THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Military and Veterans Affairs

FMO Design and Construction
57024 Roosevelt Rd
PO Box 5169
JBER, AK 99505

Email: jay.friesen@alaska.gov

Issue Date: September 6, 2023

ATTN: Vendors

RE: **Project Name:** Hooper Bay Interior Restoration
Project Number: **0252123012**
Project Location: Hooper Bay, Alaska

Addendum Two (2)

This addendum forms a part of the contract documents and modifies the original drawings and/or specifications for the subject work. In case of conflicts between this addendum and previously issueddocuments, this addendum shall take precedence.

The following additions are required:

1. A list of questions has been forwarded to the project manager as listed below:

- The safe in the HOPA 2, do we need to move these to paint behind them, or can we leave them where they are? The safes will need to have paint behind them.
- In HOPA 3, the compost toilet, do we need to paint behind it or can it stay in place? It can stay in place.
- In HOPA 2, are we to paint the paneling, remove it, or leave it as is and paint around it? The paneling is in good condition so we will plan on painting it and patching where necessary.
- 4. In HOPA 3, the paint scheme is gray on the bottom and white on top. Are we matching that or are we doing one color? One color
- 5. In HOPA 2, the new interior doors we are adding in the partition wall, are we to use the Department of Veterans Affairs Office of Construction & Facilities Management PG 18-14 Room Finishes, Door and Hardware schedule dated April 10, 2017 Rev 07/01/2022? If so, are we using chapter 279 for the standard, or a different chapter?
- There is now piping for oil to the heaters in HOPA 1 or HOPA 2. Is an oil supply line from the main tank to these two areas to be part of the scope? Yes, oil piping to the new heating units is part of this scope.
- The drawings don't not address the interior doors, are these to be replaced or left as is? The interior doors will be left as is. If there are doors that are not serviceable, we will address by change order.
- Hopa 1 (Built 1960) Are we to assume all of the sheetrock and joint compound is asbestos? An asbestos survey is attached to this addendum and identifies the areas of asbestos.

- The new interior walls that are to be constructed in Hopa 2, do we need to have these designed and engineered or just build them as non load bearing partition walls? No engineering is necessary. These are non load bearing partition walls.

- The new sheetrock in Hopa 1, 1/2" or 5/8"? ½" on walls, 5/8 on ceilings

- Throughout the buildings, what kind of finish on the sheetrock? smooth wall, orange peel? Smooth wall.

- In Hopa 1, All of the lighting will be coming down, do we reuse the lights (PCB ballasts) or do we install new? LED or standard bulb? If we replace the lights in Hopa 1, Should we also replace all of the lights throughout the project? Replace all lights with LED's.
- There is currently no Utility Power to the facility. Will the local electric utility require Service Upgrades to reconnect power? Who is coordinating the reconnect? DMVA will reach out to the local utility to determine what needs to be done to restore electrical service.

- HOPA 1- The documents call for a complete gut of interior architectural finishes - are we replacing electrical devices and light fixtures? these will need to be removed and reinstalled in order for the drywall to be replaced and refinished. Yes, electrical devices and light fixtures will need to be replaced.
- Are we replacing the electrical panel in HOPA 1? The existing cover is destroyed. Yes, we are replacing the existing panel in HOPA 1.
- HOPA 2-There are new offices being framed as part of the scope of HOPA2. What are the electrical requirements for the new offices? The new offices will require a minimum of four receps, two LED light fixtures and one light switch. We will need to relocate several light fixtures as part of the new office build out. Do you want the lighting fixtures in HOPA 2 upgraded to LED? Yes

This addendum is considered part of the Invitation to Bid (ITB) and is to be acknowledge on your bid proposal.

Please contact me if you have any questions.

Sincerely

Jay Friesen

Building Management Specialist

907-428-7198 or Cell 907-795-9334

End of Addendum

ASBESTOS SURVEY
ALASKA ARMY NATIONAL GUARD
HOOPER BAY FEDERAL SCOUT ARMORY
HOOPER BAY, ALASKA
APRIL 1996

Prepared for:

State of Alaska
Department of Military and Veteran Affairs
Army National Guard
Environmental Office
Box 5-549
Fort Richardson, Alaska 99505

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LIST OF ACRONYMS AND ABBREVIATIONS

