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US Army Corps of Engineers
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Final

ASBESTOS SURVEY FOR THE SUPPLEMENTAL REMEDIAL INVESTIGATION

Presidio of San Francisco
Modification to Phase II Environmental Study

Contract No. DAAA15-90-D-0018
Task Order 0002, Data Item A004

Prepared by:
Watkins-Johnson Environmental, Inc.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland 21010-5401

March 1993

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Modification to Phase II Environmental Study

Prepared by:

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U.S. Army Corps of Engineers

U.S. ARMY TOXIC AND HAZARDOUS MATERIALS AGENCY

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LIST OF ACRONYMS AND ABBREVIATIONS

ACM	asbestos-containing material
ACBM	asbestos-containing building material
AHERA	Asbestos Hazard Emergency Response Act
EPA	U.S. Environmental Protection Agency
f/cc	fibers per cubic centimeter
Misc	miscellaneous materials
NVLAP	National Voluntary Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
O & M	Operations and Maintenance
PLM	Polarized Light Microscopy
PSF	Presidio, San Francisco
QA	quality assurance
TNT	trinitrotoluene
TSI	thermal system insulation
USATHAMA	United States Army Toxic and Hazardous Materials Agency
WJE	Watkins-Johnson Environmental, Inc.

EXECUTIVE SUMMARY

Watkins-Johnson Environmental, Inc. (WJE, formerly R.L. Stollar and Associates, Inc.) performed an asbestos survey and bulk sampling of materials in buildings and fortifications not previously investigated during the Presidio Installation-Wide Asbestos Survey. Twenty-eight structures were investigated during the asbestos survey and 67 bulk samples were collected and submitted for analyses.

The survey was conducted in accordance with procedures outlined in TM 5-612, Asbestos Control. Assessment of friable asbestos containing materials (ACM) was made using worksheets outlined in the Guide for Asbestos Hazard Assessment in U.S. Army Facilities (CERL- Environmental Engineering Team, 1988). From damage/risk exposure values obtained from these worksheets, recommended management corrective actions were determined. Recommended actions based on the risk and exposure calculations are summarized in Table 4.3 (Assessment Index Summary).

Results of Survey and Sampling

Friable asbestos was found in four of the structures: Building 277, Battery Dynamite, Battery Howe-Wagner, and the New Mine Casemate. Only Building 277 of these structures is currently occupied. Six other structures contain nonfriable ACM, all of which are occupied or used occasionally.

The friable asbestos found in Building 277 (the Golden Gate National Park Training Facility) consisted of a duct tape 1 ½-in. wide, and 20-ft long applied to several seams of the ductwork in a maintenance/storage area.

The friable asbestos found in Battery Howe-Wagner consisted of two samples of debris in piles on the floor, apparently boiler wrap or thermal system insulation (TSI) removed elsewhere. The most apparent piles of ACM debris are estimated to total less than 100 square feet (ft^2); however, given the manner in which this waste asbestos was transported into the building and discarded, asbestos dust contamination of most of the building's 3,000 ft^2 cannot be discounted.

The friable asbestos in Battery Dynamite consisted of significant quantities of TSI (two types) with some associated debris, and two types of woven asbestos material (< 15 ft^2). The friable TSI consisted of 210 linear ft of 4-in. diameter aircell, and 150 linear ft of 4-in. diameter preformed TSI with associated debris

contaminating a pipe chase and some rooms. Four ft^2 of the friable ACM woven material was found as duct isolation cloth and in the observation deck as gaskets on individual unmounted glass lenses. It was observed during the asbestos survey of the New Mine Casemate that identical glass lenses with this type of gasket were in storage there.

The nonfriable ACM found during the survey included nine bulk samples of vinyl sheeting, floor tile and/or mastic, two samples of transite exterior sheeting used extensively on several of the buildings surveyed, transite debris, and a sealant material. Table S-1 summarizes by building all asbestos identified during the survey, and the estimated quantity.

Table S-1 Summary of Asbestos Containing Building Materials (page 1 of 2)

Building	Material	Asbestos Content	Friable Y/N	Quantity
275	Floor tile mastic	10-20%	N	3,000 ft^2*
275	Transite panel	30%	N	20 ft^2
277	Duct tape	45%	Y	3 ft^2
277	Floor tile mastic; maintenance/ storage area	15%	N	55 ft^2
Battery Dynamite	Floor tile red, 12 × 12 in.	8%	N	500 ft^2
Battery Dynamite	Floor tile, black and red; and mastic	14%	N	5,000 ft^2
Battery Dynamite	Duct isolation cloth	35%	Y	4 ft^2
Battery Dynamite	Sealant, pipe to wall; black	20%	N	10 ft^2
Battery Dynamite	Aircell thermal system insulation; 4 inch diameter	25%	Y	210 ft
Battery Dynamite	Thermal system insulation; pre-fabricated; 4-inch diameter	25%	Y	150 ft plus 1,000 ft^2 fine cleaning
Battery Dynamite	Gasket on glass lenses (not installed)	35%	Y	< 10 ft^2
Battery Godfrey	Transite debris	25%	N	unknown

* An estimate that assumes all carpeted areas still have tile underneath.

Table S-1 Summary of Asbestos Containing Building Materials (page 2 of 2)

Building	Material	Asbestos Content	Friable Y/N	Quantity
Battery Howe-Wagner	Thermal system insulation debris	25%	Y	100 ft^2 for debris; 3,000 ft^2 to decontaminate
Mine Depot Building 985	Transite	35%	N	2,600 ft^2
Mine Depot Building 986	Transite	35%	N	2,600 ft^2
Mine Depot Building 987	Transite	35%	N	1,300 ft^2
Mine Depot Building 989	Floor sheeting backing; restrooms	30%	N	52 ft^2
Mine Depot Building 989	Vinyl sheeting backing; restroom wall	40%	N	52 ft^2
New Mine Casemate	Floor tile, black and red; and mastic	7%	N	2,400 ft^2
New Mine Casemate	Gasket on glass lenses (not installed)	35%	Y	< 10 ft^2

Recommended Corrective Action

Battery Howe-Wagner should remain securely closed until a remedial cleaning of the asbestos debris and dust contamination is completed. It should be noted that oxygen levels monitored during the site entry were slightly less than the acceptable Occupational Safety and Health Administration (OSHA) minimum (19.5% O_2). Asbestos removal in Battery Dynamite is recommended before any restoration or re-use of the structure. Implementation of an Operations and Maintenance (O&M) program is recommended for Building 277 and removal of the asbestos duct tape is recommended prior to any renovation or demolition in the maintenance/storage area. The friable lens gaskets remaining in the New Mine Casemate do not pose a potential hazard if left undisturbed and could be easily collected for appropriate disposal.

The nonfriable transite debris embedded in the soil pile by Battery Godfrey was not observed to be distributed in significant quantities on the surface; however, these transite fragments have the potential for becoming friable if subjected to the occasional vehicle traffic on the adjacent service road. The soil pile may contain additional transite fragments that could be exposed by weathering, or landscaping/excavation activities. It is recommended that the soil surface be picked clean of transite. Additional remedies recommended would include an annual O&M inspection of the area for newly exposed materials, and an O&M procedure that would ensure any transite exposed as the result of excavation would be immediately collected.

The nonfriable transite, floor tiles, and mastics/sealants in occupied areas should be inspected periodically as a part of an O&M Program. Any ACM that may potentially be disturbed so as to generate dust during a renovation or demolition must be abated prior to that activity.

Costs for Removal of ACM

Costs for the removal of all ACM and for specific corrective actions are provided in Tables 6.1-6.3. The estimate for the cost of removal of the friable ACM from the buildings surveyed is $14,400. The estimate for the cost of removal of all ACM from the buildings surveyed is $85,128.

1.0 INTRODUCTION

Asbestos is the generic name for a group of naturally occurring hydrated mineral silicates of the amphibole or serpentine series that are characterized by fibers or bundles of fine single crystal fibrils. The most common minerals identified in the asbestos definition include chrysotile, amosite and crocidolite. The unique combination of resistance to heat and chemical attack, high tensile strength and flexibility was utilized as asbestos was incorporated into a variety of construction materials. The medical community has recognized that chronic exposures of workers to high levels of airborne asbestos fibers causes debilitating and fatal diseases of the lungs including cancers.

Asbestos containing materials (ACMs) are classified as friable or nonfriable. Friable ACM can be crumbled, pulverized, or reduced to powder by hand pressure when dry and includes any previously nonfriable material if it is damaged to the extent that it meets these criteria. A nonfriable material does not meet these criteria (40CFR, Part 61, Subpart M - National Emission Standard for Asbestos). A material sample is considered positive if asbestos is detected at greater than 1.0 percent. Friable ACM presents the greatest potential for risk and exposure because if it is damaged, asbestos fibers can become airborne.

1.1 TASK DESCRIPTION

WJE conducted inspections and bulk sampling for asbestos at coastal fortifications, magazines, and buildings along Baker Beach, in the Golden Gate Bridge District and Crissy Field areas that were not previously investigated as part of the Presidio Installation-Wide Asbestos Survey or surveys conducted by Golden Gate Bridge District. The purpose of the survey was to identify all areas that may have ACM, evaluate the extent and condition of friable and nonfriable ACM, assess the potential for disturbance, and provide recommendations for corrective actions when necessary.

The asbestos survey was conducted pursuant to Section 3.2.2.14 of the Modification of Contract. A work plan for conducting the asbestos survey was prepared (Asbestos Work Plan for the Supplemental Remedial Investigation (R.L. Stollar & Associates, Inc. 1991)). The survey and collection of samples was conducted in accordance with procedures outlined in enclosure 4 to the Modification of Contract (Surveying for Asbestos, Documentation and Recordkeeping), and the U.S. Army's Technical Manual (TM) 612, Asbestos Control (Dames & Moore, 1989). In accordance with the Modification of Contract,

an inspection priority list was not prepared. Assessment of friable ACM was made using worksheets outlined in the Guide for Asbestos Hazard Assessment in U.S. Army Facilities. (CERL - Environmental Engineering Team, 1988). Risk and exposure were quantified for friable asbestos by assessing the evidence of physical damage and potential exposure to human populations. The damage/risk exposure values obtained from these worksheets provided guidance in the preparation of the recommended management corrective actions. Descriptions of ACM (the material, its use, size, and color) and the sample locations are delineated on floorplans. Floorplans have also been provided showing the approximate extent of ACBM, however, actual quantities and locations may differ because the technical detail of data acquisition during the survey was not intended for the preparation of design and construct plans.

1.2 Site Description

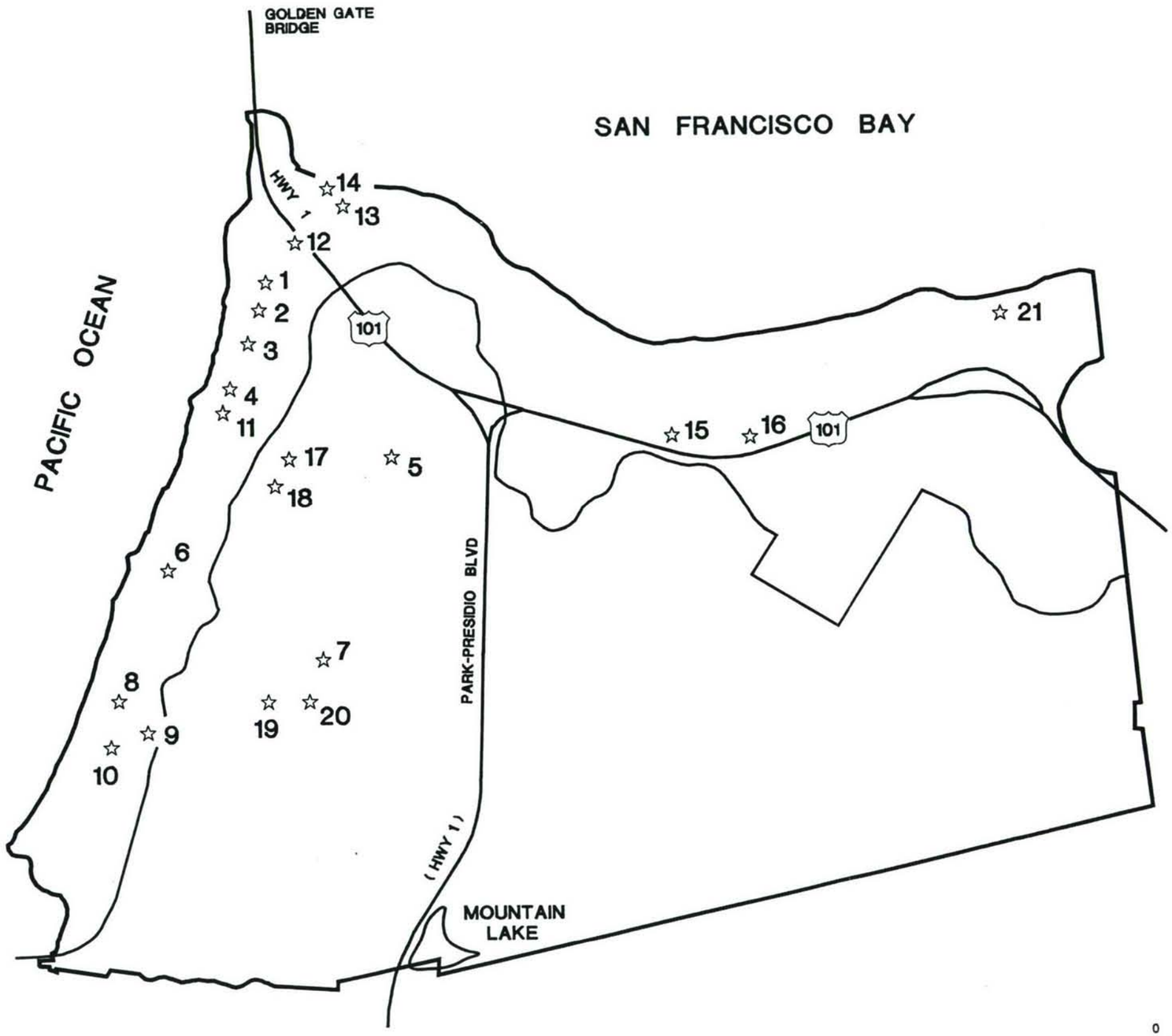
Structures inspected during this asbestos survey fall generally into two categories: those that were at one time directly employed in housing or storing munitions for gun emplacements or mine casemates (26 of the structures inspected); and two buildings near Crissy Field that have operated as office or storage structures with no history of storing munitions. Locations of the asbestos survey at PSF are shown on Figure 1.2.

1.2.1 Site Description of Buildings 275 and 277

Buildings 275 and 277 are currently occupied office buildings and are estimated to have been constructed about 40 years ago. Building 275 is the administration offices of the National Maritime Museum. Building 277 is the Golden Gate National Park Training Facility. Trailer annexes to Building 277 were constructed and installed following the U.S. Environmental Protection Agency (USEPA) ban on manufacture of asbestos containing building materials. These buildings are located near Crissy Field and are not considered a part of the coastal fortification structures at PSF.

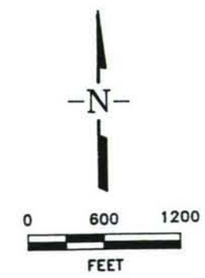
1.2.2 Site Descriptions of Coastal Fortifications

The coastal fortifications at the Presidio of San Francisco were intended to protect the harbor and harbor entrance from a naval approach or attack by a hostile foreign power. Although the facilities at the Presidio were primarily gun emplacements targeted for marine craft, other structures supported defense



ASBESTOS SURVEY LOCATIONS

1 BATTERY CRANSTON
2 BATTERY MARCUS MILLER
3 BATTERY BOUTELLE
4 BATTERY GODFREY
5 BATTERY HOWE / WAGNER
6 BATTERY CROSBY
7 CENTRAL MAGAZINE
8 BATTERY CHAMBERLIN
9 NEW MINE CASEMATE
10 OLD MINE CASEMATE
11 BATTERY WEST
12 BATTERY LANCASTER
13 BATTERY EAST
14 MINE DEPOT (Building 985 - 990)
15 BATTERY SHERWOOD
16 BATTERY BLANEY
17 BATTERY DYNAMITE
18 BATTERY SAFFOLD
19 BATTERY McKINNON
20 BATTERY STOTSENBERG
21 BUILDING 275 & 277



WATKINS-JOHNSON ENVIRONMENTAL, INC.
Ground-Water Consulting, Environmental Engineering, Remediation Services

ASBESTOS SURVEY LOCATIONS

PGF63016/DV1

Date: March 1993 | Figure 1.2

activities for anti-aircraft guns, mortars, mine depots, casements, and ammunition magazines. The earliest coastal fortifications inspected for the survey were constructed during the 1860s; other structures surveyed were built during intermittent periods of construction since then, and have nearly all either been abandoned or converted to uses other than storing explosives.

Coastal fortifications at the Presidio center around Fort Point, the promontory on the south side of the narrow harbor entrance. From this position, the gun batteries extend southward lining the beach facing the Pacific Ocean, and line the San Francisco Bay shore east of the point; each battery is 1,000 ft or less from the shoreline. The mine depot and casemates were also built close to the shore. Two mortar emplacements were constructed slightly further inland, as was an ammunition magazine. The coastal fortifications were located to minimize an identifiable profile from offshore by employing the physical features of land and vegetative patterns at the promontory. The construction of the coastal fortifications minimized the vulnerable exposed area, and provided a shielding overburden barrier in its design of excavation and earthwork backfill. The masonry construction of these coastal fortifications was similarly designed and built to withstand an artillery assault. Unless otherwise noted in the site description, all coastal fortifications were constructed primarily of concrete.

1.2.3 Historical Use of Coastal Fortifications

The history of the construction, use, and abandonment of the coastal fortifications has been well researched and described. The Historic Resource Study of Seacoast Fortifications of San Francisco Harbor (Erwin N. Thompson, National Park Service, 1979) was used as a reference for this report.

Although defense fortifications were established at the Presidio by Spanish Mexico (1776-1846) and the United States, the oldest structures investigated as relevant to this report date from 1864. All of the batteries constructed after the Civil War were almost entirely concrete. The cycles of construction and abandonment of gun batteries at the Presidio are defined enough to describe in discrete time intervals:

Civil War Period - The surviving structures are some of the magazines constructed for the Battery East, and Battery West. These discrete, one-room structures are built from brick and masonry. They were used until about the turn of the century when some were incorporated into the battery construction of the Endicott Period, and the remaining structures were abandoned.

Postwar through 1890 - East Battery and West Battery were improved and expanded during the 1870s but otherwise few changes were made.

Endicott Improvements (1890-1905) - This was the most active period for coastal fortification at the Presidio with the construction of the Mine Depot and Batteries Baldwin, Blaney, Boutelle, Chamberlin, Cranston, Crosby, Dynamite, Godfrey, Howe-Wagner, Lancaster, Marcus Miller, McKinnon, Saffold, Sherwood, Slaughter and Stotsenberg.

Peak Operation (1905-1917) - This period was the peak utility phase of the Presidio coastal fortifications in terms of active gun batteries. Some minor construction occurred.

Salvage (1917-World War II) - During this period many of the coastal fortifications were salvaged and abandoned. The construction of the Central Magazine and the New Mine Casemate were the few exceptions to the climax of the conventional use of gun batteries for coastal defense.

World War II to present - Abandonment of the structures or the employment of the available enclosed space for materials storage characterizes the use of the batteries following World War II.

2.0 ASBESTOS SURVEY AND ASSESSMENT PROCEDURES

An asbestos survey and assessment of the coastal fortifications and other structures was conducted to locate, sample and analyze potential ACM and to assess the current and future integrity of potential ACM. The survey was conducted in accordance with the Asbestos Work Plan for Supplemental Remedial Investigation (R.L. Stollar & Associates, 1991). Survey personnel ensured their safety by their performance of the survey in accordance with the Accident Prevention and Safety Plan for Supplemental Remedial Investigation (R.L. Stollar & Associates, Inc., 1992).

During the surveys of the batteries it became apparent that the time of construction and abandonment (late 19th and early 20th centuries), and the homogeneity of construction design and materials (concrete and wood) virtually precluded the existence of asbestos construction materials. When batteries with many welded doors were encountered (Marcus Miller, Crosby, etc.) only one or two of the larger rooms were opened for inspection and as expected, no suspected ACM was found or sampled. All structures that were readily accessible by key or open door were thoroughly inspected regardless of age or subsequent use. Only Batteries Baldwin and Slaughter were not surveyed for asbestos. Battery Baldwin was buried by the approach road to the Golden Gate Bridge and Battery Slaughter has been destroyed.

Suspected ACM was categorized by type to define homogeneous areas and ACM survey data sheets (Appendix B) were completed for each suspected asbestos containing building material. A homogeneous material is uniform in texture and appearance, and is unlikely to consist of more than one type or formulation. If several floors or buildings contained the same homogeneous material, the separate locations were considered to exhibit a single homogeneous material. At least one bulk sample was collected from each type of suspected homogeneous ACM. A sample tested positive when asbestos was found at greater than 1.0 percent.

The survey was nondestructive in nature. Structural units such as walls or floors were not removed to check for ACM; however, movable objects such as ceiling tiles, trap doors and furniture were displaced when needed in order to completely examine each functional space. All potential ACM surfaces were examined for friability and evidence of damage that would degrade nonfriable material to a friable condition. The location and description of all suspect ACM materials was recorded. The approximate amount of the material was determined, and the condition (risk number) and potential for disturbance

(exposure number) were assessed (as described in Section 4.0) in order that management and corrective actions for friable asbestos could be summarized (Table 4.3).

The polarized light microscopy (PLM) method was used to analyze the bulk samples. This method is approved for asbestos bulk sample analysis (40 CFR, Part 783, Appendix A to Subpart F).

Because the composition of friable materials can be variable, if at least one sample of a friable homogeneous material tested positive for asbestos, all locations of that material are assumed to contain asbestos.

2.1 Quality Assurance: Personnel and Procedures

Prior to the survey, the procedures outlined in enclosure 4 to the Modification of Contract (Surveying for Asbestos, Documentation and Recordkeeping), U.S. Army document TM5-612 Asbestos Control and Asbestos Work Plan for the Supplemental Remedial Investigation (R.L. Stollar & Associates, Inc., 1991) were reviewed by the survey participants, and compliance with these procedures was maintained throughout the survey. Assessment of friable ACM was made using worksheets outlined in the Guide for Asbestos Hazard Assessment in U.S. Army Facilities (Dames & Moore, 1989), included as Appendix G.

The survey and assessment was conducted by a person with EPA certification as an asbestos building inspector (Appendix A) as specified in the Code of Federal Regulations Title 40, Part 763 and supervised by an industrial hygienist certified by the American Board of Industrial Hygiene (Appendix A). Control of the collected samples was maintained by means of chain of custody documents (Appendix F).

Environmental Science and Engineering Inc. (ESE, Englewood, Colorado) was the analytical laboratory and is accredited for bulk asbestos fiber analysis by the U.S. Department of Commerce National Voluntary Laboratory Accreditation Program (NVLAP). The NVLAP accreditation, the ESE procedure for calculating asbestos in samples and the laboratory Quality Assurance (QA) measures are included as Appendix C. Bulk asbestos samples were analyzed by trained microscopists, using Polarized Light Microscopy (PLM) with dispersion staining. Quantitation was performed through visual estimates. The accuracy of estimates varies depending on the nature of each sample, but is generally ± 10 percent or better.

2.2 Quality Assurance: Laboratory Analyses of Duplicate Samples

Of the 63 samples collected for analyses, four were split and provided to the laboratory to assure precision in the laboratory's analytic method. The sample analytic data for the 63 samples is provided in Appendix D and the duplicate analytic data is provided in Appendix E. Table 2.2 demonstrates that the precision of the analyses was acceptable.

Table 2.2 Laboratory Quality Assurance Analyses of Duplicates

Site ID	Sample Analysis	Duplicate Analysis	Comment
277A04	15% chrysotile in mastic 2% total	18% chrysotile in mastic 2% total	Acceptable
275A02	15% chrysotile in mastic 2% total	15% chrysotile in mastic 2% total	Identical
DYNA13	8% amosite 20% chrysotile 28% total	10% anthophyllite 25% chrysotile 35% total	Acceptable
DEPA01	35% chrysotile	30% chrysotile	Acceptable

3.0 ASBESTOS SURVEY RESULTS

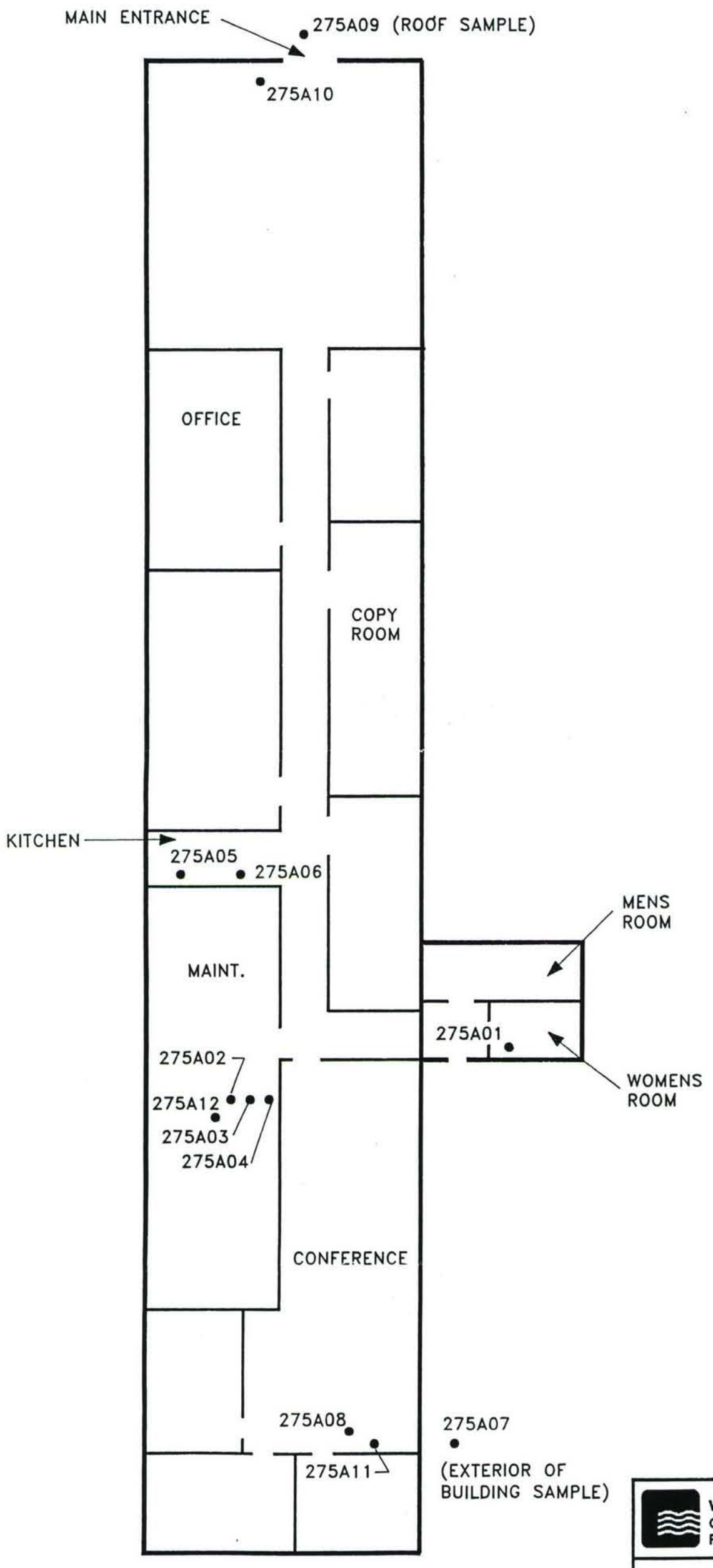
Twenty-eight structures were surveyed for asbestos. Friable asbestos was found in four of the structures: Building 277, Battery Dynamite, Battery Howe-Wagner, and the New Mine Casemate. Only Building 277 is currently occupied. Six other structures, all of which are occupied or used occasionally, contain nonfriable ACM.

3.1 BUILDING 275

Building 275 is an occupied office building used by the National Maritime Museum Association. Twelve suspect materials were collected and analyzed for asbestos content and four nonfriable materials tested positive. Figure 3.1 shows the floorplan of the building and the sample locations. Asbestos sample results for Building 275 are presented in Table 3.1. Figure 3.2 shows the approximate extent of the ACM (tan asbestos containing floor tiles and asbestos containing mastic) in Building 275.

3.2 BUILDING 277

Building 277 is an occupied office building used by the Golden Gate National Park as a training facility Ten suspected materials were collected and analyzed for asbestos content and one friable and one nonfriable material tested positive. A floorplan of the building with the sample locations is presented as Figure 3.3. Asbestos sample results for Building 277 are presented in Table 3.2.



EXPLANATION

● ASBESTOS SAMPLING LOCATION

N

0 5 10

FEET

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Ground-Water Consulting, Environmental Engineering, Remediation Services

BUILDING 275
ASBESTOS SAMPLING LOCATIONS

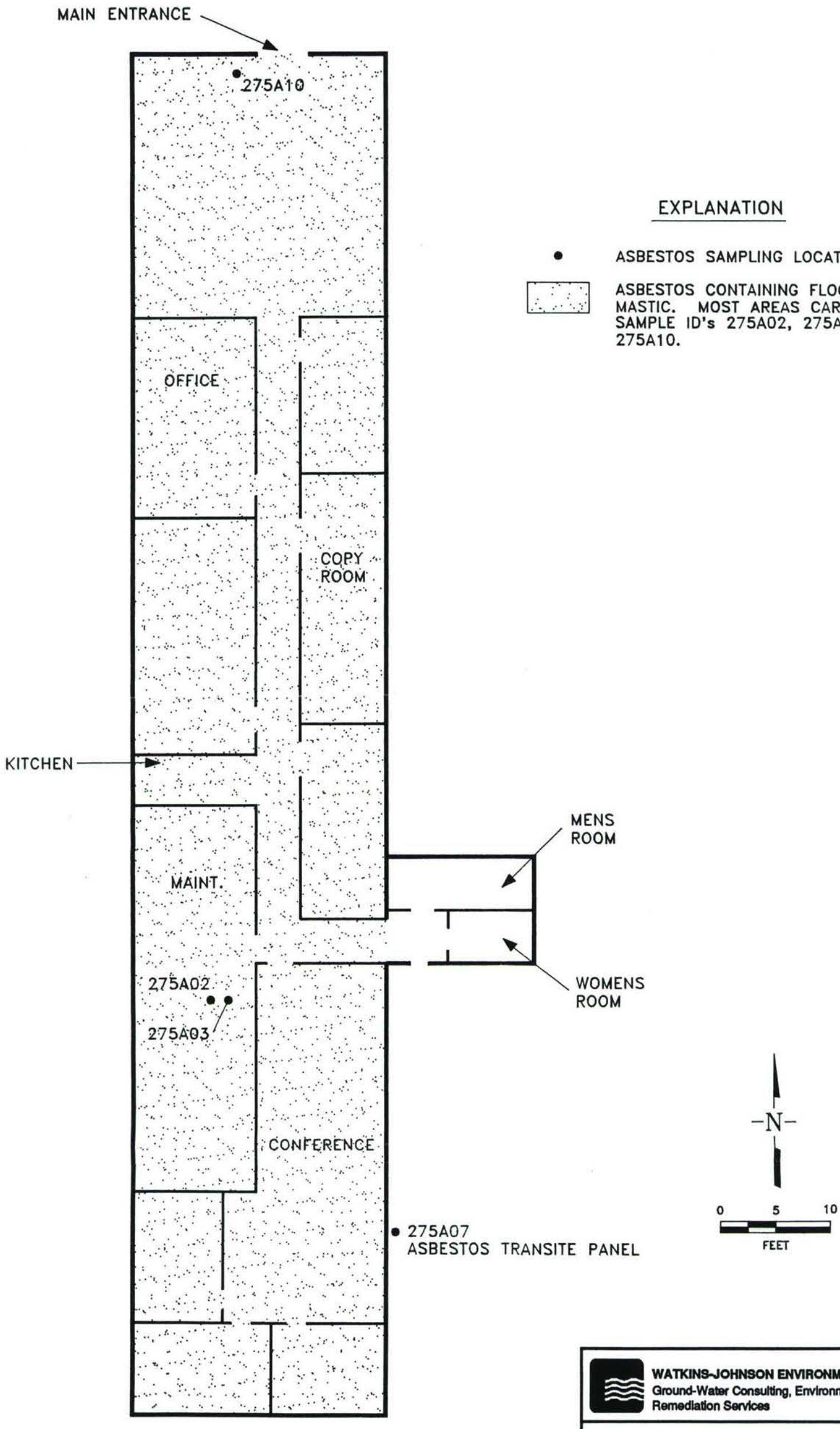
PSF6300\DV2

Date: March 1993 | Figure 3.1

Table 3.1 Building 275 Asbestos Analyses Results

Sample ID	Material	Asbestos Content	Friable Y/N	Quality Assurance	Risk Number	Exposure Number	Assessment Index Code[1]
275A01	Vinyl sheeting, green, restrooms	ND	N		0	0	N/A
275A02	Floor tile, tan, 12 × 12 in and mastic	15% (mastic)	N	D	0	0	N/A
275A03	Floor tile mastic of sample 275A02	10-20%	N		0	0	N/A
275A04	Rug mastic	ND	N		0	0	N/A
275A05	Floor tile, red, kitchen striated surface	ND	N		0	0	N/A
275A06	Floor tile, red, kitchen smooth surface	ND	N		0	0	N/A
275A07	Transite panel	30%	N		0	0	N/A
275A08	Ceiling finish, spray-on	ND	Y		NA	NA	N/A
275A09	Roofing tile, black-grey	ND	N		0	0	N/A
275A10	Floor tile (tan) and mastic	15% (mastic)	N		0	0	N/A
275A11	Ceiling finish, spray-on	ND	Y		NA	NA	N/A
275A12	Paper w/tar (beneath floor tile)	ND	N		0	0	N/A

D = Duplicate
ND = Not detected
NA = Not applicable, no asbestos detected
N/A = Nonfriable and/or nonasbestos
1 = The Assessment Index Code is described in Section 4.0 and defined in Table 4.2.

