ppm and non-liquids at concentrations equal to or above 50 ppm. The state does not specifically regulate PCB containing waste disposal, but if wastes contain the threshold levels stated above, they must be disposed of as a hazardous waste.

Fluorescent light ballasts containing PCBs are considered hazardous waste and must be transported and disposed of as hazardous waste. Transportation of these ballasts for consolidation prior to disposal is exempted from manifesting and use of a registered hauler for up to two 55-gallon drums per vehicle.

D. Mercury Containing Thermostat Switches

Mercury containing thermostats are considered in California as a Universal Hazardous Waste under the "Universal Waste Rule," in accordance with California Code of Regulations, Title 22, Division 4.5, Chapter 23. The mercury containing thermostats must be recycled or disposed of as hazardous waste at an approved facility.

SECTION II - SURVEY FINDINGS

I. Asbestos/Hazardous Materials Survey Results - 29 Caledonia Street (Former Sausalito Police Station Facility)

A. Asbestos Survey

The subject structure is a two-story masonry/concrete and wood-framed structure on a concrete foundation. Based on previous building plans, it appears that the original structure has undergone extensive renovation in the mid to late 1970's. Windows are metal framed with little to no window glazing on the window exterior portion.

The interior partition and perimeter walls are primarily sheetrock with associated drywall mud/joint compound, with subordinate wood, brick and wallpaper covered sheetrock. Newer sheetrock and associated drywall mud/joint compound is found in the lower floor reception area (internal partition walls) and upper level former squad room area.

The interior ceiling surfaces are covered with suspended 2 x 4' acoustical ceiling tiles, directly applied 1 x 1' acoustical ceiling tiles, exposed sheetrock with associated drywall mud/joint compound and/or surface texturing material, ceiling plaster and/or stucco, wood and subordinate ceiling plaster surface texturing material.

Flooring consists of various styles and ages of vinyl sheet linoleum, 12"x12 vinyl floor tile/mastic and/or carpeting over concrete (lower level) and/or wood (upper level).

Heating consists of gas furnace with metal flue pipes located in an upper level mechanical closet adjacent to the former laboratory area. A 3 x 3' section of asbestos-containing wall insulation padding material was observed in the upper level furnace room adjacent to the former laboratory area. No additional suspect asbestos-containing thermal insulation was observed associated with the HVAC system.

The structure roof surface is covered with asphaltic built-up roofing material on the pitched roof surface and asphaltic tar & gravel roofing material on the flat roof surfaces. Various types of roofing sealants have been utilized around roof penetrations, skylights and along the upper-pitched roof surface ridge caps.

The following suspect asbestos-containing materials were identified in the subject former Police Station structure:

- 1) 2 x 4' Acoustical Ceiling Panels – located in lower level office area (Samples 05421-29-1 to 05421-29-3);
- 2) Ceiling Plaster – located above 2 x 4' acoustical ceiling panels (Samples 05421-29-4 to 05421-29-6 and 05421-29-35);
- 3) Vinyl Sheet Linoleum – located throughout the subject structure (Samples 05421-29-7 to 05421-29-10, 05421-29-15, and 05421-29-20 to 05421-29-23);
- 4) Drywall Mud/Joint Compound on sheetrock walls – located throughout the subject structure (Samples 05421-29-11 to 05421-29-13, and 05421-29-31 to 05421-29-33);
- 5) Vapor Barrier Paper – located 1st floor mechanical hallway (Sample 05421-29-14);
- 6) 9" x 9" or 12" x 12" Vinyl floor Tile/Mastic – located in structure upper level (Samples 05421-29-16, 05421-29-17 and 05421-29-19);
- 7) Insulation Wall Pad – on upper level furnace (mechanical) closet wall (Sample 05421-29-18);
- 8) 1 x 1' Acoustical Ceiling Panels – located in upper level office area (Samples 05421-29-24 and 05421-29-25);
- 9) 1 x 1' Acoustical Ceiling Panel Mastic – located on back side of 1 x 1' acoustical ceiling panels (Samples 05421-29-26 and 05421-29-27);
- 10) Textured Ceiling Material – located above 2 x 4' acoustical ceiling panels (Samples 05421-29-28 and 05421-29-29);
- 11) Base Coving/Mastic - upper level restroom area (Sample 05421-29-30);

- 12) Exterior Window Glazing – exterior portion of windows (Sample 05421-29-34);
- 13) Asphaltic Roofing Sealant – along ridge caps and around penetrations on pitched roof surfaces (Samples 05421-29-36 and 05421-29-41);
- 14) Asphaltic Built-up Roofing Material – on pitched and flat roof surfaces (Samples 05421-29-37 to 05421-29-39);
- 15) Skylight Caulking – located on upper flat roof surface (Sample 05421-29-40);
- 16) Asphaltic Built-up Tar & Gravel Roofing Material – on flat roof surfaces (Samples 05421-29-42 and 05421-29-43); and
- 17) Garage Ceiling Plaster/Stucco Material – on garage ceiling surfaces (Samples 05421-29-44 and 05421-29-45);

No other suspect asbestos-containing building materials were observed at the subject structure available for inspection.

In most instances, the suspect ACM at the subject structures was noted to be in fair to good condition. Please refer to **Plates 1 and 2** and **Table 1** on the following pages to identify those building materials that are asbestos containing. Complete laboratory results and chain-of-custody results have been attached in **Appendix A**.

**Summary of Identified Asbestos-Containing Building Materials
29 Caledonia Street – Former Sausalito Police Station Facility**

Level	Identified ACBM	Square Footage	Locations/Notes **
Lower Level	Vinyl Sheet Linoleum	280 sf.	Located primarily in restroom and hallway areas – See Plate 1 for location details. Vinyl sheet linoleum with same pattern in areas not accessible for inspection should be assumed asbestos-containing until determined by laboratory analysis.
	Sheetrock with Drywall Mud/Joint Compound	NE	On sheetrock wall/ceiling surfaces in older building section with exception of reception area internal partition wall and garage area (See Plate 1 for location details). All remaining sheetrock walls in areas not available for inspection should be considered as having asbestos-containing drywall mud/joint compound.
Upper Level	Wall insulation Pad	9 sf.	Located in furnace (mechanical room) near laboratory area
	Vinyl Sheet Linoleum and/or Vinyl Sheet Linoleum backing materials under existing flooring	670 sf.	See Plate 2 for location details. Vinyl sheet linoleum with same pattern in areas not accessible for inspection should be assumed asbestos-containing until determined by laboratory analysis.
	12 x 12" Vinyl Floor Tile and/or Mastic	420 sf	See Plate 2 for location details. 12 x 12' Vinyl Floor Tile and/or Mastic with same pattern in areas not accessible for inspection should be assumed asbestos-containing until determined by laboratory analysis
	Sheetrock with Drywall Mud/Joint Compound	NE	On sheetrock wall/ceiling surfaces in older building section with exception of former squad room area (See Plate 2 for location details). All remaining sheetrock walls in areas not available for inspection should be considered as having asbestos-containing drywall mud/joint compound.
Roof Surface	Ridge Cap Sealant	140 sf.	Around perimeter of upper pitched roof surface
	Penetration Roofing Sealant	NE	Located around pitched roof penetrations

NE – Not Estimated

** - See **Plates 1 and 2** for asbestos-containing building materials location details

TABLE 1



Suspect Asbestos-Containing Building Material Listing

BUILDING/FUNCTIONAL SPACE: Former Sausalito Police Station Facility - 29 Caledonia Street, Sausalito
PROJECT/PROJECT LOCATION: Pre-demolition Asbestos/Hazardous Materials Survey
INSPECTOR: Bob Gerhold - CAC #92-0157 **DATE:** 15 November 2005

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL DESCRIPTION	AREA	PERCENT ASBESTOS	FRIABILITY	ABATEMENT PROCEDURES	RECOMMENDATIONS/NOTES
05421-29-1	1st Floor - Hallway	Acoustical Ceiling Panel	N/A	ND	N/A	N/A	N/A
05421-29-2	1st Floor - Behind Reception	Acoustical Ceiling Panel	N/A	ND	N/A	N/A	N/A
05421-29-3	1st Floor - at Holding Cells	Acoustical Ceiling Panel	N/A	ND	N/A	N/A	N/A
05421-29-4	1st Floor - Behind Reception	Ceiling Plaster	N/A	ND	N/A	N/A	N/A
05421-29-5	1st Floor - Hallway	Ceiling Plaster	N/A	ND	N/A	N/A	N/A
05421-29-6	1st Floor - Office Behind Reception	Ceiling Plaster	N/A	ND	N/A	N/A	N/A
05421-29-7	1st Floor - Restroom	Vinyl Sheet Linoleum	280 sf.	32% Chrysotile	Friable	Containment	Remove prior to renovation/demolition. Asbestos in backing layer
05421-29-8	1st Floor - Hallway	Vinyl Sheet Linoleum		Not Analyzed			
05421-29-9	1st Floor - Holding Cell	Vinyl Sheet Linoleum	N/A	ND	N/A	N/A	N/A
05421-29-10	1st Floor - Outside Holding Cell	Vinyl Sheet Linoleum	N/A	Not Analyzed			
05421-29-11	1st Floor - Behind Reception	Drywall Mud/ Joint Compound	N/A	ND	N/A	N/A	N/A
05421-29-12	1st Floor - Electrical Panel Room	Drywall Mud/ Joint Compound	NE *	4% Chrysotile	Friable	Containment	Remove prior to renovation/demolition. Asbestos in drywall mud/joint compound only. Composite sample contains trace asbestos
05421-29-13	1st Floor - Upper Room w/ Mechanical Hallway	Drywall Mud/ Joint Compound		3% Chrysotile	Friable	Containment	
05421-29-14	1st Floor - Upper Mechanical Hallway	Vapor Barrier	N/A	ND	N/A	N/A	N/A

NOTES/COMMENTS

*See **Plate 1** for interior wall and ceiling sheetrock surfaces which contain asbestos-containing drywall mud/joint compound and/or surface texturing material.

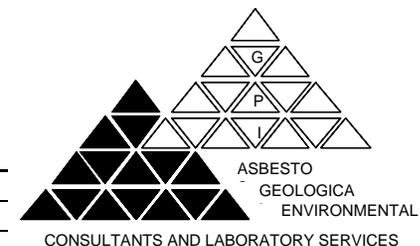
ND = Asbestos Content less than 1.0% by volume
AACM = Assumed ACM/ Not Analyzed
Chrysotile = Chrysotile Asbestos

Key to Abbreviations

N/A = Not Applicable
sf./lf. = Square Feet/Linear Feet
Crocidolite = Crocidolite Asbestos

Wet Methods = Wet Methods/Critical Barrier
NE = Not Estimated
Containment = Containment w/ negative pressure

TABLE 1



Suspect Asbestos-Containing Building Material Listing

BUILDING/FUNCTIONAL SPACE: Former Sausalito Police Station Facility - 29 Caledonia Street, Sausalito
PROJECT/PROJECT LOCATION: Pre-demolition Asbestos/Hazardous Materials Survey
INSPECTOR: Bob Gerhold - CAC #92-0157 **DATE:** 15 November 2005

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL DESCRIPTION	AREA	PERCENT ASBESTOS	FRIABILITY	ABATEMENT PROCEDURES	RECOMMENDATIONS/NOTES
05421-29-15	2nd Floor - Office	Vinyl Sheet Linoleum	N/A	ND	N/A	N/A	N/A
05421-29-16	2nd Floor - Office	Unknown Flooring Material	see 05421-21 to 23	70% Chrysotile	Friable	Containment	Remove prior to renovation/demolition. Asbestos in remnant backing layer
05421-29-17	2nd Floor - Hallway	Unknown Flooring Material	420 sf. **	Tile=8% Mastic=15%	Non-Friable	Wet Method	Remove prior to renovation/demolition.
05421-29-18	2nd Floor - Furnace Closet	Insulating Pad	9 sf.	55% Chrysotile	Friable	Containment	Remove prior to renovation/demolition.
05421-29-19	2nd Floor - Kitchen	Vinyl Floor Tile & Mastic	see 05421-17	Tile=8% Mastic=20%	Non-Friable	Wet Method	Remove prior to renovation/demolition.
05421-29-20	2nd Floor - Office	Vinyl Sheet Linoleum	N/A	ND	N/A	N/A	N/A
05421-29-21	2nd Floor - Office	Vinyl Sheet Linoleum	670 sf. ***	21% Chrysotile	Friable	Containment	Remove prior to renovation/demolition. Asbestos in backing layer
05421-29-22	2nd Floor - Closets	Vinyl Sheet Linoleum		35% Chrysotile	Friable	Containment	Remove prior to renovation/demolition. Asbestos in backing layer
05421-29-23	2nd Floor - Laboratory	Vinyl Sheet Linoleum		21% Chrysotile	Friable	Containment	Remove prior to renovation/demolition. Asbestos in backing layer
05421-29-24	2nd Floor - Hallway	Acoustical Ceiling Tile	N/A	ND	N/A	N/A	N/A
05421-29-25	2nd Floor - Hallway near squad Room	Acoustical Ceiling Tile	N/A	ND	N/A	N/A	N/A
05421-29-26	2nd Floor - Hallway	Acoustical Ceiling Tile Mastic	N/A	ND	N/A	N/A	N/A
05421-29-27	2nd Floor - Hallway near squad Room	Acoustical Ceiling Tile Mastic	N/A	ND	N/A	N/A	N/A
05421-29-28	2nd Floor - Lobby	Ceiling Surface Texturing Material	N/A	ND	N/A	N/A	N/A

NOTES/COMMENTS

** Square footage of all types of 9" x 9" and/or 12" x 12" vinyl floor tile/mastic in upper level area (See Plate 2).

*** Square footage of all types of asbestos-containing vinyl sheet linoleum and/or backing material in upper level area (See Plate 2).