ACM	Asbestos-Containing Materials
AES	Analytical Environmental Services, Inc.
AHERA	Asbestos Hazard Emergency Response Act
AKARNG	Alaska Army National Guard
AR	Army Regulations
ASHARA	Asbestos School Hazard Abatement Reauthorization
CFR	Code of Federal Regulations
EMSL	Electron Microscopy Services Laboratories, Inc.
EPA	Environmental Protection Agency
HA	Homogeneous Area
LoA	List of Acronyms
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
NGB	National Guard Bureau
NVLAP	National Voluntary Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
PFI	Pipe Fitting Insulation
PLM	Polarized Light Microscopy
QC	Quality Control
SOW	Statement of Work
TEM	Transmission Electron Microscopy

1.0 INTRODUCTION

Under the provisions of the national contract (NGB) DAHA90-94-D-0005, the State of Alaska, Department of Military & Veterans Affairs, Army National Guard (AKARNG) contracted Ogden Environmental and Energy Services Company, Inc., (Ogden) to conduct asbestos inspections of AKARNG administrative and support facilities located throughout the State of Alaska. The facilities were specified in requisition number 5117-0200 (Form DA 3953), the Statement of Work (SOW) (AKARNG Purchase Order Number 0035) received from AKARNG on May 12, 1995, and subsequent SOW Change Agreements. The purpose of the inspections was to identify suspected asbestos-containing materials (ACM) present in the operational and support buildings located at the specified AKARNG sites. The inspections were performed in accordance with the Environmental Protection Agency (EPA) Title 40 Code of Federal Regulations (CFR), Part 763 - *Asbestos-Containing Materials in Schools*; Final Rule and Notice, commonly referred to as the Asbestos Hazard Emergency Response Act (AHERA), Asbestos School Hazard Abatement Reauthorization Act (ASHARA), National Emissions Standards for Hazardous Air Pollutants (NESHAPS), the Occupational Safety and Health Administration (OSHA) and all other applicable Federal laws, and state and local environmental regulations. All work complies with Army Regulations AR 200-1, Environmental Protection and Enhancement. Ogden has also complied with State Department of Labor, Division of Labor Standards and Safety, Occupational Safety and Health Standards Construction Code (Asbestos). All asbestos sampling, analysis and reporting provisions have followed guidelines under ASHARA and NESHAPS.

The asbestos inspections were conducted on September 22, 1995. During these inspections, the Ogden EPA accredited inspectors performed an initial building walk-through to identify all suspect ACM. Photographs were taken of the buildings and selected building materials (Appendix A). The locations and quantities of each material were noted and their physical condition assessed. The required number of material bulk samples were collected with the following exceptions: 1) samples were not collected where the integrity or usability of the material would be damaged, 2) samples were not collected in locations which could not be safely accessed, 3) samples were not collected in other inaccessible areas. All applicable federal safety

and health regulations were adhered to during the collection of suspect ACM samples. The samples collected were forwarded to Electron Microscopy Services Laboratories, Inc. (EMSL) in Westmont, New Jersey for analysis. EMSL is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), Accreditation Number 1250. Quality Control (QC) samples were forwarded to Analytical Environmental Services, Inc., (AES) in Atlanta, Georgia for analysis. AES is also accredited under the NVLAP; Accreditation Number 2033. Laboratory accreditation certificates are located in Appendix D.

1.1 SAMPLING PROTOCOL

Accredited inspectors surveyed all specified existing, standing, and safe-to-enter structures located at the AKARNG sites. Buildings were assessed for the potential presence of ACM. An inspection of the exterior of the structures was conducted for presence of debris, damaged suspect ACM material, and adjacent structures. Building materials in each contiguous area (floor, wing, etc.) to be sampled for asbestos analysis was divided into homogeneous areas to address each different type of materials. As defined by the EPA, a homogeneous area of suspect ACM is an area of surfacing, thermal system, or miscellaneous material that is uniform in color and texture. The number of samples collected from each homogeneous area was dictated by the category of material; each was sampled in accordance with 40 CFR 763. A review of each category is presented below:

1.1.1 Surfacing Material (sprayed-on or trowled-on material)

- The number of samples collected was determined by the square feet of homogeneous material present:
- Three samples for 1,000 square feet or less.
- Five samples for over 1,000 square feet, but less than or equal to 5,000 square feet.
- Seven samples for over 5,000 square feet.

Specific sample locations were determined by dividing each homogeneous area into nine equal areas and applying the EPA random sampling scheme numbering system to the grids.