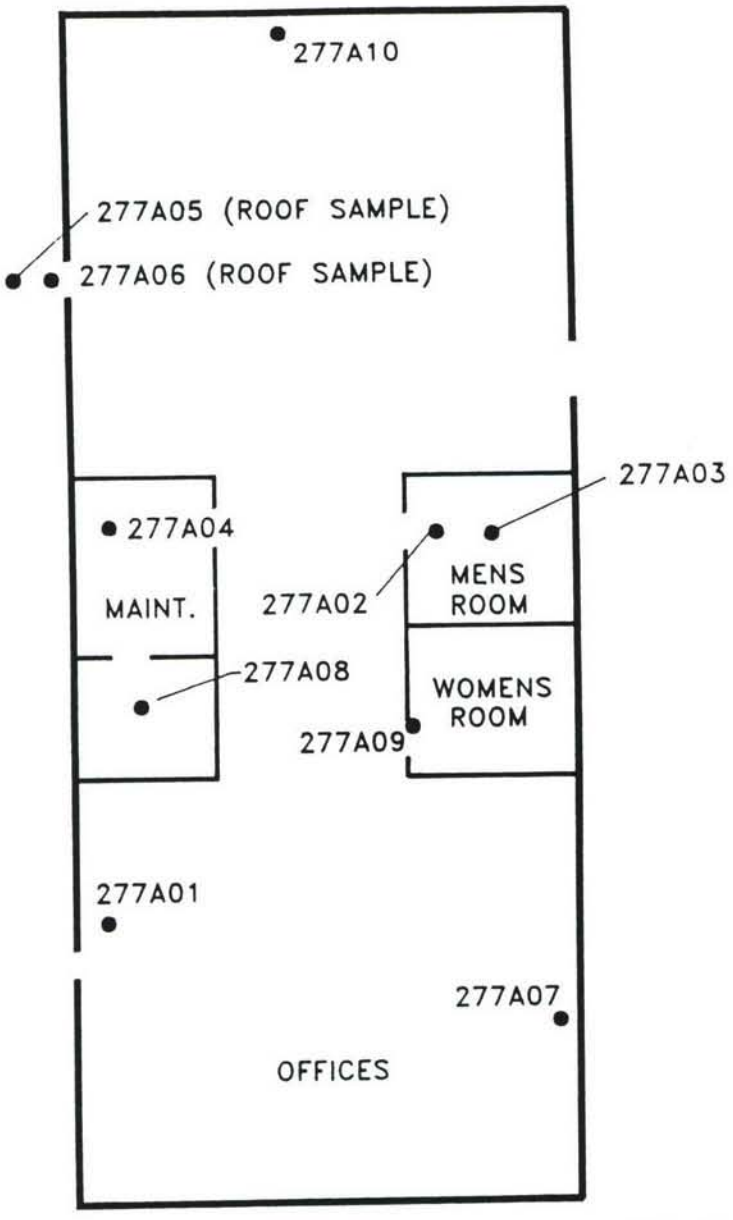


WATKINS-JOHNSON ENVIRONMENTAL, INC.
Ground-Water Consulting, Environmental Engineering, Remediation Services

BUILDING 275
ASBESTOS CONTAINING MATERIALS LOCATIONS

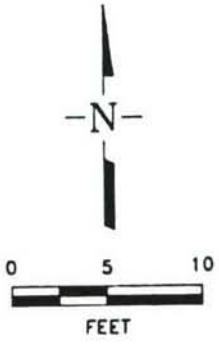
PSF63002/DV3

Date: March 1993 | Figure 3.2



EXPLANATION

● ASBESTOS SAMPLING LOCATION



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BUILDING 277
ASBESTOS SAMPLING LOCATIONS

PSF63003/DV2

Date: March 1993 | Figure 3.3

Table 3.2 Building 277 Asbestos Analyses Results

Sample ID	Material	Asbestos Content	Friable Y/N	Quality Assurance	Exposure Number	Risk Number	Assessment Index Code[1]
277A01	Ceiling tile, 12 × 12 in.	ND	Y		NA	NA	N/A
277A02	Floor tile, beige; restrooms	ND	N		0	0	N/A
277A03	Floor tile, dark beige; 12 × 12 in.	ND	N		0	0	N/A
277A04	Floor tile mastic, maintenance/ storage area	15%	N	D	0	0	N/A
277A05	Roof tile, black-grey	ND	N		0	0	N/A
277A06	Paper beneath roof tile	ND	N		0	0	N/A
277A07	Bulletin board	ND	N		0	0	N/A
277A08	Duct tape	45%	Y		8	10	C
277A09	Green vinyl flooring	ND	N		0	0	N/A
277A10	Gray floor tile and mastic	ND	N		0	0	N/A

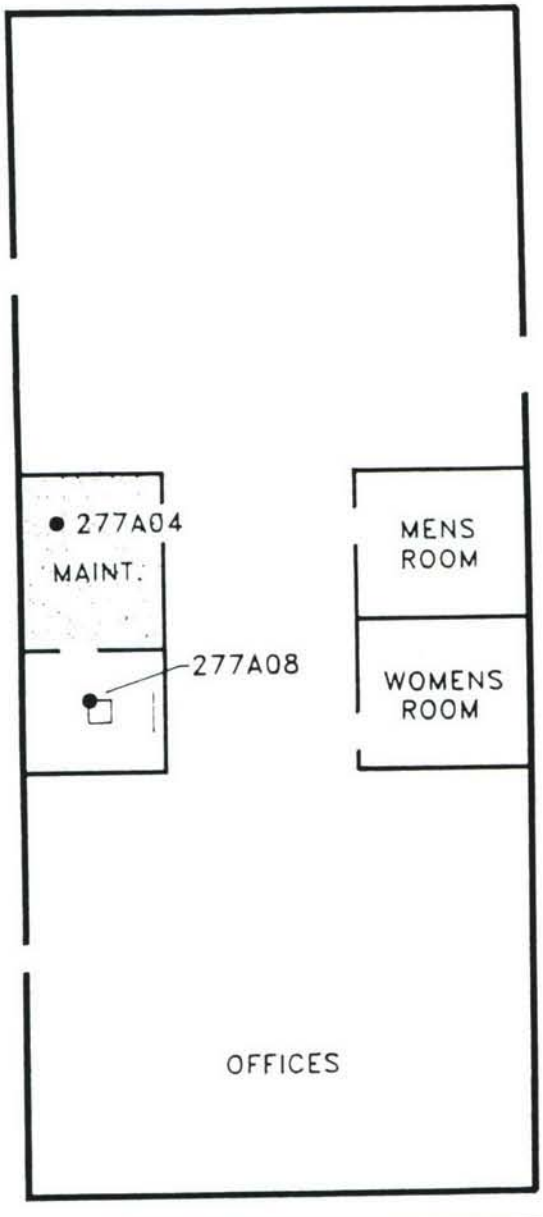
D = Duplicate
ND = Not detected
NA = Not applicable, no asbestos detected
N/A = Nonfriable and/or nonasbestos
1 = The Assessment Index Code is described in Section 4.0 and defined in Table 4.2

Figure 3.4 delineates the approximate extent of the asbestos containing floor tile mastic in Building 277.

3.3 BATTERY BLANEY

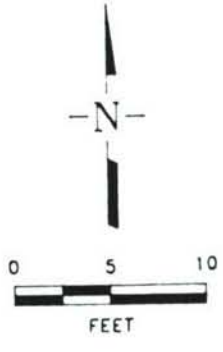
Battery Blaney (Building 635) is located at the end of Battery Blaney Road, about 100 ft north of U.S. Highway 101 and 900 ft south of the Helipad. This battery was constructed in 1901 and consisted of four emplacements for 15-pound 3-in. rapid fire guns. In 1920 all four guns were dismounted. During World War II its magazines were used as storehouses for various classes of supplies and air raid shelters. The battery is now abandoned and surrounded by a fence with a locked gate at the access road. The battery itself is secured with locked/welded doors.

No suspected ACMs were identified during the walkthrough and no samples were collected for analyses.



EXPLANATION

- ASBESTOS SAMPLING LOCATION
- OFF-WHITE NON-ASBESTOS FLOOR TILE WITH AN ASBESTOS-CONTAINING MASTIC (SAMPLE I.D. 277A04)
- ASBESTOS CONTAINING DUCT-TAPE (SAMPLE I.D. 277A08)



JAUSS STREET

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BUILDING 277
ASBESTOS CONTAINING MATERIALS LOCATIONS

PSF63004/DV3

Date: March 1993

Figure 3.4

3.4 BATTERY BOUTELLE

Battery Boutelle (Building 1651) is located on Bowman Road approximately 400 ft east of the Pacific Ocean shoreline and 2,200 ft south of Fort Point. This battery was constructed in 1898, and was partially built over two 1870 Battery West mortar batteries and three magazines. The battery consisted of three 5-in. rapid-fire guns. In 1918 all three guns were dismounted. During World War II its magazines were used as air raid shelters and as storehouses for various classes of supplies. The battery is now abandoned and secured with locked/welded doors.

No suspected ACMs were identified during the walkthrough and no samples were collected for analyses.

3.5 CENTRAL MAGAZINE

Central Magazine (Buildings 1470 and 1471) is located on Rob Hill at the end of Central Magazine Road 600 ft east of the intersection of Washington and Harrison Boulevards. Central Magazine was built in 1933 when the Golden Gate Bridge displaced and covered parts of Battery Lancaster. It was constructed to accommodate equipment for 1,200 rounds of anti-aircraft ammunition, 1,600 rounds of 155 mm shell, 1,600 rounds of 155 mm propelling charges, small arms ammunition, and 200 rounds of reserve 16-in. ammunition for Fort Funston. It is still used for ammunition storage. The compound is fenced and guarded and each room is secured by locked doors.

3.5.1 BUILDING 1470

No suspected ACMs were identified during the walkthrough and no samples were collected for analyses.

3.5.2 BUILDING 1471

No suspected ACMs were identified during the walkthrough and no samples were collected for analyses.

3.6 BATTERY CHAMBERLIN

Battery Chamberlin (Building 1621) is located in the Baker Beach area within 200 ft of the Pacific Ocean. Battery Chamberlin was constructed between 1902 and 1904 as an emplacement for four 6-in.

disappearing guns, which were removed in 1917. In 1920 the structure was modified to accept two 6-in. guns on barbette carriages, which were removed some time after World War II. In 1976 a 6-in. gun on disappearing carriage was remounted for display. The building now serves as a museum and to store materials belonging to the Boy Scouts.

No suspected ACMs were identified during the walkthrough and no samples were collected for analyses.

3.7 BATTERY CRANSTON

Battery Cranston (Building 1661) is located about 200 ft west of the Golden Gate Bridge Toll Plaza. Battery Cranston was constructed during 1897 and 1898 as an emplacement for two 10-in. disappearing rifles. In 1900 an electric light plant was installed. The two 10-in. guns were dismounted in 1941. In 1945 the magazine was converted to a dormitory for personnel assigned to Fort Winfield Scott signal station. Access to the battery is restricted by a fenced compound and locked doors. Some materials owned by the Golden Gate Bridge and Highway Transportation District are stored there.

Prior to this survey, a review was made of two asbestos surveys conducted by the Golden Gate Bridge Highway and Transportation District. A single sample of suspect friable ACM was collected and analyzed from Battery Cranston but tested negative for asbestos. A floorplan of Battery Cranston is presented as Figure 3.5. The asbestos sample result for Battery Cranston is presented in Table 3.3.

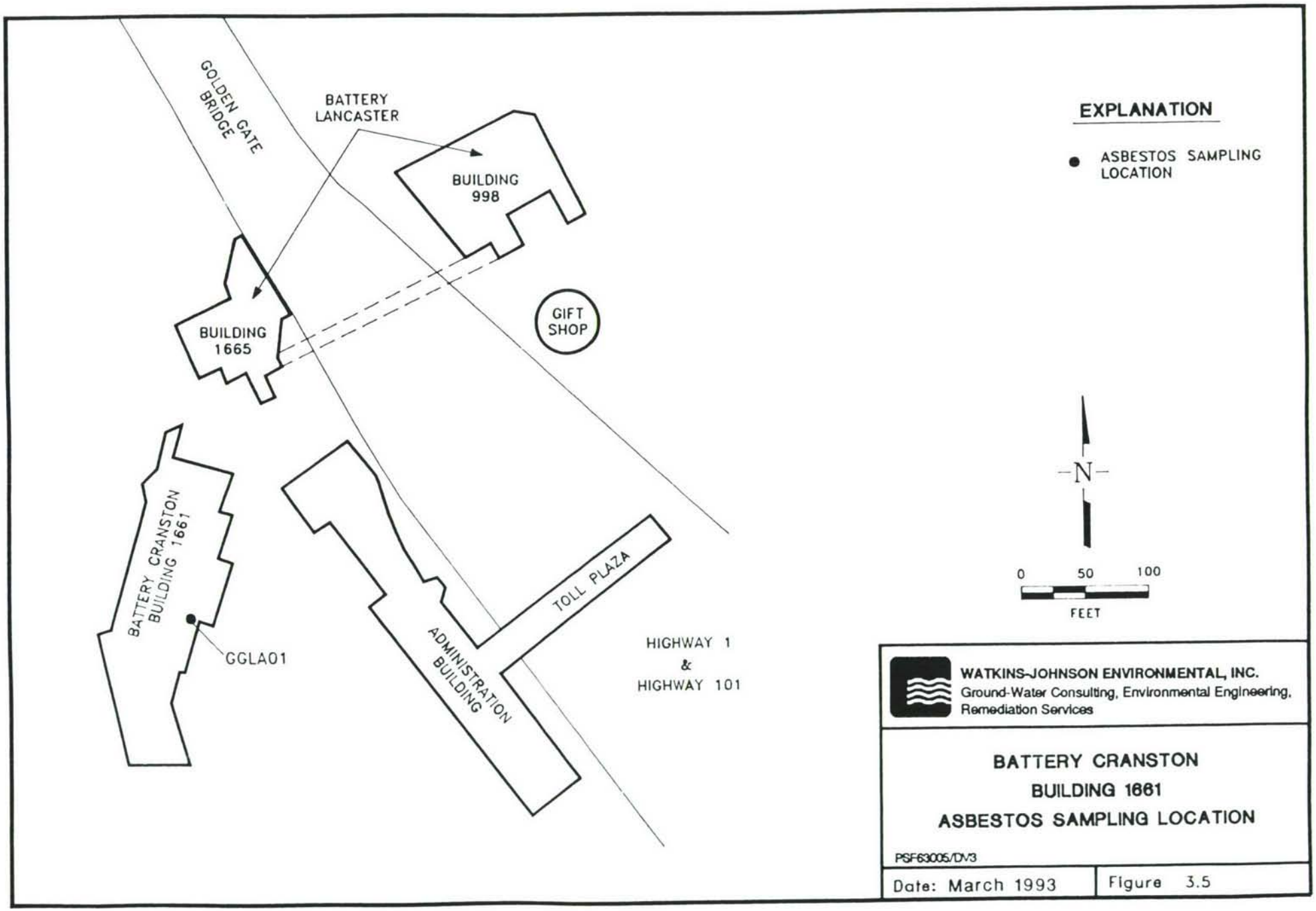
Table 3.3 Battery Cranston Asbestos Analysis Result

Sample ID	Material	Asbestos Content	Friable Y/N	Risk Number	Exposure Number	Assessment Index Code[1]
GGLAO1	Wallboard	ND	Y	NA	NA	N/A

ND = Not detected
NA = Not applicable, no asbestos detected
N/A = Nonfriable and/or nonasbestos
1 = The Assessment Index Code is described in Section 4.0 and defined in Table 4.2

3.8 BATTERY CROSBY

Battery Crosby (Building 1630) is located about 400 ft east of the Pacific Ocean shoreline and 600 ft west of the West Coast Memorial. Battery Crosby was built in 1900 as an emplacement for two 6-in. guns



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BATTERY CRANSTON
BUILDING 1661
ASBESTOS SAMPLING LOCATION

PSF63005/DV3

Date: March 1993

Figure 3.5

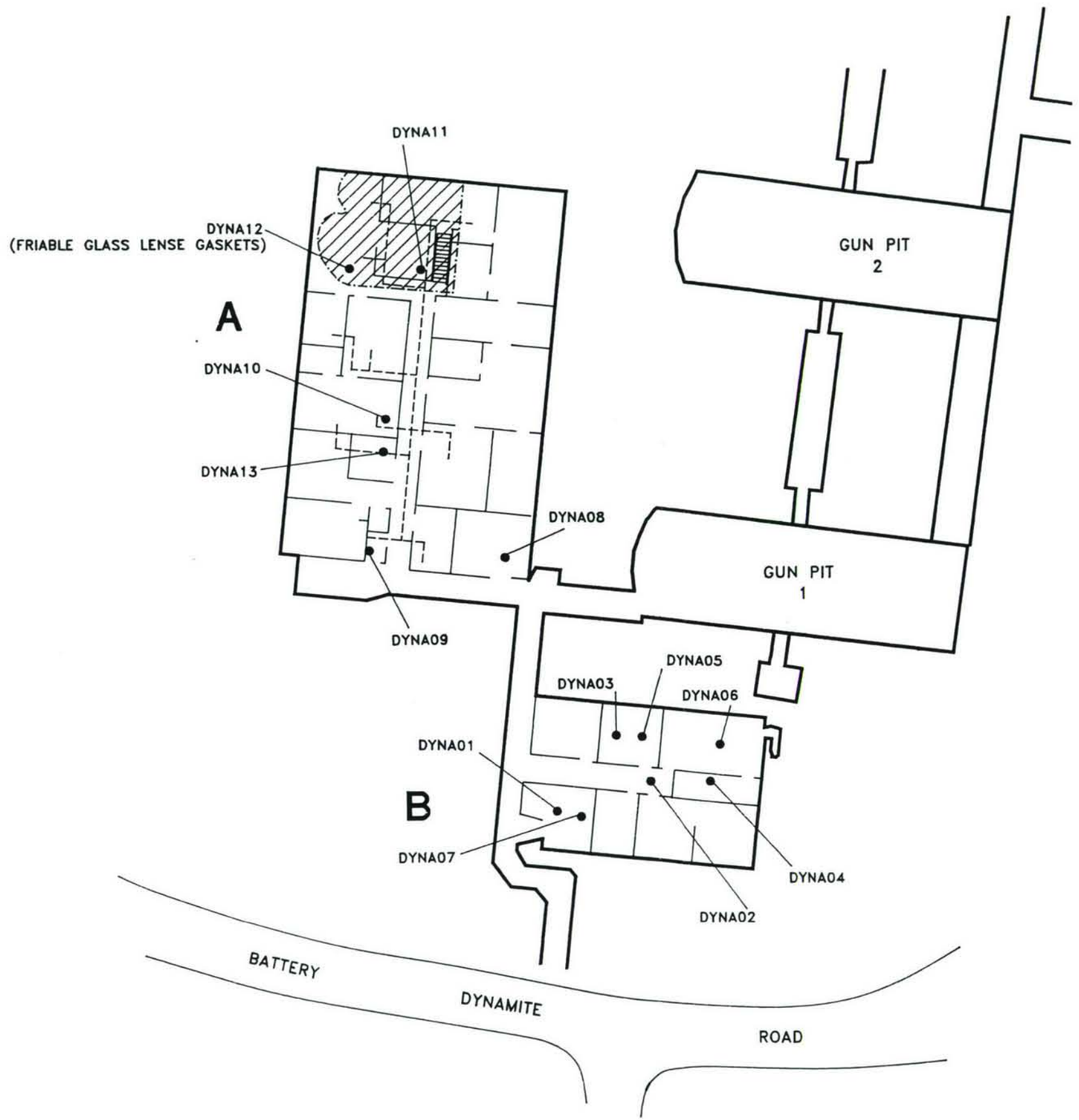
on disappearing carriages. In 1943 the battery was salvaged. The battery is now abandoned. A locked gate prevents vehicle access and the battery doors are welded/locked.

No suspected ACMs were identified during the walkthrough and no samples were collected for analyses.

3.9 BATTERY DYNAMITE

Battery Dynamite (Building 1399) is on the east side of Lincoln Boulevard about 200 ft southwest of the Ocean Lookout View Area. The sprawling, multi-level structure encompasses a courtyard and has apparently served a number of uses since it was built in 1895. At the time of its construction it served as an emplacement for three 15-in. pneumatic dynamite guns, which used compressed air to fire dynamite charges. No parapets were constructed for the emplacements. Construction in 1898-1900 added concrete retaining walls, an earthen parapet, and separate magazines for dynamite and detonators. In 1901 the pneumatic dynamite guns were declared obsolete and by 1904 the guns and machinery were sold. A 1906 earthquake collapsed a retaining wall. In 1910 a concrete building was built for a central power plant for Fort Winfield Scott. Engineers were using the corridors and rooms for storage by 1912. In 1919 an artillery fire control switchboard and post telephone switchboard were installed, and two adjoining rooms were converted to sleeping quarters. During World War II Battery Dynamite served as a harbor defense command post. By 1979 the building was being used for classrooms, a communications center, and storage of different materials. Battery Dynamite is now abandoned. The structure has several unlocked doors, but is located within a fenced compound.

Battery Dynamite is constructed almost entirely of concrete; however, subsequent renovations made in increments included materials, friable and nonfriable, that were analyzed and found to contain asbestos. Thirteen bulk samples were collected during the building survey, eight of which tested positive for asbestos. Of the eight confirmed positives, five were friable. A partial floorplan of the building with all the sample locations is presented as Figure 3.6. Asbestos sample results for Battery Dynamite are presented in Table 3.4. Figure 3.7 delineates the approximate extent of the asbestos containing floor tiles, floor tile mastic, air cell and prefabricated thermal system insulation (TSI), gaskets and sealant.



EXPLANATION

- ASBESTOS SAMPLING LOCATION
- STAIRS TO SECOND LEVEL OBSERVATION DECK
- TSI
- SECOND FLOOR OBSERVATION DECK

N

0 15 30

FEET

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BATTERY DYNAMITE
BUILDING 1399
ASBESTOS SAMPLING LOCATIONS

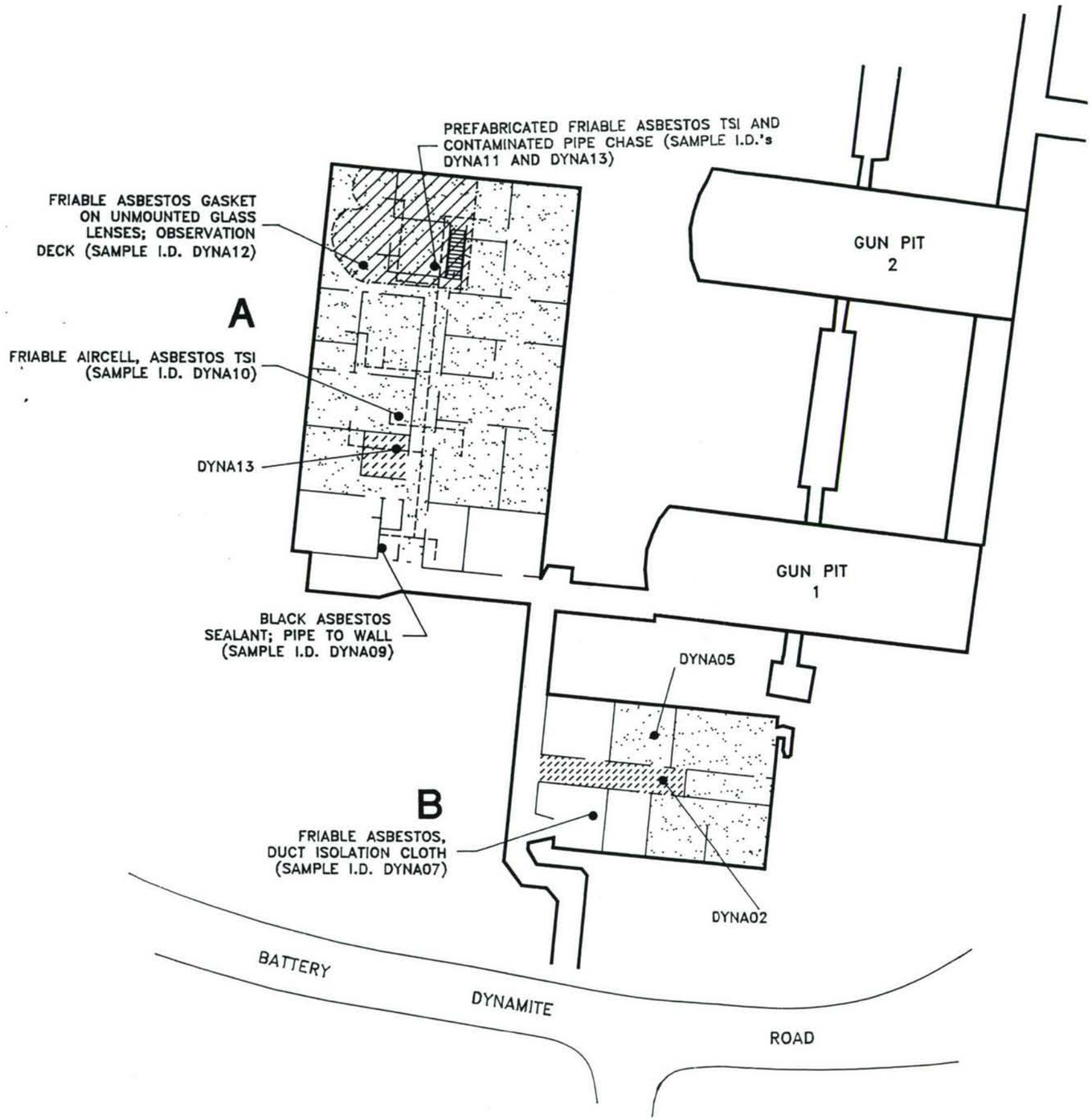
PSF63006/DV2

Date: March 1993 | Figure 3.6

Table 3.4 Battery Dynamite Asbestos Analyses Results

Sample ID	Material	Asbestos Content	Friable Y/N	Quality Assurance	Risk Number	Exposure Number	Assessment Index Code[1]
DYNA01	Ceiling tile	ND	Y		NA	NA	N/A
DYNA02	Floor tile, red, 12 × 12 in.	8%	N		0	0	N/A
DYNA03	Baseboard, brown	ND	N		0	0	N/A
DYNA04	Acoustic tile, 12 × 12 in., ceiling and walls	ND	Y		NA	NA	N/A
DYNA05	Floor tile, black and red; and mastic	14%	N		0	0	N/A
DYNA06	Ceiling tile paper backing	ND	Y		NA	NA	N/A
DYNA07	Duct isolation cloth	35%	Y		5	7	E
DYNA08	Gasket on generator	ND	Y		NA	NA	N/A
DYNA09	Sealant, pipe to wall; black	20%	N		0	0	N/A
DYNA10	Aircell thermal system insulation, 4 in. diameter	25%	Y		2	11	C
DYNA11	Thermal system insulation; pre-fabricated, 4 in. diameter	25%	Y		9	13	C
DYNA12	Gasket on glass lenses	35%	Y		3′	7	F
DYNA13	Thermal system insulation; pre-fabricated, 4 in. diameter	28%	Y	D	8	11	C

D = Duplicate
ND = Not detected
NA = Not applicable, no asbestos detected
N/A = Nonfriable and/or nonasbestos
1 = Assessment Index Code is described in Section 4.0 and defined in Table 4.2.



EXPLANATION

- ASBESTOS SAMPLING LOCATION
- STAIRS TO SECOND LEVEL AREA
- TSI
- SECOND FLOOR OBSERVATION DECK
- RED ASBESTOS FLOOR TILE (SAMPLE I.D. DYNA02)
- BLACK & RED ASBESTOS FLOOR TILE AND MASTIC (SAMPLE I.D. DYNA05)

N

0 15 30

FEET

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BATTERY DYNAMITE
BUILDING 1399
ASBESTOS CONTAINING MATERIALS LOCATIONS

PSF83007/DV2

Date: March 1993 | Figure 3.7

3.10 BATTERY EAST

Battery East is within the boundaries of the Fort Point Historic Site, about 200 ft north of where Lincoln Boulevard makes its closest approach to the end of the promontory. When Battery East was constructed in 1864 as a temporary emplacement, it included five small shellrooms in the parapet between the six guns. Improvements made during 1873-1875 involved the construction of an improved parapet, but the work was not completed as planned. In 1891 a platform for a 15-in. gun to be used for target practice was built. Four platforms were completed in 1897 for 8-in. converted rifles. These rifles and five 15-in. Rodmans were operable at this time, but one year later four of five Rodmans were removed. The remaining magazines are now abandoned and open to public. Battery East magazines are constructed entirely of brick. No suspected ACMs were identified during the walkthrough and no samples were collected for analyses.

3.11 BATTERY GODFREY

Battery Godfrey (Building 1647) is located on Bowman Road approximately 400 ft east of the Pacific Ocean and 2,300 ft south of Fort Point. Excavation began in 1892 for the construction of three emplacements for 12-in. barbette guns, and engulfed three old Battery West Magazines which were broken up or embedded within Battery Godfrey. The gun platform was laid in 1894. In 1897 three 12-in. rifles were mounted, and on the right flank by old Battery West magazine, excavation was begun for guard and relocator rooms. An electric light plant was installed in 1900. Construction of gun plugs for two anti-aircraft guns was undertaken at the left flank of the battery in 1920, but by 1925 the anti-aircraft guns had been dismounted. In 1943 the battery was salvaged. Battery Godfrey is abandoned with the doors welded/locked. The Bowman Road access has a locked gate but foot traffic can freely pass the battery's exterior.

No suspected ACMs were identified during the walkthrough of the structure's interior. However, about 60 ft to the east of the structure, a shard of transite was found embedded on the north side of the Bowman Road embankment, and upon analysis tested positive for asbestos (see Table 3.5). This transite is technically nonfriable, however, its proximity to the seldom used road raises the concern that other shards could be reduced to a friable condition as the result of vehicular impact, or that future reconstruction/landscaping could similarly expose and render transite into airborne fibers. The amount

of transite observed on the soil surface was not substantial, however this is inconclusive as to the quantity and condition of ACM unexposed within the embankment.

Table 3.5 Battery Godfrey Asbestos Analysis Result

Sample ID	Material	Asbestos Content	Friable Y/N	Risk Number	Exposure Number	Assessment Index Code[1]
BBG0A01	Transite debris	25%	N	0	0	N/A

N/A = Nonfriable and/or nonasbestos
1 = Assessment Index Code described in Section 4.0 and defined in Table 4.2.

3.12 BATTERY HOWE-WAGNER

Battery Howe-Wagner (Building 1287) is located about 700 ft west-by-southwest from the U.S. Highway 101-Lincoln Boulevard overpass. Construction of the mortar pits for the battery began in 1893-1895 in the shape of a cross with mortars in each quarter; the eastern pits comprised Battery Howe and the western pits comprised Battery Wagner. A total of 16 mortars were mounted. In 1896 an ammunition conveyor was installed. Following an 1897 landslide, the battery was repaired, ammunition carriers were installed, and a casemated firing room was built southwest of the battery. In 1898 the firing room was converted to a relocator room, and a telephone room, guardroom, commanding officer room and chart room were added. In 1920 all sixteen 12-in. mortars were dismounted. During World War II the magazines were used as storehouses for various classes of supplies or as air raid shelters. In 1945 Battery Wagner was used for storage of operating reserve of trinitrotoluene (TNT) for submarine mines, and Battery Howe became an air raid shelter for civilians. The structure now contains stored materials but generally is unmaintained and abandoned. At the time of the survey (July 1992) the access door was closed but unsecured. Oxygen levels monitored during the site entry were slightly less than the acceptable OSHA minimum of 19.5 percent (29 CFR 1910.146). Sometime before October 26, 1992 this door was secured against casual entry.

No suspected asbestos construction materials were identified during the walkthrough; however, suspect friable ACM debris was found and sampled from two piles on the floor. Both samples tested positive for asbestos. A floorplan of the building with the sample locations is presented as Figure 3.8. Asbestos sample results for Battery Howe-Wagner are presented in Table 3.6. The source of the ACM debris is

WAGNER ROAD

HW A01

HW A02

EXPLANATION

● ASBESTOS SAMPLING LOCATION

N

0 8 16

FEET

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Ground-Water Consulting, Environmental Engineering, Remediation Services

BATTERY HOWE-WAGNER
BUILDING 1287
ASBESTOS SAMPLING LOCATIONS

PSF63008/DV2

Date: March 1993 | Figure 3.8

apparently boiler wrap or TSI removed elsewhere. The most apparent piles of ACM debris are estimated to total less than 100 ft^2; however, given the manner in which this waste asbestos was transported into the building and discarded, asbestos dust contamination of most of the building's 3,000 ft^2 cannot be discounted. Battery Howe-Wagner should remain securely closed until a remedial cleaning of the asbestos debris and dust contamination is completed.

Table 3.6 Battery Howe-Wagner Asbestos Analyses Results

Sample ID	Material	Asbestos Content	Friable Y/N	Risk Number	Exposure Number	Assessment Index Code[1]
HWA01	Thermal system insulation debris	25%	Y	7	11	C
HWA02	Thermal system insulation debris	26%	Y	7	12	C

[1] = Assessment Index Code is described in Section 4.0 and defined in Table 4.2.

3.13 BATTERY LANCASTER

Battery Lancaster (Buildings 1665 and 998) is located beneath the ramp of the Golden Gate Bridge about 200 ft north of the toll plaza. Battery Lancaster was built in 1896-1897 as a gun platform for three 12-in. guns. In 1898 earthwork improvements were made, and in 1900 two emplacements were constructed and an electric light plant was installed. Two of three 12-in. guns were dismounted in 1918, but the magazines continued to store reserve ammunition. The 1933 construction of Golden Gate Bridge straddled Battery Lancaster, restricting its use to the remaining wings. During World War II its magazines were used as storehouses for various classes of supplies or as air raid shelters. The remnants of Battery Lancaster are now maintained by the Golden Gate Bridge Highway and Transportation District. Prior to this asbestos survey, a review was made of two asbestos surveys conducted by the Golden Gate Bridge Highway and Transportation District.

No suspected ACMs were identified during the walkthrough and no samples were collected for analyses.