Key to Abbreviations

ND = Asbestos Content less than 1.0% by volume
AACM = Assumed ACM/ Not Analyzed
Chrysotile = Chrysotile Asbestos

N/A = Not Applicable
sf./lf. = Square Feet/Linear Feet
Crocidolite = Crocidolite Asbestos

Wet Methods = Wet Methods/Critical Barrier
NE = Not Estimated
Containment = Containment w/ negative pressure

TABLE 1



Suspect Asbestos-Containing Building Material Listing

BUILDING/FUNCTIONAL SPACE: Former Sausalito Police Station Facility - 29 Caledonia Street, Sausalito
PROJECT/PROJECT LOCATION: Pre-demolition Asbestos/Hazardous Materials Survey
INSPECTOR: Bob Gerhold - CAC #92-0157 **DATE:** 15 November 2005

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL DESCRIPTION	AREA	PERCENT ASBESTOS	FRIABILITY	ABATEMENT PROCEDURES	RECOMMENDATIONS/NOTES
05421-29-29	2nd Floor - Laboratory	Ceiling Surface Texturing Material	N/A	ND	N/A	N/A	N/A
05421-29-30	2nd Floor - Restroom	Base Coving & Mastic	N/A	ND	N/A	N/A	N/A
05421-29-31	2nd Floor - Squad Room	Drywall Mud/ Joint Compound	N/A	ND	N/A	N/A	N/A
05421-29-32	2nd Floor - Kitchen	Drywall Mud/ Joint Compound	NE *	4% Chrysotile	Friable	Containment	Remove prior to renovation/demolition. Asbestos in drywall mud/joint compound only. Composite sample contains trace asbestos
05421-29-33	2nd Floor - Office	Drywall Mud/ Joint Compound		6% Chrysotile	Friable	Containment	
05421-29-34	2nd Floor - Exterior Mezzanine	Window Glazing Material	N/A	ND	N/A	N/A	N/A
05421-29-35	2nd Floor - Office	Ceiling Plaster	N/A	ND	N/A	N/A	N/A
05421-29-36	Roof - Upper Pitched Roof	Roofing Sealant	140 sf.	25% Chrysotile	Non-Friable	Wet Method	Remove prior to renovation/demolition. Around pitched roof perimeter
05421-29-37	Roof - Pitched Roof	Asphaltic Built-up Roofing	N/A	ND	N/A	N/A	N/A
05421-29-38	Roof - Pitched Roof	Asphaltic Built-up Roofing	N/A	ND	N/A	N/A	N/A
05421-29-39	Roof - Flat Roof	Asphaltic Built-up Roofing	N/A	ND	N/A	N/A	N/A
05421-29-40	Roof - Upper Flat Roof	Caulking	N/A	ND	N/A	N/A	N/A
05421-29-41	Roof - Pitched Roof	Penetration Mastic	NE	15% Chrysotile	Non-Friable	Wet Method	Remove prior to renovation/demolition. Around pitched roof penetrations
05421-29-42	Roof - Flat Roof	Asphaltic Built-up Roofing	N/A	ND	N/A	N/A	N/A

NOTES/COMMENTS

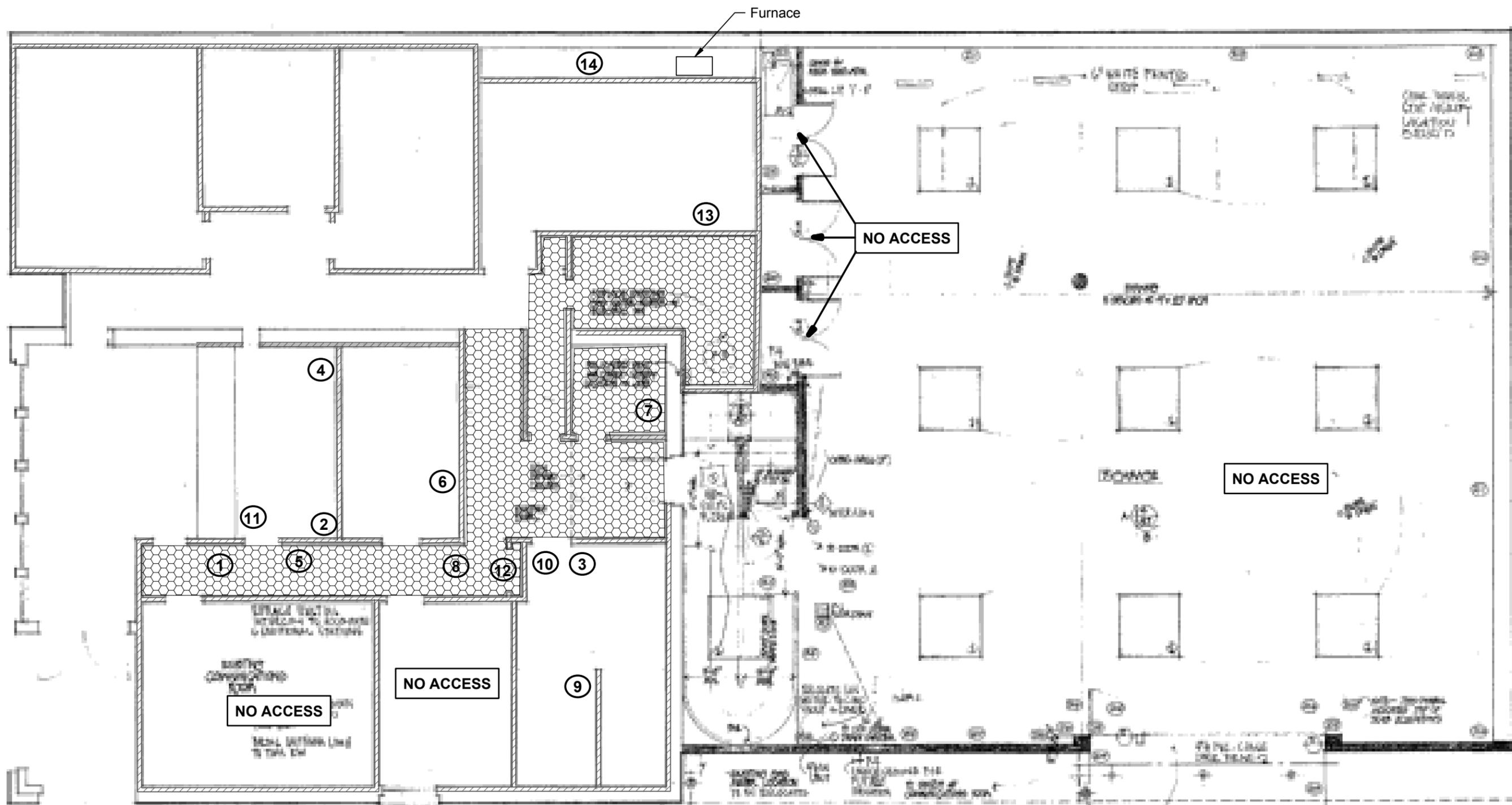
*See Plate 2 for interior wall and ceiling sheetrock surfaces which contain asbestos-containing drywall mud/joint compound and/or surface texturing material.

ND = Asbestos Content less than 1.0% by volume
AACM = Assumed ACM/ Not Analyzed
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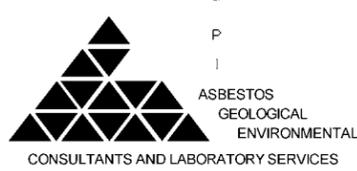


 Asbestos-containing vinyl sheet linoleum
 Sheetrock with asbestos-containing drywall mud/joint compound

 Sample Location

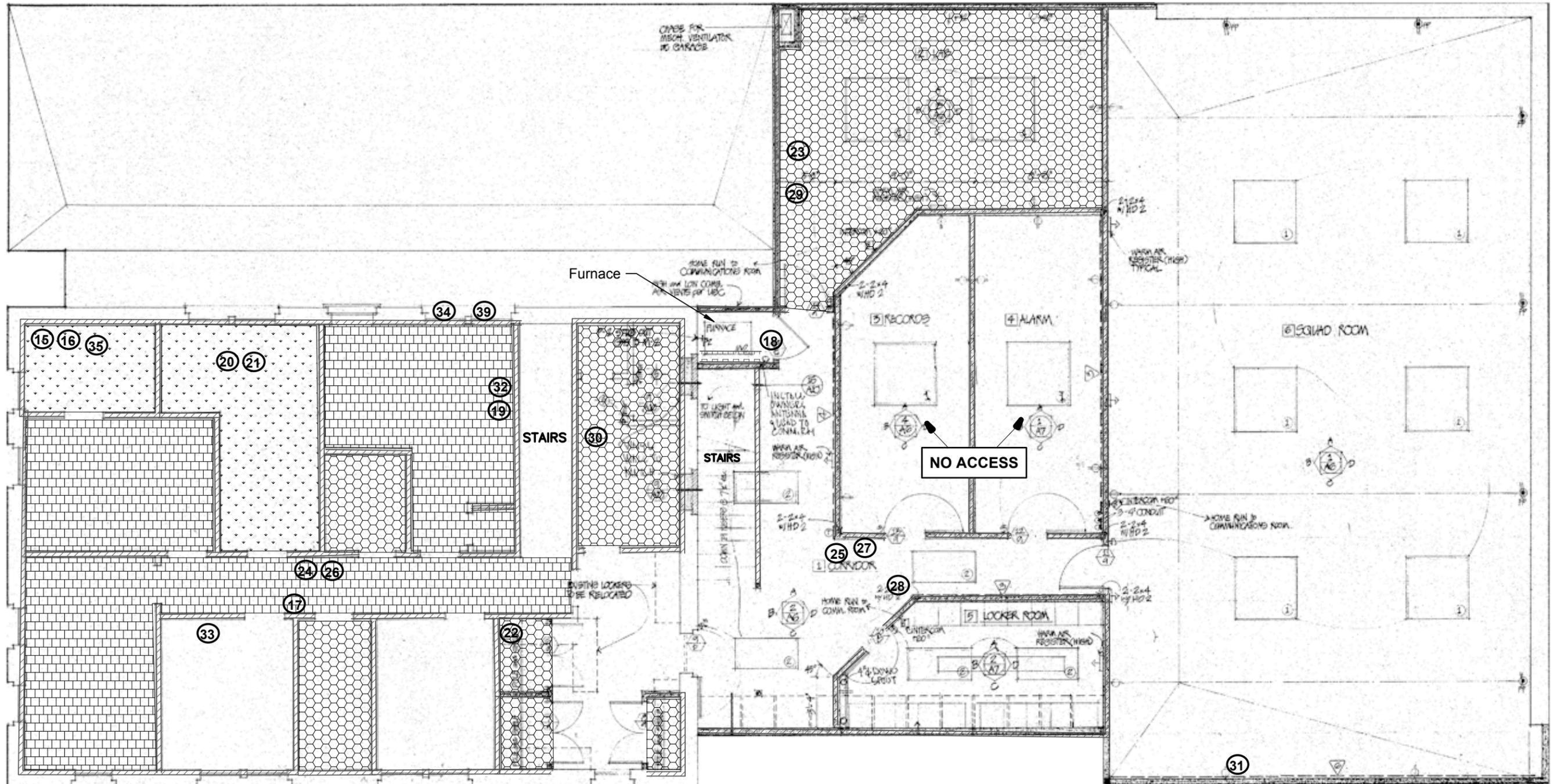
Source: Donald K. Olsen, AIA Architect, Sausalito Police Station Addition, Phase 3 Oct 1978

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City of Sausalito
Pre-Demolition Asbestos/Hazardous Material Survey
Lower Level Building Plan
Former Sausalito Police Station Facility
29 Caledonia Street, Sausalito, California

PLATE
1



- Asbestos-containing vinyl sheet linoleum
- Asbestos-containing vinyl sheet linoleum backing layer - or linoleum under existing flooring
- Asbestos-containing vinyl floor tile and mastic - exposed and/or under carpeting/flooring
- Asbestos-containing insulation padding on furnace wall
- Sheetrock with asbestos-containing drywall mud/joint compound
- Sample Location

Source: Donald K. Olsen, AIA Architect, Sausalito Police Station Addition, Phase 3 Oct 1978

B. PCB-containing Fluorescent Light Fixture Ballasts

Based on the mixed age of the fluorescent light fixtures within the structure, some of the fluorescent light fixtures may still contain PCB-containing transformer ballasts. Several removed ballasts located on the lower level were observed not to contain "No PCB's" markings to indicate that the ballasts are non-PCB containing. Prior to fluorescent light fixture removal and disposal, each fixture ballast(s) will be required to be removed and inspected. Non PCB-containing ballasts will contain a label indicating that the ballast is non PCB-containing. Non-labeled fixture ballasts must be assumed to be PCB-containing and transported and disposal of in accordance with state and federal regulations.

C. Mercury Thermostat Switches

Mercury-containing thermostat switches were not observed throughout the subject structure.