1.1.2 Thermal System Insulation

Three samples for each homogeneous area of thermal system insulation were collected. At least one sample was collected for each patched (less than six square or linear feet) material or joint compound.

1.1.3 Miscellaneous Materials

A representative number of samples per homogeneous area were collected to determine the presence or absence of asbestos.

Materials such as fiberglass ceiling tiles and fiberglass or rubber thermal system insulation were generally noted to be non-ACM. As such, the materials were not typically assigned homogeneous area numbers nor were they sampled. This procedure is in accordance with the applicable AHERA regulations. However, if the inspectors had reservations as to the possibility of the material containing asbestos, samples were collected and submitted for laboratory analysis.

1.2 SAMPLE ANALYSIS

As required in 40 CFR Part 763, bulk samples were analyzed by polarized light microscopy (PLM), the EPA-approved method for analyzing material bulk samples for asbestos. As defined in the AHERA regulation, an asbestos-containing material means any material or product which contains more than one percent asbestos by area. Material with bulk sample analytical results of less than one percent (<1%) asbestos are reported as a non-ACM. However, according to 40 CFR Part 61 Subpart M, National Emission Standard for Hazardous Air Pollutants (NESHAPS) - Asbestos; prior to conducting a building renovation or demolition which involves the disturbance of any material previously identified as containing <10% asbestos, must be re-analyzed by the PLM Point Counting Method prior to disturbance.

The limit of detection for asbestos analysis by PLM is approximately one percent (1%) by area. Some materials, such as floor tile, cement products, and hard rubber materials, may contain asbestos fibers in sizes that are below the resolution limit for the PLM method. Prior to the disturbance of these type materials, it is recommended that negative PLM analytical results (EPA Modified Level 2) be confirmed using the transmission electron microscopy (TEM) method for asbestos analysis.

For quality control purposes, and as recommended by the EPA, every twentieth bulk sample was split, yielding a duplicate or QC sample. The duplicate samples were assigned sample identification numbers and submitted to a second laboratory for analysis. This quality control procedure served as a check on the variability between laboratories. The comparison of percentage results estimated by the analytical laboratories provided essential information on the reliability of the analysis. Although there may be discrepancies in estimating the exact percentage of asbestos in duplicate samples, these discrepancies are not as serious as the presence or absence determination since any material sample which contains more than 1% asbestos is considered an ACM. Furthermore, some variability in the actual asbestos content in an ACM would be expected from one sample to another. Generally, the percent asbestos content for the QC sample as compared to the corresponding primary sample should not exceed ten percent.

1.3 PRESENTATION OF INSPECTION DATA

The following criteria for reporting the data were used:

Quantity - The estimated quantity of the ACM in square feet for surfaces or linear feet for piping was noted.

Friability - The inspectors determined whether an identified ACM was friable by using the AHERA definition of a friable ACM. Friable, when referring to an identified ACM, means that the material, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure, and includes previously non-friable material that becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

Percent Asbestos - The total percentage of all asbestos identified from the bulk sampling is provided. In addition, the identified type (chrysotile, amosite, tremolite, anthophyllite, crocidolite, and actinolite) is provided.

Material Condition - Accredited inspectors utilized the following criteria in assessing building conditions:

- Good: ACM is not damaged, deteriorated, or delaminated.
- Damaged: ACM is deteriorated or has sustained physical injury such that the material lacks adequate cohesion and/or adhesion qualities. Damage to ACM could include delamination, flaking, blistering, or crumbling.
- Significantly Damaged: ACM is damaged and such damage is extensive and severe.

2.0 SITE AND PROJECT DESCRIPTION

The Hooper Bay Federal Scout Armory is located in the village of Hooper Bay, in western Alaska. Hooper Bay is located 20 miles south of Cape Romanzof and 25 miles south of Scammon Bay in the Yukon-Kuskokwim Delta. This site consists of three buildings: an Old and New Armory and a Training Building. A hallway connects the south end of the Old Armory to the southwest side of the New Armory Another hallway connects the west side of the Old Armory with the northeast side of the Training Building. The Hooper Bay Armory Complex is currently occupied or utilized by 36 National Guard personnel.

The Old Armory was constructed in the year 1960. The Old Armory is a one story 20' x 60' metal structure with a metal roof. The interior finish materials include rolled felt floors, wood walls, and wood and gypsum board ceilings. The interior totals approximately 1,200 square feet of usable space. The interior included space for assembly, office administration, and storage.