3.14 BATTERY MARCUS MILLER

Battery Marcus Miller (Building 1658) on Bowman Road is located about 400 ft east of the Pacific Ocean and 600 ft southwest of the Golden Gate Bridge toll plaza. Construction of Battery Marcus Miller began in 1891 with the excavation for parapet and magazine rooms and placement of masonry foundations to

provide emplacements for three 10-in. guns with disappearing carriages. By 1896 the engineering work was completed with the construction of trolleys and cranes to lift and move ammunition from magazines. The three 10-in rifles were mounted in 1897 and removed in 1920. During World War II the magazines were used as storehouses for various classes of supplies or as air raid shelters. Battery Marcus Miller is now administered by Golden Gate National Recreation Area, but remains locked and abandoned. No suspected ACMs were identified during the walkthrough and no samples were collected for analyses.

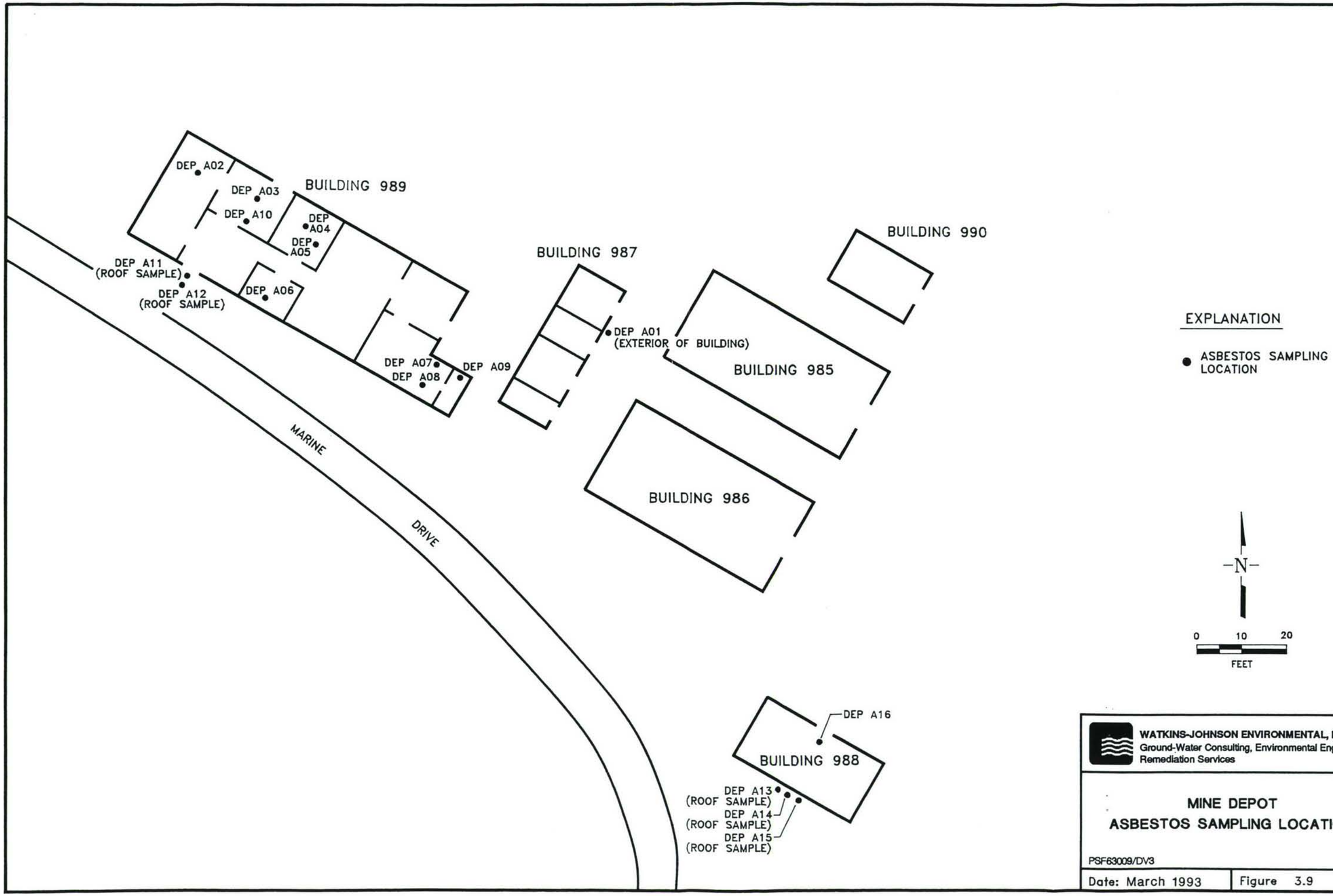
3.15 BATTERY MCKINNON

Battery McKinnon (building 1430) is located south of Rob Hill on Compton Road. Battery McKinnon was constructed in 1897 and was originally known as Battery Stotsenberg. It consisted of four-in-line mortar batteries (a total of sixteen 12-in. mortars), four magazines, a storage battery room, relocator room, telephone room, and two guardrooms. An electric light plant was installed in 1900. In 1906, the two western pits were renamed Battery McKinnon and the two eastern pits remained Battery Stotsenberg. The date of abandonment was not determined. The United States Geological Survey maintains earthquake monitoring equipment in Battery McKinnon and other rooms store expired Civil Defense supplies and about 200 cases of methyl bromide ampules for fabric fumigation. The compound area is fenced and doors are locked/welded.

No suspected ACMs were identified during the walkthrough and no samples were collected for analyses.

3.16 MINE DEPOT

The Mine Depot (Buildings 979, 985, 986, 987, 988, 989, and 990) is located by the San Francisco Bay shoreline, about 1,400 ft east-by-southeast of the Golden Gate Bridge toll plaza. The Mine Depot buildings 985, 986 and 987 were constructed in 1907-1910. Building 979 housed the cables used to place the mines. Buildings 986 and 987 were used for storage of explosives. In 1908 the mining casemates were eliminated. A floorplan of the Mine Depot buildings with the sample locations is presented as Figure 3.9.



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MINE DEPOT
ASBESTOS SAMPLING LOCATIONS

PSF63009/DV3

Date: March 1993 | Figure 3.9

3.16.1 BUILDING 985

Building 985 is used to store materials and equipment. The walls and roof are corrugated transite identical to the sample from building 987 that tested positive for asbestos. This nonfriable ACM is approximately 2,600 ft². No asbestos samples were collected from this structure.

3.16.2 BUILDING 986

Building 986 is used to store materials and equipment. The walls and roof are corrugated transite identical to the sample collected from Building 987 that tested positive for asbestos. This nonfriable ACM is approximately 2,600 ft². No asbestos samples were collected from this structure.

3.16.3 BUILDING 987

Building 987 is used for restrooms and a maintenance area. The walls and roof are corrugated transite, which tested positive for asbestos. Asbestos sample result for Building 987 is presented in Table 3.7. This nonfriable ACM is approximately 1,300 ft². No other suspected ACM was identified in the structure.

Table 3.7 Mine Depot Building 987 Asbestos Analysis Result

Sample ID	Material	Asbestos Content	Friable Y/N	QC Type	Risk Number	Exposure Number	Assessment Index Code[1]
DEPA01	Transite	35%	N	D	0	0	N/A

D = duplicate
N/A = Nonfriable and/or nonasbestos
1 = Assessment Index Code is described in Section 4.0 and defined in Table 4.2.

3.16.4 BUILDING 988

Building 988 is called the Presidio Resource Center and functions as a museum and library for the Presidio. Four samples of suspected ACM were collected, including three samples of roofing materials and one sample of floor sheeting. None of these materials tested positive for asbestos. Asbestos sample results for Building 988 are presented in Table 3.8.

Table 3.8 Mine Depot Building 988 Asbestos Analyses Results

Sample ID	Material	Asbestos Content	Friable Y/N	Risk Number	Exposure Number	Assessment Index Code[1]
DEPA13	Roofing tile, red	ND	N	0	0	N/A
DEPA14	Roofing tile, red/black	ND	N	0	0	N/A
DEPA15	Roofing tar paper	ND	N	0	0	N/A
DEPA16	Floor tile	ND	N	0	0	N/A

N/A = Nonfriable and/or nonasbestos
ND = Not detected
1 = Assessment Index Code is described in Section 4.0 and defined in Table 4.2.

3.16.5 BUILDING 989

Building 989 is the Park Headquarters, an occupied structure with offices, a locker room, restrooms and a meeting room. Eleven samples of suspected ACM were collected in this building, two tested positive for nonfriable asbestos. Collected for analyses were two samples of ceiling tile, two samples of roofing materials, five samples of flooring materials and one each of a baseboard and a ceiling insulation. Of these materials, two samples of floor sheeting from restrooms, with a total area of about 100 ft^2, tested positive, but are nonfriable and in fair condition. Asbestos sample results for Building 989 are presented in Table 3.9. Figure 3.10 delineates the extent of the asbestos containing backing on vinyl sheeting found on floors and walls.

Table 3.9 Mine Depot Building 989 Asbestos Analyses Results (page 1 of 2)

Sample ID	Material	Asbestos Content	Friable Y/N	Risk Number	Exposure Number	Assessment Index Code[1]
DEPA02	Ceiling tile, 12 × 12 in. west end of building	ND	Y	NA	NA	N/A
DEPA03	Ceiling tile, 12 × 12 in.; central offices	ND	Y	NA	NA	N/A
DEPA04	Fibrous glass insulation above crawl space	ND	Y	NA	NA	N/A
DEPA05	Grey floor tile, storage room and office	<1%	N	0	0	N/A
DEPA06	Floor sheeting, green	ND	N	0	0	N/A

Table 3.9 Mine Depot Building 989 Asbestos Analyses Results (page 2 of 2)

Sample ID	Material	Asbestos Content	Friable Y/N	Risk Number	Exposure Number	Assessment Index Code[1]
DEPA07	Floor sheeting backing (from DEPA06)	ND	N	0	0	N/A
DEPA08	Floor sheeting backing, restrooms restrooms	30%	N	0	0	N/A
DEPA09	Vinyl sheeting backing, restroom wall	20%	N	0	0	N/A
DEPA10	Vinyl baseboard	ND	N	0	0	N/A
DEPA11	Roofing tile, red	ND	N	0	0	N/A
DEPA12	Roofing tile, black	ND	N	0	0	N/A

ND = Not detected
NA = Not applicable, no asbestos detected
N/A = Nonfriable and/or nonasbestos
1 = Assessment Index Code is described in Section 4.0 and defined in Table 4.2.

3.16.6 BUILDING 990

Building 990 stored flammable liquids. No suspected asbestos materials were identified in this structure during the survey and no samples were sent for analysis.

3.17 NEW MINE CASEMATE

New Mine Casemate (Building 1601) is located on Baker Beach about 400 ft from the Pacific Ocean shoreline. It was constructed in 1943 and included control panels for removing poison gases from the air and the contaminated personnel. The door is now locked. Some stored or abandoned materials such as engines, machinery, and hardware remain in the casemate.

Four suspected ACM materials were sampled in the New Mine Casemate, two types of floor tiles and two samples of ceiling materials. Only one of the samples, a floor tile, tested positive for asbestos. The tile is nonfriable, in good condition and covers about 2,400 ft^2. A floorplan of the building with the sample locations is presented as Figure 3.11. Asbestos sample results for New Mine Casemate are presented in Table 3.10.

BUILDING 989

BUILDING 987

BUILDING 990

BUILDING 985

BUILDING 986

BUILDING 988

DEP A09

DEP A08

MARINE DRIVE

EXPLANATION

ASBESTOS SAMPLING LOCATION

EXTENT OF VINYL SHEETING WITH ASBESTOS CONTAINING BACKING; ON FLOORS AND WALLS (SAMPLE I.D.'s DEPA09)

NOTE: TRANSITE (ASBESTOS) SHEETING NOT SHOWN BUT PRESENT ON BUILDINGS 985, 986, AND 987.

N

0 10 20

FEET

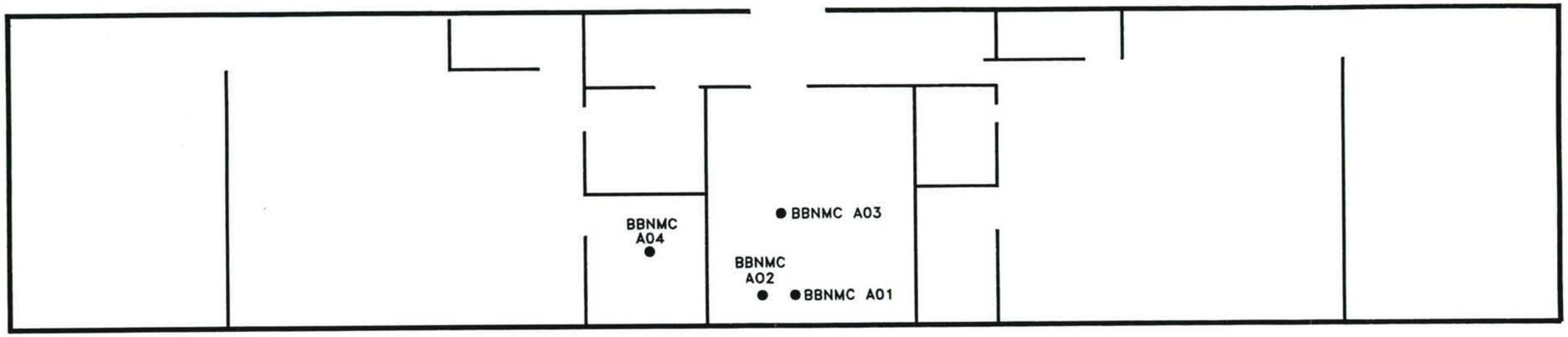
WATKINS-JOHNSON ENVIRONMENTAL, INC.
Ground-Water Consulting, Environmental Engineering, Remediation Services

BUILDING 989
ASBESTOS CONTAINING MATERIALS LOCATIONS

PSF63010/DV4

Date: March 1993

Figure 3.10



EXPLANATION

● ASBESTOS SAMPLING LOCATION

-N-

0 5 10

FEET

WATKINS-JOHNSON ENVIRONMENTAL, INC.
Ground-Water Consulting, Environmental Engineering, Remediation Services

NEW MINE CASEMATE
BUILDING 1601
ASBESTOS SAMPLING LOCATIONS

PSF63011/DV1

Date: March 1993

Figure 3.11

Table 3.10 New Mine Casemate Asbestos Analyses Results

Sample ID	Material	Asbestos Content	Friable Y/N	Risk Number	Exposure Number	Assessment Index Code[1]
BBNMCA01	Ceiling tile	ND	Y	0	0	N/A
BBNMCA02	Paper backing to ceiling tile	ND	Y	0	0	N/A
BBNMCA03	Floor tile, black and red; mastic	7%	N	0	0	N/A
BBNMCA04	Floor tile, light colored	ND	N	0	0	N/A

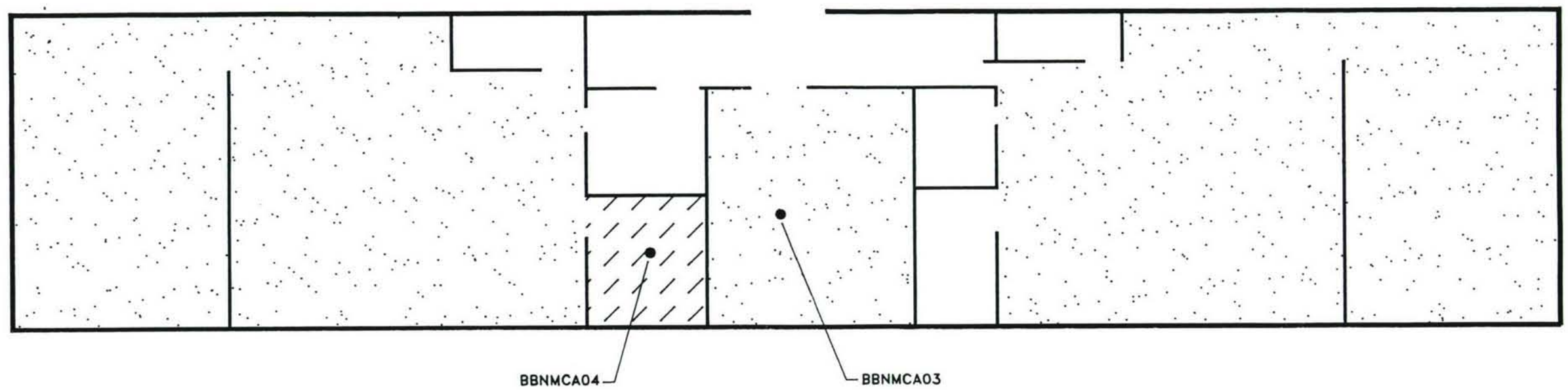
ND = Not detected
N/A = Nonfriable and/or nonasbestos
1 = Assessment Index Code is described in Section 4.0 and defined in Table 4.2.

It was also observed that a type of friable gasket on glass lenses found in Battery Dynamite was present. About 10 of these gaskets were noted but are unlikely to be a significant source of airborne fibers given the structure's low usage. Figure 3.12 delineates the extent of asbestos containing floor tile and mastic.

3.18 Old Mine Casemate

Old Mine Casemate (Building 1600) is located on Baker Beach at Battery Chamberlin Road about 200 ft from the Pacific Ocean shoreline. It was constructed in 1912. In 1918 its roof was reinforced. The building is now locked/welded and abandoned.

Two samples of tape wrap on wiring tested negative for asbestos. A floorplan of the building with the sample locations is presented as Figure 3.13. Asbestos sample results for Old Mine Casemate are presented in Table 3.11.



EXPLANATION

- ASBESTOS SAMPLING LOCATION
- BLACK AND RED ASBESTOS FLOOR TILE AND MASTIC (SAMPLE I.D. BBNMCA03)
- LIGHT-COLORED NON-ASBESTOS FLOOR TILE (SAMPLE I.D. BBNMCA04)

NOTE: FRIABLE GLASS LENSE GASKETS VARIOUS ISOLATED LOCATIONS (SAME AS SAMPLE I.D. DYNA12 FIGURE 3.7)

N

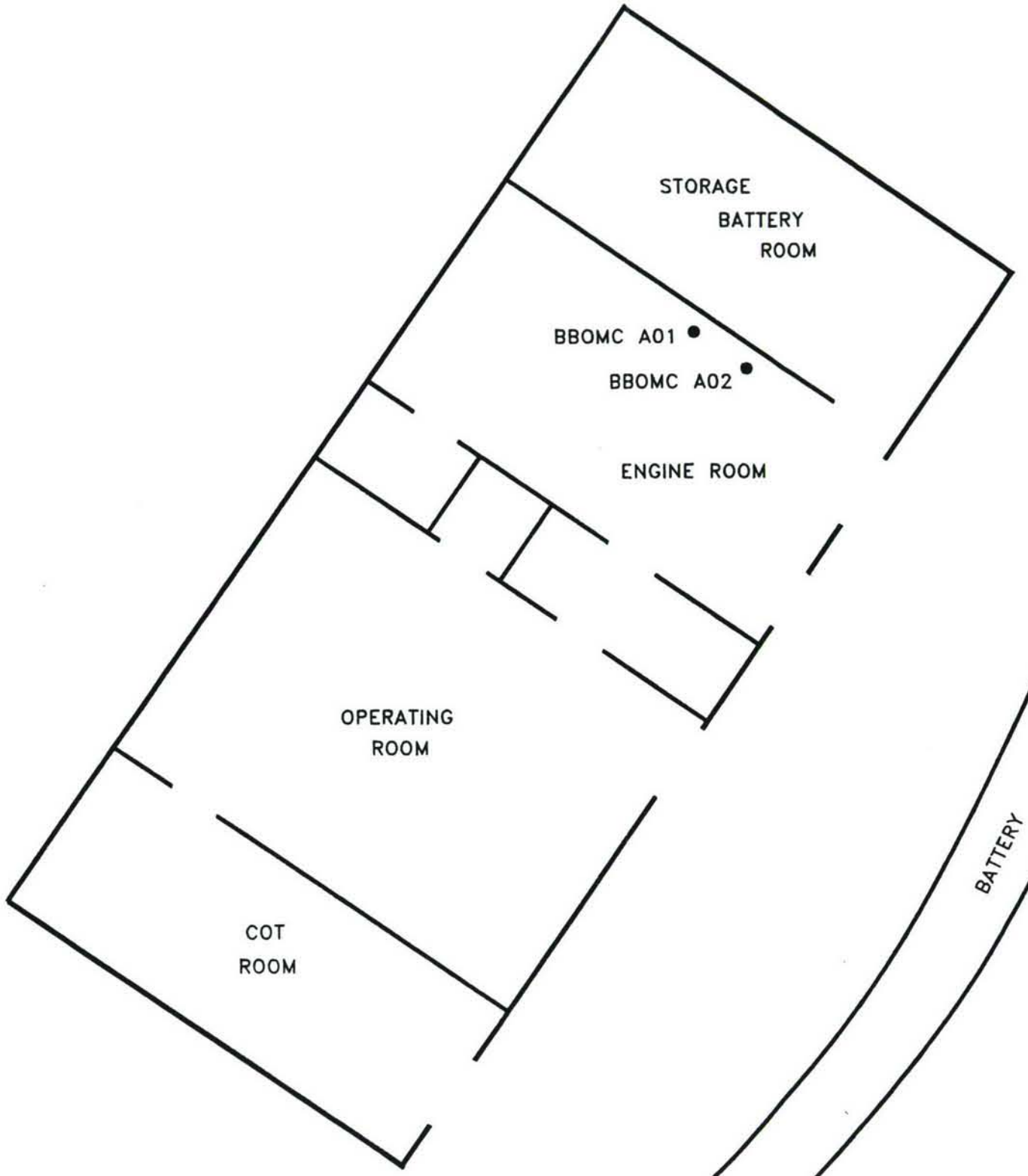
0 5 10
FEET

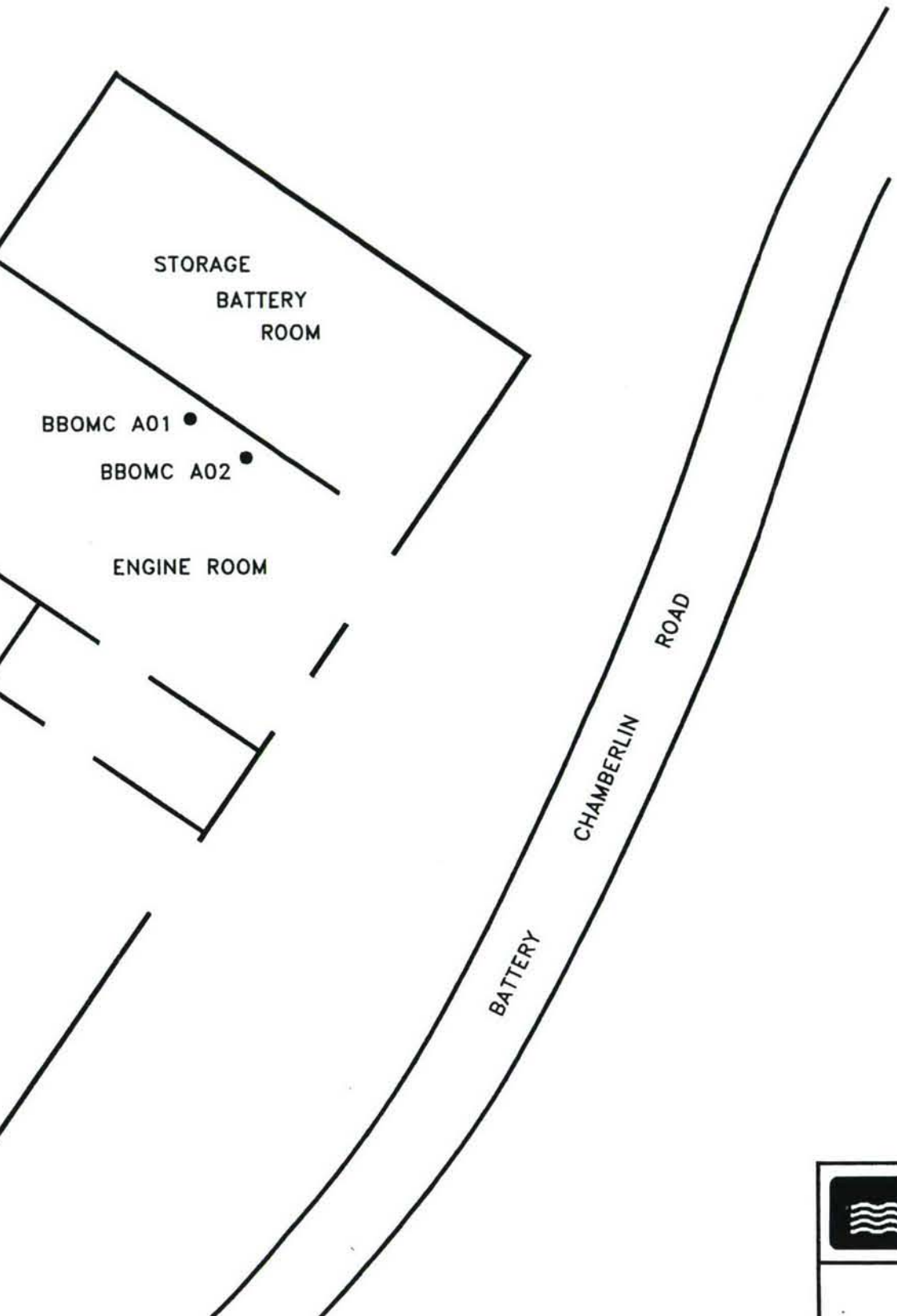
WATKINS-JOHNSON ENVIRONMENTAL, INC.
Ground-Water Consulting, Environmental Engineering, Remediation Services

NEW MINE CASEMATE BUILDING 1601 ASBESTOS CONTAINING MATERIALS LOCATIONS

PSF63012/DV2

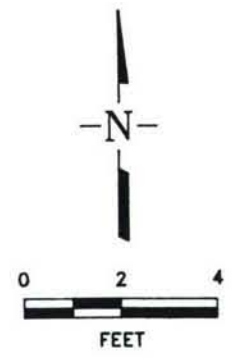
Date: March 1993 | Figure 3.12





EXPLANATION

● ASBESTOS SAMPLING LOCATION



WATKINS-JOHNSON ENVIRONMENTAL, INC.
Ground-Water Consulting, Environmental Engineering, Remediation Services

OLD MINE CASEMATE
BUILDING 1600
ASBESTOS SAMPLING LOCATIONS

PSF63013/DV2

Date: March 1993 | Figure 3.13

Table 3.11 Old Mine Casemate Asbestos Analyses Results

Sample ID	Material	Asbestos Content	Friable Y/N	Risk Number	Exposure Number	Assessment Index Code[1]
BBOMCA 01	Tape on wiring insulation	ND	N	0	0	N/A
BBOMCA 02	Tape on wiring insulation	ND	N	0	0	N/A

ND = Not detected
N/A = Nonfriable and/or nonasbestos
1 = Assessment Index Code is described in Section 4.0 and defined in Table 4.2.

3.19 BATTERY SAFFOLD

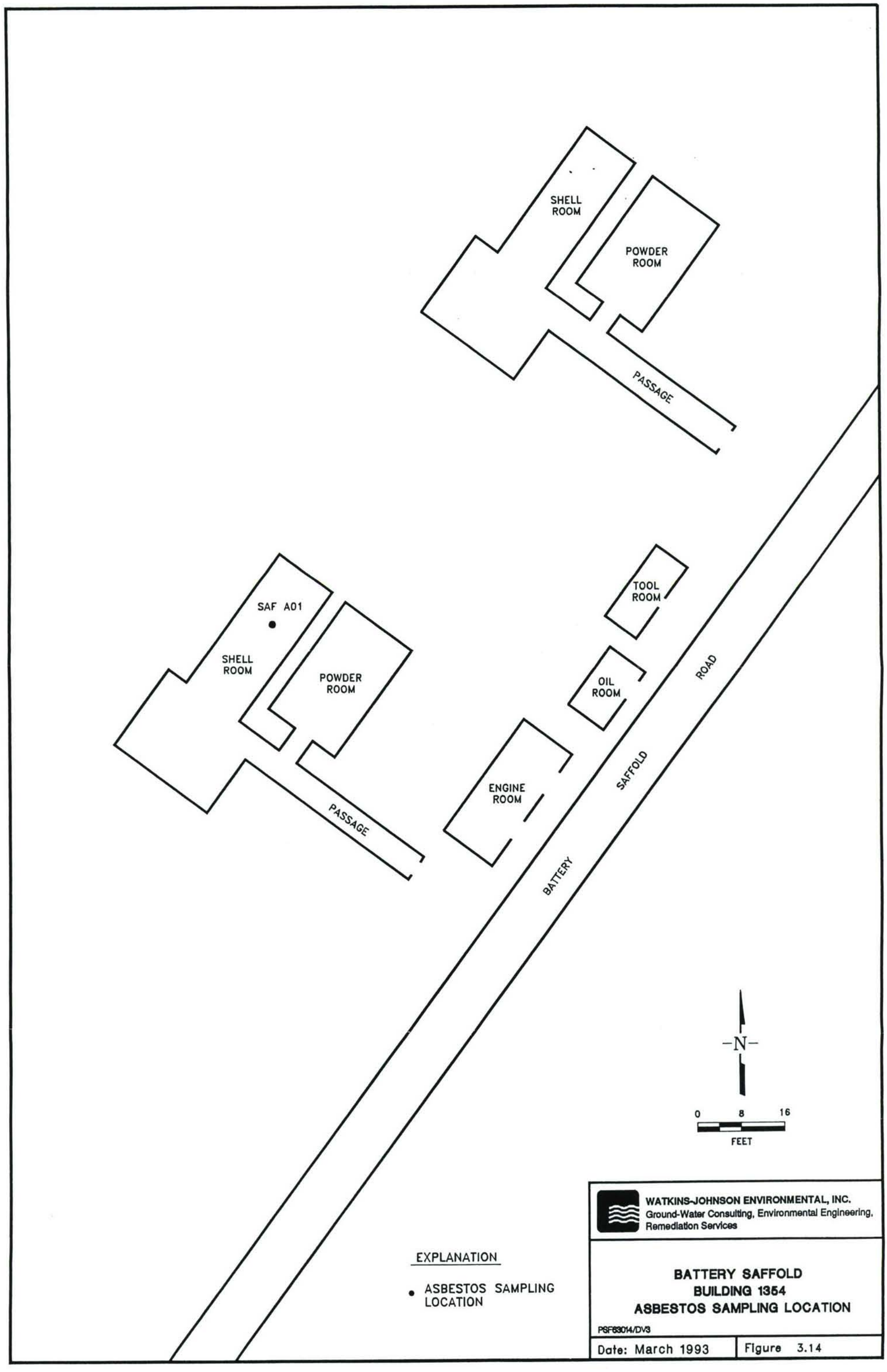
Battery Saffold (Building 1354) is located about 200 ft southeast of the intersection of Washington and Lincoln Boulevards. Battery Saffold was constructed from 1895-1897 as an emplacement for two 12-in. guns. In 1937 the battery was abandoned. There is some storage of fire department materials in a locked room. The building is inside a fenced compound, but some rooms are open.

One sample of floor debris tested negative for asbestos. A floorplan of the building with the sample location is presented as Figure 3.14. The result of the analysis of the asbestos sample for Battery Saffold is presented in Table 3.12. No other suspected ACMs were identified during the walkthrough.

Table 3.12 Battery Saffold Asbestos Analysis Result

Sample ID	Material	Asbestos Content	Friable Y/N	Risk Number	Exposure Number	Assessment Index Code
SAFA01	Floor debris	ND	Y	NA	NA	N/A

ND = Not detected
NA = Not applicable, no asbestos detected
N/A = Nonfriable and/or nonasbestos



WATKINS-JOHNSON ENVIRONMENTAL, INC.
Ground-Water Consulting, Environmental Engineering, Remediation Services

BATTERY SAFFOLD
BUILDING 1354
ASBESTOS SAMPLING LOCATION

PSF63014/DV3

Date: March 1993

Figure 3.14

3.20 BATTERY SHERWOOD

Battery Sherwood (Building 636) is located along Battery Blaney Road about 100 ft north of U.S. Highway 101 and 800 ft southwest of the helipad. This battery was constructed from 1900-1901 for two 5-in. guns. During World War II its magazines were used as storehouses for various classes of supplies or as air raid shelters. The battery is now abandoned and surrounded by a fence with a locked gate at the access road. The battery itself is secured with locked/welded doors.

No suspected ACMs were identified during the walkthrough and no samples were collected for analyses.