D. Lead-based/containing Painted Surfaces

The older portions of the existing structure predates the 1978 ban on lead-based paints, thus lead-based and/or lead-containing interior/exterior paint coatings may exist underlying the relatively newer recent paint coatings on the building interior/exterior surfaces. It is not known at the time of this investigation whether the interior/exterior paint coatings have underlying lead-based painted surfaces or the original paint coats were removed during previous renovation activities. At the time of this investigation, sampling and analysis of suspected lead-containing or lead-based paints is not required for demolition, thus has not been performed for the existing structure.

II. Asbestos/Hazardous Materials Survey Results - 300 Johnson Street – Sausalito Fire Station #1

A. Asbestos Survey

The subject structure is a two-story masonry/concrete and wood-framed structure on a concrete foundation. The exterior walls are painted stucco and wood siding. Windows are metal framed with no window glazing on the window exterior portion.

The interior lower level partition and perimeter walls are sheetrock with associated drywall mud/joint compound, with subordinate concrete, metal and stucco. Newer sheetrock and associated drywall mud/joint compound is found in the lobby and administration area.

The interior upper level partition and perimeter walls are sheetrock with associated drywall mud/joint compound and wall plaster, with subordinate concrete, metal and stucco. Newer sheetrock and associated drywall mud/joint compound is found in the lobby and administration area.

The interior lower level ceiling surfaces are covered with directly applied 1 x 1' acoustical ceiling tiles, exposed sheetrock with associated drywall mud/joint compound and/or surface texturing material, ceiling stucco, wood and concrete.

The interior upper level ceiling surfaces are covered with primarily directly applied 1 x 1' acoustical ceiling tiles, with subordinate exposed sheetrock with associated drywall mud/joint compound.

Flooring on the lower level consists of carpet over concrete, concrete and ceramic tile. Flooring on the upper level consists of various styles and ages of vinyl sheet linoleum, 12"x12 vinyl floor tile/mastic underneath the existing carpeting and/or carpeting over wood.

Heating consists of gas furnace with metal flue pipes located in a heater closet adjacent to the Mail/forms/supplies room. Asbestos-containing furnace and duct insulation was observed located in heater closet and above the lobby, admin area, lieutenant's office and mail/form/supplies room areas (above ceiling).

Asbestos-containing register boots insulation was observed in dorm (2), Day room (2), Multi-purpose Room (2), and Chief's Office (1) areas. The duct source was not observed, thus asbestos-containing duct insulation may exist in the space between first and second floors. Fiberglass and non-insulated ducting was observed in attic crawl space above the locker room ceiling. No additional suspect asbestos-containing thermal insulation was observed associated with the HVAC system.

The structure roof surface is covered with asphaltic built-up roofing material on the flat roof surfaces. Various types of roofing sealants have been utilized around roof penetrations and skylights.

The following suspect asbestos-containing materials were identified in the Fire Station structure:

- 1) Blown-in Insulation Material – attic crawl space (Samples 05421-300-1 and 05421-300-2);
- 2) Asphaltic Built-up Roofing Material – on upper flat roof surface and mechanical equipment roof surface, flat roof (Samples 05421-300-3 and 05421-300-20);
- 3) Asphaltic Roofing Material – on upper flat roof surface where pitched roof surface meets flat roof (Sample 05421-300-4);
- 4) Asphaltic Roofing Material (remnants) – within attic crawl space (Sample 05421-300-5);
- 5) Skylight/Hatch Sealant – located on upper flat roof surface (Sample 05421-300-6);
- 6) 1 x 1' Acoustical Ceiling Panels – located throughout the structure (Samples 05421-300-7 to 05421-300-11);
- 7) Plaster/Drywall – located primarily in upper level multi-purpose room (Sample 05421-300-12);
- 8) Vinyl Sheet Linoleum – located in upper level Chief's office restroom and kitchen areas (Samples 05421-300-13 and 05421-300-19);
- 9) 9" x 9" or 12" x 12" Vinyl floor Tile/Mastic – located in upper level area under carpeting (Samples 05421-300-14 and 05421-300-15);

- 10) Wall Plaster – throughout structure (Samples 05421-300-16 and 05421-300-32);
- 11) Drywall Mud/Joint Compound on sheetrock walls – located throughout interior portion of structure (Samples 05421-300-17, 05421-300-18, 05421-300-31, 05421-300-36 to 05421-300-38);
- 12) Exterior Textured Paint – on mechanical equipment roof walls (Sample 05421-300-21);
- 13) HVAC thermal Insulation – upper level register boots, furnace ductwork and HVAC ductworks (Samples 05421-300-22 to 05421-300-24);
- 14) 1 x 1' Acoustical Ceiling Panel Mastic – located on back side of 1 x 1' acoustical ceiling panels (Samples 05421-300-25 to 05421-300-28);
- 15) Interior Wall Stucco – lower level area (Samples 05421-300-29 and 05421-300-30);
- 16) Wall Surface Texturing Material – on lower level wall surfaces adjacent to Apparatus Bay #2 (Samples 05421-300-33 to 05421-S-35); and
- 17) Exterior Stucco – Structure's exterior wall surface (Samples 05421-300-39 and 05421-300-40)

No other suspect asbestos-containing building materials were observed at the subject structure available for inspection. In most instances, the suspect ACM at the subject structure was noted to be in fair to good condition. Please refer to **Plates 3 and 4** and **Table 2** on the following pages to identify those building materials that are asbestos containing. Complete laboratory results and chain-of-custody results have been attached in **Appendix B**.

**Summary of Identified Asbestos-Containing Building Materials
300 Johnson Street – Sausalito Fire Station #1**

Structure	Identified ACBM	Square Footage	Locations/Notes
Lower Level	HVAC Thermal Insulation	NE	Asbestos-containing furnace and duct insulation located in heater closet and above the lobby, admin area, lieutenant's office and mail/form/supplies room areas (above ceiling). Quantity not estimate due to limited access.
	Sheetrock with Drywall Mud/Joint Compound	NE	On outer and inner sheetrock wall/ceiling surfaces in older building section to include medical supplies/parts, evidence storage, water gear, compressor room and parts/tools areas adjacent to Apparatus Bay #2 (See Plate 3 for location details).
Upper Level	HVAC Register Boot Insulation	7 boots	Asbestos-containing register boots insulation in dorm (2), Day room (2), Multi-purpose Room (2), and Chief's Office (1) areas – duct source unknown. Asbestos-containing duct insulation may exist in the space between first and second floors. Fiberglass and non-insulated ducting was observed in attic crawl space above the locker room ceiling.
	Vinyl Sheet Linoleum	30 sf.	Chief's Office restroom area
	9"x9" or 12" x 12" Vinyl Floor Tile/Mastic	1160 sf.	Located in hall, Chief's office, multi-purpose room, training/library and fire prevention office areas – see Plate 4 for location details

NE – Not Estimated

** - See **Plates 3 and 4** for asbestos-containing building materials location details

B. PCB-containing Fluorescent Light Fixture Ballasts

Based on the mixed age of the fluorescent light fixtures within the structure, some of the fluorescent light fixtures may still contain PCB-containing transformer ballasts. . Prior to fluorescent light fixture removal and disposal, each fixture ballast(s) will be required to be removed and inspected. Non PCB-containing ballasts will contain a label indicating that the ballast is non PCB-containing. Non-labeled fixture ballasts must be

TABLE 2



Suspect Asbestos-Containing Building Material Listing

BUILDING/FUNCTIONAL SPACE: Sausalito Fire Station #1, Sausalito, California
PROJECT/PROJECT LOCATION: Pre-demolition Asbestos/Hazardous Materials Survey
INSPECTOR: Bob Gerhold - CAC #92-0157 **DATE:** 14 November 2005

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL DESCRIPTION	AREA	PERCENT ASBESTOS	FRIABILITY	ABATEMENT PROCEDURES	RECOMMENDATIONS/NOTES
05421-300-1	Attic	Blown-in Insulation	N/A	ND	N/A	N/A	N/A
05421-300-2	Attic	Blown-in Insulation	N/A	ND	N/A	N/A	N/A
05421-300-3	Upper Flat Roof	Built-up Roofing	N/A	ND	N/A	N/A	N/A
05421-300-4	Upper Flat Roof	Roofing Material	N/A	ND	N/A	N/A	N/A
05421-300-5	Attic	Roofing Material	N/A	ND	N/A	N/A	N/A
05421-300-6	Upper Flat Roof	Roofing Sealant	N/A	ND	N/A	N/A	N/A
05421-300-7	2nd Floor - Dorm	1x1' Acoustical Ceiling Tile	N/A	ND	N/A	N/A	N/A
05421-300-8	2nd Floor - Multi-purpose Room	1x1' Acoustical Ceiling Tile	N/A	ND	N/A	N/A	N/A
05421-300-9	2nd Floor - Hallway	1x1' Acoustical Ceiling Tile	N/A	ND	N/A	N/A	N/A
05421-300-10	2nd Floor - Lobby	1x1' Acoustical Ceiling Tile	N/A	ND	N/A	N/A	N/A
05421-300-11	1st Floor - Radio Room	1x1' Acoustical Ceiling Tile	N/A	ND	N/A	N/A	N/A
05421-300-12	2nd Floor - Multi-purpose Room	Drywall Mud/ Joint Compound	N/A	ND	N/A	N/A	N/A
05421-300-13	2nd Floor, Small Bathroom	Vinyl Sheet Linoleum	30 sf.	24% Chrysotile	Friable	Containment	Remove prior to renovation/demolition. Asbestos in backing layer
05421-300-14	2nd Floor - Hallway	Vinyl Floor Tile & Mastic	1160 ssf.	Tile=20% Mastic=ND	Non-friable	Wet Method	Remove prior to renovation/demolition.

NOTES/COMMENTS

ND = Asbestos Content less than 1.0% by volume
AACM = Assumed ACM/ Not Analyzed
Chrysotile = Chrysotile Asbestos

N/A = Not Applicable
sf./lf. = Square Feet/Linear Feet
Crocidolite = Crocidolite Asbestos

Key to Abbreviations

Wet Methods = Wet Methods/Critical Barrier
NE = Not Estimated
Containment = Containment w/ negative pressure

TABLE 2



Suspect Asbestos-Containing Building Material Listing

BUILDING/FUNCTIONAL SPACE: Sausalito Fire Station #1, Sausalito, California
PROJECT/PROJECT LOCATION: Pre-demolition Asbestos/Hazardous Materials Survey
INSPECTOR: Bob Gerhold - CAC #92-0157 **DATE:** 14 November 2005

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL DESCRIPTION	AREA	PERCENT ASBESTOS	FRIABILITY	ABATEMENT PROCEDURES	RECOMMENDATIONS/NOTES
05421-300-15	2nd Floor - Multi-purpose Room	Vinyl Floor Tile & Mastic	N/A	ND	N/A	N/A	N/A
05421-300-16	2nd Floor - Small Dorm Room	Plaster	N/A	ND	N/A	N/A	N/A
05421-300-17	2nd Floor - Day Room	Drywall Mud/ Joint Compound	N/A	ND	N/A	N/A	N/A
05421-300-18	2nd Floor - Dorm	Drywall Mud/ Joint Compound	N/A	ND	N/A	N/A	N/A
05421-300-19	2nd Floor - Kitchen	Vinyl Sheet Linoleum	N/A	ND	N/A	N/A	N/A
05421-300-20	Flat Roof - Mechanical Equipment	Built-up Roofing	N/A	ND	N/A	N/A	N/A
05421-300-21	Exterior - Mech Equip Roof Walls	Exterior Paint	N/A	ND	N/A	N/A	N/A
05421-300-22	2nd Floor - Day Room	Insulation on Register Boot	7 Boots	85% Chrysotile	Friable	Containment	Remove prior to renovation/demolition.
05421-300-23	1st Floor - Furnace	Insulation Tape	NE *	90% Chrysotile	Friable	Containment	Remove prior to renovation/demolition.
05421-300-24	1st Floor - Furnace	HVAC insulation		70% Chrysotile	Friable	Containment	Remove prior to renovation/demolition.
05421-300-25	2nd Floor - Dorm	Ceiling Tile Mastic	N/A	ND	N/A	N/A	N/A
05421-300-26	2nd Floor - Multi-purpose Room	Ceiling Tile Mastic	N/A	ND	N/A	N/A	N/A
05421-300-27	1st Floor - Hallway at Furnace Room	Ceiling Tile Mastic	N/A	ND	N/A	N/A	N/A
05421-300-28	1st Floor - LT's Office	Ceiling Tile Mastic	N/A	ND	N/A	N/A	N/A

NOTES/COMMENTS

* Asbestos-containing furnace and duct insulation located in heater closet and above the lobby, admin area, lieutenant's office and mail/form/supplies room areas

Key to Abbreviations

ND = Asbestos Content less than 1.0% by volume
AACM = Assumed ACM/ Not Analyzed
Chrysotile = Chrysotile Asbestos

N/A = Not Applicable
sf./lf. = Square Feet/Linear Feet
Crocidolite = Crocidolite Asbestos

Wet Methods = Wet Methods/Critical Barrier
NE = Not Estimated
Containment = Containment w/ negative pressure

TABLE 2



Suspect Asbestos-Containing Building Material Listing

BUILDING/FUNCTIONAL SPACE: Sausalito Fire Station #1, Sausalito, California
PROJECT/PROJECT LOCATION: Pre-demolition Asbestos/Hazardous Materials Survey
INSPECTOR: Bob Gerhold - CAC #92-0157 **DATE:** 14 November 2005