The New Armory was constructed in the year 1984. The New Armory is a one story 30' x 40' metal structure with a metal roof. The interior finish materials include, wood floors; wood walls; and a wood ceiling. The interior totals approximately 1,360 square feet of usable space. The interior included space for assembly, office administration, and storage.

The Training Building was constructed in the year 1993. The Training Building is a one story 30' x 50' metal structure with a metal roof. The interior finish materials consist of wood floors, walls, and ceilings. The interior totals approximately 1,660 square feet of usable space. The interior included for assembly, office administration, and storage.

The hallway connecting the New Armory to the Old Armory was constructed in 1984 and is therefore considered part of the New Armory. There is also a hallway connecting the Training Building to the New Armory. This hallway was constructed in 1993 and is considered part of the Training Building.

The Hooper Bay facility was inspected by an AHERA certified inspector, William Garibay. A total of six building material samples of suspect ACM were collected from two homogeneous

areas identified in the Old Armory on September 22, 1995. A total of six building material samples of suspect ACM were collected from two homogeneous areas identified in the New Armory on September 22, 1996. No samples of suspect ACM were collected from the Training Building. Copies of AHERA Certificates are presented in Appendix C.

Samples were obtained using hand tools such as a knife, pliers, and scrapers. If needed, repairs were made to the sampled materials using roofing patch, dry wall Spackle, and duct tape. Samples were placed into individual resealable plastic bags.

3.0 BUILDING EVALUATION

3.1 OLD ARMORY

3.1.1 Building Interior Evaluation

The interior of the Old Armory (Building 1) was visually inspected on September 22, 1995. The interior finish materials observed during the inspection include rolled felt floors, wood and gypsum board walls, and wood and gypsum board ceilings. Most of these materials are visible in the photographs included in Appendix A.

The heating system for this facility consists of small heating oil stoves scattered throughout the armory.

3.1.2 Ceilings

Approximately 1,200 square feet of gypsum board ceiling is located throughout the Old Armory. Samples HB-01-2-01 through 2-03 were collected from this homogeneous area (sample locations are shown in Figure 1 and a picture of the material is shown in Appendix A, Photo No 2).

3.1.3 Floors

Approximately 1,200 square feet of brown rolled flooring is located throughout the Old Armory. Samples HB-01-1-01 through 1-03 were collected from this homogeneous area (sample locations are shown in Figure 1 and a picture of the material is shown in Appendix A, Photo No 1).

3.1.4 Interior Walls

The interior walls were either wood or gypsum board. Approximately 2,400 square feet of gypsum board is located throughout the Old Armory. Samples HB-01-2-01 through 2-03 were collected from this homogeneous area (sample locations are shown in Figure 1 and a picture of the material is in Appendix A, Photo No. 2). Metal walls were present in all other parts of the building and were not sampled.

3.1.5 Pipe Insulation

No insulation was sampled during the inspection.

3.1.6 Boiler Room

No suspect material/insulation was sampled during the inspection

3.1.7 Roofing Materials

The roof is metal.

3.1.8 Exterior Shell

The exterior shell is metal.

3.2 NEW ARMORY

3.2.1 Building Interior Evaluation

The interior of the New Armory (Building 2) was visually inspected on September 22, 1995. The interior finish materials observed during the inspection include vinyl floor, wood walls, and wood and gypsum board ceilings. Most of these materials are visible in the photographs included in Appendix A.

The heating system for this facility consists of small heating oil stoves scattered throughout the armory.

3.2.2 Ceilings

Approximately 450 square feet of gypsum board ceiling is located in the offices and storage space on the east side of the New Armory. Samples HB-02-2-01 through 2-03 were collected from this homogeneous area (sample locations are shown in Figure 3 and a picture of the material is shown in Appendix A, Photo No 4).

3.2.3 Floors

Approximately 1,350 square feet of tan 12" x 12" floor tile is located throughout the New Armory. Samples HB-02-1-01 through 1-03 were collected from this homogeneous area (sample locations are shown in Figure 3 and a picture of the material is shown in Appendix A, Photo No 3).

3.2.4 Interior Walls

The walls of the New Armory are wood.

3.2.5 Pipe Insulation

No insulation was sampled during the inspection.