3.21 BATTERY STOTSENBERG

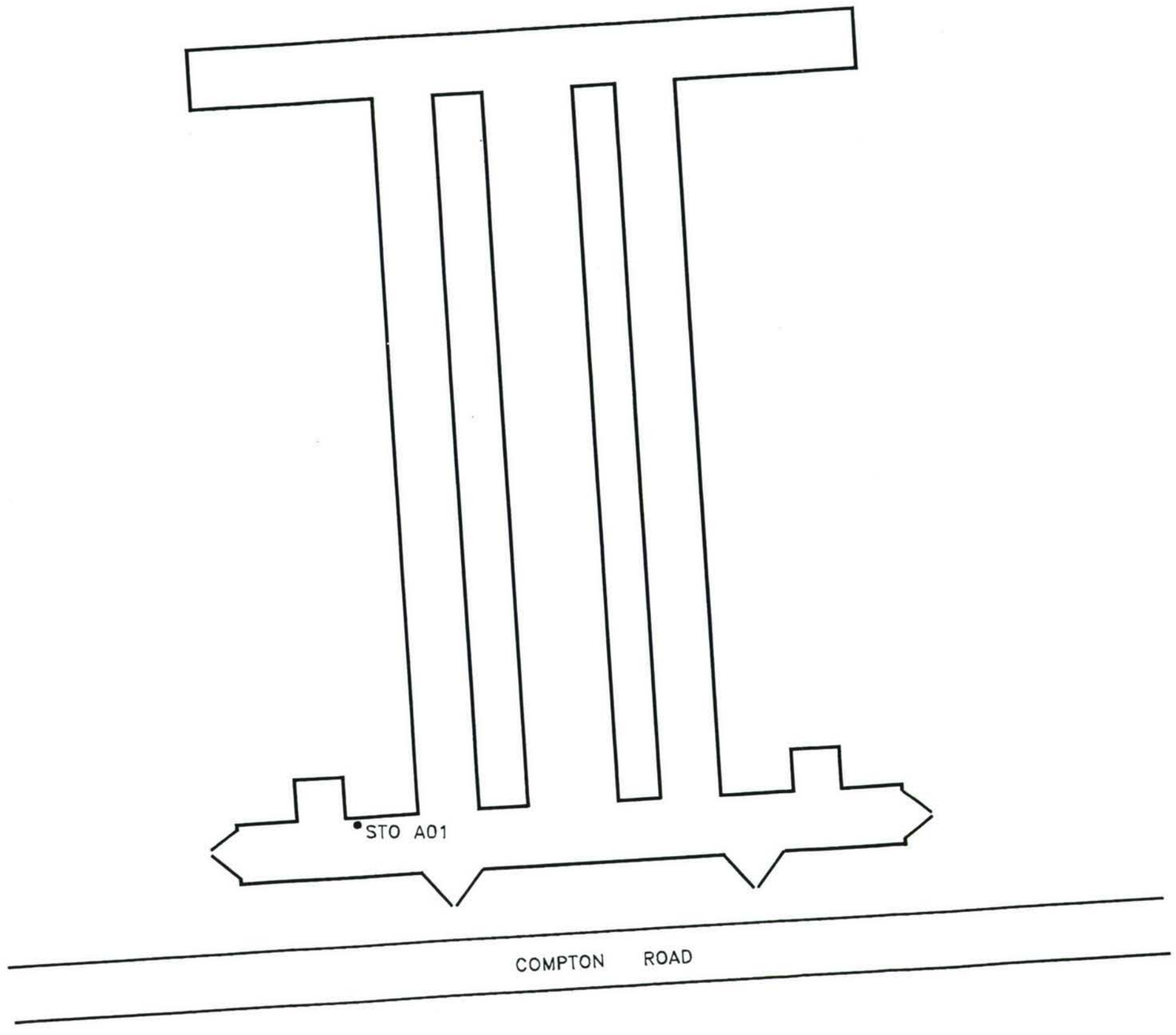
Battery Stotsenberg (Building 1430) is located south of Rob Hill on Compton Road. Battery Stotsenberg was constructed in 1897 and consisted of four-in-line mortar batteries (a total of sixteen 12-in. mortars), four magazines, a battery storage room, relocator room, telephone room, and two guardrooms. In 1900 an electric light plant was installed. In 1906 the two western pits were renamed McKinnon; the two eastern pits remained Stotsenberg. During World War II the building stored ammunition and other materials. The date of abandonment was not determined. The compound area is fenced and doors are locked/welded.

The ceiling finish was collected but tested negative for asbestos. A floorplan of the building with the sample location is presented as Figure 3.15. The result of the analysis of the asbestos sample for Battery Stotsenberg is presented in Table 3.13.

Table 3.13 Battery Stotsenberg Asbestos Analysis Result

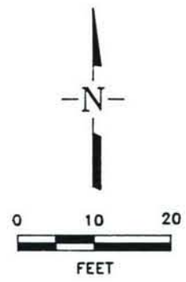
Sample ID	Material	Asbestos Content	Friable Y/N	Risk Number	Exposure Number	Assessment Index Code[1]
STOA01	Ceiling plaster	ND	Y	NA	NA	N/A

ND = Not detected
NA = Not applicable, no asbestos detected
N/A = Nonfriable and/or nonasbestos
1 = Assessment Index Code is described in Section 4.0 and defined in Table 4.2.



EXPLANATION

• ASBESTOS SAMPLING LOCATION



WATKINS-JOHNSON ENVIRONMENTAL, INC.
Ground-Water Consulting, Environmental Engineering, Remediation Services

BATTERY STOTSENBERG
BUILDING 1430
ASBESTOS SAMPLING LOCATION

PSF63015/DV3

Date: March 1993 | Figure 3.15

3.22 BATTERY WEST

Battery West (Buildings 1640 and 1643) is located on Bowman Road about 400 ft east of the Pacific Ocean shoreline. When Battery West was constructed in 1864 as a temporary emplacement, it included five small shellrooms in the parapet between the six guns. Improvements made from 1872-1873 involved the construction of walls for 20 emplacements, parapets and magazines, and the mounting of 12 guns. In 1891, 15-in. gun platforms were removed and the mortar positions displaced for construction at Battery Marcus Miller. In 1892 when excavation began for three emplacements of 12-in. barbette guns at Battery Godfrey, three of the old Battery West Magazines were broken up and/or embedded within Battery Godfrey. In 1898 Battery Boutelle was built over two 1870 Battery West mortar batteries; three of its former magazines were used for storage of nonexplosive articles. The four original magazines that still remain are now abandoned; one on either flank of Battery Godfrey and two on the left flank of Battery Marcus Miller. At least two of these have unsecured entrances. Battery West magazines are constructed entirely of brick.

Battery West magazines are constructed entirely of brick. No suspected ACMs were identified during the walkthrough and no samples were collected for analyses.

4.0 RISK AND EXPOSURE ASSESSMENT OF FRIABLE ASBESTOS

During the field survey for asbestos, an assessment index was calculated for risk and exposure at each location where a sample of a friable material was collected. Numerical values keyed to the type of material, its asbestos content, physical damage, potential contact by occupants, and proximity to items for repair were totaled to represent risk. Similarly, a number representing exposure was calculated from values keyed to the material's friability, surface area, air movement/ventilation, susceptibility to displacement from vibration, and the texture of surfaces needing cleaning. The exposure values in all of the buildings with friable asbestos presumed a low level of occupancy and use. Only Building 277 is currently occupied at this time. If these buildings are returned to any regular use, or are otherwise disturbed by remodeling/restoration, their exposure rating and recommended corrective action will change. The calculated values for risk and exposure are reported on the building survey results tables in Section 3, and the worksheets for their calculation have been included as Appendix G.

The risk and exposure numbers for each friable ACM were entered into the Assessment Index Matrix, (Table 4.1) which generated an Index Assessment Code (letters A through F) that corresponds to a set of management and corrective actions (Table 4.2). The Index Assessment Code serves as a general means to rank each friable ACM for response actions.

Table 4.3 is an Assessment Index Summary for friable asbestos. ACM that has been ranked with an Assessment Index A should be prioritized for a response action, as these areas present the greatest risk. No index assessment greater than C was calculated for the friable asbestos evaluated. Other Index Assessment Codes rank the friable ACM by priority, and type of response, for corrective actions. When these corrective actions are implemented (see the EPA recommended guidelines "Managing Asbestos in Place" [EPA, 1990] for details) the friable ACM will be controlled to minimize human exposures to airborne asbestos fibers and mitigate associated health risks.

Table 4.1 Assessment Index Matrix

Using the Risk and Exposure values, use the matrix below to find the corresponding Assessment Index Code.

Risk	Exposure 43-26	25-17	16-8	7-4
28-17	A	A	A	B
16-11	A	B	C	D
10-5	A	B	C	E
4-1	A	C	D	F

Table 4.2 Management and Corrective Actions for Asbestos Containing Materials

Assessment Index Code	Management Corrective Actions
A	Immediate Action – Isolate the area/restrict access and/or immediately remove the ACM. If removal is indicated, action planning should include a detailed survey. This condition will likely involve a near-term expenditure of funds. Managers must know exactly what needs to be done to eliminate the asbestos hazard and how to use available funds most effectively.
B	Action as Soon as Possible – Initiate O & M (Operations and Management) program immediately. Possible follow-up actions may include limiting access to the area and scheduling removal during periods of low activity in the facility, rather than waiting for the normal repair and maintenance cycle.
C	Planned Action – Initiate O & M program. Removal should be scheduled as part of the normal repair and maintenance cycle of a facility, minimizing cost and disturbance.
D	Repair – Initiate O & M program. Damaged areas should be repaired, where "repair" means returning damaged ACBM to an undamaged condition or to an intact state to contain fiber release. Schedule removal when practical and cost effective. Take preventive measures to reduce further damage.
E	Monitoring – Provide O & M Program. Take steps to prevent damage to the ACBM or other ACM. Frequently monitor the condition of all ACM.
F	No Immediate Action – Provide O & M Program until major renovation or demolition requires removal or until assessment factors change.

Table 4.3 Assessment Index Summary

Building 277

Sample ID	Assessment Index Code	Material	Quantity
277A08	C	Duct tape	3 ft²

Battery Dynamite

DYNA07	E	Duct isolation cloth	4 ft²
DYNA10	C	Aircell thermal system insulation, 4-in. diameter	210 ft
DYNA11	C	Thermal system insulation, pre-fabricated; 4-in. diameter	150 ft
DYNA12	F	Gasket on glass lenses	< 10 ft²
DYNA13	C	Thermal system insulation; pre-fabricated; 4-inch diameter	(same material as DYNA11 at 150 ft)

Battery Howe-Wagner

HWA01	C	Thermal system insulation debris	< 10 ft²
HWA02	C	Thermal system insulation debris	< 100 ft²

New Mine Casemate

DYNA12[1]	C	Gasket on glass lenses	< 10 ft²

[1] Material found in New Mine Casemate homogenous to sample collected at Battery Dynamite.

5.0 APPROACHES TO REMEDIATION OF MATERIALS CONTAINING ASBESTOS

Two courses of action may be taken to remediate materials containing asbestos at the facility. The asbestos may be removed or a maintenance program to control the asbestos may be implemented.

5.1 Asbestos Removal

Removal of ACM provides a long-term solution by eliminating the contaminant source. When the option for removal of asbestos is affected, provisions for the protection of the abatement personnel (29 CFR 1926.58) and the public (40 CFR 61, subpart M) must be ensured through worker training, site preparation, removal techniques and appropriate disposal methods. The guidelines for planning and executing the removal of ACM are described in Chapters 8 and 9 of TM 5-612, Asbestos Control (CERL - Environmental Engineering Team, 1988).

5.2 Operations and Maintenance Program

An Operations and Maintenance (O & M) Program for asbestos which is not removed from buildings is considered an essential control measure by the EPA (Guidance for Controlling Asbestos-Containing Materials in Buildings, EPA, 1985). An O&M Program includes the following elements:

1) notification of workers and building occupants concerning presence of asbestos;

2) initial cleaning and maintenance of all ACM;

3) repair of all damaged ACM;

4) periodic inspection of ACM and ACM enclosures and encapsulations;

5) emergency procedures;

6) worker training.

There are no specific training requirements for O&M Programs not covered by the Asbestos Hazard Emergency Response Act. The following recommendations for training comply with EPA requirements for school systems:

1) maintenance and custodial staff who work in buildings containing ACM should receive at least 2 hours of awareness training that includes asbestos uses and forms, health effects of asbestos exposure, asbestos locations in buildings at the facility, and asbestos damage recognition; and

2) maintenance and custodial staff who perform tasks that may disturb ACM should receive the training in item 1) and an additional 14 hours of training that includes proper methods for handling asbestos, proper use and selection of respiratory protection, regulations governing the handling and disposal of asbestos materials, and hands-on training in the use of respiratory protection, personal protection measures, and good work practices.

6.0 COSTS FOR CORRECTIVE ACTION AND REMOVAL OF ALL ACM

Asbestos abatement projects generally include the following cost activities:

a. bid preparation and contractor selection
b. mobilization of the contractor
c. work area setup
d. gross material removal
e. final cleaning
f. air monitoring of personnel and for clearance
g. work area tear-down
h. asbestos disposal
i. demobilization
j. restoration/reconstruction

On small projects such as removal of vinyl sheeting from a small room, the actual costs of removal is often less than one-third of the total project cost, while the remaining costs cover items a-c and e-i above. The differences in the per-foot costs between large and small projects result from the relatively greater amount of time required for mobilization and set-up for small projects. The corrective actions suggested would all be small to medium sized projects.

A.	Removal of vinyl sheeting from small area	$12/ft^2
B.	Removal of floor tile from small area	$15/ft^2
C.	Removal of floor tile and mastic from large area	$ 5/ft^2
D.	Removal of floor tile with mastic from small area	$16/ft^2
E.	Removal of aircell/prefabricated TSI and plaster fittings and elbows	$10/ft
F.	Fine cleaning contaminated pipe chase	$ 3/ft^2
G.	Fine cleaning concrete floor	$1.50/ft^2
H.	Removal of asbestos mastic gasket	$100/each
I.	Removal of transite sheets	$ 2/ft^2
J.	Removal of miscellaneous free asbestos materials	$100 minimum
K.	Removal of duct isolation cloth or duct tape	$1,500/enclosure

Table 6.1 presents the estimated costs to remove (as a corrective action) the friable ACM identified in this survey. Table 6.2 presents the estimated costs to remove (as a corrective action) all ACM identified in this survey. Table 6.3 presents summary costs by building for removal of all ACM and all friable ACM, and total costs.

Table 6.1 Costs: Removal of Friable ACM

Building	Material	Quantity	Cost
Building 277	Duct tape	3 ft^2	$1,500
Battery Dynamite	Duct isolation cloth	4 ft^2	$1,500
	Aircell thermal system insulation, 4-in. diameter (includes fittings and elbows)	210 ft	$2,100
	Thermal system insulation, pre-fabricated; 4-in. diameter (includes plaster fittings and elbows)	150 ft plus 1,000 ft^2 fine cleaning	$4,500
	Gasket on glass lenses	< 10 ft^2	$100
Battery Godfrey	Transite debris	unknown	minimum $100
Battery Howe-Wagner	Thermal system insulation debris	100 ft^2 for debris; 3,000 ft^2 to decontaminate	$4,500
New Mine Casemate	Gasket on glass lenses	< 10 ft^2	$100

Table 6.2 Costs: Removal of All ACM

Building	Material	Quantity	Cost
275	Floor tile, mastic	3,000 ft²*	$15,000
	Transite panel	20 ft²	$100
277	Floor tile mastic, maintenance/storage area	55 ft²	$880
	Duct tape	3 ft²	$1,500
Battery Dynamite	Floor tile, red, 12 × 12 in	500 ft²	$2,500
	Floor tile, black and red; and mastic	5,000 ft²	$25,000
	Duct isolation cloth	4 ft²	$1,500
	Sealant, pipe to wall, black	10 ft²	$1,000
	Aircell thermal system insulation, 4-in. diameter (includes fittings and elbows)	210 ft	$2,100
	Thermal system insulation, prefabricated; 4-in. diameter (includes plaster fittings and elbows)	150 ft plus 1,000 ft² fine cleaning	$4,500
	Gasket on glass lenses	< 10 ft²	$100
Battery Godfrey	Transite debris	unknown	minimum $100
Battery Howe-Wagner	Thermal system insulation debris	100 ft² for debris; 3,000 ft² to decontaminate	$4,500
Mine Depot Building 985	Transite	2,600 ft²	$5,200
Mine Depot Building 986	Transite	2,600 ft²	$5,200
Mine Depot Building 987	Transite	1,300 ft²	$2,600
Mine Depot Building 989	Floor sheeting backing, restrooms	52 ft²	$624
	Vinyl sheeting backing, restroom wall	52 ft²	$624
New Mine Casemate	Floor tile, black and red; mastic	2,400 ft²	$12,000
	Gasket on glass lenses	< 10 ft²	$100

* An estimate that assumes all carpeted areas still have tile underneath.

Table 6.3 Removal Costs Summary and Total

Building	All ACM	Corrective Action ACM
Building 275	$15,100	$0
Building 277	$2,380	$1,500
Battery Dynamite	$36,700	$8,200
Battery Godfrey	$100 minimum	$100 minimum
Battery Howe-Wagner	$4,500	$4,500
Mine Depot Building 985	$5,200	$0
Mine Depot Building 986	$5,200	$0
Mine Depot Building 987	$2,600	$0
Mine Depot Building 989	$1,248	$0
New Mine Casemate	$12,100	$100
TOTAL	$85,128	$14,400

7.0 REFERENCES

Asbestos Control, (U.S. Army document TM5-612) Draft, January, 1989.

Guide for Asbestos Hazard Assessment in U.S. Army Facilities, Draft, November 1988, CERL-Environmental Engineering Team.

Guidance for Controlling Asbestos-Containing Materials in Buildings, EPA, 1985.

29 CFR 1926.58

40 CFR, Part 783, Appendix A to Subpart F.

40 CFR, Part 61, Subpart M.

Historic Resource Study, Seacoast Fortifications, San Francisco Harbor, Erwin Thompson, May 1979.

Asbestos Work Plan for Supplemental Remedial Investigation, Final, November 1991, R.L. Stollar and Associates, Inc.

Accident Prevention and Safety Plan for Supplemental Remedial Investigation, Revised Draft Final, April 1992, R.L. Stollar & Associates, Inc.

Asbestos Survey Report for Golden Gate Bridge Highway & Transportation District, April 15, 1988, Certified Health Services, Inc.

Resurvey for Asbestos at Golden Gate Toll Plaza, March 30, 1990, Certified Health Services, Inc.

List of Asbestos Containing Materials - GGBHTD Facilities, August 2, 1990 Interoffice Memorandum from Merv Giacomini.

Appendix A

Asbestos Building Inspectors Accrediatation

SUMMIT Environmental Training, Inc.

CERTIFIES THAT

CYNTHIA E. WHALEN

HAS COMPLETED THE AHERA

ASBESTOS INSPECTOR
CERTIFICATION COURSE

This course is approved under the
Colorado State Regulation 8
equivalent to EPA approval under
Section 206 of the Toxic Substances Control Act II

Expiration Date: July 8, 1993

Instructor/Authorized Signature:

Certification Number: 045-64-8636

The

American Board of Industrial Hygiene

ABIH

organized to improve the practice of Industrial Hygiene
proclaims that

Loren DeWayne Gunderson

having met all requirements through
education, experience, and examination,
is hereby certified in the

COMPREHENSIVE PRACTICE
of
INDUSTRIAL HYGIENE

and has the right to use the designations

CERTIFIED INDUSTRIAL HYGIENIST

CIH

December 9, 1991
date

Kenneth M. Walkingford
Chairman ABIH

5314
certificate number

Monty Hess
Secretary ABIH

Appendix B

ACM Survey Data Sheets

275 A01

FACILITY: PRESIDIO BUILDING: 275 ROOM/AREA: OPERATION:

EVALUATOR: C. Whalen USEHA DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other floor tile (green)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no 275 A01 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics light green tile 6" x 6" in both mens & womens rooms

NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet							~	150 ft x 2
Thickness (in.)								1/4"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tile
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								N/A
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	restroom areas
Exist so of contact	X		
Physical barriers	X		
User activities			maritime support center; office area

Figure 3-1 ACM Survey Data Sheet

275 A02

FACILITY: Presidio BUILDING: 275 ROOM/AREA: _____ OPERATION: _____

EVALUATOR: C. Wheeler USEHF DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other floor tile (tan)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system N/A

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. 275 A02 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics 1'x1' tan tiles NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								5
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet							2	325 ft²
Thickness (in.)								1/4"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								P
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tile
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								N/A
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								2
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	supply area for office
Evidence of contact		X	tiles loose & broken
Material exposed		X	
Physical barriers		X	shelves/furniture obstruct most of floor
User activities			storage area for offices

Figure 3-1 ACM Survey Data Sheet

275-A03

FACILITY: Presidio BUILDING: 275 ROOM/AREA: _____ OPERATION: _____

EVALUATOR: C. Whalen UCHF DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other mastic under floor tile (275-A02)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. 275 A03 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics slightly white, crumbly mastic on back of floor tiles (275-A02)
NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet							~	725 sq ft
Thickness (in.)								1/4"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								C
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y- floor tile
Is covering uniform? Yes/No/Describe								Y- except for broken tile area
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								2
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	office supply room
Exposure of occupant		X	broken tiles expose mastic
Vibration exposure		X	
Physical barriers		X	intact floor tiles
User activities	much activity in this storage room		

Figure 3-1 ACM Survey Data Sheet

FACILITY: Presidio BUILDING: 275 ROOM/AREA: supply room OPERATION: 1275-A04

EVALUATOR: C. Whaley LIEHI DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other mastic for rug
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces

☐ No ☒ Yes If yes, describe on top of floor tiles where rug used to be

Confirmation bulk sample no. 275 A04 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics Underlying cementitious MASTIC left over from where rug used to be in office supply area; NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet							~	45ft²
Thickness (in.)								
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								C rubberized
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	in office supply area of heavy traffic
Evidence of contact		X	bulk of building materials present
Visible debris		X	
Physical barriers		X	most under existing rug except 45ft²
User activities			high activity supply room

Figure 3-1 ACM Survey Data Sheet

275-AC15

FACILITY: Presidio BUILDING: 275 ROOM/AREA: Kitchen OPERATION:

EVALUATOR: C. Whalen, USEHI DATE: 8/5/02

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other floor tile (red-brick colored, ~~smooth~~ structured) (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.) (A)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. 275 AC5 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily use

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics red-brick floor like, structured surface; NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								A
1 Sprayed-on 2 Troweled-on 3 Air Cell 4 Block Type 5 Cementitious 6 Other								
Sq. or linear feet								3,000 ft²
Thickness (in.)								
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Con
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								Y
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:	NO	YES	DESCRIBE
Vulnerable to human activity		X	
Existence of contact	X		
Visible access	X		
Physical barriers	X		
User activities			daily use of kitchen as facility office employees

Figure 3-1 ACM Survey Data Sheet

275 ABC

FACILITY: Presidio BUILDING: 275 ROOM/AREA: Kitchen OPERATION:

EVALUATOR: Cliffvalley, CLEHI DATE: 5/15/97

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ∩∩∩
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other Floor tile (red brick colored, smooth surface)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system N A

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. 275 ABC Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure UNKNOWN

Renovation schedule (past, present, future - dates) UNKNOWN

Utilization by public daily

Other unique characteristics 2" - brick colored tile, smooth surface, NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								
Thickness (in.)								
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tile
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								N/A
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								NO
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	daily use
Exposure of workers	X		
Maintenance workers	X		
Physical barriers	X		
User activities			kitchen area in office building

Figure 3-1 ACM Survey Data Sheet

FACILITY: Presidio BUILDING: 275 ROOM/AREA: building exterior OPERATION: [275 North]

EVALUATOR: C. Whaley NEHT DATE: 9/ /2

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ∩∩
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other transite mud on exterior of building
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system _____

ACM debris on floor, furniture, equipment, or other surfaces _____

☐ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. 275A007 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☐ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily (weather)

Life-cycle projection for structure [illegible]

Renovation schedule (past, present, future - dates) [illegible]

Utilization by public daily use of building interior

Other unique characteristics Corrugated transite panels coated with paint, NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								
Thickness (in.)								
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								C
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								N
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								30
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Exposure of personnel	X		
Work practices	X		
Physical barriers	X		
User activities	use to seal off crawl space when working		

Figure 3-1 ACM Survey Data Sheet

275-A08

FACILITY: Presidio BUILDING: 275 ROOM/AREA: entire building OPERATION:

EVALUATOR: C. Whalen / UCHI DATE: 8/6/92

ACM APPLIED TO:

☒ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

SPRAY ON PLASTER

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☐ Other (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☒ Carpet ☐ Other

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. 275 A08 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☐ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily, use of bldg.

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics White, spray-on ceiling plaster, rough, nodular. FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X Ceiling
☒ 1 Sprayed-on 2 Troweled-on 3 Air Cell 4 Block Type 5 Cementitious 6 Other								
Sq. or linear feet								2500 ft 2
Thickness (in.)								½"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								G
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								N/A
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	Ceiling material throughout bldg.
Evidence of contact	X		
Material exposed	X		
Physical barriers	X		
User activities			daily, used office building

Figure 3-1 ACM Survey Data Sheet

FACILITY: Presidio BUILDING: 275 ROOM/AREA: Roof OPERATION: 275-A09

EVALUATOR: C. Whalen UCHI DATE: 8/6/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other Roof (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system _____

ACM debris on floor, furniture, equipment, or other surfaces _____

☐ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. 275 A09 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily (weather)

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics black/grey roofing tile taken from entryway roof, tar-like; NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet							>	Size 1/4"
Thickness (in.)								
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tar
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Material exposed	X		
Physical barriers	X		
User activities	subject to weather conditions more than human		

Figure 3-1 ACM Survey Data Sheet

275A10

ACM SURVE . .TA SHEET .

FACILITY: Presidio SF BUILDING: 275 ROOM/AREA: _____ OPERATION: _____

EVALUATOR: Loren Gunderson Inside doorway of main entrance DATE: 2/4/93

Sample 275A10 Floor tile and mastic

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other _____ (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system _____

ACM debris on floor, furniture, equipment, or other surfaces _____

☐ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. _____ Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☐ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☐ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency _____

Life-cycle projection for structure _____

Renovation schedule (past, present, future - dates) _____

Utilization by public _____

Other unique characteristics _____

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								3000
Thickness (in.)								1/4
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								?
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								solid
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y carpet
Is covering uniform? Yes/No/Describe								Y
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos					Chrysotile			
% Asbestos								45
Other comments								

unknown quantity of tile since building is mostly carpeted

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	✓		
Evidence of contact	✓		
Material exposed	✓		
Physical barriers		✓	
User activities			

275A11

ACM SURVE . .TA SHEET .

FACILITY: Presidio SF BUILDING: 275 ROOM/AREA: _____ OPERATION: _____

EVALUATOR: Loren Gunderson conference Room DATE: 2/4/93

ACM APPLIED TO:

☒ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☒ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other _____ (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☐ Tile ☐ Wood ☒ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system _____

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. 275A08 Results NO NOS BESTOS

ACM is subject to direct air stream or is located in proximity to air plenum

☐ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☐ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency _____

Life-cycle projection for structure _____

Renovation schedule (past, present, future - dates) _____

Utilization by public _____

Other unique characteristics _____

DESCRIPTION OF MATERIAL: Popcorn "spray on ceiling"

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								1
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								3000
Thickness (in.)								1/8
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								H
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								F
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								
Bulk sample no. 1								ND
no. 2								
no. 3								
Type asbestos								NA
% Asbestos								NA
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	ceiling hatch
Evidence of contact	X		
Material exposed		X	
Physical barriers	X		
User activities			

275A12

ACM SURVE . .TA SHEET .

FACILITY: Presidio SF BUILDING: 275 ROOM/AREA: Maintenance room OPERATION: _____

EVALUATOR: Loren Gunderson DATE: 2/4/93

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ∩∩∩
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other _____ (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system _____

ACM debris on floor, furniture, equipment, or other surfaces _____

☐ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. _____ Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☐ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☐ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency _____

Life-cycle projection for structure _____

Renovation schedule (past, present, future - dates) _____

Utilization by public _____

Other unique characteristics _____

DESCRIPTION OF MATERIAL: tar and paper beneath tile floor

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								6
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								325 1/2
Thickness (in.)								
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								G
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y tile
Is covering uniform? Yes/No/Describe								Y
Bulk sample no. 1							275A12	
no. 2								
no. 3								
Type asbestos								N/A
% Asbestos								N/A
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	1005e tiles
Evidence of contact		X	1005p tiles
Material exposed		X	1005c tiles
Physical barriers		X	
User activities			

277-A01

FACILITY: PRESIDIO BUILDING: 277 ROOM/AREA: _____ OPERATION: _____

EVALUATOR: C. Whalen DATE: 8/4/92

ACM APPLIED TO:

☒ Ceiling

Type
- ☐ Concrete
- ☒ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☒ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other _____ (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☐ Tile ☐ Wood ☒ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system FHA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no: 277 A01 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☐ No ☒ Yes If yes, describe plenum on wall near tile

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency frequent / occupied bldg

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics FRIABLE; White ceiling tile 1'x1'

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								852 (x2)
Thickness (in.)								1"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								Y
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								F
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	area occupied daily
Evidence of contact	X		
Water exposure		X	some tiles missing
Physical barriers			
User activities			

Figure 3-1 ACM Survey Data Sheet

277-A02

FACILITY: Presidio BUILDING: 277 ROOM/AREA: _____ OPERATION: _____

EVALUATOR: C. Whaley, LICHI DATE: 8/14/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-In Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other Floortile in restrooms
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system FHA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. 277 A02 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure continuous

Renovation schedule (past, present, future - dates) continuous

Utilization by public daily

Other unique characteristics Floor tile (beige/light colored) NON-FRIABLE
mottled design 1'x1' tile

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet								152 ft²
Thickness (in.)								¼"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tile
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								N
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	daily office activities
Evidence of contact	X		
Airflow exposure	X		
Physical barriers	X		
User activities	daily restroom area		

Figure 3-1 ACM Survey Data Sheet

277-AC3

FACILITY: Presidio BUILDING: 277 ROOM/AREA: _____ OPERATION: _____

EVALUATOR: C. Whalen, HCHI DATE: 8/4/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other Floortile
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system FHA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. 277 AC3 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics dark beige, mottled 1'x1' tile NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet								47 ft 2
Thickness (in.)								1/4"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tile
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:	NO	YES	DESCRIBE
Vulnerable to human activity		X	daily restroom cleaning
Evidence of contact	X		
Water exposure	X		
Physical barriers	X		
User activities	probably replacement tiles per sample 277-AC2		

Figure 3-1 ACM Survey Data Sheet

277 AC14

FACILITY: Presidio BUILDING: 277 ROOM/AREA: _____ OPERATION: _____

EVALUATOR: C. Whalen, USACHPPM DATE: 8/4/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other Floortile
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system FH/F

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no: 277 AC14 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics NON-FRIABLE floor tile

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								53 sq ft
Thickness (in.)								
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tile
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								N/A
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								2
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	daily office use.
Evidence of access	X		
Material exposed	X		
Physical barriers	X		
User activities			located in maintenance/storage area

Figure 3-1 ACM Survey Data Sheet

277-ACS

FACILITY: Presidio BUILDING: 277 ROOM/AREA: OPERATION:

EVALUATOR: C. Whaley USEHA DATE: 8/4/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other ~~Floortile~~ (AW) ROOFING TILE
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile (AW) ☐ Wood ☐ Carpet ☐ Other

Type of lighting (AW) ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights

Type of ventilation system EHA (AW)

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. 277-ACS Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics black/grey colored roofing tile, NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								
Thickness (in.)								3/4
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Textured
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								N/A
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Water vapors	X		
Physical barriers	X		
User activities			tile on building roof - exposed to weather conditions not human factors

Figure 3-1 ACM Survey Data Sheet

277 A66

FACILITY: Presidio BUILDING: 277 ROOM/AREA: _____ OPERATION: _____

EVALUATOR: C. Whaling UCHI DATE: 5/4/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other tar paper under roof tile
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

N/A Type of floor ☐ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other _____

N/A Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

N/A Type of ventilation system _____

ACM debris on floor, furniture, equipment, or other surfaces _____

N/A ☐ No ☐ Yes If yes, describe _____

Confirmation bulk sample no: 277 A66 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics black paper underlying tile; NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet								
Thickness (in.)								½
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								no
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Paper
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N - tarpaper tile
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Airstream exposure	X		
Physical barriers	X		
User activities	under tile roof		

Figure 3-1 ACM Survey Data Sheet

FACILITY: Presidio BUILDING: 277 ROOM/AREA: _____ OPERATION: 277-A07

EVALUATOR: C. Whalen USCHE DATE: 8/4/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other bulletin board material
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☐ Tile ☐ Wood ☒ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system FHA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. 277 A07 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics wood-fiber like bulletin board hanging on wall in office area

NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								6
Sq. or linear feet								6"x6"x2
Thickness (in.)								1"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								F
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y-by paint
Is covering uniform? Yes/No/Describe								Y
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	in office area
Evidence of contact		X	poke push pins
Friction exposure	X		
Physical barriers			
User activities			

Figure 3-1 ACM Survey Data Sheet

277A08

ACM SURVE . .TA SHEET .

FACILITY: Presidio SF BUILDING: 277 ROOM/AREA: _____ OPERATION: Maintenance/storage

EVALUATOR: Loren Gunderson DATE: 2/4/93

ACM APPLIED TO: ductwork exterior as a tape on seams

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other _____ (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☒ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☒ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system _____

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. _____ Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☐ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency _____

Life-cycle projection for structure _____

Renovation schedule (past, present, future - dates) _____

Utilization by public _____

Other unique characteristics _____

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM					6			
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet					3			
Thickness (in.)					1/8			
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor					F			
Friability: Low/Moderate/High					M			
Uniformity: Yes/No					Y			
Water damage: Yes/No/Source					N			
Vibration damage: Yes/No/Source					N			
Adhesion to underlying surface: Good/Moderate/Poor					G			
Texture: Fibrous/Cementitious/ Granular/Concrete-like					F			
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.					N			
Is covering uniform? Yes/No/Describe								
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos					Chrysotile			
% Asbestos					45			
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity			
Evidence of contact			
Material exposed			
Physical barriers			
User activities			

·27 A09

ACM SURVE . .TA SHEET .

FACILITY: Presidio SF BUILDING: ~~275~~ 277 ROOM/AREA: _____ OPERATION: _____

EVALUATOR: Loren Gunderson Doorway of Women's Room DATE: 2/4/93

ACM APPLIED TO: green vinyl or tile and mastic layer beneath tile floor

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other _____ (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☑ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system _____

ACM debris on floor, furniture, equipment, or other surfaces _____

☐ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. _____ Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☐ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☐ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency _____

Life-cycle projection for structure _____

Renovation schedule (past, present, future - dates) _____

Utilization by public _____

Other unique characteristics _____

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet								200
Thickness (in.)								1/4
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y
Is covering uniform? Yes/No/Describe								
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos							N/A	
% Asbestos							ND	
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	✓		
Evidence of contact	✓		
Material exposed		✓	
Physical barriers			
User activities			

277A10

ACM SURVE . .TA SHEET .