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL DESCRIPTION	AREA	PERCENT ASBESTOS	FRIABILITY	ABATEMENT PROCEDURES	RECOMMENDATIONS/NOTES
05421-300-29	1st Floor - Emergency Generator Room	Interior Stucco	N/A	ND	N/A	N/A	N/A
05421-300-30	1st Floor - Hose Tower	Interior Stucco	N/A	ND	N/A	N/A	N/A
05421-300-31	1st Floor - Lobby	Drywall Mud/ Joint Compound	N/A	ND	N/A	N/A	N/A
05421-300-32	1st Floor - Laundry	Plaster	N/A	ND	N/A	N/A	N/A
05421-300-33	1st Floor - Apparatus Bay #2	Drywall Mud/ Joint Compound	N/A	ND	N/A	N/A	N/A
05421-300-34	1st Floor - Medical Supplies	Drywall Mud/ Joint Compound	N/A	ND	N/A	N/A	N/A
05421-300-35	1st Floor - Parts/Tools Room	Drywall Mud/ Joint Compound	N/A	ND	N/A	N/A	N/A
05421-300-36	1st Floor - Apparatus Bay #2	Drywall Mud/ Joint Compound	N/A	ND	N/A	N/A	N/A
05421-300-37	1st Floor - Medical Supplies	Drywall Mud/ Joint Compound	NE **	4%	Friable	Containment	Remove prior to demolition. Asbestos in drywall mud/joint compound portion only. Composite sample contains trace asbestos.
05421-300-38	1st Floor - Parts/Tools Room	Drywall Mud/ Joint Compound		2%	Friable	Containment	
05421-300-39	Exterior - Rear Addition	Exterior Stucco	N/A	ND	N/A	N/A	N/A
05421-300-40	Exterior - By Entrance	Exterior Stucco	N/A	ND	N/A	N/A	N/A

NOTES/COMMENTS

** On outer and inner sheetrock wall/ceiling surfaces in older building section to include medical supplies/parts, evidence storage, water gear, compressor room and parts/tools areas adjacent to Apparatus Bay #2 (See Plate 3 for location details).

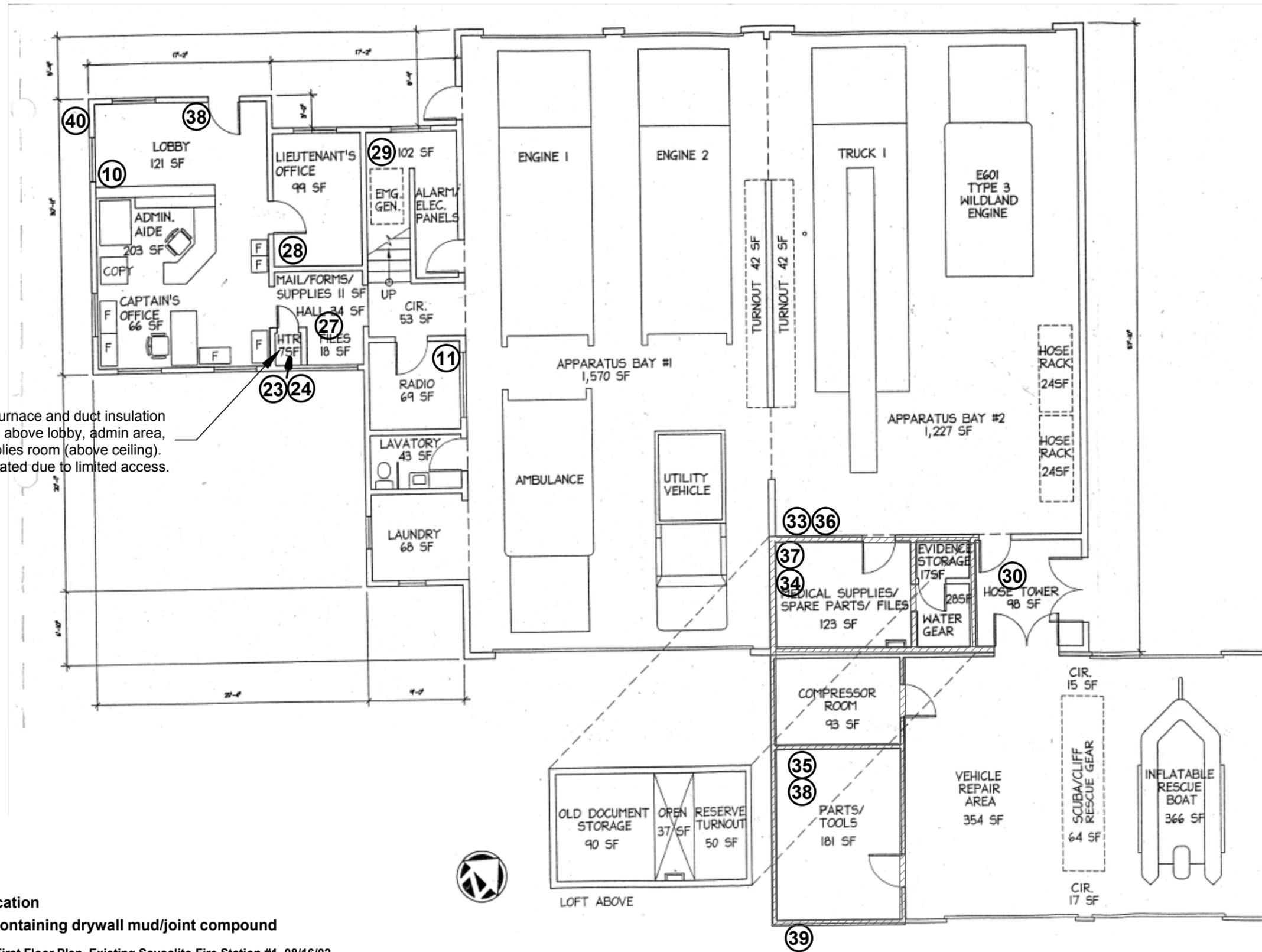
Key to Abbreviations

ND = Asbestos Content less than 1.0% by volume
AACM = Assumed ACBM/ Not Analyzed
Chrysotile = Chrysotile Asbestos

N/A = Not Applicable
sf./lf. = Square Feet/Linear Feet
Crocidolite = Crocidolite Asbestos

Wet Methods = Wet Methods/Critical Barrier
NE = Not Estimated
Containment = Containment w/ negative pressure

Asbestos-containing furnace and duct insulation located in heater closet and above lobby, admin area, lieutenant's office and mail/form/supplies room (above ceiling).
Quantity not estimated due to limited access.



- (21) Sample Location
- ▨ Asbestos-containing drywall mud/joint compound

Source: Unknown, First Floor Plan, Existing Sausalito Fire Station #1, 08/16/02

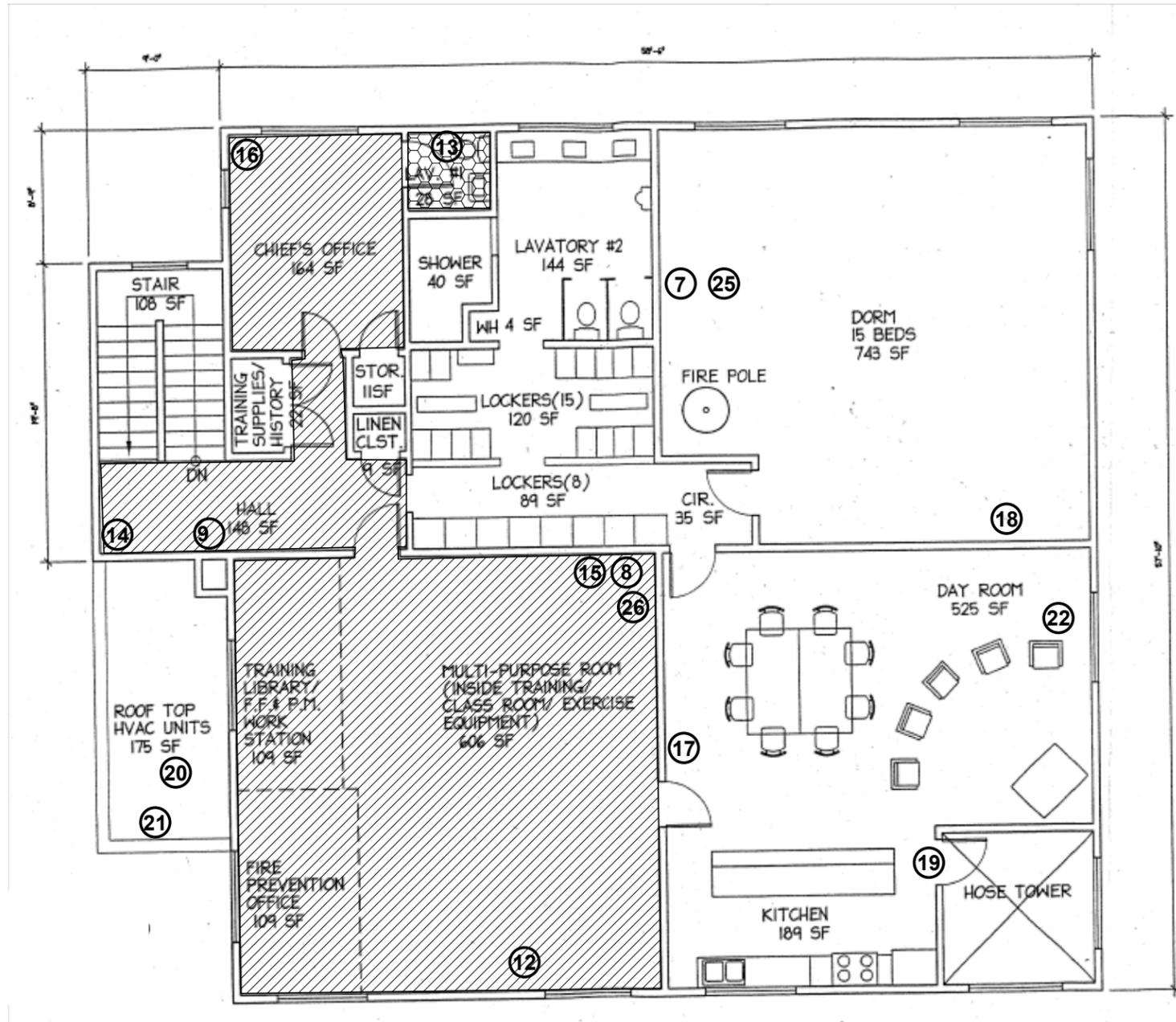


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Environmental
Management

City of Sausalito
Pre-Demolition Asbestos/Hazardous Material Survey

First Floor Plan
Sausalito Fire Station #1
300 Johnson Street, Sausalito, California

PLATE
3



Asbestos-containing register boots insulation located in dorm (2), Day Room (2), Multi-purpose Room (2), and Chief's Office (1) areas - duct source unknown. Asbestos-containing duct insulation may exist in space between the first and second floors. Fiberglass and non-insulated ducting was observed in attic crawl space above locker room ceiling.

- ②① Sample Location
-  Asbestos-containing vinyl sheet linoleum
-  Asbestos-containing red vinyl floor tile under carpeting.
Mastic is negative for asbestos.

Source: Unknown, Second Floor Plan, Existing Sausalito Fire Station #1, 08/16/02

assumed to be PCB-containing and transported and disposal of in accordance with state and federal regulations.

C. Mercury Thermostat Switches

Two mercury-containing thermostat switches were observed within the subject structure in the lower level lobby area and in the upper level day room area. The mercury containing thermostats must be recycled or disposed of as hazardous waste at an approved facility.

D. Lead-based/containing Painted Surfaces

The older portions of the existing structure predates the 1978 ban on lead-based paints, thus lead-based and/or lead-containing interior/exterior paint coatings may exist underlying the relatively newer recent paint coatings on the building interior/exterior surfaces. It is not known at the time of this investigation whether the interior/exterior paint coatings have underlying lead-based painted surfaces or the original paint coats were removed during previous renovation activities. At the time of this investigation, sampling and analysis of suspected lead-containing or lead-based paints is not required for demolition, thus has not been performed for the existing structure.