3.2.6 Boiler Room

No suspect material/insulation was sampled during the inspection

3.2.7 Roofing Materials

The roof is metal.

3.2.8 Exterior Shell

The exterior shell is metal.

3.3 TRAINING BUILDING

3.3.1 Building Interior Evaluation

The interior of the Training Building (Building 3) was visually inspected on September 22, 1995. The interior finish materials observed during the inspection include wood floors, walls, and ceilings.

The heating system for this facility consists of small heating oil stoves scattered throughout the building.

3.3.2 Ceilings

The ceilings of the Training Building are wood.

3.3.3 Floors

The floors of the Training Building are wood.

3.2.4 Interior Walls

The walls of the Training Building are wood.

3.3.5 Pipe Insulation

No insulation was sampled during the inspection.

3.3.6 Boiler Room

No suspect material/insulation was sampled during the inspection

3.3.7 Roofing Materials

The roof is metal.

3.3.8 Exterior Shell

The exterior shell is metal.

4.0 LABORATORY ANALYSIS

A total of 12 bulk materials samples from the Hooper Bay site were submitted for analyses for asbestos. The bulk samples were analyzed by polarized light microscopy (PLM) and dispersion staining, the method of analysis recommended by the U.S. Environmental Protection Agency (EPA) to determine the composition of suspected asbestos containing materials. PLM is a method wherein a microscope equipped with two polarizing filters are used to observe specific optical characteristics of samples. Quantitative analysis involves the use of point counting, a standard technique for determining the relative areas occupied by separate minerals in a sample. Only materials containing more than 1% total asbestos (all types) were classified as "asbestos containing" bases upon EPA criteria.

The laboratory selected, EMSL, is certified under the National Voluntary Laboratory Accreditation Program (NVLAP) of the National Institute of Science and Technology, an Institute of the U.S. Department of Commerce. This certification is required by the EPA for bulk asbestos analysis. A copy of the laboratory certification is attached in Appendix D. The sample locations and descriptions are summarized in Tables 2-1 and 2-2. The individual detailed laboratory reports are included in Appendix B. Chain of custody procedures were followed in handling of these samples on this project.

5.0 DISCUSSION OF ASBESTOS ANALYTICAL RESULTS

Sample locations and descriptions are summarized and presented in Table 4. Locations for these samples are shown in Figures 1, 3, and 5. Locations of asbestos containing materials are shown in Figures 4.

In the Old Armory, six samples were collected from two homogeneous areas (HA) identified during the inspection. No HAs were assumed to contain asbestos, and, as indicated by the materials bulk sample analysis results, none of the sampled materials were found to contain asbestos:

Ceilings:
- No asbestos containing material was observed or identified during the field inspection.

Flooring:
- No asbestos containing material was observed or identified during the field inspection.

Interior walls:
- No asbestos containing material was observed or identified during the field inspection.

Pipe insulation:
- No asbestos containing material was observed or identified during the field inspection.

Boiler Room:
- No asbestos containing material was observed or identified during the field inspection.

Roofing:
- No asbestos containing material was observed or identified during the field inspection.

Exterior Shell:
- No asbestos containing material was observed or identified during the field inspection.

In the New Armory, six samples were collected from two homogeneous areas (HA) identified during the inspection. No HAs were assumed to contain asbestos, and, as indicated by the

materials bulk sample analysis results, one of the sampled materials were found to contain asbestos:

Ceilings:
- No asbestos containing material was observed or identified during the field inspection.

Flooring:
- Approximately 1,350 square feet of tan 12" x 12" floor tile located throughout the New Armory was found to contain asbestos. A pictures of this material is in Appendix A Photo No. 3.

Interior walls:
- No asbestos containing material was observed or identified during the field inspection.

Pipe insulation:
- No asbestos containing material was observed or identified during the field inspection.

Boiler Room:
- No asbestos containing material was observed or identified during the field inspection.

Roofing:
- No asbestos containing material was observed or identified during the field inspection.

Exterior Shell:
- No asbestos containing material was observed or identified during the field inspection.

In the Training Building, no homogeneous areas (HAs) were identified during the inspection.

Ceilings:
- No asbestos containing material was observed or identified during the field inspection.

Flooring:
- No asbestos containing material was observed or identified during the field inspection.