FACILITY: Presidio SF BUILDING: 277 ROOM/AREA: Reception Area OPERATION: DATE: 2/4/93

EVALUATOR: Lorea Gunderson

ACM APPLIED TO: gray floor tile and mastic beneath carpet

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other _____ (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☑ Tile ☐ Wood ☑ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system _____

ACM debris on floor, furniture, equipment, or other surfaces _____

☐ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. _____ Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☐ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☐ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency _____

Life cycle projection for structure _____

Renovation schedule (past, present, future - dates) _____

Utilization by public _____

Other unique characteristics _____

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet								1600 ?
Thickness (in.)								1/8
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y
Is covering uniform? Yes/No/Describe								Y
Bulk sample no. 1								
no. 2								
no. 3								N/A
Type asbestos								N/A
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	✓		
Evidence of contact	✓		
Material exposed		✓	
Physical barriers			
User activities			

DYN AOI

FACILITY: PRESIDIO BUILDING: Battery Dynamite ROOM/AREA: B OPERATION:

EVALUATOR: C. Whalen, ACHT (reference floor plan) DATE: 7/25/02

ACM APPLIED TO:

☒ Ceiling

Type
- ☐ Concrete
- ☒ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☒ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☐ Other (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☒ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA non operable

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces

☐ No ☐ Yes If yes, describe suspect ceiling tile on floor

Confirmation bulk sample no. DYN AOI Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☐ No ☒ Yes

If yes, describe generator – inoperable, inactive

SPECIAL CONSIDERATIONS:

Utility maintenance frequency NONE

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics White with circular holes; 1'x1'; FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								ceiling
1 Sprayed-on 2 Troweled-on 3 Air Cell 4 Block Type 5 Cementitious 6 Other								
Sq. or linear feet								~~2000~~ ~6200 ft2
Thickness (in.)								1"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								Low
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								Y
Vibration damage: Yes/No/Source								Y
Adhesion to underlying surface: Good/Moderate/Poor								P
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Fibrous
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Water exposure		X	broken pieces
Physical barriers	X		
User activities	none authorized		

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: Battery Dynamite ROOM/AREA: Area B OPERATION: DYN A02

EVALUATOR: C. Whalen UEPH (representative description) DATE: 7-25-92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-In Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other FLOORTILE - NON-FRIABLE
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces

☐ No ☐ Yes If yes, describe scattered tile debris

Confirmation bulk sample no. DYNA02 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency NONE

Life-cycle projection for structure UNKNOWN

Renovation schedule (past, present, future - dates) UNKNOWN

Utilization by public NONE AUTHORIZED

Other unique characteristics Red 1'x1' tile. NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								FLOORTILE - NON FRIABLE
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								500 SQ FT
Thickness (in.)								1/4"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tile
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								PJ
Is covering uniform? Yes/No/Describe								
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								Chrysotile
% Asbestos								8
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of [illegible]		X	
[illegible] exposure		X	some broken tiles
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: Battery Dynamite ROOM/AREA: Area B OPERATION: DYN AQ3

EVALUATOR: C. Burnett, LUETH (Reference floor plan) DATE: 7/28/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other Baseboard – non-friable material (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete / ☒ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights Nil

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces NONE

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. DYNAQ3 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency NONE

Life-cycle projection for structure UNKNOWN

Renovation schedule (past, present, future - dates) UNKNOWN

Utilization by public NONE

Other unique characteristics Vinyl-like, brown baseboard NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								Baseboard. Mt (Non-friable)
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet							~	750 linear/ft
Thickness (in.)								
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Semi-Conti (Cu) 8/7/92 VINYL
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Exposed to corrosion	X		
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

DYN A04

FACILITY: PRESIDIO BUILDING: Battery Dynamite ROOM/AREA: Area B OPERATION:

EVALUATOR: C. Whalen, WESTEC (reference floor plans) DATE: 7/28/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other ACOUSTICAL TILES ON WALLS + CEILING (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. DYN A04 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency NA

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public None

Other unique characteristics acoustical tile in acoustical channels - on walls + ceiling; white 1'x1' tiles, circular holes. FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM							✓	ceiling
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet							~ 4000 ft2	*
Thickness (in.)								½"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Fibrous
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								
Is covering uniform? Yes/No/Describe								
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	☒	☐	
Evidence of access	☒	☐	
Visible dust/debris	☒	☐	
Physical barriers	☒	☐	
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: Dynamite Battery ROOM/AREA: Area B OPERATION:

DYN AOS

EVALUATOR: C. Whalen, ECHT (reference floor plan) DATE: 7/28/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other FLOORTILE (ceramic-like) - NON-FRIABLE
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA NA

Type of ventilation system

ACM debris on floor, furniture, equipment, or other surfaces

☐ No ☒ Yes If yes, describe some broken tiles

Confirmation bulk sample no. DYN AOS Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency NONE

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics black/red FLOOR TILE - (NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								FLOORTILE - NON-FRIABLE
1 Sprayed-on 2 Troweled-on 3 Air Cell 4 Block Type 5 Cementitious 6 Other								
Sq. or linear feet							~	5000 ft²
Thickness (in.)								¼"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								ceramic-like
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								14 Chrysotile
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Exposed to contact	X		
Moisture/vapors	X		
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: Batting Dynamite ROOM/AREA: Area B OPERATION: DYN A06

EVALUATOR: C. Whalen, UEHI (reference floor plan) DATE: 7/28/92

ACM APPLIED TO:

☒ Ceiling

Type
- ☐ Concrete
- ☒ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☒ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other _____ (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. DYN A06 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency NONE

Life-cycle projection for structure UNKNOWN

Renovation schedule (past, present, future - dates) UNKNOWN

Utilization by public NONE

Other unique characteristics black thin paper layer below ceiling tile (DYN A06) FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								backing paper underneath
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet							~	600 tiles
Thickness (in.)								1/8"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								Y
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								paper
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y - by tiles
Is covering uniform? Yes/No/Describe								Y
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact		X	falling/damaging from ceiling
Airborne exposure		X	" " " "
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: BATTERY DYNAMITE ROOM/AREA: Area B (CW) 8/7/92 (CW) A B OPERATION: DYN A07

EVALUATOR: C. Whalen, UEMI (ref. floor plan) DATE: 7/28/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other GASKET MATERIAL ON GENERATOR
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. DYNA07 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency NONE

Life-cycle projection for structure UNKNOWN

Renovation schedule (past, present, future - dates) UNKNOWN

Utilization by public NONE

Other unique characteristics White, fibrous gasket material, FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								gasket mat'l
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								<1ft²
Thickness (in.)								¼"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								M
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								NA
Texture: Fibrous/Cementitious/ Granular/Concrete-like								fibrous
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								35 chrysotile
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Exposed to air contact	X		
Water exposure	X		
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: Battery Dynamite ROOM/AREA: Area B (ref. floor plan) OPERATION: DYNA08T

EVALUATOR: C. Whalen, USHI DATE: 7/28/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other GASKET MATL ON GENERATOR
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. DYN A08 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency none

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics white gasket material, brittle, fiberglass-like; FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								gasket matl
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								21 ft + 2
Thickness (in.)								1/4 in
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								NA
Texture: Fibrous/Cementitious/ Granular/Concrete-like								fibrous
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND ~~35~~ chrysotile
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Exposed surfaces	X		
Moisture access	X		
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: Battery Dynamite ROOM/AREA: Area B (see 8/7/92 memo) OPERATION: DYN A09

EVALUATOR: C. Whalen, WEHI (Neg. floor plan) DATE: 7/28/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other sealant between piping + wall - NON FRIABLE
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. DYNA09 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency None

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public None

Other unique characteristics black/gummy material NON FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								sealant
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								~~1~~ (see 8/7/92 memo) 1 ft²
Thickness (in.)								½"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								gummy
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								20 Chrysotile
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Access barriers	X		
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: Battery Dynamite ROOM/AREA: Area A OPERATION: DYNAIO

EVALUATOR: C. Whalen, UCHI (ref. floor plan) DATE: 7/28/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☒ Pipe Overhead; aircell-looking

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☐ Other (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. DYNAIO Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency None

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public None

Other unique characteristics aircell - FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM		X						
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet	~	350 linear feet					~	250 (7/31/92 Linear feet)
Thickness (in.)		1"						
Diameter (in.)		4"						
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor		G						
Friability: Low/Moderate/High		L						
Uniformity: Yes/No		Y						
Water damage: Yes/No/Source		N						
Vibration damage: Yes/No/Source		N						
Adhesion to underlying surface: Good/Moderate/Poor		G						
Texture: Fibrous/Cementitious/ Granular/Concrete-like		Paper like						
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.		N						
Is covering uniform? Yes/No/Describe								
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								chrysotile
% Asbestos								25
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Visible deposits	X		
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: Battery Dynamite ROOM/AREA: Area B/A @8/7/92 (see floor plan) OPERATION: DYN-A11

EVALUATOR: C. Whalen, UCHE DATE: 7/30/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☒ Pipe 4" diam. TSI (prefab), not troweled on

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☐ Other (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☒ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights N/A

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces

(CW) ☒ No ☒ Yes If yes, describe on ducts in chase

Confirmation bulk sample no. DYN-A11 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency none

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics found in pipe chase and several rooms; FRIABLE!

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM		X						
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								
Thickness (in.)								1"
Diameter (in.)								4"
No. of runs								1
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								H
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								Y
Vibration damage: Yes/No/Source								Y
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								F
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y cloth or paper
Is covering uniform? Yes/No/Describe								Y
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								25 Chrysotile
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact		X	some pieces lost
Material exposed		X	" " "
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: Battery Dynamite ROOM/AREA: Area A OPERATION: DYN-A12

EVALUATOR: C. Whalen, UCHI observation deck DATE: 7/30/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other insulation gasket on glass light lenses
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☒ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. DYNA12 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency none

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics Round appx. 80 (w) of these light lens (w) Batt. Dynamite gaskets in FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet								
Thickness (in.)								¼"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								NA
Texture: Fibrous/Cementitious/ Granular/Concrete-like								fibrous
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								35 chrysot. 6
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Air erosion			
Physical barriers	X		
User activities	X		

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: Battery Diprankute ROOM/AREA: Area B OBSERVATION DECK (CW) 8/3/92 A DYN A13

EVALUATOR: C. Whalen, UEHI OPERATION: DATE: 7/30/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☒ Pipe INSULATION: TSI - approx. 4" molded (not troweled on) (prefab)

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☐ Other (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☒ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. DYN A13 Results

(CW) ACM is subject to direct air stream or is located in proximity to air plenum

☐ No ☒ Yes If yes, describe pipe runs off chase; chase house air ducts

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency none

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public None

Other unique characteristics this sample used as duplicate (of DYN A13) for lab QC

FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM		X						
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet		~250 linear feet						
Thickness (in.)								4"
Diameter (in.)								4"
No. of runs								1
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								M
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								Y
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								F
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y
Is covering uniform? Yes/No/Describe								Y
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								20 chrysotile
% Asbestos								8 amosite
Other comments								28%

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact		X	some runs but not inside rooms
Material exposed		X	" " " " "
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: Battery Howe/Wagner ROOM/AREA: _____ OPERATION: HW AOI

EVALUATOR: C. Whalen URS T DATE: 7/29/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-In Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other pile of debris at TSF - tank/boiler, possibly (Floortile/Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☒ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights N/A

Type of ventilation system N/A

ACM debris on floor, furniture, equipment, or other surfaces _____

☐ No ☒ Yes If yes, describe pile of suspect TSI

Confirmation bulk sample no. HW AOI Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency none

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics pile looks like it was dropped from room - pile contains duct work wrapped in wrap; looks like tank/boiler/furnace insulation from outside inward. Bottom area

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X Debris on floor
[1] Sprayed-on [2] Troweled-on [3] Air Cell [X] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								
Thickness (in.)								1"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								P
Friability: Low/Moderate/High								H
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N?
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								N/A
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Fibrous
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								hard paper-like material on pile
Is covering uniform? Yes/No/Describe								N/A
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos							25	
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of [illegible]		X	pile "suspected" in room
[illegible]		X	
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: Battery HOWE/WAGNER ROOM/AREA: _____ OPERATION: HW A02

EVALUATOR: C. Whalen NEHI DATE: 7/29/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other FLOOR DEBRIS - DOES. TSI FROM Boiler Area
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☒ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting NA ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system _____

ACM debris on floor, furniture, equipment, or other surfaces _____

☐ No ☒ Yes If yes, describe debris left in room

Confirmation bulk sample no. HW A07 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency NONE

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public NONE

Other unique characteristics two large pieces in area; may be part of material from sample HW A01; looks like TSI from tank/boiler/furnace FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X floor debris
[1] Sprayed-on [2] Troweled-on [3] Air Cell [X] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								
Thickness (in.)								1"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								P
Friability: Low/Moderate/High								H
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								?
Adhesion to underlying surface: Good/Moderate/Poor								NA
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Fibrous
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								NA
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos							26	
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact		X	debris left on floor
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: Presidio BUILDING: MINE DEPOT ROOM/AREA: 985, 986, 987 OPERATION: DEP AREA 1

EVALUATOR: C. Whalen UEH I DATE: 8/4/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other TRANSITE PANELS HS (ew), corrugated
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☒ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☐ Surface ☒ Suspended ☐ Recessed

No. of Lights

Type of ventilation system None

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. DEP A01 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☐ No ☒ Yes

If yes, describe garage/maintenance storage

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily use by PARK SERVICE

Other unique characteristics painted transite panels, 6'x4'
NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet								1700 ft²
Thickness (in.)								½"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								C
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y- paint
Is covering uniform? Yes/No/Describe								Y
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								35 chrysotile
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	area used daily
Evidence of access		X	small holes in panels
Water vapors		X	
Physical barriers	X		
User activities	motorscooters housed here; also hand equipment; also subject to daily weather conditions		

Figure 3-1 ACM Survey Data Sheet

DEPA02

FACILITY: Presidio BUILDING: MINE DEPOT ROOM/AREA: Bldg 989 OPERATION:

EVALUATOR: C. Whalen UEHF DATE: 8/5/92

ACM APPLIED TO:

☒ Ceiling

Type
- ☐ Concrete
- ☒ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☒ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☐ Other (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☐ Tile ☐ Wood ☒ Carpet ☐ Other

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights

Type of ventilation system N/A

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. DEPA02 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily by PARK SERVICE & visitors

Other unique characteristics white 1'x1' tiles, circular hole pattern, FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet								Approx 2
Thickness (in.)								1"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								F
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	daily office area
Evidence of contact	X		
Water exposure	X		
Physical barriers			
User activities	PARK SERVICE FORT POINT HEADQUARTERS		

Figure 3-1 ACM Survey Data Sheet

FACILITY: Presidio BUILDING: MINE Depot ROOM/AREA: Bldg 989 OPERATION: DEPA03

EVALUATOR: C. Whalen USACHPPM DATE: 8/5/92

ACM APPLIED TO:

☒ Ceiling

Type
- ☐ Concrete
- ☒ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other _____ (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☐ Tile ☐ Wood ☒ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system N/A

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. DEPA03 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily by park service and visitors

Other unique characteristics White, 1'x1' tiles with worm hole pattern, FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet								2500 sf 2
Thickness (in.)								1"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								F
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								N/A
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	park service office, daily
Evidence of contact	X		
Material exposed	X		
Physical barriers	X		
User activities			park service headquarters for FORT POINT

Figure 3-1 ACM Survey Data Sheet

DEP A04

FACILITY: Presidio BUILDING: MINE DEPOT ROOM/AREA: Bldg 989 OPERATION:

EVALUATOR: C. Whalen USEHI DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other in overhead crawl-space (fiberglass poss)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☐ Tile ☒ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights N/A (above office area)

Type of ventilation system N/A

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. DEP A04 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency infrequent

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public N/A

Other unique characteristics fiberglass like insulation on overhead and above ceiling tiles, between wooden rafters; FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet							~	550 ft²
Thickness (in.)								4in Batting
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								M
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								F
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	Δ		
Material exposed		X	not wrapped/covered/contained
Physical barriers		X	above ceiling tile
User activities			

Figure 3-1 ACM Survey Data Sheet

DEP AQS-

FACILITY: Presidio BUILDING: Mine Depot ROOM/AREA: Bldg 989 OPERATION:

EVALUATOR: C. Whalen UCHI DATE: 8/5/97

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other floor tile (grey)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights

Type of ventilation system N/A

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. DEP AQS Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics grey, 1'x1' tiles
NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet							~	55 ft x 2
Thickness (in.)								1/4"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tile
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								< 1 %
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:	NO	YES	DESCRIBE
Vulnerable to human activity		X	daily/park service office
Evidence of contact	X		
Access restrictions	X		
Physical barriers	X		
User activities	park service office areas FORT POINT tour guides		

Figure 3-1 ACM Survey Data Sheet

FACILITY: Presidio BUILDING: Mine Depot ROOM/AREA: Bldg 89 OPERATION: DEP A&G

EVALUATOR: C. Wilhelm UEHI. DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ∩∩
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other floor tile
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system N/A

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. DEPA&G Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics green sheet-long floor tile NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								
Thickness (in.)								
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								
Friability: Low/Moderate/High								
Uniformity: Yes/No								
Water damage: Yes/No/Source								
Vibration damage: Yes/No/Source								
Adhesion to underlying surface: Good/Moderate/Poor								
Texture: Fibrous/Cementitious/ Granular/Concrete-like								
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								
Is covering uniform? Yes/No/Describe								
Bulk sample no. 1								ND
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:	NO	YES	DESCRIBE
Vulnerable to human activity		X	park service employees
Evidence of contact	X		
Water vapors	X		
Physical barriers		X	some underneath cabinets/shelves/furniture
User activities	used in park service. lockers room and break room		

Figure 3-1 ACM Survey Data Sheet

FACILITY: Presidio Mine BUILDING: Depot ROOM/AREA: Bldg 989 OPERATION: DEPACT

EVALUATOR: C. Whalen CIH I DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other floor tile backing
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights

Type of ventilation system N/A

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. DEP NOT Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics linoleum texture backing to green floor tile (DEP #06); NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet							~	225 ft²
Thickness (in.)								¼"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tile
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								ND
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	in locker room/break room
Evidence of contact		X	some worn
Water damage	X		
Physical barriers	X		
User activities	park service headquarters building		

Figure 3-1 ACM Survey Data Sheet

DEP-A08

FACILITY: Presidio BUILDING: Mine Depot ROOM/AREA: Bldg 989 OPERATION:

EVALUATOR: C. Whalen UOH-I DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-In Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other floor tile
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system N/A

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. DEP A08 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics multi-colored bathroom tile (sheet); NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet							~	55 for 2
Thickness (in.)								44"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tile
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								N/A
Bulk sample no. 1								15
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	bathroom for park service employees
Evidence of contact		X	"
Water damage	X		
Physical barriers	X		
User activities			bathroom for park service employees

Figure 3-1 ACM Survey Data Sheet

DEPARG

FACILITY: Presidio BUILDING: Mine Depot ROOM/AREA: Bldg 989 OPERATION:

EVALUATOR: Cathalen WESTEC DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☒ Wall tile, also applied to 1 countertop

☐ Other (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights

Type of ventilation system N/A

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. DEPARG Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics multi-colored wall tile in park service employee bathrooms; sheet; NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet							~	50 ft2
Thickness (in.)								¼"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tile
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								20
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	bathroom for PK serv. employees
Evidence of contact	X		
Airflow proximity	X		
Physical barriers	X		
User activities	mostly decorative and water protection in bathroom		

Figure 3-1 ACM Survey Data Sheet

DEP A 40

FACILITY: Presidio BUILDING: Mine Depot ROOM/AREA: Bldg 987 OPERATION:

EVALUATOR: C. Whalen UEHI DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other baseboard trim at base of walls
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☐ Tile ☒ Wood ☒ Carpet ☐ Other

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. DEPA40 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics brown, vinyl-like baseboard material, NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet							N	125 lin feet
Thickness (in.)								4"
Diameter (in.)								4"
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								vinyl-like
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	in office areas
Evidence of contact	X		
Material exposed	X		
Physical barriers	X		
User activities	found in offices of park service office areas		

Figure 3-1 ACM Survey Data Sheet

DEP A11

FACILITY: Presidio BUILDING: Mine Depot ROOM/AREA: Bldg 989 OPERATION:

EVALUATOR: C. Whalen DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☐ Other Roofing tile (red)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

NA Type of floor ☐ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights

Type of ventilation system

ACM debris on floor, furniture, equipment, or other surfaces

☐ No ☐ Yes If yes, describe

Confirmation bulk sample no. DEP A11 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily (weather)

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics red roofing tile; indiv tiles NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet								
Thickness (in.)								½"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tar
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Recent disturbance	X		
Physical barriers	X		
User activities	subject to weather conditions more than human factors		

Figure 3-1 ACM Survey Data Sheet

DEP A12

FACILITY: Presidio BUILDING: Mine Depot ROOM/AREA: Bldg 987 OPERATION:

EVALUATOR: C. Whalen UEHI DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other roof tile (shingle)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

NA Type of floor ☐ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system _____

ACM debris on floor, furniture, equipment, or other surfaces _____

Y ☐ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. DEP A12 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily (weather)

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics Black tile found under red roof tile, probably original roof tile; tar-like NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								
Thickness (in.)								½"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tar
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y- by newer tile
Is covering uniform? Yes/No/Describe								Y
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of erosion	X		
Water exposure	X		
Physical barriers	X		
User activities	tile subject to weather conditions rather than human factors		

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO MINE BUILDING: DEPOT ROOM/AREA: Bldg 988 OPERATION: DEP A13

EVALUATOR: C. Whalen UCHI DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other roof tile (red)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights _____

Type of ventilation system _____

ACM debris on floor, furniture, equipment, or other surfaces _____

☐ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. DEPA13 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☐ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☐ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily (weather)

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics red roof tile (in small tiles) tar-like; NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								
Thickness (in.)								Var
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tar
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Material damage	X		
Physical barriers	X		
User activities			subject to weather conditions rather than human (foot) traffic

Figure 3-1 ACM Survey Data Sheet

FACILITY: Presidio BUILDING: Mine Depot ROOM/AREA: Bldg 988 OPERATION: DEPA14

EVALUATOR: Clothalen DATE: 8/5/93

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other roof tile (reddish-black)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights

Type of ventilation system N/A

ACM debris on floor, furniture, equipment, or other surfaces

☐ No ☐ Yes If yes, describe

Confirmation bulk sample no. DEPA14 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily (weather)

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics red-black tile, tar-like, found under red tile (DEPA13), probably original roof tile NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								
Thickness (in.)								½"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tar
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y- by newer roof tile
Is covering uniform? Yes/No/Describe								X
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Visible damage	X		
Physical barriers	X		
User activities			Subject to weather conditions rather than human

Figure 3-1 ACM Survey Data Sheet

FACILITY: Presidio BUILDING: Mine Depot ROOM/AREA: Bldg 988 OPERATION:

DEPAIS

EVALUATOR: C. Whalen DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other roof paper
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights

Type of ventilation system

ACM debris on floor, furniture, equipment, or other surfaces

☐ No ☐ Yes If yes, describe

Confirmation bulk sample no. DEPAIS Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily (weather)

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics black roofing paper under-lying sample @ DEPAH
NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								
Thickness (in.)								¼"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								Y
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Paper
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y - by roofing
Is covering uniform? Yes/No/Describe								Y
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Water damage	X		
Physical barriers	X		
User activities	Subject to weather conditions more than human condition		

Figure 3-1 ACM Survey Data Sheet

DEPA16

FACILITY: Presidio BUILDING: Mine Depot ROOM/AREA: Bldg 988 OPERATION:

EVALUATOR: C. Whalen UCHHF DATE: 8/5/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members

☐ Wall

☒ Other floor tile (whitish)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe

Confirmation bulk sample no. DEPA16 Results

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe

SPECIAL CONSIDERATIONS:

Utility maintenance frequency daily

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public daily

Other unique characteristics whitish floor tile, sheets/rolls NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet							N	450 sf + 2
Thickness (in.)								1/4"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Tile
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	Office area
Evidence of contact		X	Especially under ~~desks~~ (w) chairs
Visible dust/debris	X		
Physical barriers			
User activities			Presidio Resource Center - library area

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: Battery Lancaster ROOM/AREA: lower maint. OPERATION: (cw) GGLA - AE1

EVALUATOR: C Whalen UCSF DATE: 7/31/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☒ Wall _____

☐ Other _____
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☒ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights <5

Type of ventilation system _____

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. GGLA AE1 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☐ No ☒ Yes If yes, describe plenum on east wall

Machinery or equipment in area ☐ No ☒ Yes

If yes, describe cutting equipment in maint. area

SPECIAL CONSIDERATIONS:

Utility maintenance frequency frequent - DAILY

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public frequent - DAILY

Other unique characteristics sample taken from wallboard in high activity maintenance area at Bridge district maint. dept.; FRIABLE

DESCRIPTION OF MATERIAL: Wall board

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM							X	
[1] Sprayed-on [2] Troweled-on [3] Air Cell [X] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								228 ft²
Thickness (in.)								1½"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								P
Friability: Low/Moderate/High								H
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								Y
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								F
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y
Is covering uniform? Yes/No/Describe								Y
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								ND

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity		X	maintenance area for GG bridge
Evidence of damage		X	holes patched with wallboard
Air stream exposure		X	
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: New Mine Casement ROOM/AREA: _____ OPERATION: BBNMC - ACI

EVALUATOR: C. Wheeler, USEHI DATE: 8/3/92

ACM APPLIED TO:

☒ Ceiling

Type
- ☐ Concrete
- ☒ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other _____ (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces _____

☐ No ☒ Yes If yes, describe pieces of suspect mtl. fallen

Confirmation bulk sample no. BBNMC ACI Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency none

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics White, friable ceiling tile 1'x1' each

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet								~~287~~ (LF) 2500
Thickness (in.)								1/4
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								P
Friability: Low/Moderate/High								M
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								Y
Vibration damage: Yes/No/Source								Y
Adhesion to underlying surface: Good/Moderate/Poor								P
Texture: Fibrous/Cementitious/ Granular/Concrete-like								F
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								N/A
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Material exposed	X		
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

NEW MINE — BBNMC A02

FACILITY: PRESIDIO BUILDING: CASEMENT ROOM/AREA: _____ OPERATION: _____

EVALUATOR: C Whalen WCHI DATE: 8/3/92

ACM APPLIED TO:

☒ Ceiling

Type
- ☐ Concrete
- ☒ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other _____ (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no: BBNMCA02 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency none

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public None

Other unique characteristics brown paper backing under ceiling tile; NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
1 Sprayed-on 2 Troweled-on 3 Air Cell 4 Block Type 5 Cementitious ☒ Other								
Sq. or linear feet								2520 ft 2
Thickness (in.)								1/8"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								P
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								Y
Vibration damage: Yes/No/Source								Y
Adhesion to underlying surface: Good/Moderate/Poor								M
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Paper
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								~~Y~~ N - not covered by ceiling tile
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Exposed surfaces	X		
Maintenance access	X		
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESIDIO BUILDING: NEW MINE CASEMENT ROOM/AREA: _____ OPERATION: BB NMC A03

EVALUATOR: C. Whalen WEHI DATE: 8/3/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-In Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other FLOORTILE (BLACK & RED)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. BBNMC-A03 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency none

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics black & red ceramic-like floor tile; NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet								2400 sf + 2
Thickness (in.)								1/2"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								G
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Ceramic-like
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Exposure of personnel	X		
Water exposure	X		
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

NEW MINE

BBNMC-A04

FACILITY: PRESIDIO BUILDING: CASEMENT ROOM/AREA: _____ OPERATION: _____

EVALUATOR: C. Whalen, USEHI DATE: 8/3/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ∩∩∩
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other floortile (vinyl-like)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☐ Concrete ☒ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. BBNMC A04 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency none

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics light-colored, moist, likely VAT - NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								X
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [X] Other								
Sq. or linear feet								except 2 1/2"
Thickness (in.)								
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								P
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Vinyl
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Visible exposure	X		
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

FACILITY: PRESDIO BUILDING: OLD MINE CASEMENT ROOM/AREA: _____ OPERATION: _____

BB0MC-A01

EVALUATOR: C. Whalen, UCHI DATE: 7/29/93

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other electrical tape covering wires
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☒ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces _____

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. BB0MC-A01 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency none

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics black electrical tape covering wires

NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								☒ elec. tape
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								< 100 lin. feet
Thickness (in.)								¼"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								P
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								tape
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								Y-by outer wire cover
Is covering uniform? Yes/No/Describe								Y
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Restricted access			
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

BBOMC-A02

FACILITY: PRESIDIO BUILDING: ~~HOUSE/WING~~ Battery ROOM/AREA: _____ OPERATION: _____

EVALUATOR: C. Whalen DATE: 7/29/92

ACM APPLIED TO:

☐ Ceiling

Type
- ☐ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☐ Flat —
- ☐ Folded Plate ^^^
- ☐ Dome ∩
- ☐ Barrel ⌒
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☒ Other electrical tape (black)
(Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☒ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NA

Type of ventilation system NA

ACM debris on floor, furniture, equipment, or other surfaces

☒ No ☐ Yes If yes, describe _____

Confirmation bulk sample no. BBOMC-A02 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency none

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public none

Other unique characteristics outer black electrical tape

NON-FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								☒ tape
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								~100 linear ft
Thickness (in.)								1/8"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								F
Friability: Low/Moderate/High								L
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								N
Vibration damage: Yes/No/Source								N
Adhesion to underlying surface: Good/Moderate/Poor								G
Texture: Fibrous/Cementitious/ Granular/Concrete-like								tape
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Environmental	X		
Mechanical	X		
Physical barriers	X		
User activities			

Figure 3-1 ACM Survey Data Sheet

SAFA01

FACILITY: Presidio BUILDING: Saffold ROOM/AREA: _____ OPERATION: _____

EVALUATOR: Lorrie Gunderson Large North Room, east entrance (not locked) drawing appended DATE: 7-27-92

ACM APPLIED TO:

☒ Ceiling

Type
- ☒ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☒ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other _____ (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☒ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☐ Surface ☐ Suspended ☐ Recessed

No. of Lights NONE operable

Type of ventilation system None

ACM debris on floor, furniture, equipment, or other surfaces floor

☐ No ☒ Yes If yes, describe floor debris

Confirmation bulk sample no. SAFA01 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☒ No ☐ Yes

If yes, describe _____

SPECIAL CONSIDERATIONS:

Utility maintenance frequency None

Life-cycle projection for structure unknown

Renovation schedule (past, present, future - dates) unknown

Utilization by public None

Unique characteristics in fenced compound - to battery unlocked

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								2 (ceiling)
[1] Sprayed-on [2] Troweled-on [3] Air Cell [4] Block Type [5] Cementitious [6] Other								
Sq. or linear feet								2200
Thickness (in.)								1/2
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								Poor
Friability: Low/Moderate/High								M
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								Y
Vibration damage: Yes/No/Source								Y
Adhesion to underlying surface: Good/Moderate/Poor								P
Texture: Fibrous/Cementitious/ Granular/Concrete-like								plaster
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Material exposed		X	
Physical barriers	X		
User activities	None authorized		

Figure 3-1 ACM Survey Data Sheet

STØ AØ1

FACILITY: PRESIDIO BUILDING: Stolzenburg ROOM/AREA: Battery hallway entrance OPERATION:

EVALUATOR: C. Whalen, URS/ECI DATE: 7/28/92

ACM APPLIED TO:

☒ Ceiling

Type
- ☒ Concrete
- ☐ Tile
- ☐ Metal Deck
- ☐ Concrete Joists & Beams
- ☐ Corrugated Steel
- ☐ Suspended Metal Lathe
- ☐ Suspended Lay-in Panels
- ☐ Steel Beam or Bar Joists

Shape
- ☒ Flat
- ☐ Folded Plate
- ☐ Dome
- ☐ Barrel
- ☐ Other (draw)

☐ Pipe _____

INSULATION

	Loose fill	Blanket	Thermal Brick	Sheeting	Other
☐ Boiler					
☐ Tank					
☐ Ductwork					

☐ Structural members _____

☐ Wall _____

☐ Other _____ (Floortile, Shingles, Roofing Felt, Wall Board, Panel, etc.)

ENVIRONMENTAL CONDITIONS:

Type of floor ☒ Concrete ☐ Tile ☐ Wood ☐ Carpet ☐ Other _____

Type of lighting ☒ Surface ☐ Suspended ☐ Recessed

No. of Lights 10

Type of ventilation system N/A

ACM debris on floor, furniture, equipment, or other surfaces floor

☐ No ☒ Yes If yes, describe cracked/peeling-from ceiling

Confirmation bulk sample no. STO A01 Results _____

ACM is subject to direct air stream or is located in proximity to air plenum

☒ No ☐ Yes If yes, describe _____

Machinery or equipment in area ☐ No ☒ Yes

If yes, describe non-operable

SPECIAL CONSIDERATIONS:

Utility maintenance frequency N/A

Life-cycle projection for structure N/A

Renovation schedule (past, present, future - dates) unknown

Utilization by public N/A

Other unique characteristics area locked; paint on plaster; FRIABLE

DESCRIPTION OF MATERIAL:

	Line	Pipe	Boiler	Tank	Ductwork	Structural	Walls	Other
Type of ACM								2 - ceiling
1 Sprayed-on 2 Troweled-on 3 Air Cell 4 Block Type 5 Cementitious 6 Other								
Sq. or linear feet								6400 ft²
Thickness (in.)								¼"
Diameter (in.)								
No. of runs								
No. of fittings								
Condition: Good/Fair/Poor								POOR
Friability: Low/Moderate/High								M
Uniformity: Yes/No								Y
Water damage: Yes/No/Source								Y
Vibration damage: Yes/No/Source								Y
Adhesion to underlying surface: Good/Moderate/Poor								P
Texture: Fibrous/Cementitious/ Granular/Concrete-like								Paste
Is ACM covered? Yes/No/Describe Cloth, Paper, Paint, etc.								N
Is covering uniform? Yes/No/Describe								NA
Bulk sample no. 1								
no. 2								
no. 3								
Type asbestos								
% Asbestos								ND
Other comments								

AREA OCCUPANT/USER ACCESSIBILITY:

	NO	YES	DESCRIBE
Vulnerable to human activity	X		
Evidence of contact	X		
Airborne dust		X	
Physical barriers	X		
User activities	storage		

Figure 3-1 ACM Survey Data Sheet

Appendix C

Laboratory Accreditation, Internal QA Procedures, and Asbestos Calculating Procedure

United States Department of Commerce
National Institute of Standards and Technology

NVLAP

Certificate of Accreditation

ENVIRONMENTAL SCIENCE & ENGINEERING, INC
ENGLEWOOD, CO

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 7 Code of Federal Regulations. Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

July 1, 1993
Effective until

DEPARTMENT OF COMMERCE • UNITED STATES OF AMERICA •

For the National Institute of Standards and Technology

NVLAP LAB CODE: 1991

8.0 INTERNAL QUALITY CONTROL CHECKS

8.1 NIST/NVLAP PROFICIENCY TESTING

8.1.1 Proficiency samples are received by the Quality Control Designate at the laboratory. Upon receipt, each sample is subdivided as necessary so that each analyst in the laboratory have a sub-sample.