SECTION III - CONCLUSIONS AND RECOMMENDATIONS

I. CONCLUSIONS

A. Asbestos-containing Building Materials (ACBM)

Based on laboratory analysis of samples collected from the subject structures, the following asbestos-containing materials have been identified:

1. 29 Caledonia Street – Former Sausalito Police Station Facility

Level	Identified ACBM	Square Footage	Locations/Notes **
Lower Level	Vinyl Sheet Linoleum	280 sf.	Located primarily in restroom and hallway areas – See Plate 1 for location details. Vinyl sheet linoleum with same pattern in areas not accessible for inspection should be assumed asbestos-containing until determined by laboratory analysis.
	Sheetrock with Drywall Mud/Joint Compound	NE	On sheetrock wall/ceiling surfaces in older building section with exception of reception area internal partition wall and garage area (See Plate 1 for location details). All remaining sheetrock walls in areas not available for inspection should be considered as having asbestos-containing drywall mud/joint compound.
Upper Level	Wall insulation Pad	9 sf.	Located in furnace (mechanical room) near laboratory area
	Vinyl Sheet Linoleum and/or linoleum backing materials under existing flooring	670 sf.	See Plate 2 for location details. Vinyl sheet linoleum with same pattern in areas not accessible for inspection should be assumed asbestos-containing until determined by laboratory analysis.
	12 x 12" Vinyl Floor Tile and/or Mastic	420 sf	See Plate 2 for location details. 12 x 12' Vinyl Floor Tile and/or Mastic with same pattern in areas not accessible for inspection should be assumed asbestos-containing until determined by laboratory analysis
	Sheetrock with Drywall Mud/Joint Compound	NE	On sheetrock wall/ceiling surfaces in older building section with exception of former squad room area (See Plate 2 for location details). All remaining sheetrock walls in areas not available for inspection should be considered as having asbestos-containing drywall mud/joint compound.
Roof Surface	Ridge Cap Sealant	140 sf.	Around perimeter of upper pitched roof surface
	Penetration Roofing Sealant	NE	Located around pitched roof penetrations

NE – Not Estimated

** - See **Plates 1 and 2** for asbestos-containing building materials location details

2. 300 Johnson Street – Sausalito Fire Station #1

Structure	Identified ACBM	Square Footage	Locations/Notes
Lower Level	HVAC Thermal Insulation	NE	Asbestos-containing furnace and duct insulation located in heater closet and above the lobby, admin area, lieutenant's office and mail/form/supplies room areas (above ceiling). Quantity not estimate due to limited access.
	Sheetrock with Drywall Mud/Joint Compound	NE	On outer and inner sheetrock wall/ceiling surfaces in older building section to include medical supplies/parts, evidence storage, water gear, compressor room and parts/tools areas adjacent to Apparatus Bay #2 (See Plate 3 for location details).

Structure	Identified ACBM	Square Footage	Locations/Notes
Upper Level	HVAC Register Boot Insulation	7 boots	Asbestos-containing register boots insulation in dorm (2), Day room (2), Multi-purpose Room (2), and Chief's Office (1) areas – duct source unknown. Asbestos-containing duct insulation may exist in the space between first and second floors. Fiberglass and non-insulated ducting was observed in attic crawl space above the locker room ceiling.
	Vinyl Sheet Linoleum	30 sf.	Chief's Office restroom area
	9"x9" or 12" x 12" Vinyl Floor Tile/Mastic	1160 sf.	Located in hall, Chief's office, multi-purpose room, training/library and fire prevention office areas – see Plate 4 for location details

NE – Not Estimated

** - See **Plates 3 and 4** for asbestos-containing building materials location details

Estimated quantities of asbestos-containing building material should be utilized as a general guideline and not for bidding purposes. Renovation/demolition contractor is responsible for determining actual quantities of asbestos-containing building material to be removed.

Caution during renovation should be exercised due to the possibility that additional asbestos-containing materials (i.e. additional flooring type underneath the existing flooring material) could be found in areas not available for inspection. If suspect asbestos-containing materials are found in hidden spaces during renovation and/or demolition, work should cease until the material contents are verified. Periodic monitoring by the building owner should be made during work to identify possible additional ACM.

B. PCB-containing Fluorescent Light Fixture Ballasts

Based on the mixed age of the fluorescent light fixtures within the structures, some of the fluorescent light fixtures may still contain PCB-containing transformer ballasts. Several removed ballasts located on the lower level were observed not to contain "No PCB's" markings to indicate that the ballasts are non-PCB containing. Prior to fluorescent light fixture removal and disposal, each fixture ballast(s) will be required to be removed and inspected. Non PCB-containing ballasts will contain a label indicating that the ballast is non PCB-containing. Non-labeled fixture ballasts must be assumed to be PCB-containing and transported and disposal of in accordance with state and federal regulations.

C. Mercury Thermostat Switches

Two mercury-containing thermostat switches were observed within the Fire Station structure in the lower level lobby area and in the upper level day room area. No mercury-containing thermostat switches were observed within the former Police Station structure.

D. Lead-based/containing Painted Surfaces

The older portions of the existing structures predates the 1978 ban on lead-based paints, thus lead-based and/or lead-containing interior/exterior paint coatings may exist underlying the relatively newer recent paint coatings on the building interior/exterior surfaces. It is not known at the time of this investigation whether the interior/exterior paint coatings have underlying lead-based painted surfaces or the original paint coats were removed during previous renovation activities. At the time of this investigation, sampling and analysis of suspected lead-containing or lead-based paints is not required for demolition, thus has not been performed for the existing structure.

II. RECOMMENDATIONS

Based on our visual inspection, laboratory results, and the regulatory guidelines affecting the subject structure, the following recommendations for removal of asbestos containing building materials and/or other hazardous materials, if necessary, are provided for the subject structures.

A. Asbestos

Asbestos Notification Law

The California Health and Safety Code section 25915-25919.7 (The Asbestos Notification Law) requires that building owners and lessees notify other owners, building employees, tenants and lessees regarding known asbestos-containing construction materials in buildings built prior to 1979. For the purpose of this statute, and "asbestos-containing construction material" is a material that contains greater than 1.0 percent asbestos by weight. "Building" means any public or commercial building, apartment complexes with 4 or more units, except residential dwellings. The initial and subsequent annual notifications must include the following information:

- 1) The existence of, conclusion from, and a description or list of, any asbestos survey conducted to determine the existence and location of asbestos-containing materials within the building(s);
- 2) Specific locations of known asbestos-containing construction materials;
- 3) General procedures and handling procedures necessary to prevent, and if appropriate, to minimize disturbance, release, and exposure to asbestos. If detailed handling instructions (e.g. Management/O&M Plans) are necessary to ensure employee/tenant safety, the notice shall include where information can be obtained;
- 4) Results of bulk sampling of suspect asbestos-containing construction materials and/or air monitoring performed at the building(s);
- 5) Potential health risks or impacts that may result from exposure to asbestos-containing material in the building(s)
- 6) The location of asbestos surveys and air monitoring results must be available for review and photocopying to all affected parties.

Asbestos Abatement Guidelines

BAAQMD's Regulation 11-2-401.3 requires that for every demolition or for every renovation involving the removal of 100 sq. ft./lin. ft. or greater of Regulated Asbestos Containing Material (RACM), a notification must be made to the BAAQMD at least 10 working days prior to commencement of demolition/renovation. In addition, BAAQMD requires removal, prior to renovation and/or demolition, of regulated asbestos-containing materials (RACM), i.e., materials with asbestos content of greater than 1 percent that are friable or may become friable during removal or renovation. A Cal/OSHA 10-day notification is also required prior to renovation and/or demolition of regulated asbestos-containing materials.

Regulated Asbestos Containing Material (RACM) is defined in BAAQMD Regulation 11, Rule 2 as asbestos-containing material that is friable and contains greater than 1% asbestos. A friable material is defined by USA EPA NESHAPS regulation 40 CFR 61, Subpart 61.141 as any material containing more than 1% asbestos by volume that can crumble, pulverize, or reduce to powder by hand pressure, when dry. This definition may also apply to those asbestos containing materials that when torn, have the potential to release asbestos fibers.

Non-friable asbestos containing materials containing greater than 1% asbestos are also considered to be RACM if they are subjected to sanding, drilling, grinding, cutting, abrading or may be crumbled, pulverized, or reduced to powder during the course of demolition or renovation activities.

Friable Asbestos-Containing Materials

Vinyl Sheet Linoleum

Removal would be required to be completed by a Cal/OSHA registered abatement contractor utilizing full containment and abatement procedures. Since the quantity of vinyl sheet linoleum exceeds 100 square feet at the subject site, Bay Area Air Quality Management District (BAAQMD) and Cal/OSHA would require a

ten-day notification prior to vinyl sheet linoleum abatement. The vinyl sheet linoleum must be removed following BAAQMD and Cal/OSHA guidelines. Friable wastes generated during abatement must be disposed in approved hazardous waste site and transported by licensed hazardous waste hauler.

HVAC Duct Insulation/Register Boot/Seam Tape Thermal Insulation

Removal is required to be completed by a Cal/OSHA registered abatement contractor utilizing glove bag/abatement procedures and/or the entire ducting/boot and insulation can be removed as a unit. Asbestos-containing HVAC duct insulation/register boot/plenum seam tape can be removed from the underlying substrate and disposed of separately. Bay Area Air Quality Management District (BAAQMD) and Cal/OSHA would require the ten-day notification prior to thermal insulation abatement. The HVAC duct insulation/register boot/seam tape thermal insulation must be removed following BAAQMD and Cal/OSHA guidelines. Friable wastes generated during abatement must be disposed in approved hazardous waste site and transported by licensed hazardous waste hauler.

Drywall Mud/Joint Compound

In residential or commercial structures in which at least one drywall mud/joint compound and/or texture surfacing material has tested positive for asbestos, the remaining wall surfaces within the homogeneous area and/or construction age should also be an assumed asbestos-containing material.

Interior walls that have asbestos-containing drywall mud/joint compound on the sheetrock surface are required to be abated by a registered asbestos abatement contractor or a Cal-OSHA registered demolition contractor.

In regard to Bay Area Air Quality Management District (BAAQMD) guidelines, the total wall construction may be considered non-asbestos containing even though the drywall mud/joint compound is positive for asbestos (greater than 1%) and would not require notification prior to abatement. This is based on the asbestos percentage for the total wall construction (gypsum board and drywall mud/joint tape) in which the gypsum board comprises over 90% by volume of the wall construction material. For example, if the drywall mud component contains 10% asbestos and comprises less than 10% (by volume) of the wall construction material, the total asbestos percentage based on the total wall construction is less than 1.0%. In addition, the surface area of drywall joint compound on a gypsum board is typically less than 25% of the total surface area, thus the total asbestos concentration of the wall construction may be less than 0.1%.

Although, the gypsum board/drywall mud combination may be considered non-asbestos containing, Cal/OSHA requires personal air monitoring and worker protection during demolition/renovation activities if the concentration of asbestos for the total wall construction is greater than 0.1% and/or if there is a potential for asbestos fiber release. The State of California considers asbestos-containing material as materials which contain more than 1% asbestos. When the entire combination of drywall mud and gypsum board contains less than 1% by volume asbestos, the gypsum board and associated asbestos-containing drywall mud/joint compound can be disposed at a local Class III landfill as non-asbestos containing waste.

HVAC Wall Insulation Pad (former Police Station Facility)

Removal would be required to be completed by a Cal/OSHA registered abatement contractor utilizing glove bag/abatement procedures and/or the entire ducting and insulation can be removed as a unit. Bay Area Air Quality Management District (BAAQMD) and Cal/OSHA would not require a ten-day notification prior to thermal insulation abatement. The HVAC wall insulation pad must be removed following BAAQMD and Cal/OSHA guidelines. Friable wastes generated during abatement must be disposed in approved hazardous waste site and transported by licensed hazardous waste hauler.

Non-Friable Asbestos Materials

Asphaltic Roofing/Penetration Sealant Materials

All asbestos-containing roofing materials would be required to be removed before demolition of the existing roof surface. Non-asbestos containing roofing material that is in contact with adjacent asbestos-containing roofing material must also be removed and treated as asbestos-containing waste. The remaining roof surfacing materials can be disposed of in the normal manner. The non-friable roofing materials can be removed by a Cal/OSHA registered asbestos roofing contractor under wet conditions and utilization of worker protection practices. The roofing material should be kept wet and removed in sections in order to

reduce the possibility of fiber release from the material. Non-friable roofing materials, upon approval, can be disposed of to a local Class III landfill that accepts non-friable asbestos-containing materials.

9 x 9" or 12 x 12" Vinyl Floor Tile/Mastic

Removal would be required to be performed by a Cal/OSHA registered abatement contractor or a Cal/OSHA registered flooring company since the quantity of asbestos-containing vinyl tile flooring material exceeds 100 square feet at the subject site. Flooring materials must be removed following Bay Area Air Quality Management District (BAAQMD) and Cal/OSHA guidelines. Removal should be conducted, at a minimum, with splashguards and with the materials kept in a wetted state. This will reduce any potential for fiber release, and/or to contain asbestos-containing emissions. Non-friable flooring material can be disposed of, upon approval, at a Class III landfill that accepts non-friable asbestos-containing materials.

B. Miscellaneous Hazardous Materials

1. PCB-containing Fluorescent Light Fixture Ballasts

Prior to fluorescent light fixture removal and disposal, each fixture ballast will be required to be removed and inspected. Non PCB-containing ballasts will contain a label indicating that the ballast is non PCB-containing. Non-labeled fixture ballasts must be assumed to be PCB-containing and transported and disposal of in accordance with state and federal regulations.

California regulates PCBs as a hazardous waste in liquid format concentrations equal to or above 5 ppm and non-liquids at concentrations equal to or above 50 ppm. The state does not specifically regulate PCB containing waste disposal, but if wastes contain the threshold levels stated above, they must be disposed of as a hazardous waste.

Fluorescent light ballasts containing PCBs are considered hazardous waste and must be transported and disposed of as hazardous waste. Transportation of these ballasts for consolidation prior to disposal is exempted from manifesting and use of a registered hauler up to two 55-gallon drums per vehicle.

2. Mercury Thermostat Switches

Mercury containing thermostats are considered in California as a Universal Hazardous Waste under the "Universal Waste Rule," in accordance with California Code of Regulations, Title 22, Division 4.5, Chapter 23. The mercury containing thermostats must be recycled or disposed of as hazardous waste at an approved facility. Based on the limited quantity of mercury containing thermostats identified within the structures, they may be disposed of through the Marin County Business Hazardous Waste Collection Program.