Interior walls:	•	No asbestos containing material was observed or identified during the field inspection.
Pipe insulation:	•	No asbestos containing material was observed or identified during the field inspection.
Boiler Room:	•	No asbestos containing material was observed or identified during the field inspection.
Roofing:	•	No asbestos containing material was observed or identified during the field inspection.
Exterior Shell:	•	No asbestos containing material was observed or identified during the field inspection.

6.0 RECOMMENDATIONS

Building 1: The Old Armory

No recommendations are presented for the Old Armory Building at Hooper Bay because no HAs were identified as ACM.

Building 2: The New Armory

Based on the lab's analysis, the pre-mobilization investigations, and the field inspections (specifically the condition of the HAs), Ogden makes the following recommendation concerning the New Armory Building at Hooper Bay:

1. The mastic beneath 12" X 12" tan floor tile (HA No. 1) located throughout the building and in between buildings 1 and 2 was found to contain asbestos. On the day of the inspection, the mastic was found to be in good condition. As such, it does not require immediate action. However, it is recommended that it be documented by the on-site maintenance personnel and managed in place. It should be noted that if the mastic becomes damaged, the potential for exposing building occupants to airborne asbestos fibers increases. In such a circumstance, the mastic should either be repaired or removed.

Building 3: The Training Building

No recommendations are presented for the Training Building at Hooper Bay because no suspect materials were identified.

7.0 COST ESTIMATES

This section provides cost estimates for ACM removal/replacement and for the development and management of an O&M Program. The estimates provided for ACM removal/replacement are based on the local average unit rate costs for asbestos abatement. Local contractors were contacted and requested to provide approximate abatement costs for specific materials (e.g., floor tile, ceiling tile, and pipe insulation). In remote areas, travel costs are included in the contractors estimate. The estimates for an O & M Plan include costs for personnel training and for the labor and materials required for the on-going management of the O & M Plan. However, this cost does not include the preparation and the O & M Plan. The actual costs will vary due to unforeseen factors such as building/area accessibility, project size and project scheduling. No cost estimate appears if no ACM was detected or identified.

8.0 CLOSURE/LIMITATIONS

This report was prepared for the exclusive use of the client and their representatives for evaluating the site as it relates to the environmental aspects discussed herein. The findings and conclusions contained in this report assume that the conditions observed are representative of the conditions throughout the site. If conditions different from those described in the report are known, observed or encountered, we should be advised at once so that we can review these conditions and reconsider our conclusions.

Ogden Environmental and Energy Services Company, Inc. has prepared the attachments in Appendix F "Important Information about Your Environmental Site Evaluation/Assessment" to assist you and others in understanding the use and limitations of our report. We appreciate this opportunity to be of service.

Table 3 - 1 **Inspection Inventory Summary**

Hooper Bay

Old Armory

Building No 1

Homogeneous Area Number	Description of Material	Asbestos Containing	Quantity
1	Rolled Flooring, Brown	No	1200 SF
2	Gypsum Board	No	3600 SF