8.1.2 Each analyst independently analyzes each sample. Analysis is done in accordance with EPA 40 CFR CH. 1, Pt. 763, Subpart F, Appendix A. Each analyst then enters the test results in his/her laboratory data records.

8.1.3 The Laboratory Manager from each facility collects each analyst's data and submits them to the QA/QC Designate. The results are compared and one set of test results are recorded for the laboratory on the forms provided. The laboratory keeps the remaining portions of samples for future use as reference materials.

8.1.4 The QA/QC Designate keeps a copy of the data reported by the laboratory and each analyst's data sheets on file. When the summary of results from reference laboratories is returned, the data is compared to the results the laboratory reported and to each analyst's results.

8.1.5 Should the results of any analyst be incomparable with the reference laboratories analysis, the results of the analysis will be discussed with the analyst who incorrectly analyzed the sample, and the analyst subjected to additional reanalysis to determine his/her areas of deficiency. During re-evaluation of a deficient analyst, the analyst will be given blind samples to analyze that are similar in character and nature to the previously incorrect samples. The analyst will then be required to perform reanalysis of these samples until he/she can be shown once again proficient in analysis or until the source of the error can be determined. Should an analyst be unable to demonstrate proficiency, the analyst will be removed from active duty and retrained in accordance with training procedures. Should it be determined following an effort in retraining, that an analysts deficiencies cannot be corrected, the analyst will be removed from the Laboratory Department to another department or dismissed.

8.1.6 Results of the laboratories performance are included in the Quality Control Designate monthly summary. Results of individual analyst's results, deficiency corrections and control charts showing overall accuracy and precision for each analyst are filed in the personnel manual and in the individual Laboratory Analysts file.

8.2 Ten Percent Replicat/Duplicate Analysis

8.2.1 Ten percent of all samples will be "flagged" for duplicate/replicate analysis. These samples will be distributed among analysts by the QA/QC designate on Friday of each week. To assure random selection, every tenth line in the sample log book will be "red-marked" and every fiftieth line will be "green-marked" before samples are logged into the book. Each sample logged onto a "red-marked" line will be selected for duplicate analysis and every sample logged onto a "green-marked" line will be selected for replicate analysis.

8.2.2 A separate log book for the duplicate/replicate analysis is used to help conceal the sample identity to the analyst, and also maintains a running list of which samples have been checked, and the number of times a particular sample is analyzed for quality control purposes.

8.2.3 The QA/QC Oversight shall split replicate samples into as many sub-samples as possible and submit the sub-samples to analysts. The QA/QC Oversight is the only person who will know the identity of the samples until the results are turned in.

8.2.3 The quality control designate shall maintain current control records of this log book, insure corrective action procedures are timely, and compile statistical QC data regarding each analysts work. The quality control designate shall draw from this log book to keep each analyst within acceptable standards for determining asbestos percentages.

8.3 QC with Outside Labs.

8.3.1 On the last working day of each month an outside laboratory will be contacted and samples will be exchanged with them.

8.3.2 Samples to be sent will include non-typical samples (low percentages, less common type of asbestos, etc.). No less than five samples will be sent each month. If there have not been five "non-typical" samples in a month, other samples will be substituted. (Samples QC'd in-house are also good choices to send out).

8.3.3 Laboratories used may be chose from the following:

Environmental Science & Engineering, Inc.
P.O. Box 1703
Gainesville, FL 32602
Attn: Barbara Ross

Environmental Science & Engineering, Inc.
1205 E. International Airport Rd.
Anchorage, AK 99518
Attn: Bill Waite

Associated Labs, Inc.
P.O. Box 27827
Denver, CO 80227

8.4 Known Materials - Each analyst should mount a known standard material (NIST reference material, NVLAP proficiency sample, etc.) to use for microscope calibration (McCrone dispersion staining objective). This is a QC analysis and must be logged as such.

8.5 DAILY LAB BLANKS

8.5.1 On a daily basis a lab blank sample will be analyzed. On days with heavy sample load, analyzing a lab blank for every ten samples is recommended. The blank need not be the first or last sample analyzed on a given day. At the analyst's discretion a blank may be inserted at any point in the work day. An exceptionally opportune time to analyze a blank would be following analysis of a very "hot" friable sample. The analyst might also run a blank if a sample were inadvertently spilled during analysis. The following guidelines apply:

8.5.1.1 The blank matrix to be used is the NIST fibrous glass standard.

8.5.1.2 The sample should be treated as any other lab sample including placing the entire sample into a petri dish for teasing fibers.

8.5.1.3 The analyst should mount fibers teased from the main bulk of the sample and also from the broken crushed residue portion.

8.5.1.4 It is recommended that the sample be mounted in at least two of the three major refractive index liquids (1.55, 1.665, 1.68).

8.5.1.5 Post analysis clean up should be the same as any other sample, including the vacuuming of HEPA hood with a HEPA vacuum.

8.5.1.6 Record results like any other analytical sample in the analyst notebook.

8.5.1.7 A copy of the blank results should be placed in the laboratory QC notebook.

8.6 PREVENTION AND CLEANING/ASSURANCE OF CONTAMINATION FREE WORK STATION

8.6.1 Contamination can occur in many places; oils, on work surfaces, and sampling instruments, as well as by following poor lab procedures. Incoming samples need to be examined upon arrival to the lab to prevent contamination. The lab shall be free of unnecessary potential contaminants such as air monitoring equipment and long-term archive storage.

8.6.1.1 Tape samples will be taken every month from the work station and the microscope.

8.6.2 Work station surfaces should be cleaned before analyses, between each analysis, and after analytical session is complete. A simple cleaning method is to water spray and wipe all suspect surfaces with a KIM-wipe fiberless cloth. A separate KIM-wipe shall be used for each sample preparation and clean-up, and the petri dish surface shall be disposed of after each sample is analyzed. All tools used shall be wet-wiped before a new sample is analyzed. Only one sample should be placed under the hood, to prevent sample mix-ups and possible cross-contamination. Slides and coverslips shall be wiped prior to use with a new KIM-wipe, or sprayed with a pressurized canned duster.

8.6.3 Index oil is applied by dropping oil onto the clean slide or by using a clean syringe or pipet to drop oil onto slide. Never touch the slide surface. The sample is added to the oil to minimize fiber release, then a cover slip is applied. The HEPA hood is to remain on from the time the first sample is placed in the hood until a final clean after the final sample has been removed from the hood.

8.6.4 At least one air sample will be taken each month. The sample should be taken when the laboratory has a high sample volume. The best locations to take air samples are at the exhaust of the hood, personal sample at analysts breathing zone, and sample storage area.

8.7 CONTAMINATION DETECTION ON PREPPING TOOLS, GLASS SLIDES, COVERSLIPS, CLEANING LIQUIDS, & OILS-MOUNT, CHECK, AND CORRECTIVE ACTION

8.7.1 A monthly check of the refractive index oils, glass slides, and coverslips shall be conducted to test for contamination. If contamination is found in the oil, the oil should be remounted a minimum of three times and checked. If contamination appears, the bottle shall be disposed of as asbestos waste, and a note entered in the bulk sample log. Each new bottle of oil is to be numbered, and the opened bottles of 1.55 and 1.68 shall be checked monthly. Oils not often used shall be checked prior to use and documented. Cleaning liquids shall be checked monthly and prepping tools. The procedure for checking for oil contamination is as follows:

8.7.1.1 Clean work area by wet-wiping and KIM-wiping

8.7.1.2 Clean slide and cover glass to be used

8.7.1.3 Apply a few drops of oil or cleaning liquid to be checked on to slide, then add cover slip. For checking prepping instruments rub ends of instruments together in a drop of oil on the slide.

8.7.1.4 View under microscope, scanning for suspect asbestos fibers

8.7.1.5 Periodically check syringes as well as the bottles of index oils

8.7.1.6 Record results into the analysts notebook, recording which bottle was tested, date, results, and comments. A copy of the results is placed in the QC notebook.

8.8 REFRACTIVE INDEX OIL CALIBRATION

8.8.1 The method uses a set of glass standards for oil of different refractive indices, ranging from 1.48 through 1.72. The oil is mounted on the glass standard and viewed under the microscope with a 10x objective. Refractive index oil should conform to the TRUE BECKE LINE by raising and lowering the focus shifts.

8.8.2 If the BECKE LINE moves inward or outward after the plane of focus is moved from the edge of the particle to a position above the particle, then the refractive index oil is either low or high and should be disposed of at once.

8.8.3 Calibration of refractive index oil of 1.55 and 1.68 will be conducted monthly and others upon use. Sealed bottles will be calibrated upon opening.

8.8.4 Microscope positions shall be set in the following manner to observe BECKE LINE technique with Cargille glass standards:

8.8.4.1 Retardation plate is in center position

8.8.4.2 Analyzer and polarizer removed

8.8.4.3 Aperture diaphragm is closed down

8.8.4.4 Correct objective is in place (20x or 40x preferred)

8.9 DISCREPANCIES IN DATA

8.9.1 The following discrepancies may arise when a sample is analyzed.

8.9.1.1 In house duplicate analysis (by the same analyst) disagree

8.9.1.2 In house between analysts results disagree

8.9.1.3 Between lab analysis may disagree

8.9.2 Situation: Duplicate analysis by same analyst disagree.

8.9.2.1 Determine the extent of disagreement. If results change from positive ACM to negative ACM or vice versa, a 3rd analysis is best if done by an outside lab as quality control. Assume the matching results are correct and report to client. Analysts should discuss findings to determine possible reason for conflicting analysis. If discrepancy is in percent ACM found, another in-house analyst should be consulted and combined judgment used.

8.9.3 Situation: Duplicate analysis, different analysts.

8.9.3.1 Again a 3rd opinion is necessary. An outside laboratory again should be used and the results most closely matching the 3rd analysis should be reported. Again

communication between analysts is essential to pinpoint possible reason for variance.

8.9.4 Situation: Conflicting analysis between laboratories.

8.9.4.1 Consult a third laboratory if after duplication of analysis by initial laboratories, the problem is not resolved.

8.9.5 In each situation, all analysts involved should become comfortable with the final results. Interaction between analysts is essential to work out differences and prevent future occurrences for the same reasons. No analyst should ever be forced to just accept another analysts judgment. All analysts should view the episode as a useful learning/training experience.

8.9.6 After the issue is resolved, the analyst who incorrectly analyzed the sample may be subjected to additional reanalysis to determine his/her areas of deficiency. During re-evaluation of a deficient analyst, the analyst will be given blind samples to analyze that are similar in character and nature to the samples he/she previously identified incorrectly. The analyst is required to perform reanalysis of these samples until he/she can be shown once again proficient in analysis or until the source of error can be determined. Should an analyst be unable to demonstrate proficiency, the analyst will be removed from active duty and retrained in accordance with training procedures.

8.9.7 Once the results of all samples reanalyzed during the QA/QC program have been demonstrated comparable, copies of the original and reanalysis information is placed in the quality control log binder.

8.9.8 Corrective Actions to nonconforming analyst data shall be treated in the following ways:

8.9.8.1 On the spot, immediate action - such as malfunctions or simple misunderstandings of equipment or lab procedures.

8.9.8.2 Corrected Reports to the client will be labeled as "re-issue" along with an explanation of the need for revision.

8.9.8.3 If recurring problems in analyst error persist, the QC designate shall schedule a thorough re-training in the problem area. The analyst(s) shall be instructed to take necessary actions to correct his/her deficiencies.

8.9.9 The QC lab No. corresponding to the actual lab No. shall be known to the QC designate only, until result comparisons are complied and distributed to the respective analyst, by the designate or his/her assistant.

8.10 DEALING WITH TESTING COMPLAINTS FROM CLIENTS

8.10.1 Dealing with testing complaints is a delicate matter. The client should never be told that you are the expert and he/she is not an expert. The client may have a very valid reason to believe the results are incorrect. One never knows if he or she is the first, second or third person to analyze a particular sample. The best recourse is to determine why the client believes the results are incorrect. Reanalysis will always be performed. The type of reanalysis (duplicate, between analysts, between laboratories) will be determined by the QC Designate and/or the laboratory manager.

8.10.2 If there is not enough sample left to analyze properly, or if cross-contamination is suspected, the client must be contacted and asked to provide an additional sample for reanalysis.

8.10.3 Any time reanalysis is performed with discrepancies, an amended report is to be issued to the client with the results from the reanalysis reported. The reason for reanalysis or any changes made should also be addressed in the amended report to the client.

8.10.4 Records of all actions taken in response to testing complaints will be maintained in the project file.

[Added to quality manual 3-20-91]

8.11 Control Charts

All replicate and duplicate analyses results must be entered onto the graph for statistical treatment in order to characterize the performance of individual analysts and the laboratory as a whole. Standard deviations are calculated monthly for each analyst and for the entire laboratory. When an individual routine QC sample is tested for acceptance/rejection, the range of the two results (duplicate or replicate) for that sample is compared to the most current average standard deviation for the laboratory. If the range is within two standard deviations, QC passes and the report associated with that QC sample(s) may be issued. If the range is between two and three standard deviations, it passes but is recorded as being above the warning limit. If the range is greater than three standard deviations, QC fails and the report is withheld. This sample must be re-submitted as a "blind" sample and reanalyzed. If it is still outside acceptable limits the QA/QC designate shall isolate the problem and take corrective action (as described in section 8.9 of this manual). We will use this QC parameter as an overall indicator of the precision of each analyst and the laboratory as a whole.
NOTE: Duplicate and replicate sets of data must conform to the first acceptance criteria, i.e. 100% qualitative agreement (this includes a judgement as to whether the sample is asbestos-containing or not as defined by the U.S.E.P.A.) before results are subjected to statistical analysis. QC results which do not agree qualitatively are rejected.

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have been shown to be unreliable. Only proficiency testing materials characterized by multiple techniques should be used to determine accuracy and precision.

2.1.5 Procedures

NOTE: Exposure to airborne asbestos fibers is a health hazard. Bulk samples submitted for analysis are oftentimes friable and may release fibers during handling or matrix reduction steps. All sample handling and examination must be carried out in a HEPA-filtered hood or glove box with continuous airflow (negative pressure). Handling of samples without these precautions may result in exposure of the analyst to and contamination of samples by airborne fibers.

2.1.5.1 Sample Preparation

No sample preparation should be undertaken before initial macroscopic examination. Distinct changes in texture or color on a macroscopic scale that might denote an uneven distribution of components should be noted. When a sample consists of two or more distinct layers or building materials, each should be treated as a separate sample, when possible. Thin coatings of paint, rust, mastic, etc., that cannot be separated from the sample without compromising the layer are an exception to this case and may be included with the layer to which they are attached. Drying (by heat lamp, warm plate, etc.) of wet or damp samples is recommended before further macroscopic examination and is mandatory before PLM examination. **Drying must be done in a HEPA-filtered hood.**

For nonlayered materials that are heterogeneous, homogenization by some means (mill, blender, mortar and pestle) may provide a more even distribution of sample components. It may also facilitate disaggregation of clumps and removal of binder from fibers (rarely however, it may mask fibers that were originally discernable).

For materials such as cementitious products and floor tiles, breaking, pulverizing, or grinding may improve the likelihood of exposing fibrous components.

It may be appropriate to treat some materials by dissolution with hydrochloric acid to remove binder/matrix materials (the term "dissolution" as used here and throughout the text, refers to the reaction between carbonates and hydronium ions in an acid solution to form

bicarbonate ions and CO_2). Components such as calcite, gypsum, magnesite, etc., may be removed by this method. For materials found to possess a high organic content (cellulose, organic binders), ashing by means of a muffle furnace or plasma asher (for small, cellulosic samples), or dissolution by solvents may be used to remove interfering material. In either case, it is recommended that matrix removal be tracked gravimetrically.

Additional information concerning homogenization, ashing and acid dissolution may be found in Sections 2.2.5.1 and 2.3.

2.1.5.2 Analysis

Samples should be examined with a simple stereomicroscope by viewing multiple fields of view over the entire sample. The whole sample should be observed after placement in a suitable container (watchglass, weigh boat, etc.) substrate. Samples that are very large should be subsampled. The sample should be probed, by turning pieces over and breaking open large clumps. The purpose of the macroscopic analysis is to determine homogeneity, texture, friability, color, and the extent of fibrous components of the sample. This information should then be used as a guide to the selection of further, more definitive qualitative and quantitative asbestos analysis methods. Homogeneity, in the macroscopic analysis, refers to whether each subsample made for other analytical techniques (e.g. the "pinch" mount used for the PLM analysis), is likely to be similar or dissimilar. Color can be used to help determine homogeneity, whether the sample has become wet (rust color), and also can be used to help identify or clarify sample labelling confusion between the building material sampler and the laboratory. Texture refers to size, shape and arrangement of sample components. Friability may be indicated by the ease with which the sample is disaggregated (see definitions in Appendix A) as received by the analyst. This does not necessarily represent the friability of the material as determined by the assessor at the collection site. Extent of fibrous components may be determined by comparison to similar materials of known fibrous content. For materials composed of distinct layers or two or more distinct building materials, each layer or distinct building material should be treated as a discrete sample. The relative proportion of each in the sample should be recorded. The layers or materials should then be separated and analyzed individually. Analysis results for each layer

or distinct building material should be reported. If monitoring requirements call for one reported value, the results for the individual layers or materials may be combined. Each layer or material should be checked for homogeneity during the macroscopic analysis to determine the extent of sample preparation and homogenization necessary for successful PLM or other analysis. Fibers and other components should be removed for further qualitative PLM examination.

Using the information from the macroscopic examination, selection of additional preparation and analytical procedures should be made. Macroscopic examination should typically be performed again after any change or major preparation (ashing, acid dissolution, milling, etc.) to the sample. Macroscopic examination for estimation of asbestos content should also be performed again after the qualitative techniques have clarified the identities of the various fibrous components and/or to assist in resolving differences between the initial quantitative estimates made during the macroscopic analysis and those of subsequent techniques. Calibration of analysts by use of materials of known asbestos content is essential.

The macroscopic examination is often an iterative process. Initial examination and estimates of asbestos concentration should be made. The sample should then be analyzed by PLM and possibly other techniques. These results should be compared to the initial macroscopic results. Where necessary, disagreements between results of the techniques should be resolved by reanalyzing the sample macroscopically.

2.1.6 Calibration Materials

Calibration materials fall into several categories, including internal laboratory standards and other materials that have known asbestos weight percent content. These calibration materials could include:

- Actual bulk samples: asbestos-containing materials that have been characterized by other analytical methods such as XRD, AEM and/or gravimetry. (i.e. NVLAP test samples).

- Generated samples: in-house standards that can be prepared by mixing known quantities of asbestos and known quantities of asbestos-free matrix materials (by weight), and mixing (using blender, mill, etc.) thoroughly to achieve homogeneity; matrix materials such as vermiculite, perlite, sand, fiberglass, calcium carbonate, etc. may be used. A range of asbestos concentrations should be prepared (i.e. 1, 3,

5, 10, 20%, etc.). The relationship between specific gravities of the components used in standards should be considered so that weight/volume relationships may be determined.

- Photographs, drawings: photomicrographs of standards, computer-generated drawings, etc.

Suggested techniques for the preparation and use of in-house calibration standards are presented in Appendix C, and at greater length by Harvey et al.[1] The use of synthesized standards for analyst calibration and internal laboratory quality control is not new however, having been outlined by Webber et al.[2] in 1982.

2.1.7 References

1. Harvey, B. W., R. L. Perkins, J. G. Nickerson, A. J. Newland and M. E. Beard, "Formulating Bulk Asbestos Standards", **Asbestos Issues**, April 1991, pp. 22-29.

2. Webber, J. S., A. Pupons and J. M. Fleser, "Quality-Control Testing for Asbestos Analysis with Synthetic Bulk Materials". **American Industrial Hygiene Associations Journal**, 43, 1982, pp. 427-431.

2.2 Polarized Light Microscopy

2.2.1 Principle and Applicability

Samples of bulk building materials taken for asbestos identification should first be examined macroscopically for homogeneity and preliminary fiber identification. Subsamples should then be examined using PLM to determine optical properties of constituents and to provide positive identification of suspect fibers.

The principles of optical mineralogy are well-established.[1,2,3,4] A light microscope equipped with two polarizing filters is used to observe specific optical characteristics of a sample. The use of plane polarized light allows for the determination of refractive indices relative to specific crystallographic orientations. Morphology and color are also observed while viewing under plane polarized light. Observation of particles or fibers while oriented between polarizing filters whose privileged vibration directions are perpendicular (crossed polars) allows for determination of isotropism/anisotropism, extinction characteristics of anisotropic particles, and calculation of birefringence. A retardation plate may be placed in

the polarized light path for verification of the sign of elongation. If subsamples are prepared in such a way as to represent all sample components and not just suspect fibers, semi-quantitative analysis may also be performed. Semi-quantitative analysis involves the use of calibrated visual area estimation and/or point counting. Visual area estimation is a semi-quantitative method that must relate back to calibration materials. Point counting, also semi-quantitative, is a standard technique used in petrography for determining the relative areas occupied by separate minerals in thin sections of rock. Background information on the use of point counting[3] and the interpretation of point count data[5] is available.

Although PLM analysis is the primary technique used for asbestos determination, it can show significant bias leading to false negatives and false positives for certain types of materials. PLM is limited by the visibility of the asbestos fibers. In some samples the fibers may be reduced to a diameter so small or masked by coatings to such an extent that they cannot be reliably observed or identified using PLM.

2.2.2 Range

The detection limit for visual estimation is a function of the quantity of sample analyzed, the nature of matrix interference, sample preparation, and fiber size and distribution. Asbestos may be detected in concentrations of less than one percent by area if sufficient material is analyzed. Since floor tiles may contain fibers too small to be resolved by PLM (< 0.25 μm in diameter), detection of those fibers by this method may not be possible. When point counting is used, the detection limit is directly proportional to the amount of sample analyzed, but is also limited by fiber visibility. Quantitation by area estimation, both visual and by point counting, should yield similar results if based on calibration standards.

2.2.3 Interferences

Fibrous and nonfibrous, organic and inorganic constituents of bulk samples may interfere with the identification and quantitation of the asbestos mineral content. Binder/matrix materials may coat fibers, affect color, or obscure optical characteristics to the extent of masking fiber identity. Many organic mastics are soluble in refractive index liquids and, unless removed prior to PLM examination, may affect the refractive index measurement

of constituent materials. Fine particles of other materials may also adhere to fibers to an extent sufficient to cause confusion in identification. Gravimetric procedures for the removal of interfering materials are presented in Section 2.3.

2.2.4 Precision and Accuracy

Data obtained for samples containing a single asbestos type in a sample matrix have been reported previously by Brantley et al.[6] Data for establishing the accuracy and precision of the method for samples with various matrices have recently become available. Perkins,[7] Webber et al.[8] and Harvey et al.[9] have each documented the tendency for visual estimates to be high when compared to point-count data.. Precision and accuracy must be determined by the individual laboratory for the percent range involved. If point counting and/or visual estimates are used, a table of reasonably expanded errors, such as those shown in Table 2-1, should be generated for different concentrations of asbestos.

TABLE 2-1. SUGGESTED ACCEPTABLE ERRORS FOR PLM ANALYSIS
(Based on 400 point counts of a reasonably homogeneous sample or 100 fields of view for visual estimate)

% Area Asbestos	Acceptable Mean Result	% Area Asbestos	Acceptable Mean Result
1	>0-3%	50	40-60%
5	>1-9%	60	50-70%
10	5-15%	70	60-80%
20	10-30%	80	70-90%
30	20-40%	90	80-100%
40	30-50%	100	90-100%

If the laboratory cannot demonstrate adequate precision and accuracy (documented by control charts, etc), quantitation by additional methods, such as gravimetry, may be required. Refer to the Handbook for SRM Users[10] for additional information concerning the concepts of precision and accuracy.

2.2.5 Procedures

NOTE: Exposure to airborne asbestos fibers is a health hazard. Bulk samples submitted for analysis are oftentimes friable and may release fibers during handling or matrix reduction steps. All sample and slide preparations must be carried out in a HEPA-filtered hood or glove box with continuous airflow (negative pressure). Handling of samples without these precautions may result in exposure of the analyst to and contamination of samples by airborne fibers.

2.2.5.1 Sample Preparation

Slide mounts are prepared for the identification and quantitation of asbestos in the sample.

2.2.5.1.1 Qualitative Analysis Preparation

The qualitative preparation must allow the PLM analysis to classify the fibrous components of the sample as asbestos or nonasbestos matrix. The major goal of the qualitative preparation is to mount easily visible fibers in appropriate refractive index liquids for complete optical characterization. Often this can be accomplished by making immersion grain mounts of random subsamples of the homogeneous material. Immersion liquids with refractive indices close to the suspected (see macroscopic analysis) asbestos mineral should be used for the qualitative analysis so that n_D can be determined. Problem samples include those with inhomogeneities, coatings, small fibers, and interfering compounds. Additional qualitative preparations are often necessary for these types of samples. All samples, but especially those lacking homogeneity, may require picking of fibers from specific sample areas during the macroscopic examination. Coatings on the fibers often need to be removed by mechanical or chemical means. Teasing the particles apart or use of a mortar and pestle or similar mechanical method often is sufficient to free fibers from coatings. Chemical means of removing some coatings and interfering compounds are discussed in Section 2.3, Gravimetry.

2.2.5.1.2 Quantitative Analysis Preparation

The major purpose of the quantitative preparation is to provide the analyst with a representative grain mount of the sample in which the asbestos can be observed and distinguished from the nonasbestos matrix. This is typically performed by using randomly selected subsamples from a homogeneous sample (see macroscopic analysis.) Particles should be mounted in a refractive index (RI) liquid that allows the asbestos to be visible and distinguished from nonasbestos components. Care should be taken to ensure proper loading and even distribution of particles. Both the qualitative and quantitative sample preparations are often iterative processes. Initial samples are prepared and analyzed. The PLM analysis may encounter problems or questions that can only be resolved by further preparations, e.g. through the use of different RI immersion liquids, elimination of interfering compounds, sample homogenization, etc.

For layered materials, subsamples should be taken from each individual or discrete layer. Each of these subsamples should be treated as a discrete sample, but, as stated in Section 2.1.5.2, the results for the individual layers or materials may be combined if called for by monitoring requirements.

Homogenization involves the use of any of a variety of devices, such as a mortar and pestle, mill, or blender to pulverize, disaggregate and mix heterogeneous, friable bulk materials. Selection of the appropriate device is dependent upon personal preference and the nature of the materials encountered. A blender or mortar and pestle may be adequate for homogenizing materials that lack appreciable amounts of tacky matrix/binder, and for separating interfering components from the fibers. For materials which are unusually sticky or tacky, or contain unusually long asbestos fibers, milling (especially freezer milling) may be more efficient. However, milling should be discontinued as soon as the material being milled appears homogeneous, in order to reduce the potential for mechanically reducing fiber size below the resolving power of the polarizing microscope. Hammer mills or cutting mills may also be used on these materials; however, the same precaution regarding reduction of fiber size should be taken. Blending /milling devices should be disassembled (when possible) and thoroughly cleaned after each use to minimize contamination.

2.2.5.2 Analysis

Analysis of bulk building materials consists of the identification and semi-quantitation of the asbestos type(s) present, along with the identification, where possible, of fibrous, nonasbestos materials, mineral components and matrix materials. If the sample is heterogeneous due to the presence of discrete layers or two or more distinct building materials, each layer or distinct material should be analyzed, and results reported. Total asbestos content may also be stated in terms of a relative percentage of the total sample.

2.2.5.2.1 Identification

Positive identification of asbestos requires the determination of the following optical properties:

- Morphology
- Color and, if present, pleochroism
- Refractive indices (± .005)
- Birefringence
- Extinction characteristics
- Sign of elongation

Descriptions of the optical properties listed above for asbestos fibers may be found in Appendix A, Glossary of Terms. Table 2-2 lists the above properties for the six types of asbestos and Table 2-3 presents the central stop dispersion staining colors for the asbestos minerals with selected high-dispersion index liquids. Tables 2-4 and 2-5 list selected optical properties of several mineral and man-made fibers. All fibrous materials in amounts greater than trace should be identified as asbestos or nonasbestos, with all optical properties measured for asbestos and at least one optical property measured for each nonasbestos fibrous component that will distinguish each from asbestos. Small fiber size and/or binder may necessitate viewing the sample at higher magnification (400-500x) than routinely used (100x).

Asbestos types chrysotile, amosite and crocidolite, are currently available as SRM 1866 from the Office of Standard Reference Materials, National Institute of Standards and Technology.

2.2.5.2.2 Quantitation of Asbestos Content

As described in Sections 2.1.5 and 2.1.6, a visual volume estimation of the relative concentrations of asbestos and nonasbestos components should be made during the macroscopic examination. In addition, quantitation of asbestos content should be performed on subsample slide mounts using calibrated visual area estimates and/or a point counting procedure. Section 2.1.6 and Appendix C discuss the procedures for preparation and use of calibration standards. After thorough PLM analysis in which the asbestos and other components of the bulk material are identified, several slides should be carefully prepared from randomly selected subsamples. If the sample is not homogenous, some homogenization procedure should be performed to ensure that slide preparations made from small pinch samples are representative of the total sample. Homogenization may range from gentle mixing using a mortar and pestle to a brief period of mixing using a blender equipped with a mini-sample container. The homogenization should be of short duration (~15 seconds) if using the blender technique so as to preclude a significant reduction in fiber size. The use of large cover slips (22x30mm) allows for large subsamples to be analyzed. Each slide should be checked to ensure that the subsample is representative, uniformly dispersed, and loaded in a way so as not to be dominated by superimposed (overlapping) particles.

During the qualitative analysis of the sample, the analyst should decide on the appropriate optical system (including magnification) to maximize the visibility of the asbestos in the sample while still allowing the asbestos to be uniquely distinguished from the matrix materials. The analyst may choose to alter the mounting medium or the optical system to enhance contrast. During the quantitative analysis, slides should be scanned using an optical setup that yields the best visibility of the asbestos. Upon finding asbestos, the parameters that were selected in the qualitative analysis for uniquely distinguishing it from the matrix should be used for identification. These properties will vary with the sample but include any or all of the parameters required for the qualitative analysis. (For instance, low magnification allows for concurrent use of dispersion staining (focal screening), but compromises resolution of extremely small diameter fibers; use of a compensator plate and crossed polarizers frequently enhances the contrast between asbestos fibers and matrix material).

Visual area estimates should be made by comparison of the sample to calibration materials that have similar textures and fiber abundance (see Section 2.1.6 and Appendix C). A minimum of three slide mounts should be examined to determine the asbestos content by visual area estimation. Each slide should be scanned in its entirety and the relative proportions of asbestos and nonasbestos noted. It is suggested that the ratio of asbestos to nonasbestos material be recorded for several fields for each slide and the results be compared to data derived from the analysis of calibration materials having similar textures and asbestos content.

For point counting, an ocular reticle (cross-line or point array) should be used to visually superimpose a point or points on the microscope field of view. The cross-line reticle is preferred. Its use requires the scanning of most, if not all, of the slide area, thereby minimizing bias that might result from lack of homogeneity in the slide preparation. In conjunction with this reticle, a click-stop counting stage can be used to preclude introducing bias during slide advancement. Magnification used will be dictated by fiber visibility. The slide should be examined along multiple parallel traverses that adequately cover the sample area. The analyst should score (count) only points directly over occupied (nonempty) areas. Empty points should not be scored on the basis of the closest particle. If an asbestos fiber and a nonasbestos particle overlap so that a point is superimposed on their visual intersection, a point should be scored for both categories. If the point(s) is/are superimposed on an area which has several overlapping particles, the slide should be moved to another field. While not including them in the total asbestos points counted, the analyst should record the presence of any asbestos detected but not lying under the reticle cross-line or array points. A minimum of 400 counts (maximum of eight slides with 50 counts each to minimum of one slide with 400 counts) per sample is suggested, but it should be noted that accuracy and precision improve with number of counts. Point counting provides a determination of the projected area percent asbestos. Conversion of area percent to dry weight percent is not feasible unless the specific gravities and relative volumes of the different materials are known. It should be noted that the total amount of material to be analyzed is dependent on the asbestos concentration, i.e. the lower the concentration of asbestos, the larger the amount of sample that should be analyzed, in both the visual estimation and point counting methods.

Quantitation by either method is made more difficult by low asbestos concentration, small fiber size, and presence of interfering materials.