C. Lead-Based/Lead-Containing Paints

Renovation/Demolition Construction Guidelines

At present, there are no state or federal laws dealing with mandatory abatement following the identification of **lead containing or lead based paints** prior to disturbance. However, in 1993 the Occupational Safety and Health Administration promulgated legislation (29 CFR 1926.62 and 8 CCR 1532.1) entitled "Lead Exposure in the Construction Industry" which deals with worker exposure to lead.

It should be noted that aside from the HUD definition of lead-based paint (1.0 mg/cm²), OSHA regulates worker protection and work practices on building components containing any detectable amounts of lead. Therefore, components determined to contain less than 1.0 mg/cm² may still be subject to OSHA regulations, if these materials are to be disturbed.

This standard essentially states that work, involving components containing any amount of lead must follow certain guidelines. These guidelines include but are not limited to training, personal protective equipment and specific work practices whenever workers disturb lead in any concentration because the disturbance may result in airborne exposures over action or permissible exposure limits. This legislation requires that any task that may potentially expose workers to any concentration of lead be monitored to determine workers eight-hour time weighted average (TWA) exposure to lead. Prior to conducting activities that may generate

a lead exposure, such workers must be properly fitted with respiratory protection and protective clothing until personal eight-hour TWA results reveal exposures within acceptable levels.

Any proposed renovation/demolition, which may involve the removal or disturbance of building components with lead based and/or lead containing painted surfaces should include provisions to minimize the potential for airborne release of lead contaminated dust. If lead-based and/or lead-containing paints are removed from the underlying substrate, it is recommended that the lead paint be removed by a licensed and experienced lead paint abatement contractor. Removal of the lead-based and/or lead-containing paints can be performed by either utilizing paint removal compounds and/or by scraping. Manual scraping of loose and peeling lead based paints should be conducted with polyethylene sheeting on the ground below to contain paint chips removed.

It is recommended, as a minimum, that demolition/renovation of building materials which have lead-based and/or lead-containing paints be conducted with the materials kept in a wetted state and removed in sections, as feasible, to reduce the potential for airborne lead emissions.

If separated from the underlying substrate, lead containing wastes generated during lead paint abatement removal activities would be required to be analyzed by either Soluble Lead Concentration (STLC) and/or a Lead Toxicity Characteristics Leaching Procedure (TCLP) laboratory analysis for disposal classification. Lead containing wastes equal to or greater than 5 ppm lead as determined by STLC and/or TCLP laboratory analysis would be classified as a California regulated hazardous waste. The lead containing hazardous waste is required to be transported by a licensed hazardous waste hauler and disposed of in approved hazardous waste facility.

Lead containing wastes less than 5 ppm lead as determined by STLC and/or TCLP laboratory analysis would be classified as a non-hazardous waste. The lead containing waste can be disposed of as non-hazardous waste to a local Class III landfill.

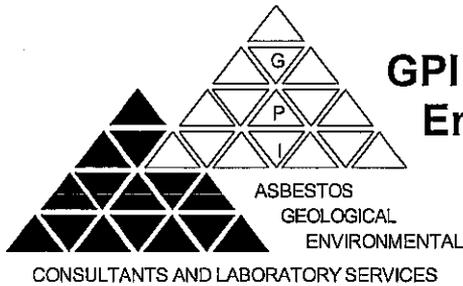
Based on total wall and/or material construction, there is no regulatory guidance for the disposal of building materials containing lead-containing and/or lead-based paint. The removed walls and/or building material containing lead-based or lead-containing paint can be disposed of as non-hazardous waste to a local Class III landfill.

Area air monitoring is recommended during and upon completion of renovation/demolition activities. The results should be provided to the renovation/demolition contractor in order to facilitate changes in renovation demolition practices if airborne lead levels exceed the federal Permissible Exposure Limit (PEL) concentrations. Air monitoring would also provide documentation that the airborne lead concentrations are below federal PEL during renovation activities and minimize possible airborne lead exposure to renovation workers and to building occupants. Upon completion of renovation/demolition activities, the work area should be thoroughly cleaned by damp wiping both vertical and horizontal surfaces. It is also recommended to collect surface swipe samples upon completion of damp wiping to verify that decontamination activities were successful in removing possible lead containing dust.

III. LIMITATIONS OF LIABILITY

Work and resulting recommendations for this survey are in accordance with generally accepted building survey practices and AHERA protocols for asbestos inspections. GPI provides no other guarantees, either expressed or implied. This investigation for asbestos is designed to provide an initial assessment of the potential for asbestos-containing materials at specific locations. The scope of work was limited to accessible surficial observation, limited sampling analyses, and data review.

Conclusions and recommendations presented in issued reports are qualitative judgements based on the prevailing regulations affecting the scope of work at the time of report issuance. The client recognizes that site conditions or access may vary in from those encountered at the time of our inspection and sample collection by GPI personnel. The data interpretations and recommendations of GPI are based solely on the information available to GPI at the time of our inspection. The client recognizes that site conditions may change with time. Further investigations or work practices could reveal different conditions from those presented in this study. GPI will not be responsible for interpretation or use by others of the information developed by GPI.



GPI Environmental Management

1516 Grant Avenue, Suite 226

Novato, CA 94945-3147

(415) 892-9016
(415) 892-6390 (FAX)

6 December 2005

GPI Project Number: 05421

Mr. Paul Kermoyan
Director, Community Development
City of Sausalito
420 Litho Street
Sausalito, CA 94965

RE: Environmental Evaluation Review for Sausalito Fire Station #1 (300 Johnson Street), Sausalito, CA.

Dear Mr. Kermoyan:

GPI Environmental Management (GPI) is pleased to submit this report presenting the results of our review and evaluation of current subsurface soil/groundwater conditions at the Sausalito Fire Station #1 property. It is our understanding that three gasoline underground storage tanks were removed from the driveway/parking area in October 1991. One groundwater monitoring well was installed downgradient from the former tank excavation in September 1992 and additional groundwater monitoring, sampling and laboratory analysis of groundwater samples was not performed until March 1998 prior to case closure in December 1998.

Our services included, as per our proposal dated 8 August 2005, the following tasks and associated subtasks:

- 1) A reconnaissance site visit will be performed to evaluate current site conditions at the subject property;
- 2) Request and review Marin County Department of Public Works, Waste Management Division's regulatory files to ascertain, document and evaluate the previous extent of soil and groundwater petroleum contamination, if present;
- 3) Review Cambria Environmental Technologies' Phase I Environmental Site assessment report to evaluate the potential for on-site contamination and ascertain potential impacts to the subject properties from the former service site at the northwest corner of Caledonia and Johnson Streets; and
- 4) Preparation of a summary environmental evaluation report to include, but not limited to, a site history, summary of subsurface investigation activities and soil/groundwater monitoring results, evaluation of previous and current soil/groundwater conditions, and provides conclusion and recommendations for further investigative and/or remedial actions, if necessary.

I. Site Background

The subject property (Sausalito Fire Department #1) is located at 300 Johnson Street, Sausalito, California, at the corner of Johnson and Caledonia Streets as shown in **Appendix A – Plate 1**. The subject property is in a commercial/residential area and Richardson Bay is 500 feet to the east of the subject property. Three former underground storage tanks (UST's) were located at the east end of the property near Johnson Street.

II. Tank Removal Activities – SEMCO – 1991

On October 9, 1991, SEMCO, Inc. (SEMCO) of San Mateo, CA., excavated and removed three underground storage tanks (USTs) from two separate excavations as shown in **Appendix A – Plate 2**. The western excavation (nearest Johnson Street) contained one 1,000-gallon regular gasoline and one 550-gallon diesel underground storage tank. The eastern excavation contained a single 1,000-gallon unleaded gasoline underground storage tank. Prior to removal, the underground storage tanks were rinsed with water and purged of hydrocarbon vapors with dry ice. A Marin County Department of Public Works, Waste Management representative was present at the time of tank removal activities. Upon completion of tank removal, the tanks were manifested and transported by Rich Hamilton Trucking of Modesto, to Erickson Inc. of Richmond, CA for disposal.

Upon completion of tank removal, SEMCO personnel collected five soil samples from the UST excavations. The soil samples were collected from approximately 8 feet below ground surface bgs. Analytical results for all soil samples indicated non-detectable concentrations of gasoline and diesel range hydrocarbon. Aromatic hydrocarbons Benzene, Toluene, Xylenes, Ethylbenzene (BTX&E) were detected at slightly elevated concentrations in the two soil samples collected in the western excavation ranging from 7 to 144 ppb. The three remaining soil samples collected from the eastern excavation indicated non-detectable to slightly elevated concentrations (6 ppb) of BTX&E constituents.

SEMCO excavated an additional 35 yards of potentially contaminated soil from the west excavation. The soil was stockpiled and covered by plastic sheeting for future disposal. The excavations remained open and subsequently accumulated rainwater.

III. Monitoring Well Installation and Excavation sampling – Certified Environmental Consultants – 1992

In January 1992, Certified Environmental Consulting of Benicia CA, (CEC), was contracted by the City of Sausalito to provide additional environmental services and install one monitor well at the site.

In February and April 1992, CEC collected soil samples at the soil-water interface (approx 4' bgs) and a water sample from both open excavations. Laboratory results have been summarized in **Appendix A – Plate 2** and in **Appendix C – Tables 1 and 2**. Laboratory results for the western excavation soil sample adjacent to the former diesel tank indicated slightly elevated concentrations of gasoline range hydrocarbons at 3.3 ppm and BTX&E constituents at between 0.030 to 0.63 ppm. Laboratory results for the eastern excavation soil sample adjacent to the former 1,000-gallon gasoline tank indicated non-detectable concentrations of gasoline range hydrocarbons and non-detectable to slightly elevated concentrations of BTX&E constituents at between 0.054 to 0.12 ppm.

Water samples collected from the excavations were non-detectable for gasoline range hydrocarbons and BTX&E constituents. Diesel range hydrocarbons were detected at 200 ppb.

In May 1992, CEC pumped approximately 2,500 gallons of water from the excavations to a Baker tank on-site. Water did not appear to re-enter the excavations once they were pumped dry. The initial water sample collected from the Baker tank contained gasoline range and diesel range hydrocarbons at 11,000 and 3,300 ppb, respectively. Samples collected from the Baker tank approximately one week later contained gasoline range and diesel range hydrocarbons concentrations of 480 and 570 ppb, respectively. Both baker tank samples were below detection limits for BTX&E.

In May 1992, a soil sample collected from the north end of the former 1000-gallon gasoline tank in the western excavation indicated gasoline range hydrocarbons at 5.1 ppm and BTX&E constituents ranging from 0.072 to 0.45 ppm. A soil sample from the north end of the former 1000-gallon gasoline tank in the eastern excavation indicated non-detectable concentrations of gasoline range hydrocarbons and BTX&E constituents ranging from 0.008 to 0.045 ppm.

The stockpiled soil was sampled and profiled for disposal. SEMCO loaded and transported the soil to an approved Class III landfill. The water contained in the Baker tank was also hauled to a recycling facility.

Additional sidewall soil samples were collected from the western excavation in September and October 1992 prior to backfilling. Laboratory results have been summarized in **Appendix A – Plate 2** and in **Appendix C – Tables 1 and 2**. The excavation soil sample from the western excavation (south end of the former 1000-gallon gasoline tank) indicated gasoline and diesel range hydrocarbons at 1200 and 310 ppm, respectively. Benzene was non-detectable and Toluene; Xylenes and Ethylbenzene were detected at 11, 210 and 5.8 ppm, respectively. Two additional soil samples were collected adjacent to the September 1992 sampling in October 1992 that indicated 77 ppm of gasoline range hydrocarbons at 4 feet below ground surface (bgs) and was non-detectable at 5.5 bgs. BTX&E constituents at 4 bgs ranged from 0.63 to 8.5 ppm, while at 5.5 bgs ranged from non-detectable to 0.030 ppm.

The excavations were backfilled with clean imported material and finished with concrete to match the existing surface. In September 1992, CEC installed one 4-inch well to 20 feet bgs adjacent to the UST excavations (see **Appendix A – Plate 2**). Soil samples collected at 4.5' bgs during the well installation were non-detectable for gasoline and diesel range hydrocarbons and BTX&E constituents. A groundwater sample was collected from the monitoring well indicated non-detectable concentrations for gasoline range hydrocarbons and BTX&E constituents. Diesel range hydrocarbons were detected at 220 ppb.

IV. Monitoring Well Sampling/Case Closure Documentation – L&S Environmental – 1998

No further work was conducted at the site until March 1998. L&S Environmental was contracted by the City of Sausalito to sample the existing well and prepare a case closure summary. A groundwater sample was collected from the monitoring well by L&S Environmental in March 1998 and indicated non-detectable concentrations for gasoline range hydrocarbons and BTX&E constituents. Diesel range hydrocarbons were detected at 57 ppb. L&S Environmental reported that during purging and sampling, the monitoring well pumped dry and was very slow to recharge. Groundwater flow direction and gradient have not been calculated for the subject property since only one monitoring well previously existed on site. The recorded static groundwater level measured at the subject property was measured at 5.08 feet bgs in September 1992 to 3.24 feet bgs in March 1998. Quarterly monitoring reports for the Chevron Station located at 1103 Bridgeway, immediately to the west, indicate a general flow direction to the north and northeast towards Richardson Bay.