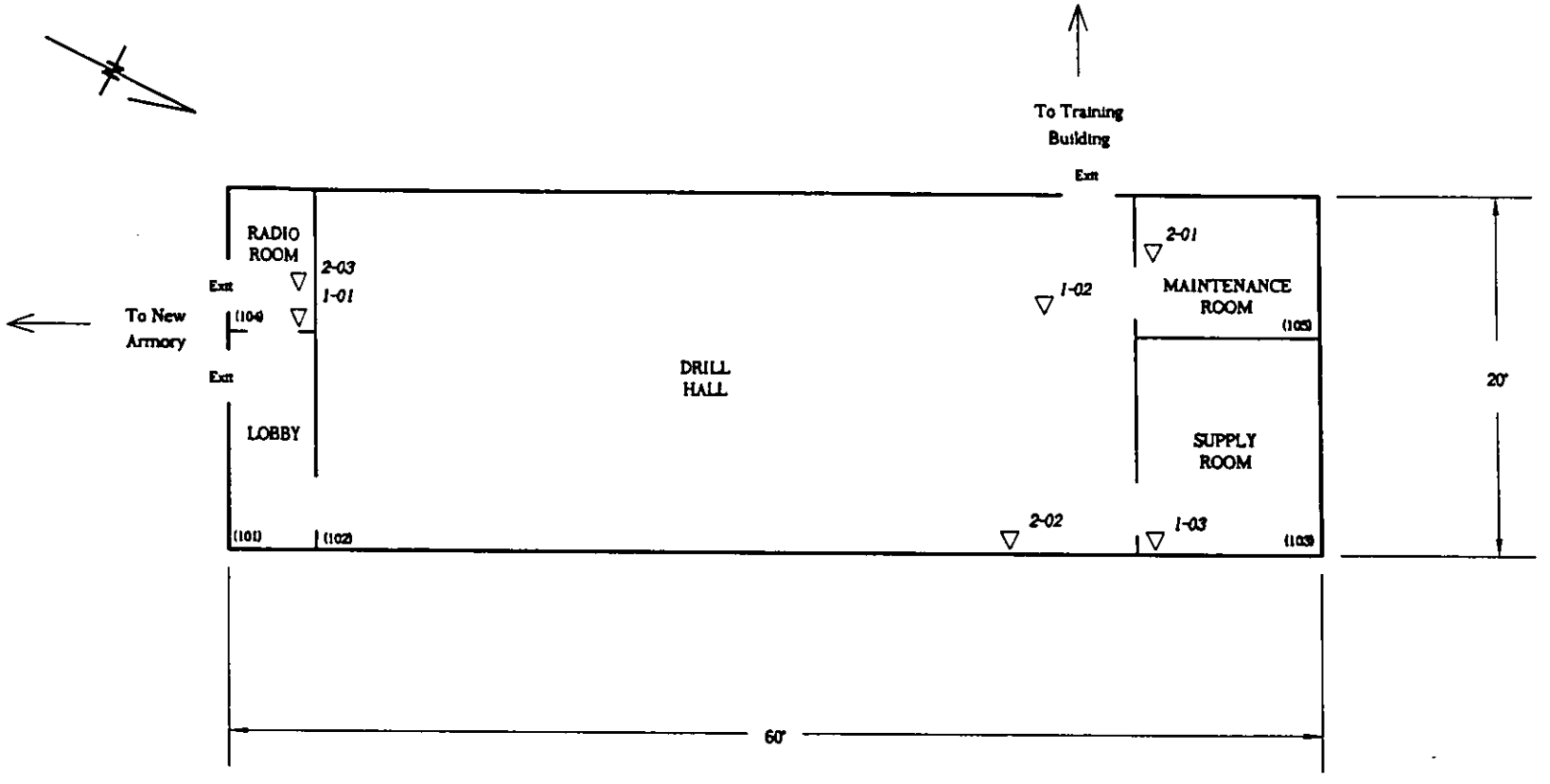
Year Built and Square Footage:	1960 1200 SF
Building Number:	1
Building Description:	Old Armory
Asbestos Program Manager:	Dave Bufo
Phone:	(907) 563-6436
Address:	Ogden 4040 B Street Anchorage, AK 99503
Inspector Name:	William Garibay
EPA Accreditation No:	5PSI 47402

Table 2 - 1 Sample Locations and Description

Old Armory, Building No 1

Sample Number Prefix	Sample Number Suffix	Inspected	Description	Material Location	Quantity
HB-01-	1-01	9/22/95	Rolled Flooring, Brown	Throughout Building	1200 SF
HB-01-	1-02	9/22/95	Rolled Flooring, Brown	Throughout Building	1200 SF
HB-01-	1-03	9/22/95	Rolled Flooring, Brown	Throughout Building	1200 SF
HB-01-	2-01	9/22/95	Gypsum Board	Ceilings and Interior Walls throughout building	3600 SF
HB-01-	2-02	9/22/95	Gypsum Board	Ceilings and Interior Walls throughout building	3600 SF
HB-01-	2-03	9/22/95	Gypsum Board	Ceilings and Interior Walls throughout building	3600 SF

Note. Shaded sample numbers indicate asbestos containing material.