Appendix D

Laboratory Analytic Data

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RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: RL STOLLAR/ESE CHEMISTRY

PROJECT IDENTIFICATION: 6921239V

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION	Site ID
0892134	7-29-92	ESE-1, TAG P7943, BROWN/WHITE FIBROUS	BBOMCA02
0892135	7-29-92	ESE-2, TAG P7942, BROWN/WHITE FIBROUS	BBOMCA01
0892136	7-28-92	ESE-3, TAG P1638, GRAY FIBROUS	DYNA10
0892137	7-28-92	ESE-4, TAG P1637, BLACK/GRAY FIBROUS RESIN	DYNA09
0892138	7-29-92	ESE-5, TAG P7961, WHITE/BROWN FIBROUS	DYNA08

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0892134	0892135	0892136	0892137	0892138
ASBESTOS PRESENT	NO	NO	YES	YES	NO
ASBESTIFORM MINERALS:					
Amosite	--	--	--	--	--
Anthophyllite	--	--	--	--	--
Chrysotile	--	--	25	20	--
Crocidolite	--	--	--	--	--
Tremolite-Actinolite	--	--	--	--	--
TOTAL ASBESTOS	ND	ND	25	20	ND
OTHER FIBROUS MATERIALS:					
Fibrous Glass	--	--	--	--	--
Cellulose	99	98	60	25	98
Synthetics	--	TRACE	--	--	1
Other: _____	--	--	--	--	--
* NONFIBROUS MATERIAL:	1	2	15	55	1

ND = None Detected

TRACE = Less Than One Percent

Analyst: M K Ran **Date:** 8-11-92

RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS
BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: RL STOLLAR/ESE CHEMISTRY

PROJECT IDENTIFICATION: 6921239V

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION	Site ID
0892139	7-29-92	ESE-6, TAG P7960, GRAY FIBROUS	DYNA07
0892140	7-29-92	ESE-7, TAG P7959, BLACK/BROWN FIBROUS	DYNA06
0892141	7-29-92	ESE-8, TAG P7958, BROWN TILE (85%T), BLK MASTIC (15%M)	DYNA05
0892142	7-29-92	ESE-9, TAG P7957, BROWN FIBROUS, WHITE PAINT	DYNA04
0892143	7-28-92	ESE-10, TAG P7956, BLACK RUBBER-LIKE TILE	DYNA03

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0892139	0892140	0892141	0892142	0892143
ASBESTOS PRESENT	YES	NO	YES	NO	NO
ASBESTIFORM MINERALS:					
Amosite	--	--	--	--	--
Anthophyllite	--	--	--	--	--
Chrysotile	35	--	15T, 5M	--	--
Crocidolite	--	--	--	--	--
Tremolite-Actinolite	--	--	--	--	--
TOTAL ASBESTOS	35	ND	14	ND	ND
OTHER FIBROUS MATERIALS:					
Fibrous Glass	--	--	--	--	--
Cellulose	60	60	3	97	2
Synthetics	--	TRACE	--	--	--
Other:	--	--	--	--	--
* NONFIBROUS MATERIAL:	5	40	83	3	98

ND = None Detected
TRACE = Less Than One Percent

Analyst: M Kan Date: 8-11-92

RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS
BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: RL STOLLAR/ESE CHEMISTRY

PROJECT IDENTIFICATION: 6921239V

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION	S.+e I
0892144	7-28-92	ESE-11, TAG P9755, RED TILE (90%T), BLACK MASTIC (10%M)	DYNA0
0892145	7-28-92	ESE-12, TAG P7954, GRAY FIBROUS, WHITE PAINT, TAN RESIN	DYNA0
0892146	7-28-92	ESE-13, TAG P7953, OFF-WHITE BRITTLE	STOA01
0892147	7-29-92	ESE-14, TAG P1639, WHITE FIBROUS, GRAY FIBROUS MESH	HWA01
0892148	7-29-92	ESE-15, TAG P1640, GRAY/TAN FIBROUS	HWA02

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0892144	0892145	0892146	0892147	0892148
ASBESTOS PRESENT	YES	NO	NO	YES	YES
ASBESTIFORM MINERALS:					
Amosite	--	--	--	10	26
Anthophyllite	--	--	--	--	--
Chrysotile	8T	--	--	15	--
Crocidolite	--	--	--	--	--
Tremolite-Actinolite	--	--	--	--	--
TOTAL ASBESTOS	8	ND	ND	25	26
OTHER FIBROUS MATERIALS:					
Fibrous Glass	--	95	--	--	--
Cellulose	3	2	1	8	5
Synthetics	--	--	--	--	--
Other:	--	--	--	--	--
* NONFIBROUS MATERIAL:	89	3	99	67	69

ND = None Detected
TRACE = Less Than One Percent

Analyst: MKan Date: 8-11-92

RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS
BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: RL STOLLAR/ESE CHEMISTRY

PROJECT IDENTIFICATION: 6921239V

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION	Site ID
0892149	7-27-92	ESE-16, TAG P7952, WHITE BRITTLE	SAFA01
0892150	7-30-92	ESE-17, TAG P8115, BROWN FIBROUS	BBGOA01
0892151	7-30-92	ESE-18, TAG P8118, WHITE FIBROUS	DYNA13
0892152	7-30-92	ESE-19, TAG P8117, GRAY/BLACK/TAN FIBROUS	DYNA12
0892153	7-30-92	ESE-20, TAG P8116, WHITE FIBORUS	DYNA11

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0892149	0892150	0892151	0892152	0892153
ASBESTOS PRESENT	NO	YES	YES	YES	YES
ASBESTIFORM MINERALS:					
Amosite	--	--	8	--	--
Anthophyllite	--	--	--	--	--
Chrysotile	--	15	20	35	25
Crocidolite	--	10	--	--	--
Tremolite-Actinolite	--	--	--	--	--
TOTAL ASBESTOS	ND	25	28	35	25

ND = None Detected
TRACE = Less Than One Percent

OTHER FIBROUS MATERIALS:					
Fibrous Glass	--	--	--	--	--
Cellulose	TRACE	20	10	60	5
Synthetics	--	--	--	--	--
Other:	--	--	--	--	--
% NONFIBROUS MATERIAL:	100	55	62	5	70

Analyst: MKan Date: 8-11-92

RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS
BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: RL STOLLAR/ESE CHEMISTRY

PROJECT IDENTIFICATION: 6921239V

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION
0892154	7-31-92	ESE-21, TAG P8120, WHITE FIBROUS
0892155	8-03-92	ESE-22, TAG P7946, BLK/BRN TILE (95%T), BLK MASTIC (5%M)
0892156	8-03-92	ESE-23, TAG P7945, BROWN/BLACK FIBROUS
0892157	8-03-92	ESE-24, TAG P7944, GRAY FIBROUS, WHITE PAINT
0892158	8-03-92	ESE-25, TAG P7947, BROWN/TAN BRITTLE, BLACK FIBROUS

Site I
GGLAA01
~~06AA05~~
BBNMCA0
BBNMCA0
BBNMCA0
BBNMCA0

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0892154	0892155	0892156	0892157	0892158
ASBESTOS PRESENT	NO	YES	NO	NO	NO
ASBESTIFORM MINERALS:					
Amosite	--	--	--	--	--
Anthophyllite	--	--	--	--	--
Chrysotile	--	7T, 5M	--	--	--
Crocidolite	--	--	--	--	--
Tremolite-Actinolite	--	--	--	--	--
TOTAL ASBESTOS	ND	7	ND	ND	ND
OTHER FIBROUS MATERIALS:					
Fibrous Glass	20	--	--	98	--
Cellulose	3	3	95	--	80
Synthetics	--	--	--	--	--
Other: _____	--	--	--	--	--
* NONFIBROUS MATERIAL:	77	90	5	2	20

ND = None Detected
TRACE = Less Than One Percent

Analyst: MKfan Date: 8-11-92

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RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: RL STOLLAR/ESE CHEMISTRY

PROJECT IDENTIFICATION: 6921239V

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION	Site ID
0892338	8-04-92	ESE-26, TAG P8127, BROWN FIBROUS	DEPA01
0892339	8-05-92	ESE-27, TAG P8128, TAN FIBROUS, WHITE PAINT	DEP02
0892340	8-05-92	ESE-28, TAG P8129, TAN FIBROUS, WHITE PAINT	DEP03
0892341	8-05-92	ESE-29, TAG P8119, YELLOW FIBROUS	DEP04
0892342	8-05-92	ESE-30, TAG P8120, GRAY CEMENTITIOUS	DEP05

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0892338	0892339	0892340	0892341	0892342
ASBESTOS PRESENT	YES	NO	NO	NO	YES
ASBESTIFORM MINERALS:					
Amosite	--	--	--	--	--
Anthophyllite	--	--	--	--	--
Chrysotile	35	--	--	--	TRACE
Crocidolite	--	--	--	--	--
Tremolite-Actinolite	--	--	--	--	--
TOTAL ASBESTOS	35	ND	ND	ND	TRACE
OTHER FIBROUS MATERIALS:					
Fibrous Glass	--	--	--	99	--
Cellulose	5	96	95	TRACE	1
Synthetics	--	--	--	--	--
Other:	--	--	--	--	--
% NONFIBROUS MATERIAL:	60	4	5	1	99

ND = None Detected
TRACE = Less Than One Percent

Analyst: MKan Date: 8-18-92

RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS
BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: RL STOLLAR/ESE CHEMISTRY

PROJECT IDENTIFICATION: 6921239V

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION	Site ID
0892343	8-05-92	ESE-31, TAG P8121, GREEN CEMENTITIOUS, BROWN FIBROUS	DEPA06
0892344	8-05-92	ESE-32, TAG P8122, GREEN CEMENTITIOUS, BROWN FIBROUS	DEPA07
0892345	8-05-92	ESE-33, TAG P8123, GRN/GRAY LINO (50%L), GRAY FIBROUS BACKING (50%G)	DEPA08
0892346	8-05-92	ESE-34, TAG P8124, GRN/GRAY LINO (50%L), GRAY FIBROUS BACKING (50%G)	DEPA09
0892347	8-05-92	ESE-35, TAG P1678, BROWN RUBBER-LIKE MATERIAL	DEPA10

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0892343	0892344	0892345	0892346	0892347
ASBESTOS PRESENT	NO	NO	YES	YES	NO
ASBESTIFORM MINERALS:					
Amosite	--	--	--	--	--
Anthophyllite	--	--	--	--	--
Chrysotile	--	--	30G	40G	--
Crocidolite	--	--	--	--	--
Tremolite-Actinolite	--	--	--	--	--
TOTAL ASBESTOS	ND	ND	15	20	ND
OTHER FIBROUS MATERIALS:					
Fibrous Glass	--	--	--	--	--
Cellulose	10	15	20	20	TRACE
Synthetics	--	--	--	--	--
Other: _____	--	--	--	--	--
% NONFIBROUS MATERIAL:	90	85	65	60	100

ND = None Detected
TRACE = Less Than One Percent

Analyst: M V Ran Date: 8-18-92

RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS
BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: RL STOLLAR/ESE CHEMISTRY

PROJECT IDENTIFICATION: 6921239V

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION	Site ID
0892348	8-05-92	ESE-36, TAG P1679, BLACK/BROWN FIBROUS TAR	DEPA11
0892349	8-05-92	ESE-37, TAG P1680, BLACK/BROWN FIBROUS TAR	DEPA12
0892350	8-05-92	ESE-38, TAG P1681, BLACK/BROWN FIBROUS TAR	DEPA13
0892351	8-05-92	ESE-39, TAG P1682, BLACK/BROWN FIBROUS TAR	DEPA14
0892352	8-05-92	ESE-40, TAG P1683, BLACK/BROWN FIBROUS TAR	DEPA15

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0892348	0892349	0892350	0892351	0892352
ASBESTOS PRESENT	NO	NO	NO	NO	NO
ASBESTIFORM MINERALS:					
Amosite	--	--	--	--	--
Anthophyllite	--	--	--	--	--
Chrysotile	--	--	--	--	--
Crocidolite	--	--	--	--	--
Tremolite-Actinolite	--	--	--	--	--
TOTAL ASBESTOS	ND	ND	ND	ND	ND
OTHER FIBROUS MATERIALS:					
Fibrous Glass	--	--	--	--	--
Cellulose	45	45	40	40	45
Synthetics	TRACE	--	TRACE	TRACE	--
Other: _____	--	--	--	--	--
% NONFIBROUS MATERIAL:	55	55	60	60	55

ND = None Detected
TRACE = Less Than One Percent

Analyst: M C Ran

Date: 8-18-92

RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS
BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: RL STOLLAR/ESE CHEMISTRY

PROJECT IDENTIFICATION: 6921239V

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION	Site ID
0892353	8-05-92	ESE-41, TAG P1684, WHITE CEMENTITIOUS	DEPA 16
0892354	8-04-92	ESE-42, TAG P1662, TAN FIBROUS, WHITE PAINT	277A01
0892355	8-04-92	ESE-43, TAG P1663, OFF-WHITE/TAN BRITTLE	277A02
0892356	8-04-92	ESE-44, TAG P1664, OFF-WHITE/TAN CEMENTITIOUS	277A03
0892357	8-04-92	ESE-45, TAG P1665, OFF-WHT/TAN TILE (90%T), BLACK MASTIC (10%M)	277A04

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0892353	0892354	0892355	0892356	0892357
ASBESTOS PRESENT	NO	NO	NO	NO	YES
ASBESTIFORM MINERALS:					
Amosite	--	--	--	--	--
Anthophyllite	--	--	--	--	--
Chrysotile	--	--	--	--	15M
Crocidolite	--	--	--	--	--
Tremolite-Actinolite	--	--	--	--	--
TOTAL ASBESTOS	ND	ND	ND	ND	2
OTHER FIBROUS MATERIALS:					
Fibrous Glass	--	60	--	--	--
Cellulose	5	35	TRACE	2	3
Synthetics	--	--	--	--	--
Other:	--	--	--	--	--
% NONFIBROUS MATERIAL:	95	5	100	98	95

ND = None Detected
TRACE = Less Than One Percent

Analyst: M K Ran Date: 8-18-92

RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS
BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: RL STOLLAR/ESE CHEMISTRY

PROJECT IDENTIFICATION: 6921239Y

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION	Site ID
0892358	8-04-92	ESE-46, TAG P1666, BLACK/BROWN FIBROUS TAR	277A05
0892359	8-04-92	ESE-47, TAG P1667, BLACK FIBROUS	277A06
0892360	8-04-92	ESE-48, TAG P1668, TAN FIBROUS, WHITE PAINT	277A07
0892361	8-05-92	ESE-49, TAG P1669, GRAY/BLACK RUBBER-LIKE MATERIAL, TAN RESIN	275A01
0892362	8-05-92	ESE-50, TAG P1670, GRAY/TAN TILE (90%T), BLK MAST (10%M)	275A02

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0892358	0892359	0892360	0892361	0892362
ASBESTOS PRESENT	NO	NO	NO	NO	YES
ASBESTIFORM MINERALS:					
Amosite	--	--	--	--	--
Anthophyllite	--	--	--	--	--
Chrysotile	--	--	--	--	15M
Crocidolite	--	--	--	--	--
Tremolite-Actinolite	--	--	--	--	--
TOTAL ASBESTOS	ND	ND	ND	ND	2
OTHER FIBROUS MATERIALS:					
Fibrous Glass	5	--	--	--	--
Cellulose	4	80	96	2	3
Synthetics	--	--	--	--	--
Other: _____	--	--	--	--	--
% NONFIBROUS MATERIAL:	91	20	4	98	95

ND = None Detected
TRACE = Less Than One Percent

Analyst: MKRan **Date:** 8-18-92

RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS
BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: RL STOLLAR/ESE CHEMISTRY

PROJECT IDENTIFICATION: 6921239V

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION	Site ID
0892363	8-05-92	ESE-51, TAG P1671, WHITE TILE (90%T), BLK MASTIC (10%M)	275A01
0892364	8-05-92	ESE-52, TAG P1672, GRAY DUST	275A04
0892365	8-05-92	ESE-53, TAG P1673, BRN/RED RUBBER-LIKE, TAN RESIN	275A05
0892366	8-05-92	ESE-54, TAG P1674, BRN/RED RUBBER-LIKE, TAN RESIN	275A06
0892367	8-05-92	ESE-55, TAG P1675, GRAY FIBROUS	275A07

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0892363	0892364	0892365	0892366	0892367
ASBESTOS PRESENT	YES	NO	NO	NO	YES
ASBESTIFORM MINERALS:					
Amosite	--	--	--	--	--
Anthophyllite	--	--	--	--	--
Chrysotile	20M	--	--	--	30
Crocidolite	--	--	--	--	--
Tremolite-Actinolite	--	--	--	--	--
TOTAL ASBESTOS	2	ND	ND	ND	30
OTHER FIBROUS MATERIALS:					
Fibrous Glass	--	--	--	--	--
Cellulose	2	TRACE	2	1	20
Synthetics	--	--	--	--	--
Other:	--	--	--	--	--
% NONFIBROUS MATERIAL:	96	100	98	99	50

ND = None Detected

TRACE = Less Than One Percent

Analyst: M K Ran **Date:** 8-18-92

RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS
BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: RL STOLLAR/ESE CHEMISTRY

PROJECT IDENTIFICATION: 6921239V

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION	Site ID
0892368	8-06-92	ESE-56, TAG P1676, WHITE FIBROUS	275A08
0892369	8-06-92	ESE-57, TAG P1677, BLACK/BROWN FIBROUS TAR	275A09

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0892368	0892369
ASBESTOS PRESENT	NO	NO
ASBESTIFORM MINERALS:		
Amosite	--	--
Anthophyllite	--	--
Chrysotile	--	--
Crocidolite	--	--
Tremolite-Actinolite	--	--
TOTAL ASBESTOS	ND	ND

ND = None Detected
TRACE = Less Than One Percent

OTHER FIBROUS MATERIALS:		
Fibrous Glass	--	--
Cellulose	TRACE	80
Synthetics	--	TRACE
Other: _____	--	--
% NONFIBROUS MATERIAL:	100	20

Analyst: M Khan **Date:** 8-18-92

Environmental
Science &
Engineering, Inc.

March 1, 1993

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 3

To Loren Gunderson	From Kevin McHugh
Co. Watkins Johnson	Co. ESE
Dept.	Phone # 741-0639
Fax #	Fax # 293-0954

Environmental Science & Engineering, Inc.
7330 South Alton Way, Suite N
Englewood, CO 80112

Attn: Kevin McHugh

Analysis: Six bulk samples were submitted for analysis. The samples were received from Environmental Science & Engineering, Inc. on February 19, 1993.

Method: Asbestos (Identification & content)

The samples were analyzed in accordance with EPA Method 600/M4-82-020. Small portions of the sample were placed in Series: E High Dispersion Refractive Index Liquid on a microscope slide. The prepared sample was then observed at 100X (power) under polarized light using a McCrone Dispersion Staining Objective. The characteristics of the fibers were compared to the known properties of asbestos fibers for dispersion color, polarity, extinction and general morphology. Sample content (given by percentage) was made by visual estimates by comparison of asbestos fiber to non-asbestos materials.

Results: See attached results report.

Discussion: The samples were routine in nature and no departures from standard test methods were necessary. This report relates only to the items tested.

Laboratory raw data is filed and available upon request. The samples will be retained 6 months for further review or analysis if necessary.

Analyzed by: Melinda Ryan — Melinda Ryan

3-1-93 — Date

Environmental Science & Engineering, Inc.

RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: ESE/DENVER CHEMISTRY LAB

PROJECT IDENTIFICATION: 6931328V, PRESIDIO

SAMPLE DESCRIPTION:

	SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION
*62	0293293	2-04-93	62, 275A10, TAN TILE (90%T), BLACK MASTIC (10%M)
*63	0293294	2-04-93	63, 275A11, WHITE FIBROUS
*64	0293295	2-04-93	64, 275A12, BLACK FIBROUS TAR
*65	0293296	2-04-93	65, 277A08, GRAY FIBROUS
*66	0293297	2-04-93	66, 277A09, GREEN TILE, BROWN FIBROUS

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0293293	0293294	0293295	0293296	0293297
ASBESTOS PRESENT	YES	NO	NO	YES	NO
ASBESTIFORM MINERALS:					
Amosite	--	--	--	--	--
Anthophyllite	--	--	--	--	--
Chrysotile	15M	--	--	45	--
Crocidolite	--	--	--	--	--
Tremolite-Actinolite	--	--	--	--	--
TOTAL ASBESTOS	2	ND	ND	45	ND
OTHER FIBROUS MATERIALS:					
Fibrous Glass	--	--	TRACE	--	--
Cellulose	2	1	70	40	15
Synthetics	1	TRACE	1	--	--
Other:	--	--	--	--	--
* NONFIBROUS MATERIAL:	95	99	29	15	85

ND = None Detected

TRACE = Less Than One Percent

Analyst: MK Ran Date: 3-1-93

RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: ESE/DENVER CHEMISTRY LAB

PROJECT IDENTIFICATION: 6931328V, PRESIDIO

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION
*67 0293298	2-04-93	67, 277A10, GRAY TILE

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	0293298
ASBESTOS PRESENT	NO
ASBESTIFORM MINERALS:	
Amosite	--
Anthophyllite	--
Chrysotile	--
Crocidolite	--
Tremolite-Actinolite	--
TOTAL ASBESTOS	ND

ND = None Detected
TRACE = Less Than One Percent

OTHER FIBROUS MATERIALS:	
Fibrous Glass	--
Cellulose	TRACE
Synthetics	--
Other: _____	--
% NONFIBROUS MATERIAL:	100

Analyst: M K Ran Date: 3-1-93

Appendix E

Laboratory Analytical Data for Duplicates

Environmental Science & Engineering, Inc.

Dupl. copies

RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS BY POLARIZED LIGHT MICROSCOPY (PLM)

CLIENT: RL STOLLAR/ESE CHEMISTRY

PROJECT IDENTIFICATION: 6921239V

PAGE 1 OF 1

SAMPLE DESCRIPTION:

SAMPLE NUMBER	SAMPLE DATE	DESCRIPTION/CONDITION/LOCATION
1292116	8-04-92	TAG P1665, TAN TILE (90%T), BLACK MASTIC (10%M) 27740 4
1292117	8-05-92	TAG P1670, TAN TILE (90%T), BLACK MASTIC (10%M) 27542
1292118	7-30-92	TAG P8118, WHITE FIBROUS DUPLICATE
1292119	8-04-92	TAG P8127, GRAY/BROWN CEMENTITIOUS & FIBROUS DUPLICATE

RESULTS OF PLM ANALYSIS: ESTIMATED VOLUME PERCENTS

Sample Number	1292116	1292117	1292118	1292119
ASBESTOS PRESENT	YES	YES	YES	YES
ASBESTIFORM MINERALS:				
Amosite	--	--	--	--
Anthophyllite	--	--	10	--
Chrysotile	18 M 15	15 M 15	25	30
Crocidolite	--	--	--	--
Tremolite-Actinolite	--	--	--	--
TOTAL ASBESTOS	2 2	2 2	35 38%	30 35%
ND = None Detected				
M = MASTIC				
OTHER FIBROUS MATERIALS:				
Fibrous Glass	--	--	--	--
Cellulose	2	2	10	10
Synthetics	--	--	--	--
Other:	--	--	--	--
* NONFIBROUS MATERIAL:	96	96	55	60

Date: 12-11-92

Appendix F

Chain of Custody Documents

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Presidio SUPP (W) 8/11/92	8/5/92	BLDG File Type: EBS	275 A01

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Whalen	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1400	P1669	ASBESTOS	plastic bag	

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Presidio SUPP	8/5/92	BLDG File Type: CBS	275 AØ2

Samplers: (Signature)	Sample Depth:	Sample Technique:
[signature]	Ø.Ø	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1430	P1670	ASBESTOS	plastic bag	

(a) 8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802079311

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPPS Presidio SUPP (AW) 8/7/92	8/5/92	BLDG File Type: CBS	275 AØ3

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Whalen	Ø.Ø	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1430	P1671	ASBESTOS	plastic bag	

(AW) 8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Whalen	8/7/92 1730	D+L
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 68Ø207931

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Presidio SUPP	8/5/92	BLDG File Type: CBS	275 A04

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Wheeler	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1440	P1672	ASBESTOS	plastic bag	

8/6/92 (CW)

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Wheeler	8/7/92 1730	DHL
Relinquished by: (Signature)	(CW) 8/7/92 Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802207931

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab.ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Presidio SUPP	8/5/92	BLDG File Type: CBS	275 AOS

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Whalen	0.0'	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1450	P1673	ASBESTOS	plastic bag	

8/10/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Whalen	8/7/92 1730	D+H
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802079311

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Presidio SUPP	8/5/92	BLDG File Type: CBS	275 A Ø6

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Whalen	Ø.Ø	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
15ØØ	P1674	ASBESTOS	plastic bag	

(N) 8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Whalen	8/7/92 1730	D+L
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 68Ø2Ø7931

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Presidio SUPP	8/5/92	BLDG File Type: EBS	275 A07

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Chalk	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1610	P1675	ASBESTOS	plastic bag	

8/6/92 CW

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Chalk	8/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 68 020 7931

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Presidio SUPP	8/6/92	BLDG File Type: CBS	275 AØ8

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Whale	Ø.Ø	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1150	P1676	ASBESTOS	plastic bag	

(LV) 8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Whale	8/7/92 1730	D+L
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 68Ø2Ø7931

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Presidio SUPP	8/6/92	BLDG File Type: CBS	275 A09

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Wall	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1200	P1677	ASBESTOS	plastic bag	

8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Wall	8/7/92 1730	DH/H
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680207931

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Presidio SuDD	2/4/93	BLDG File Type CBS	275A 10

Samplers: (Signature)	Sample Depth:	Sample Technique:
Karen Gunderson	Ø. Ø	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0830	50130	ASBESTOS	Plastic Bag	

2/17/93

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Karen Gunderson	2/17/93 1600	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Presidio Supp	2/4/93	BLDG File Type CBS	275A11

Samplers: (Signature)	Sample Depth:	Sample Technique:
Loren Henderson	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0840	50131	ASBESTOS	plastic bag	

2/17/93

2/21

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Loren Henderson	2/17/93 1600	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS- TERS Presidio Supp	2/4/93	BLDG File Type CBS	275A12

Samplers: (Signature)	Sample Depth:	Sample Technique:
Loren Henderson	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0850	SO132	Asbestos	plastic bag	

2/17/93

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Loren Henderson	2/17/93 1600	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS PRESIDIO SUPP. (CW) 8/7/92	8/4/92	BLDG File Type: CBS	277 AØ1

Samplers: (Signature)	Sample Depth:	Sample Technique:
	Ø.Ø	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
Ø825	P1662	ASBESTOS	plastic bag	

(CW) 8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	8/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 68Ø 2Ø7931

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS PRESIDIO SUPP.	8/4/92	BLDG File Type: CAS	277 A02

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Wheeler	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0855	P16663	ASBESTOS	plastic bag	

(W) 8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Wheeler	8/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802079 31

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Presidio SUPP	8/4/92	BLDG File Type: CBS	277 A Ø3

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Wheal	Ø.Ø	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
Ø900	P1664	ASBESTOS	Ziploc bag	

8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Wheal	8/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802079311

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS PRESIDIO SUPP.	8/4/92	BLDG File Type: CBS	277 A04

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Mirabal	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0910	P1665	ASBESTOS	plastic bag	

@ 8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Mirabal	8/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802079931

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS PRESIDIO SUPP	8/4/92	BLDG File Type: EBS	277 AOS

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Mack	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0930	P16616	ASBESTOS	plastic tag	

CW 8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Mack	8/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802079311

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Presidio @8/4/92 SUPP	8/4/92	BLDG File Type: CBS	277 A06

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Whalen	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0935	P1667	ASBESTOS	plastic bag	

@ 8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Whalen	8/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680 267931

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS PRESIDIO SUPP.	8/4/92	BLDG File Type: EBS	277 AØ7

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Chaler	Ø.Ø	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
ØØ95Ø	P16168	ASBESTOS	Kwik bag	

8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Chaler	6/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802079311

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TERS Presidio SUPP	2/4/93	BLDG File Type CRS	277A08

Samplers: (Signature)	Sample Depth:	Sample Technique:
Loren Lunderson	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0900	S0133	Asbestos	plastic bag	

2/17/93

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Loren Lunderson	2/17/93 1600	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number

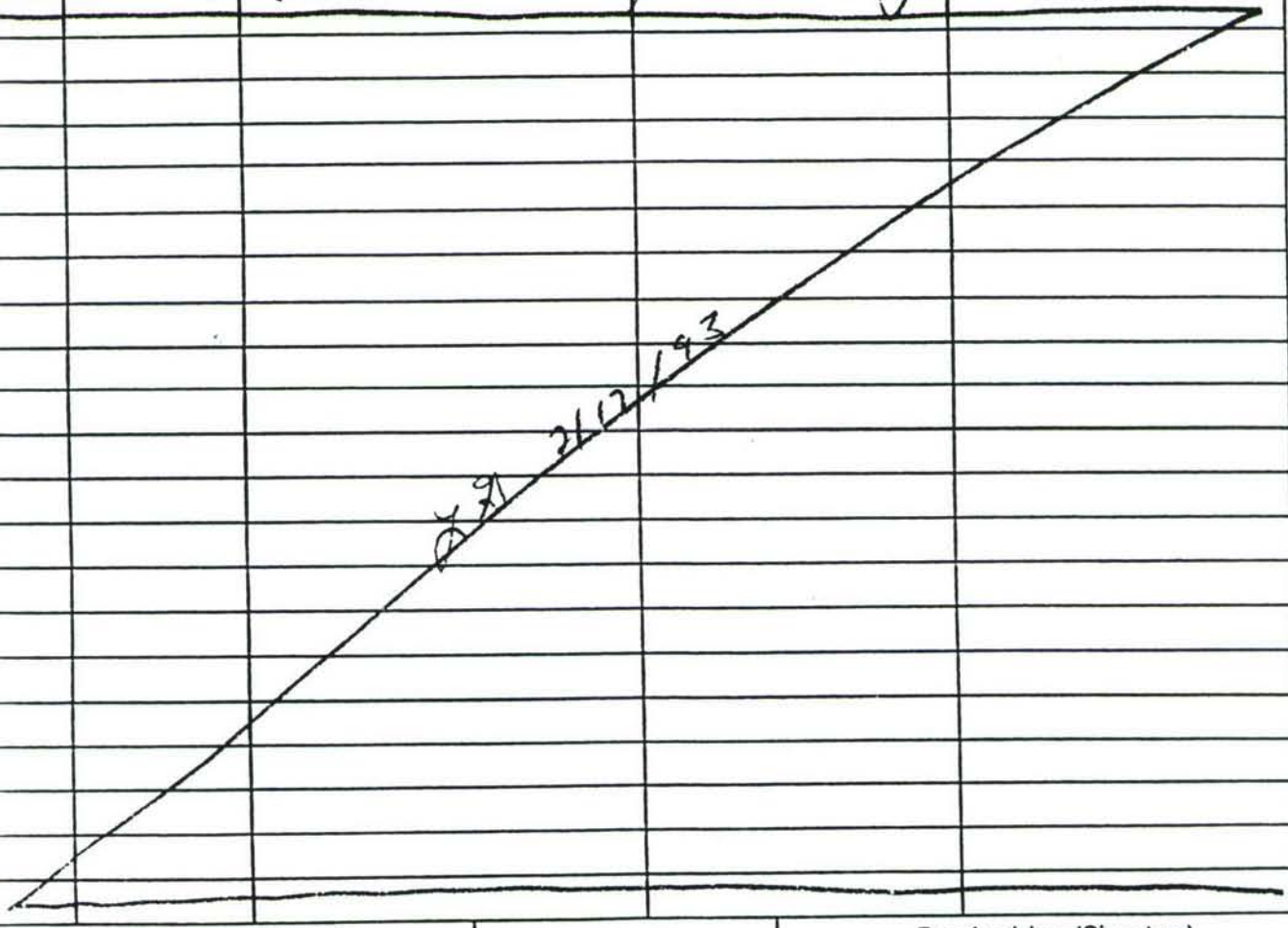
R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TERS Presidio Supp	2/4/93	RLDG File Type CBS	277A09

Samplers: (Signature)	Sample Depth:	Sample Technique:
Loren Henderson	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0910	S0134	Asbestos	plastic bag	



Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Loren Henderson	2/17/93 1600	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TEPS Presidio Supp	2/4/93	BLDG F.I.S Type CRS	277A10

Samplers: (Signature)	Sample Depth:	Sample Technique:
Lorin Henderson	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0920	S0135	Asbestos	plastic bag	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Lorin Henderson	2/17/93 1005	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TEPS Presidio SUPP	7/28/92	BATT File CBS Type:	STO A01

Samplers: (Signature)	Sample Depth:	Sample Technique:
C. Whalen, UEHI	NA	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0930	P7953	ASBESTOS	plastic bag	

7/28/92

C. Whal

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
C. Whalen UEHI	7/29/92 1640	OHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680207754

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TEPS Presidio SUPP	7/31/92	BATT File Type: CBS	GGLA A01

2954

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Thrall	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1450	P8125	ASBESTOS	plastic bag	

(RW) 7/31/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Thrall	7/31/92 1525	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680 207 986

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TEPS Presidio SUPP	07-27-92	BATT File Type: CBS	SAFA01

281

Samplers: (Signature)	Sample Depth:	Sample Technique:
Loren Henderson	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
14:25	P7952	ASBESTOS	plastic bag	

7-27-92 1630

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Loren Henderson	7-29-92	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680207754

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
		7-29-92		

Samplers: (Signature)	Sample Depth:	Sample Technique:
	0.0	O

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0935	26025	RMAN	125 ml wide mouth glass	

7-29-92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	7-29-92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6803081130

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
		7-29-92		

Samplers: (Signature)	Sample Depth:	Sample Technique:
Tom Anderson Christie Heath	0.0	6

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1030	P8026	EXP/W	125 ml wide mouth amber	

7-29-92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Tom Anderson	7-29-92 1130	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680208130

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID: ED	Project Name: PS - TEPS Presidio SUPP	Sample Date: 7/30/92	Site Type: BATT File Type: CBS	Site Identification: B3BGO-A01

294

Samplers: (Signature)	Sample Depth: 00	Sample Technique: G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
10:40	P8115	ASBESTOS	plastic bag	

(W) 7/30/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	7/2x 92 1630	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680 207 986

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TEPS Presidio SUPP	8/3/92	CASE File Type: CBS	BBNMC AØ1 280

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Whalen	Ø.Ø	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
Ø905	P7944	ASBESTOS	plastic bag	

8/3/92

CW

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Whalen	8/3/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802079 75

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TEPS Presidio SUPP	8/3/92	CASE File Type: CBS	BBNMC A02

280

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Whalen	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0907	P7945	ASBESTOS	plastic bag	

8/3/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Whalen	8/3/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802074 75

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID: ED	Project Name: PS - TEPS Presidio SUPP	Sample Date: 8/3/92	Site Type: CASK File Type: CBS	Site Identification: BBNMC AØ3
Samplers: (Signature) Cindy Wralen		Sample Depth: Ø.Ø		Sample Technique: G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
Ø93Ø	P7946	ASBESTOS	plastic bag	

CW 8/3/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy L Wralen	8/3/92 173Ø	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 68020797 5

280

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TEPS Presidio SUPP	8/3/92	CASE File Type: CBS	BBNMC A04

280

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Whalen	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0945	P7947	ASBESTOS	plastic bag	

8/3/92

(W)

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Whalen	8/3/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680207975

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TEPS Presidio Site	1/29/92	CASE File Type CBS	BBOMC-A01

Samplers: (Signature)	Sample Depth:	Sample Technique:
[signature] LEHI	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1430	[illegible]	[illegible]	[illegible]	

(W) 1/29/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature] LEHI	1/29/92 1644	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number [illegible]

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
		7/29/92		BBAMA-A02

Samplers: (Signature)	Sample Depth:	Sample Technique:
	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1445				

7/29/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	7/29/92 1704	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680207724

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TEPS Presidio SUPP	7/28/92	BATT File Type: CBS	DYN A01