V. Case Closure Summary

In July 1998, L&S Environmental prepared a case closure report and the Sausalito Fire Station #1 property was issued a case closure letter (no further action required) in December 1998 by the Marin County Department of Public Works, Waste Management Division and the State of California, California Environmental Protection Agency, State Water Resources Control Board (SWRCB-CalEPA), San Francisco Bay Region (see attached case closure letter in **Appendix B**). The "No Further Action" (NFA) letter were issued pursuant to the conditions of Section 25296.10 of the California Health and Safety Code, which applies only to releases of petroleum hydrocarbons associated with Underground Storage Tank systems.

L&S Environmental concluded that the primary sources of contamination (leaking UST) and bulk of soil contamination were addressed during the tank removal and subsequent soil over-excavation. They also concluded that based on previous site history, corrective action measures, and current land use would indicate that the site is a low risk to human health and the environment. The source (leaking UST) for contamination was been mitigated, the dissolved hydrocarbon plume is stable, no known water wells, drinking water aquifers, surface waters or other sensitive receptors are likely to be impacted, and that the subject property presents no significant risk to human health or the environment.

VI. Conclusions

GPI concurs with L&S Environmental's findings and presentation for case closure and are in agreement that additional site investigation/mitigation activities are not warranted for the subject property. With the exception of soil samples collected at 4 and 5.5 feet bgs along the southern side of the western excavation (south side of the former 1,000-gallon gasoline tank), petroleum and aromatic hydrocarbon soil/groundwater contamination in remaining areas appear to be negligible. Near-surface groundwater samples collected from the former monitoring well indicated a decline in diesel range hydrocarbons in near-surface ground from 220 ppb to 57 ppb from September 1992 to March 1998.

It is our professional opinion that slightly elevated concentrations of residue petroleum (gasoline and diesel) and aromatic hydrocarbon soil contamination may currently exist between the former western excavation and the Fire Station structure. The likely impact of the residue soil contamination in regards to the proposed foundation construction would be related to the disposal costs of excavated soils and potential exposure of petroleum and aromatic hydrocarbons to construction workers. We do not foresee that residue soil contamination would lead to additional site investigative activities and/or re-opening of the case.

Based on previous laboratory analysis (elevated concentration of gasoline range hydrocarbons on the south side of the western excavation), we estimate that approximately 35 to 50 cubic yards (down to a final foundation depth of 4 to 5 feet bgs) of slightly elevated concentrations of petroleum and aromatic hydrocarbons could potentially exist in the area as shown in **Appendix A – Plate 2**. It should be noted that additional residual soil contamination might exist in those areas not previously investigated and/or underneath the existing structure adjacent to the former fuel dispenser.

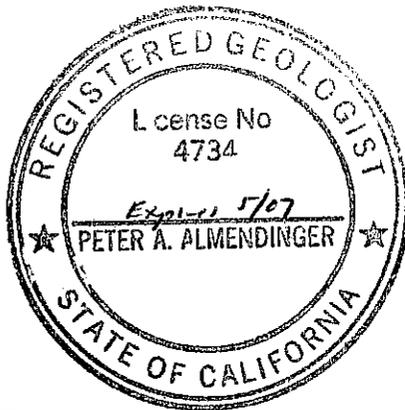
No additional information is currently available in regards to the potential impacts to the subject property from the service station site at the northwest corner of Caledonia and Johnson Streets. Additional investigations for the site have not been complete at the time of our investigation.

VII. Recommendations

Based on our conclusions, GPI provides the following recommendations:

- 1) Assumption that the proposed excavated foundation soil in the area between the former western excavation and the Fire Station structure contains slightly elevated concentration of petroleum and aromatic hydrocarbons. All excavated foundation soils in the vicinity of the former tank excavations should be stockpiled separately. A four-point composite stockpile soil sample should be collected and submitted for laboratory analysis for gasoline/diesel range and aromatic hydrocarbons. Laboratory results can be obtained from between 48 hours to 5 days, with 5 days as the normal turn-around time;
- 2) If stockpile soils are determine to be non-detectable for petroleum and aromatic hydrocarbons, the stockpiled excavation soil may be disposed of in the normal fashion. If stockpile soils are to be found with slightly elevated concentrations (generally up to 100 ppm of petroleum hydrocarbons and 1 ppm of aromatic hydrocarbons), the stockpiled soil may be disposed of as non-hazardous material to a Class III landfill (ie. Redwood Landfill) that accepts petroleum hydrocarbon contaminated soils. If soil contamination concentrations are in excess of 100 ppm, the contaminated soil must be disposed of at a Class II landfill; and
- 3) The foundation excavation contractor should have hazardous material handling training and/or a HAZ contractor license in the event that petroleum and/or aromatic hydrocarbons are encountered. Typically the hazardous material handling training involves workers undergoing an OSHA 40-hour training course.

We trust this provides the information required for the subject site. If any questions regarding this report arise, please don't hesitate to call me at (415) 892-9016.



Respectfully Submitted,
GPI Environmental Management

A handwritten signature in black ink, appearing to read "Peter Almendinger", written over a horizontal line.

Peter Almendinger -Principal
California Professional Geologist - #4734

Attachments:

Appendix A -

Plate 1 - Site Location Map

Plate 2 - Site Plan showing existing structures, former UST and soil sampling locations, Monitoring Well location, and Soil/Groundwater Sampling Laboratory Results

Appendix B - Case Closure Letter and Site Summary for Sausalito Fire Department, 333 Johnson Street, Sausalito, Marin County, UST Case No. 21-0244 - 17 December 1998

Appendix C -

Table 1 - Historical Soil Sampling Analytical Results, L & S Environmental, July 1998

Table 2 - Historical Groundwater Sampling Analytical Results, L & S Environmental, July 1998

Document Distribution:

Mr. David Ross, BSA Architects

Mr. Richard Hannigan, Swinerton, Inc.

Ms. Janet Palma, Pacific Municipal Consultants

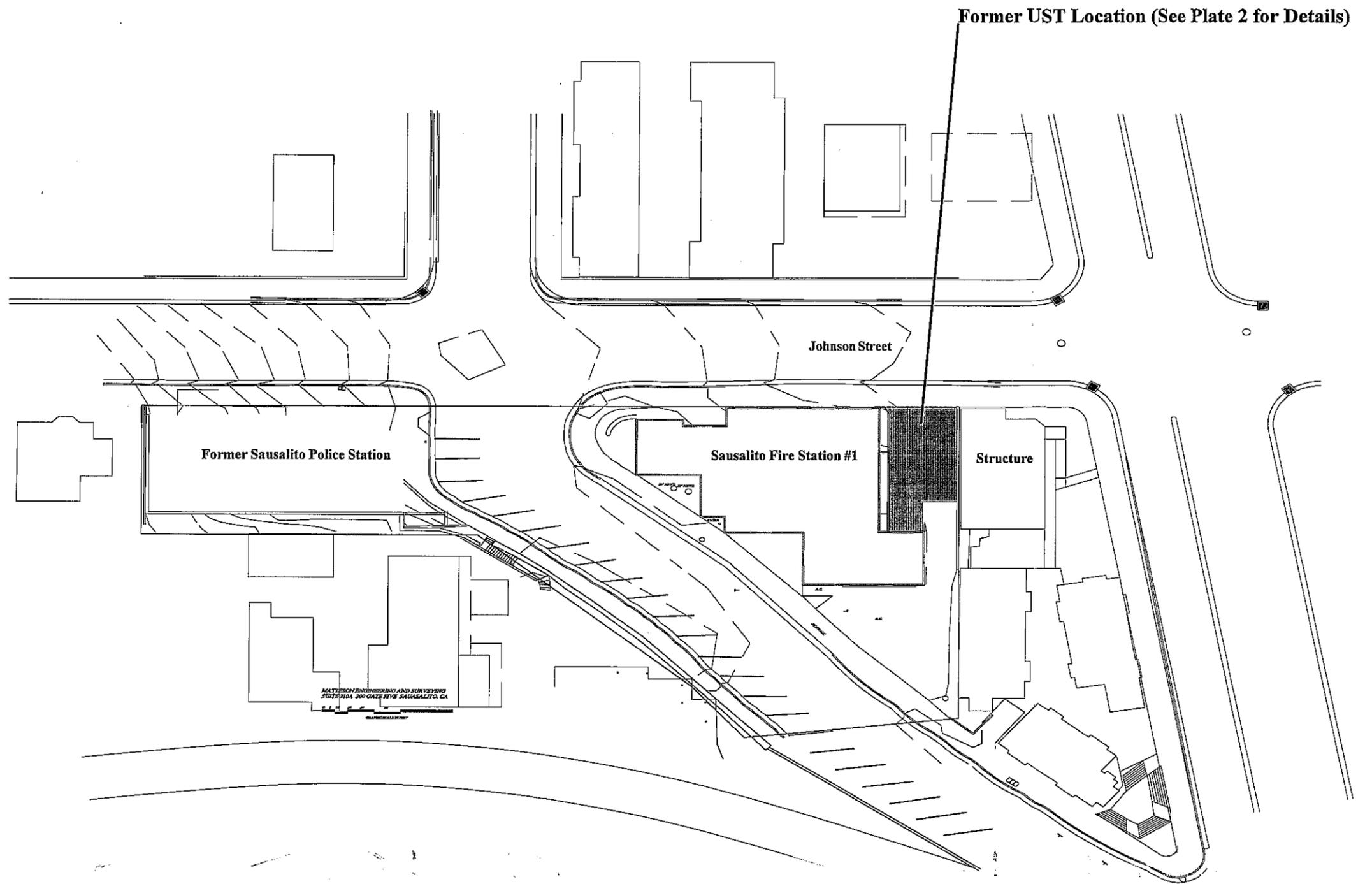
APPENDIX A

**Environmental Site Review
Sausalito Fire Station #1
300 Johnson Street, Sausalito**

Plate 1 – Site Location

**Plate 2 – Site Plan Showing Existing Structures, Former UST
and Soil Sampling Locations, Monitoring Well Location
and Soil/Groundwater Sampling Results**

GPI Environmental Management

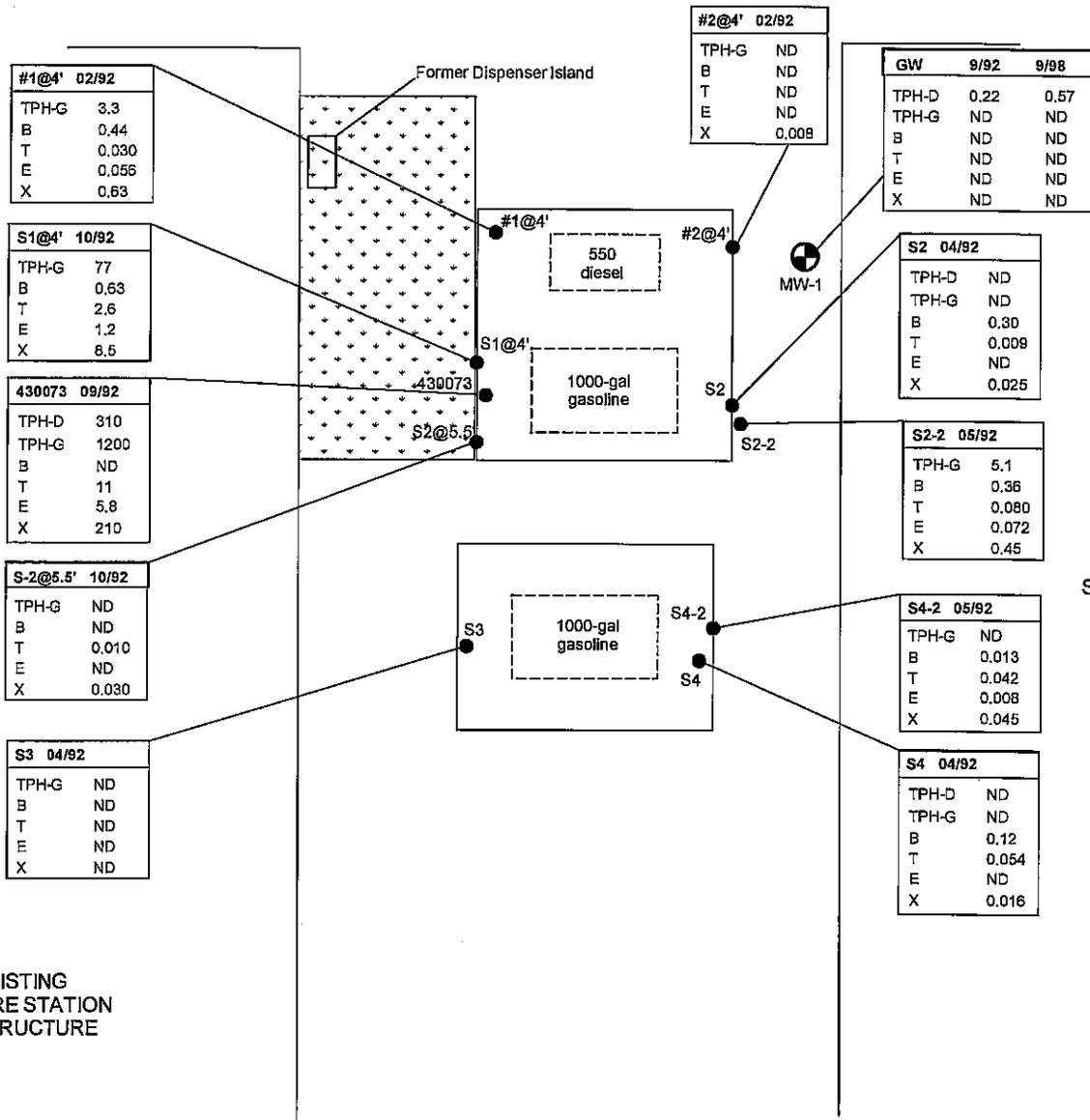


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Environmental
Management

SITE LOCATION
Sausalito Fire Station #1
300 Johnson Street, Sausalito

PLATE
1

JOHNSON STREET

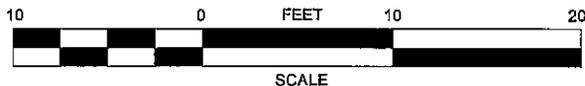


LEGEND

- Former Monitoring Well Location (Certified Environmental Consultants)
- Previous Soil Sample Location (Certified Environmental Consultants)
- Former UST Location (Removed in 10/91)
- Extent of Former UST Excavation
- TPH-D Total Petroleum Hydrocarbons as Diesel - mg/kg (ppm)
(Performed with silica gel clean up)
- TPH-G Total Petroleum Hydrocarbons as Gasoline - mg/kg (ppm)
- B Benzene - mg/kg (ppm)
- T Toluene - mg/kg (ppm)
- X Total Xylenes - mg/kg (ppm)
- E Ethylbenzene - mg/kg (ppm)
- Approximate Area of Potential Residue Diesel/Gasoline Range Hydrocarbon Soil Contamination

EXISTING
FIRE STATION
STRUCTURE

STRUCTURE



SOURCE: L & S Environmental, July 1998, Figure 3

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ASBESTOS
GEOLOGICAL
ENVIRONMENTAL

CONSULTANTS AND LABORATORY SERVICES

SITE PLAN

Showing Existing Structures, Former UST
and Soil Sampling Locations, Monitoring Well
Location, and Soil/Groundwater Sampling Results

Sausalito Fire Station #1
300 Johnson Street, Sausalito

PLATE
2

APPENDIX B

**Environmental Site Review
Sausalito Fire Station #1
300 Johnson Street, Sausalito**

Case Closure Letter and Site Summary for Sausalito Fire Department, 333
Johnson Street, Sausalito, Marin County, UST Case No. 21-0244 –
17 December 1998

GPI Environmental Management

File

RECEIVED

DEC 28 1998

DPW
WASTE MGMT.

Date: December 17, 1998
UST File Nos. 21-0244 (JMJ)
2158.12



Pete Wilson
Governor



Cal/EPA

San Francisco
Bay Regional
Water Quality
Control Board

1515 Clay Street,
Suite 1400
Oakland, CA 94612

(510) 622-2300
FAX (510) 622-2460

Mr. Jack Henderson
City of Sausalito Fire Dept.
333 Johnson Street
Sausalito, CA 94965

Dear Mr. Henderson:

SUBJECT: Transmittal of Case Closure Letter and Site Summary for Sausalito Fire Dept., 333 Johnson Street, Sausalito, Marin County, UST Case No. 21-0244

Attached please find the uniform underground storage tank closure letter and the site summary form for the subject site.

Please contact John Jang of my staff at (510) 622-2366 if you have any questions regarding this matter.

Sincerely,

Loretta Barsamian
Executive Officer

Steve Morse
Chief, Toxics Cleanup Division

Enclosures: Closure Letter
Site Summary Form

cc w/o enc.: Dave Deaner, SWRCB UST Cleanup Fund Unit
Allen Patton, SWRCB

cc w/ enc.: Mr. Tim Underwood, Marin County Waste Management
Mr. Steve Mizera, SWRCB



Cal/EPA

**San Francisco
Bay Regional
Water Quality
Control Board**

1515 Clay Street,
Suite 1400
Oakland, CA 94612

(510) 622-2300
FAX (510) 622-2460



Pete Wilson
Governor

Date: December 17, 1998
UST File Nos. 21-0244 (JMJ)
2158.12

Mr. Jack Henderson
City of Sausalito Fire Dept.
333 Johnson Street
Sausalito, CA 94965

Dear Mr. Henderson:

SUBJECT: Underground Storage Tank (UST) Case Closure for Sausalito Fire Dept.,
333 Johnson Street, Sausalito, Marin County, UST Case No. 21-0244

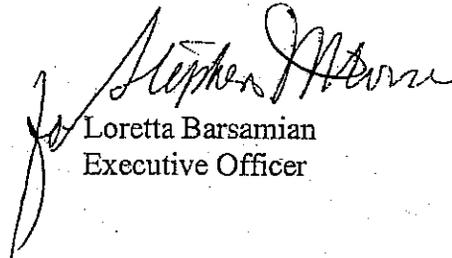
This letter confirms the completion of a site investigation and remedial action for the underground storage tank(s) formerly located at the above described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on the information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground storage tank release is required.

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

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

Sincerely,



Loretta Barsamian
Executive Officer



Site Summary Form

17-Dec-98

Site: SAUSALITO FIRE DEPT

RB File No.: 21-0244

JMJ

Yes

County: 21

333 JOHNSON ST, SAUSALITO, CA

Nearest Surface Water: Richardson Bay, 500'E

Pit Samples Submitted?: Yes

Highest GW Depth: 3.24'

Potential Ecological Risk: No

No. Borings: 1

Lowest GW Depth: 5.08'

Distance to Wells: >1000' Affected?: No

No. Wells: 1

Direction of GW Flow: NE

Human Health Risk:

Ground Elev:

Staff Notes: RWQCB closure letter dated 12/17/98.

Geology: Clay with gravel to 15 feet bgs, underlain by Bay Mud.

Comments:

LEAK TESTS IN 1990 INDICATED USTS WERE LEAKING. 3 USTS REMOVED ON 10/9/91. HOLES IN THE USTS, SOIL DISCOLORATION, & FREE PRODUCT ON THE GROUNDWATER (GW) WERE NOTED DURING UST REMOVAL. 5 SOIL SAMPLES DURING UST REMOVAL CONTAIN LOW OR NON-DETECTABLE (ND) CONCENTRATIONS OF TPH-G, TPH-D, & BTEX. 35 CUBIC YARDS OF SOIL WAS REMOVED. UNKNOWN AMOUNT OF GW PUMPED INTO BAKER TANK. GW SAMPLES FROM THE BAKER TANK CONTAINED UP TO 11,000 PPB OF TPH-G, 3,300 PPB OF TPH-D, AND ND FOR THE BTEX. ONE MW INSTALLING ON 9/1/92 TOWARDS RICHARDSON BAY. SOIL SAMPLES FROM THE SIDEWALL OF THE EXCAVATION ON 9/24/92 CONTAINED UP TO 1200 PPM OF TPH-G, 310 PPM OF TPH-D, AND ND, 11, 5.8, & 210 PPM OF THE BTEX. TWO ROUNDS OF SAMPLING FROM THE MW ON 9/24/92 & 3/24/98 CONTAINED LOW OR ND CONCENTRATIONS OF TPH-G, TPH-D, BTEX, & MTBE. CLOSURE FOR THIS SITE IS APPROPRIATE BECAUSE (1) THE USTS AND MOST OF THE POLLUTED SOILS HAVE BEEN REMOVED FROM THE SITE AND (2) THE REMAINING CONCENTRATIONS IN THE GW ARE VERY LOW OR ND.

Management Rqmts:

Reports:

(1) MARIN CO. DA MEMO (8/20/90); (2) MARIN CO. UST CLOSURE INSPECTION FORM (10/9/91); (3) TANK CLOSURE REPORT BY SEMCO; (4) WP FOR MW INSTALLATION BY CERTIFIED ENV. CONS. INC. (CEC, 3/92); (5) SWRCB CUF LETTERS DATED 10/21/94 & 6/26/95; (6) SAUSALITO FIRE DEPT. LTR DATED 6/3/97; (7) RWQCB LTRS DATED 4/9/97, 5/19/97, 7/31/97, 10/30/97, 9/11/98, & 12/17/98; (8) ANALYTICAL RESULTS FROM MCCAMPBELL ANALYTICAL INC. (1992); (9) CORRECTIVE ACTION SUMMARY AND CASE CLOSURE REQUEST BY L & S ENV. (7/98).

Remedial Activity

Action Taken	Amount
Free Product:	
Soil: REMOVED 10/91	35 YD*3
Ground Water: REMOVED 1992	UNK. AMT
Vapor:	0

Groundwater Results, ppb

DATE	LOCATION	TPH-G	TPH-D	BENZENE	TOLUENE	XYLENE	ETHYLBENZE	MTBE	HVOC	OTHERS
3/24/98	MW1	ND	57	ND	ND	ND	ND	ND		
9/24/92	MW1	ND	220	ND	ND	ND	ND			
5/15/92	MW1	ND		ND	ND	ND	ND			

Soil Results, ppm

LOCATION	TPH-gas	TPH-diesel	Benzene	Toluene	Xylene	Ethyl-benzene
	Initial	Final	Initial	Final	Initial	Final
SIDEWALL, 9/24/92	1200		310	5.8	210	

Tank Information

TANKNO	SIZE	CONTENTS	REMOVED	ACTION	DATE
1	1,000	GASOLINE	Yes	removed and disposed	10/9/91
2	1,000	GASOLINE	Yes	removed and disposed	10/9/91
3	500	DIESEL	Yes	removed and disposed	10/9/91

APPENDIX C

**Environmental Site Review
Sausalito Fire Station #1
300 Johnson Street, Sausalito**

Table 1 – Historical Soil Sampling Analytical Results

Table 2 - Historical Groundwater Sampling Analytical Results

L & S Environmental, July 1998

GPI Environmental Management

Table 1
Historical Soil Sample Analytical Results
333 Johnson Street, Sausalito, CA

Sample I.D.	Date Sampled	TPH-D (ppm)	TPH-G (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Total Xylenes (ppm)
TANK REMOVAL SAMPLES							
#1-1KG-8'	10/09/91	ND	ND	0.015	0.033	0.010	0.11
#2-1KG-8'	10/09/91	ND	ND	0.012	0.022	0.007	0.044
#3-1KG-8'	10/09/91	ND	ND	ND	0.006	ND	0.005
#4-1KG-7'	10/09/91	ND	ND	ND	ND	ND	ND
#5-550D-7.5'	10/09/91	ND	ND	ND	ND	ND	ND
EXCAVATION SIDEWALL SAMPLES							
#1 @ 4'	02/04/92	---	3.3	0.44	0.030	0.056	0.63
#2 @ 4'	02/04/92	---	ND	ND	ND	ND	0.008
S2	04/21/92	ND	1.0	0.30	0.009	ND	0.025
S3	04/21/92	ND	ND	ND	ND	ND	ND
S4	04/21/92	ND	ND	0.12	0.054	ND	0.016
S4-2	05/27/92	---	ND	0.013	0.042	0.008	0.045
S2-2	05/27/92	---	5.1	0.36	0.080	0.072	0.45
430073	09/24/92	310	1,200	ND	11	5.8	210
S1 @ 4'	10/12/92	---	77	0.63	2.6	1.2	8.5
S-2 @ 5.5'	10/15/92	---	ND	ND	0.010	ND	0.030
STOCKPILE SAMPLES							
430067	05/27/92	57	4.3	0.032	0.064	0.050	0.29
430068	05/27/92	48	9	0.28	0.30	0.33	1.2
430069	05/27/92	23	1.5	0.034	0.096	0.029	0.19
430070	05/27/92	32	3.4	0.046	0.28	0.067	0.041
MONITOR WELL SOIL SAMPLE							
S1 @ 4.5'	09/01/92	ND	ND	ND	ND	ND	ND
	Detection Limits	1.0 mg/kg	1.0 mg/kg	0.005 mg/kg	0.005 mg/kg	0.005 mg/kg	0.005 mg/kg

* - Soil Sample Results are reported in mg/kg that is equivalent to parts per million (ppm)
 ND - Below Laboratory Detection/Reporting Limits
 --- Not Analyzed

Table 2
Historical Water Sample Results
333 Johnson Street, Sausalito, CA

Sample I.D.	Date	TPH-D ppb	TPH-G ppb	Benzene ppb	Toluene ppb	Ethyl Benzene ppb	Xylenes ppb
PIT WATER SAMPLES							
430459A	04/16/92	200	ND	ND	ND	ND	ND
BAKER TANK SAMPLES							
W-1	05/19/92	3,300	11,000	ND	ND	ND	ND
430071	05/27/92	570	480	ND	ND	ND	ND
MONITOR WELL SAMPLES							
430071	09/24/92	220	ND	ND	ND	ND	ND
SMW-1	03/24/98	57	ND	ND	ND	ND	ND
Detection Limits ug/l		50	50	0.5	0.5	0.5	0.5
*CA Primary MCL		None	None	1.0	None	680	1750

*California primary maximum contaminant levels for drinking water adopted from: "A compilation of Water Quality Goals" Marshack, J.B. May 1993.

--- not analyzed,

ND - below detection limits

MTBE is ND with detection limit of 5 ppb.