2813

Samplers: (Signature)	Sample Depth:	Sample Technique:
C. Whalen UEHI	0.0.	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
10:00	P7954	ASBESTOS	plastic bag	

C.W. 7/28/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
C. Whalen UEHI	7/29/92 1642	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802077754

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TEPS Presidio SUPP	7/28/92	BATT File Type: CBS	DYN A02

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Whalen LEHI	0.0.	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
10:05 A	P7955	ASBESTOS	plastic bag	

CW 7/28/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Whalen LEHI	7/29/92 1642	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802077548

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TEPS Presidio SUPP	7/28/92	BATT File Type: CBS	DYN A03

28:

Samplers: (Signature)	Sample Depth:	Sample Technique:
UEHI	00	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
10:05	P7956	ASBESTOS	plastic bag	

CW 7/28/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
UEHI	7/29/92 1643	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680207754

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TEPS Presidio SUPP	7/28/92	BATT File Type: CBS	DYNA04

281

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Wheeler UEHI	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
10:10	P7957	ASBESTOS	plastic bag	

CW 7/28/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Wheeler UEHI	7/29/92 1643	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680207754

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TRPS Presidio SUPP	7/28/92	BATT File Type: GBS	DYNAOS

2817

Samplers: (Signature)	Sample Depth:	Sample Technique:
UEHI	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
10:15A	P7958	ASBESTOS	plastic bag	

7/28/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	7/29/92 1643	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 68020754

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PI TEPS Precipit. CHPT	7/28/92	BATT File Type: CBS	DYN A06

Samplers: (Signature)	Sample Depth:	Sample Technique:
UEHI	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
10:18A	P7959	ASBESTOS	plastic bag	

7/28/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
UEHI	7/29/92 1643	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680207754

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID: KD	Project Name: PS – TKPS Presidio SUPP	Sample Date: 7/28/92	Site Type: BATT File Type: GBS	Site Identification: DN 407
Samplers: (Signature) Cindy Whalen UEHI		Sample Depth: 0.0	Sample Technique: G	

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
10:30a	P7960	ASBESTOS	plastic bag	

CW 7/28/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Whalen UEHI	7/29/92 1643	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680207754

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Phase II SWPP	7/25/92	BATT FURNACE CBS	DYN A09

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Whalen WEHI	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1100	P11637	ASBESTOS	plastic bag	

7/29/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Whalen WEHI	7/29/92 1644	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802077754

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
E&D	PSTEPS Presidio Sump	7/28/92	BATT FACILITY/CBS	DYNA 10

Samplers: (Signature)	Sample Depth:	Sample Technique:
UEHI	—	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1130	P1638	ASBESTOS	plastic bag	

7/29/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
UEHI	7/29/92 1644	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802077754

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
RD	PS - TEPS Presidio SUPP	7/30/92	BATT File Type: CBS	DYN-A11

Samplers: (Signature)

Sample Depth: 0.0

Sample Technique: G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1315	P8116	ASBESTOS	plastic bag	
			7/30/92	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	7/30/92 1630	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680 207 986

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
KD	PS - TRPS Presidio SUPP	7/30/92	BATH FUEL SYS	DYN A12

Samplers: (Signature) Cindy Wheeler

Sample Depth: 0'0"

Sample Technique: G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1330	P8117	ASBESTOS	plastic bag	

7/30/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Wheeler	7/30/92 1630	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680 207 986

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

294

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
RD	PS - TEPS Presidio SUPP	7/30/92	BATT File Type: CBS	DYN A&B

Samplers: (Signature)

Sample Depth: 0.0

Sample Technique: G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1450	P8118	ASBESTOS	plastic bag	

7/30/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	7/30/92 1635	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 680 207 986

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
		8/4/92		DEP A01

Samplers: (Signature)	Sample Depth:	Sample Technique:
		G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS

8/4/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	8/4/92 1730	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
		8/5/92		DEP #02

Samplers: (Signature)	Sample Depth:	Sample Technique:
	2.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0925				

8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	8/7/92 0730	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6808207431

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
		8/5/92		DEP A03

Samplers: (Signature)	Sample Depth:	Sample Technique:
	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
0945				

8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	8/7/92 1330	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6890207931

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
		8/5/92		DEP A04

Samplers: (Signature)	Sample Depth:	Sample Technique:
	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1455				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	8/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 8074731

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	[illegible]	8/5/92	[illegible]	DEPTH 05

Samplers: (Signature)	Sample Depth:	Sample Technique:
[signature]	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1015	[illegible]	[illegible]	[illegible]	

8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Airbill Number	6850207931	

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
		8/5/92		DEPA06

Samplers: (Signature)	Sample Depth:	Sample Technique:
	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1030				

8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	8/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6802021131

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	[illegible]	8/5/92	[illegible]	DEP A07

Samplers: (Signature)	Sample Depth:	Sample Technique:
[signature]	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1036	[illegible]	[illegible]	[illegible]	

8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6801047931

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
		8/5/92		DEP A08

Samplers: (Signature)	Sample Depth:	Sample Technique:
	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1050				

8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	8/7/92 1730	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6845287931

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	LG TEPS Feasibility SUPP	8/5/92	DAFF File [illegible]	DEP #109

Samplers: (Signature)	Sample Depth:	Sample Technique:
[signature]	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1050	[illegible]	[illegible]	[illegible]	

8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8-6-92 1730	[signature]
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Airbill Number	6580207931	

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS - TEPS Presidio SUPP	8/5/92	BUTT FLUXES	DEP A10

Samplers: (Signature)	Sample Depth:	Sample Technique:
[signature]	0.0	C

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1100	P1678	ASBESTOS	[illegible]	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8/4/92 1738	DTL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Airbill Number	6307074131	

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TCPS Pesticide Supp	8/5/92	Bulk Flotwide: CBS	DEPA11

Samplers: (Signature)	Sample Depth:	Sample Technique:
[signature]	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1115	P1679	ASBESTOS	Plastic bag	

8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8/6/92 0930	[signature]
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 68 [illegible] 7951

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS Texas Presidio SUPP	8/5/92	BATT FUTURE CBS	DEP #12

Samplers: (Signature)	Sample Depth:	Sample Technique:
[signature]	0.0	C

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1120	P1680	ASBESTOS	Plastic Bag	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8/5/92 1230	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Airbill Number	6308 10 4931	

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TE PS Presidio SUPP	8/5/92	GW TT EB TYPE: GDS	DE P-A13

Samplers: (Signature)	Sample Depth:	Sample Technique:
[signature]	0.0	C

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1130	P1681	ASBESTOS	Plastic bag	
			(1) 8/6/92	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8/7/92 1930	DHL
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6800947931

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPSPresidio SUPP	8/5/92	BATT F.U TYPE: PS	DE P A14

Samplers: (Signature)	Sample Depth:	Sample Technique:
[signature]	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1144	P11682	PCBs TCLP	Amber Jar	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8/6/92 1234	D.H.
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Airbill Number	6807947931	

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-TEPS Pinsidle Supp	8/5/92	BATT Facility Type: CBS	DEP A15

Samplers: (Signature)	Sample Depth:	Sample Technique:
[signature]	0-0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1140	P 1683	ASBESTOS	Plastic bag	

8/6/92

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8/7/92 1300	[signature]
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Airbill Number	6802649931	

R. L. STOLLAR & ASSOCIATES, INC.

CHAIN-OF-CUSTODY RECORD

Lab ID:	Project Name:	Sample Date:	Site Type:	Site Identification:
ED	PS-72 Presidio SUPP	8/5/02	BUTT	DEP A16

Samplers: (Signature)	Sample Depth:	Sample Technique:
Cindy Wheeler	0.0	G

TIME	TAG NO.	ANALYSIS REQUIRED	CONTAINER	PRESERVATIVE/REMARKS
1150	P1684	ASBESTOS	Plastic bag	

8/6/02

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cindy Wheeler	8/7/02 1930	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Airbill Number 6807 2079 31

Appendix G

Worksheets for Army Friable Asbestos Assessment Checklist

Fig. 1b

ARMY FRIABLE ASBESTOS ASSESSMENT CHECKLIST

Form # _

BASE: PRESIDIO BLDG/RM NOS. Battery Dynamite FACILITY/OFFICE: Area B INSPECTOR (DATE) C. Whalen, UEHI 7/28/92

..... Part I: DAMAGE/RISK .....

* Physical Damage, Visible evidence: ____(5) High: ____(4) Moderate: ____(2) Low: ____(1) Minimal: O (0) None
* Water Damage: ____(3) Yes; O (0) No
* Proximity to Items for Repair. If both a. and b. apply score the one with the highest rating. (Max 3 pts). How far? :
"a". Sprayed or Trowelled-on: ____(3) <1 ft or ceiling panel contam.; ____(2) 1≤?<5 ft; ____(1) ≥5 ft; O (0) ≥5 ft No rout. maint.
"b". Pipe, Boiler, or Duct Insulation, Damage by routine maint. ? : ____(3) ceiling panel contam.; ____(1) Yes; O (0) No
* Type of Mat'l: O (0-4) Other Friable mat'l: ____(1) Boiler and/or pipes; ____(3) HVAC; ____(4) Ceilings or walls
* Potential for Contact: "<10 ft" ____(8) High; ____(5) Medium; 2 (2) Low; "≥10 ft" ____(5) High; ____(3) Medium; ____(0) Low
* Asbestos Content, % with highest prob: ____(1) 1<%≤30; X (3) 30<%≤50; ____(5) >50%; NO HAZARD all samples no asbestos

Damage (D) Total 5

..... Part II: EXPOSURE .....

* Friable: ____(6) High; X (3) Moderate; X (1) Low
* Area of Visible Mat'l: O (0) <10 ft²; ____(1) 10≤ ft²<100; ____(2) 100≤ ft²<1000; ____(3) ≥1000 ft²
* Walls: ____(4) Rough; X (3) Pitted; ____(2) Moderate; X (1) Smooth
* Ventilation (max 7 pts): ____(5) Interior supply; ____(2) Interior return; ____(1) Air supply-Fiber potential; O (0) None
* Air Movement Affecting Mat'l: ____(5) Routine turbulent or abrupt air mvmt; ____(2) Exposed to percept air; O (0) No percept air
* Activity: ____(5) High-constant vibes; ____(2) Medium-occasional vibes; O (0) Low-admin office, classroom, waiting room, etc.
* Floor: ____(4) Carpet; ____(2) Seamed or rough surface; 1 (1) Smooth continuous surface; ____(0-4) Unique situations
* Barriers. If both a. and b. apply, score theone withthe highest rating. check all that apply (Max of 4 pts):
"a". Sprayed or trowelled-on on ceiling or walls: ____(1) Suspend ceiling; ____(2) Encapsulation; ____(3) Railing or wire; ____(4) None
"b". Pipe, Boiler, Duct, or Other Mat'l: ____(1) ≤25%; ____(2) 25<%≤50; ____(3) 50<%≤75; ____(4) 75<%≤100
* Population: 1 (1)≤9 or lor corridors; ____(2)10≤Pop≤200; ____(3)201≤Pop≤500; ____(4)501≤Pop≤1000; ____(5)≥1001 or med or youth

Exposure (E) Total 7

Sample Numbers (Air & Bulk): DYNA07 (BULK)

ITY

Fig. 1b

ARMY FRIABLE ASBESTOS ASSESSMENT CHECKLIST

Form # _

BASE: PRESIDIO BLDG/RM NOS: Battery Bignault FACILITY/OFFICE: Area B (A see floor plan) @ INSPECTOR (DATE) C. Whalen, USEPA 7/28/92

..... Part I: DAMAGE/RISK 8/7/92 .....

* Physical Damage, Visible evidence: ____(5) High; ____(4) Moderate; ____(2) Low; ____(1) Minimal; (0) None
* Water Damage: ___(3) Yes; (0) No
* Proximity to Items for Repair. If both a. and b. apply score the one with the highest rating. (Max 3 pts). How far? :
"a". Sprayed or Trowelled-on: ____(3) <1 ft or ceiling panel contam.; ____(2) 1≤?<5 ft; ___(1) ≥5 ft; ____(0) ≥5 ft No rout. maint.
"b". Pipe, Boiler, or Duct Insulation, Damage by routine maint. ? : ____(3) ceiling panel contam.; ___(1) Yes; (0) No
* Type of Matl: ____(0-4) Other Friable matl; 1 (1) Boiler and/or pipes; ____(3) HVAC; ____(4) Ceilings or walls
* Potential for Contact: "<10 ft" ____(8) High; ____(5) Medium; ____(2) Low; "≥10 ft" ____(5) High; ____(3) Medium; (0) Low
* Asbestos Content, % with highest prob: 1 (1) 1<%≤30; ____(3) 30<%≤50; ____(5) >50%; NO HAZARD all samples no asbestos
Damage (D) Total 2

..... Part II: EXPOSURE .....

* Friable: ____(6) High; 3 (3) Moderate; ~~0~~ (1) Low
* Area of Visible Matl: ____(0) <10 ft^2; 1 (1) 10≤ ft^2<100; ____(2) 100≤ ft^2<1000; ____(3) ≥1000 ft^2
* Walls: ____(4) Rough; ____(3) Pitted; ____(2) Moderate; 1 (1) Smooth
* Ventilation (max 7 pts): ____(5) Interior supply; ____(2) Interior return; ____(1) Air supply-Fiber potential; (0) None
* Air Movement Affecting Matl: ___(5) Routine turbulent or abrupt air mvmt; ___(2) Exposed to percept air; (0) No percept air
* Activity: ___(5) High-constant vibes; ___(2) Medium-occasional vibes; 0 (0) Low-admin office, classroom, waiting room, etc.
* Floor: ___(4) Carpet; ___(2) Seamed or rough surface; 1 (1) Smooth continuous surface; ____(0-4) Unique situations
* Barriers. If both a. and b. apply, score theone withthe highest rating. check all that apply (Max of 4 pts):
"a". Sprayed or trowelled-on on ceiling or walls: ___(1) Suspend ceiling; ___(2) Encapsulation; ___(3) Railing or wire; ___(4) None
"b". Pipe, Boiler, Duct, or Other Matl: ____(1) ≤25%; ___(2) 25<%≤50; ____(3) 50<%≤75; 4 (4) 75<%≤100
* Population: 1 (1)≤9 or for corridors; ___(2)10≤Pop≤200; ___(3)201≤Pop≤500; ___(4)501≤Pop≤1000; ___(5)≥1001 or med or youth
Exposure (E) Total 11
Sample Numbers (Air & Bulk): DXN A10 (BULK)

Fig. 1b

ARMY FRIABLE ASBESTOS ASSESSMENT CHECKLIST

Form # _

BASE: PRESIDIO BLDG/RM NOS. Battery Dynamite FACILITY/OFFICE: Area A INSPECTOR (DATE) C. Whalen, USEHI 7/30/92

Part I: DAMAGE/RISK

* Physical Damage, Visible evidence: ____(5) High: 4 (4) Moderate: ____(2) Low: ____(1) Minimal: ____(0) None
* Water Damage: 3 (3) Yes; ____(0) No
* Proximity to Items for Repair. If both a. and b. apply score the one with the highest rating. (Max 3 pts). How far? :
"a". Sprayed or Trowelled-on: ____(3) <1 ft or ceiling panel contam.; ____(2) 1≤?<5 ft; ____(1) ≥5 ft; ____(0) ≥5 ft No rout. maint.
"b". Pipe, Boiler, or Duct Insulation, Damage by routine maint. ? : ____(3) ceiling panel contam.; 1 (1) Yes; ____(0) No
* Type of Mat'l: 0 (0-4) Other Friable mat'l; 1 (1) Boiler and/or pipes; ____(3) HVAC; ____(4) Ceilings or walls
* Potential for Contact: "<10 ft" ____(8) High; ____(5) Medium; ____(2) Low; "≥10 ft" ____(5) High; ____(3) Medium; 0 (0) Low
* Asbestos Content, % with highest prob: 1 (1) 1<%≤30; ____(3) 30<%≤50; ____(5) >50%; NO HAZARD all samples no asbestos
Damage (D) Total 9

Part II: EXPOSURE

* Friable: 6 (6) High; ____(3) Moderate; ____(1) Low
* Area of Visible Mat'l: ____(0) <10 ft^2; 1 (1) 10≤ ft^2<100; ____(2) 100≤ ft^2<1000; ____(3) ≥1000 ft^2
* Walls: ____(4) Rough; ____(3) Pitted; 2 (2) Moderate; ____(1) Smooth
* Ventilation (max 7 pts): ____(5) Interior supply; ____(2) Interior return; ____(1) Air supply-Fiber potential; 0 (0) None
* Air Movement Affecting Mat'l: ____(5) Routine turbulent or abrupt air mvmt; ____(2) Exposed to percept air; 0 (0) No percept air
* Activity: ____(5) High-constant vibes; ____(2) Medium-occasional vibes; 0 (0) Low-admin office, classroom, waiting room, etc.
* Floor: ____(4) Carpet; ____(2) Seamed or rough surface; 1 (1) Smooth continuous surface; ____(0-4) Unique situations
* Barriers. If both a. and b. apply, score theone withthe highest rating. check all that apply (Max of 4 pts):
"a". Sprayed or trowelled-on on ceiling or walls: ____(1) Suspend ceiling; ____(2) Encapsulation; ____(3) Railing or wire; ____(4) None
"b". Pipe, Boiler, Duct, or Other Mat'l: ____(1) ≤25%; 2 (2) 25<%≤50; ____(3) 50<%≤75; 4 (4) 75<%≤100
* Population: 1 (1)≤9 or lor corridors; ____(2)10≤Pop≤200; ____(3)201≤Pop≤500; ____(4)501≤Pop≤1000; ____(5)≥1001 or med or youth
Exposure (E) Total 13
Sample Numbers (Air & Bulk): DYN-A11 (Bulk)

DYN AIZ
7/30/92

Fig. 1b

ARMY FRIABLE ASBESTOS ASSESSMENT CHECKLIST

BASE: PRESIDIO BLDG/RM NOS: Battery Dynamite AREA A FACILITY/OFFICE: OBSERV. DECK Form # _

INSPECTOR (DATE) C. Whalen USEHI 7/30/92

..... Part I: DAMAGE/RISK .....

* Physical Damage, Visible evidence: ____(5) High: ____(4) Moderate: ____(2) Low: ____(1) Minimal: O (0) None
* Water Damage: ___(3) Yes; O (0) No
* Proximity to Items for Repair. If both a. and b. apply score the one with the highest rating. (Max 3 pts). How far? :
"a". Sprayed or Trowelled-on: ____(3) <1 ft or ceiling panel contam.; ____(2) 1≤?<5 ft: ____(1) ≥5 ft; ____(0) ≥5 ft No rout. maint.
"b". Pipe, Boiler, or Duct Insulation, Damage by routine maint. ? : ____(3) ceiling panel contam.; ____(1) Yes; ____(0) No
* Type of Matl: O (0-4) Other Friable matl: ____(1) Boiler and/or pipes; ____(3) HVAC; ____(4) Ceilings or walls
* Potential for Contact: "<10 ft" ____(8) High: ____(5) Medium; ____(2) Low; "≥10 ft" ____(5) High; ____(3) Medium: O (0) Low
* Asbestos Content, % with highest prob: ____(1) 1<%≤30; 3 (3) 30<%≤50; ____(5) >50%; NO HAZARD all samples no asbestos
Damage (D) Total 3 3 Rec'd

..... Part II: EXPOSURE .....

* Friable: ____(6) High; ____(3) Moderate; / (1) Low
* Area of Visible Matl: O (0) <10 ft²; X (1) 10≤ ft²<100; ____(2) 100≤ ft²<1000; ____(3) ≥1000 ft²
* Walls: ____(4) Rough; ____(3) Pitted; 2 (2) Moderate; X (1) Smooth
* Ventilation (max 7 pts): ____(5) Interior supply; ____(2) Interior return; ____(1) Air supply-Fiber potential; O (0) None
* Air Movement Affecting Matl: ___(5) Routine turbulent or abrupt air mvmt; ___(2) Exposed to percept air; O (0) No percept air
* Activity: ___(5) High-constant vibes; ___(2) Medium-occasional vibes; O (0) Low-admin office, classroom, waiting room, etc.
* Floor: ___(4) Carpet; ___(2) Seamed or rough surface; / (1) Smooth continuous surface; ____(0-4) Unique situations
* Barriers. If both a. and b. apply, score theone withthe highest rating. check all that apply (Max of 4 pts):
"a". Sprayed or trowelled-on on ceiling or walls: ___(1) Suspend ceiling; ___(2) Encapsulation; ___(3) Railing or wire; ___(4) None
"b". Pipe, Boiler, Duct, or Other Matl: X (0) ≤25%; 2 (2) 25<%≤50; ____(3) 50<%≤75; ____(4) 75<%≤100
* Population: / (1)≤9 or lor corridors; ___(2)10≤Pop≤200; ___(3)201≤Pop≤500; ___(4)501≤Pop≤1000; ___(5)≥1001 or med or youth
Exposure (E) Total 7
Sample Numbers (Air & Bulk): DYN AIZ (Bulk)

DYN A[redacted]
7/30/92

Fig. 1b

ARMY FRIABLE ASBESTOS ASSESSMENT CHECKLIST

Form # _

BASE: PRESIDIO BLDG/RM NOS. Battery Dynamite FACILITY/OFFICE: Area A (see floor plan) INSPECTOR (DATE) C. Whalen, UEHI 7/30/92

..... Part I: DAMAGE/RISK .....

* Physical Damage, Visible evidence: ____(5) High: ____(4) Moderate: 2 (2) Low: ____(1) Minimal: ____(0) None
* Water Damage: ___(3) Yes; 0 (0) No
* Proximity to Items for Repair. If both a. and b. apply score the one with the highest rating. (Max 3 pts). How far? :
"a". Sprayed or Trowelled-on: ____(3) <1 ft or ceiling panel contam.; ____(2) 1≤?<5 ft; ____(1) ≥5 ft; ____(0) ≥5 ft No rout. maint.
"b". Pipe, Boiler, or Duct Insulation, Damage by routine maint. ? : ____(3) ceiling panel contam.; 1 (1) Yes; ____(0) No
* Type of Mat'l: ____(0-4) Other Friable mat'l: 1 (1) Boiler and/or pipes: ____(3) HVAC: ____(4) Ceilings or walls
* Potential for Contact: "<10 ft" ____(8) High: ____(5) Medium: 2 (2) Low; "≥10 ft" ____(5) High; 3 (3) Medium: ____(0) Low
* Asbestos Content, % with highest prob: 1 (1) 1<%≤30; ____(3) 30<%≤50; ____(5) >50%; NO HAZARD all samples no asbestos
Damage (D) Total 8

..... Part II: EXPOSURE .....

* Friable: ____(6) High: 3 (3) Moderate: ____(1) Low
* Area of Visible Mat'l: ____(0) <10 ft^2: 1 (1) 10≤ ft^2<100; ____(2) 100≤ ft^2<1000; ____(3) ≥1000 ft^2
* Walls: ____(4) Rough; ____(3) Pitted; 2 (2) Moderate; ____(1) Smooth
* Ventilation (max 7 pts): ____(5) Interior supply; ____(2) Interior return; ____(1) Air supply-Fiber potential; 0 (0) None
* Air Movement Affecting Mat'l: ___(5) Routine turbulent or abrupt air mvmt; ___(2) Exposed to percept air; 0 (0) No percept air
* Activity: ___(5) High-constant vibes; ___(2) Medium-occasional vibes; 0 (0) Low-admin office, classroom, waiting room, etc.
* Floor: ____(4) Carpet; ____(2) Seamed or rough surface; 1 (1) Smooth continuous surface; ____(0-4) Unique situations
* Barriers. If both a. and b. apply, score theone withthe highest rating. check all that apply (Max of 4 pts):
"a". Sprayed or trowelled-on on ceiling or walls: ___(1) Suspend ceiling; ___(2) Encapsulation; ___(3) Railing or wire; ___(4) None
"b". Pipe, Boiler, Duct, or Other Mat'l: ____(1) ≤25%; ____(2) 25<%≤50; 3 (3) 50<%≤75; ____(4) 75<%≤100
* Population: 1 (1)≤9 or lor corridors; ___(2)10≤Pop≤200; ___(3)201≤Pop≤500; ___(4)501≤Pop≤1000; ___(5)≥1001 or med or youth
Exposure (E) Total 11
Sample Numbers (Air & Bulk): DYN A13 (Bulk)

Fig. 1b

HW A01

ARMY FRIABLE ASBESTOS ASSESSMENT CHECKLIST

Form # _

BASE: PRESIDIO BLDG/RM NOS. Battery House/Quarters FACILITY/OFFICE: _____ INSPECTOR (DATE) C. Whalen, IHEHT 7/29/92

..... Part I: DAMAGE/RISK .....

* Physical Damage, Visible evidence: 5 (5) High; ____(4) Moderate; ____(2) Low; ____(1) Minimal; ____(0) None
* Water Damage: ____(3) Yes; 0 (0) No
* Proximity to Items for Repair. If both a. and b. apply score the one with the highest rating. (Max 3 pts). How far? :
"a". Sprayed or Trowelled-on: ____(3) <1 ft or ceiling panel contam.; ____(2) 1≤?<5 ft; ____(1) ≥5 ft; ____(0) ≥5 ft No rout. maint.
"b". Pipe, Boiler, or Duct Insulation, Damage by routine maint. ? : ____(3) ceiling panel contam.; ____(1) Yes; 0 (0) No
* Type of Matl: ____(0-4) Other Friable matl; 1 (1) Boiler and/or pipes; ____(3) HVAC; ____(4) Ceilings or walls
* Potential for Contact: "<10 ft" ____(8) High; ____(5) Medium; 0 (2) Low; "≥10 ft" ____(5) High; ____(3) Medium; 0 (0) Low
* Asbestos Content, % with highest prob: 1 (1) 1<%≤30; ____(3) 30<%≤50; ____(5) >50%; NO HAZARD all samples no asbestos
Damage (D) Total 8 7 24

..... Part II: EXPOSURE .....

* Friable: 6 (6) High; ____(3) Moderate; ____(1) Low
* Area of Visible Matl: 0 (0) <10 ft²; ____(1) 10≤ ft²<100; ____(2) 100≤ ft²<1000; ____(3) ≥1000 ft²
* Walls: ____(4) Rough; ____(3) Pitted; 2 (2) Moderate; 4 (1) Smooth
* Ventilation (max 7 pts): ____(5) Interior supply; ____(2) Interior return; ____(1) Air supply-Fiber potential; 0 (0) None
* Air Movement Affecting Matl: ____(5) Routine turbulent or abrupt air mvmt; ____(2) Exposed to percept air; 0 (0) No percept air
* Activity: ____(5) High-constant vibes; ____(2) Medium-occasional vibes; 0 (0) Low-admin office, classroom, waiting room, etc.
* Floor: ____(4) Carpet; 2 (2) Seamed or rough surface; 4 (1) Smooth continuous surface; ____(0-4) Unique situations
* Barriers. If both a. and b. apply, score theone withthe highest rating. check all that apply (Max of 4 pts):
"a". Sprayed or trowelled-on on ceiling or walls: ____(1) Suspend ceiling; ____(2) Encapsulation; ____(3) Railing or wire; ____(4) None
"b". Pipe, Boiler, Duct, or Other Matl: ____(1) ≤25%; ____(2) 25<%≤50; ____(3) 50<%≤75; ____(4) 75<%≤100
* Population: 1 (1)≤9 or for corridors; ____(2)10≤Pop≤200; ____(3)201≤Pop≤500; ____(4)501≤Pop≤1000; ____(5)≥1001 or med or youth
Exposure (E) Total 8 11 24
Sample Numbers (Air & Bulk): HW A01 (Bulk)

Fig. 1b

ARMY FRIABLE ASBESTOS ASSESSMENT CHECKLIST

Form # _

BASE: PRESIDIO BLDG/RM NOS: Battery HOUSE/WAGNER FACILITY/OFFICE: _____ INSPECTOR (DATE) C. Whalen 7/29/92

..... Part I: DAMAGE/RISK .....

5

* Physical Damage, Visible evidence: _____ (5) High: ____ (4) Moderate: ____ (2) Low: ____ (1) Minimal: ____ (0) None
* Water Damage: ___ (3) Yes; O (0) No
* Proximity to Items for Repair. If both a. and b. apply score the one with the highest rating. (Max 3 pts). How far? :
"a". Sprayed or Trowelled-on: ____ (3) <1 ft or ceiling panel contam.; ____ (2) 1≤?<5 ft; ____ (1) ≥5 ft; ____ (0) ≥5 ft No rout. maint.
"b". Pipe, Boiler, or Duct Insulation, Damage by routine maint. ? : ____ (3) ceiling panel contam.; ____ (1) Yes; O (0) No
* Type of Matl: ~~4~~ (0-4) Other Friable mat'l: 1 (1) Boiler and/or pipes; ____ (3) HVAC; ____ (4) Ceilings or walls
* Potential for Contact: "<10 ft" ____ (8) High; ____ (5) Medium; ____ (2) Low; "≥10 ft" ~~25~~ (5) High; ____ (3) Medium; O (0) Low
* Asbestos Content, % with highest prob: 1 (1) 1<%≤30; ____ (3) 30<%≤50; ____ (5) >50%; NO HAZARD all samples no asbestos
Damage (D) Total 7

..... Part II: EXPOSURE .....

* Friable: 6 (6) High; ____ (3) Moderate; ____ (1) Low
* Area of Visible Matl: ~~0.5~~ <10 ft²; ~~1X1~~ 10≤ ft²<100; ____ (2) 100≤ ft²<1000; ____ (3) ≥1000 ft²
* Walls: ~~1X1~~ (4) Rough; ____ (3) Pitted; 2 (2) Moderate; ~~X~~ (1) Smooth
* Ventilation (max 7 pts): ____ (5) Interior supply; ____ (2) Interior return; ____ (1) Air supply-Fiber potential; O (0) None
* Air Movement Affecting Matl: ____ (5) Routine turbulent or abrupt air mvmt; ____ (2) Exposed to percept air; O (0) No percept air
* Activity: ____ (5) High-constant vibes; ____ (2) Medium-occasional vibes; O (0) Low-admin office, classroom, waiting room, etc.
* Floor: ____ (4) Carpet; ____ (2) Seamed or rough surface; / (1) Smooth continuous surface; ____ (0-4) Unique situations
* Barriers. If both a. and b. apply, score theone withthe highest rating. check all that apply (Max of 4 pts):
"a". Sprayed or trowelled-on on ceiling or walls: ____ (1) Suspend ceiling; ____ (2) Encapsulation; ____ (3) Railing or wire; ____ (4) None
"b". Pipe, Boiler, Duct, or Other Matl: 1 (1) ≤25%; ____ (2) 25<%≤50; ____ (3) 50<%≤75; ____ (4) 75<%≤100
* Population: / (1)≤9 or lor corridors; ____ (2)10≤Pop≤200; ____ (3)201≤Pop≤500; ____ (4)501≤Pop≤1000; ____ (5)≥1001 or med or youth
Exposure (E) Total 12
Sample Numbers (Air & Bulk): HW - A02 (Bulk)

Fig. 1b

ARMY FRIABLE ASBESTOS ASSESSMENT CHECKLIST

Form # _

BASE: Presidio, SF BLDG/RM NOS. 277 FACILITY/OFFICE: _____ INSPECTOR (DATE) Loren Anderson 7/4/97

Part I: DAMAGE/RISK

* Physical Damage, Visible evidence: _____(5) High; ____(4) Moderate; _____(2) Low; 1 (1) Minimal; _____(0) None
* Water Damage: ____(3) Yes; 0 (0) No
* Proximity to Items for Repair. If both a. and b. apply score the one with the highest rating. (Max 3 pts). How far? :
"a". Sprayed or Trowelled-on: _____(3) <1 ft or ceiling panel contam.; ____(2) 1≤?<5 ft; ____(1) ≥5 ft; ____(0) ≥5 ft No rout. maint.
"b". Pipe, Boiler, or Duct Insulation, Damage by routine maint. ? : _____(3) ceiling panel contam.; 1 (1) Yes; ____(0) No
* Type of Mat'l: 1 (0-4) Other Friable mat'l; ____(1) Boiler and/or pipes; ____(3) HVAC; ____(4) Ceilings or walls
* Potential for Contact: "<10 ft" ____(8) High; ____(5) Medium; 2 (2) Low; "≥10 ft" ____(5) High; ____(3) Medium; ____(0) Low
* Asbestos Content, % with highest prob: ____(1) 1<%≤30; 3 (3) 30<%≤50; _____(5) >50%; NO HAZARD all samples no asbestos

Damage (D) Total 8

Part II: EXPOSURE

* Friable: _____(6) High; 3 (3) Moderate; _____(1) Low
* Area of Visible Mat'l: 0 (0) <10 ft^2; _____(1) 10≤ ft^2<100; _____(2) 100≤ ft^2<1000; ____(3) ≥1000 ft^2
* Walls: _____(4) Rough; ____(3) Pitted; _____(2) Moderate; 1 (1) Smooth
* Ventilation (max 7 pts): _____(5) Interior supply; _____(2) Interior return; 1 (1) Air supply-Fiber potential; _____(0) None
* Air Movement Affecting Mat'l: ____(5) Routine turbulent or abrupt air mvmt; ____(2) Exposed to percept air; 0 (0) No percept air
* Activity: ____(5) High-constant vibes; 2 (2) Medium-occasional vibes; _____(0) Low-admin office, classroom, waiting room, etc.
* Floor: _____(4) Carpet; _____(2) Seamed or rough surface; 1 (1) Smooth continuous surface; _____(0-4) Unique situations
* Barriers. If both a. and b. apply, score theone withthe highest rating. check all that apply (Max of 4 pts):
"a". Sprayed or trowelled-on on ceiling or walls: ____(1) Suspend ceiling; ____(2) Encapsulation; ____(3) Railing or wire; ____(4) None
"b". Pipe, Boiler, Duct, or Other Mat'l: 1 (1) ≤25%; _____(2) 25<%≤50; _____(3) 50<%≤75; _____(4) 75<%≤100
* Population: 1 (1)≤9 or for corridors; ____(2)10≤Pop≤200; _____(3)201≤Pop≤500; _____(4)501≤Pop≤1000; ____(5)≥1001 or med or youth

Exposure (E) Total 10

Sample Numbers (Air & Bulk): 277 A08

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