LEGEND

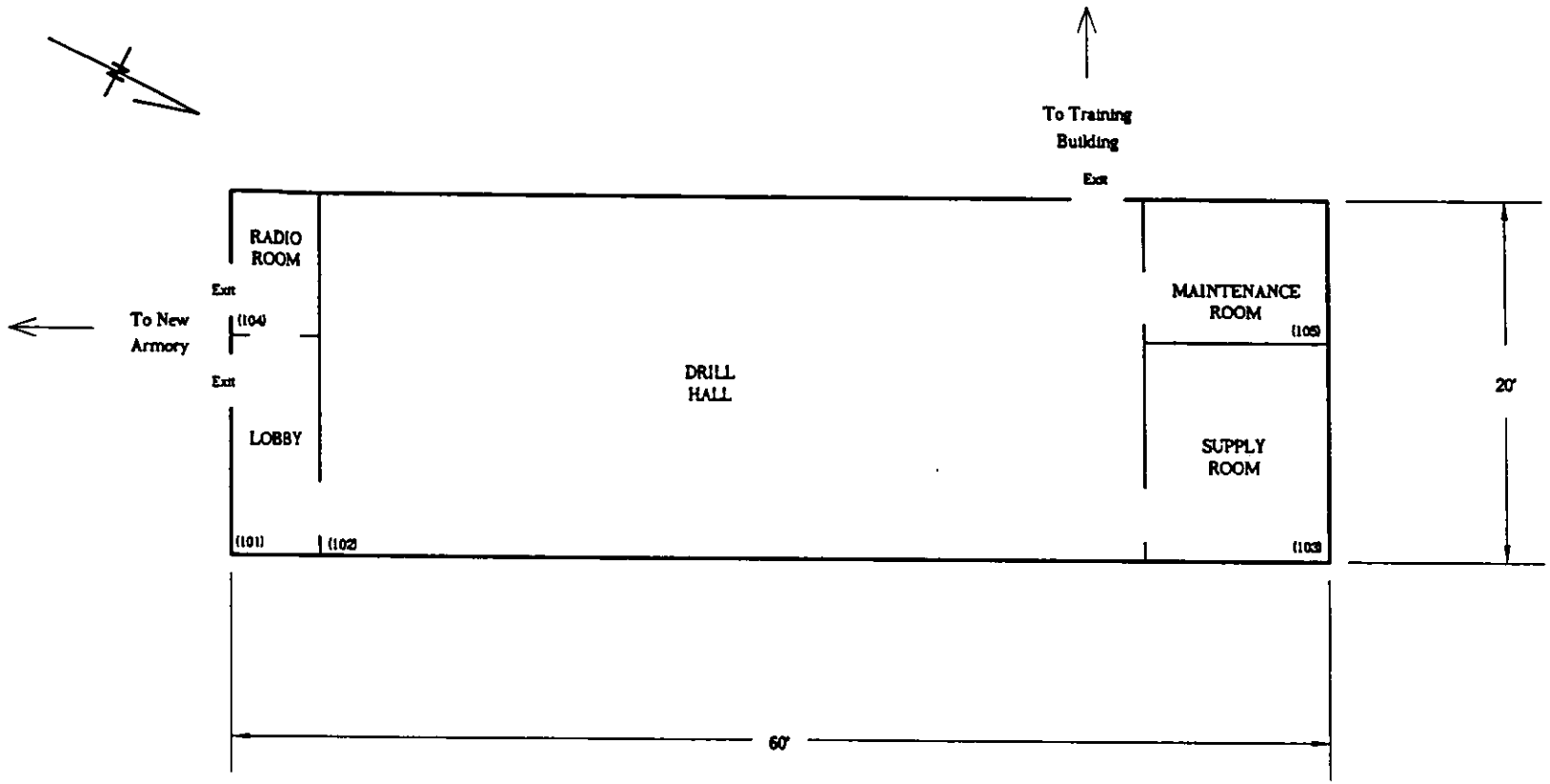
▽ 4-02 Locations where no Asbestos was found.

NOTES

1. Numbers in parentheses correspond to room numbers in the text.
2. The prefix, HB-01-, was left off for readability.

FIGURE 1

Hooper Bay, AK Federal Scout Armory Old Armory (#1)	Sampling Locations	0 10 Scale: 1"= 10'



NOTES

1. Numbers in parentheses correspond to room numbers in the text.

FIGURE 2

Hooper Bay, AK Federal Scout Armory Old Armory (#1)	No Asbestos Detected	0 10 Scale: 1"= 10'

Table 7 - 2 Cost Estimates for ACM

Building No., Name: 2, New Armory
Location: Hooper Bay
Area (SF): 1360
Date of Inspection: 22-Sep-95

HA	ACM	Description	Location	Quantity	Friabile	Response Actions	*Repair	O&M	Remove	Replace
1	Yes	12" x 12", Floor Tile, Tan	Throughout building and in connecting hallway	1350 SF	NO	O&M Program	$163	$16	$8,924	$7,385
						Totals	**$163**	**$16**	**$8,924**	**$7,385**

* Repair costs are calculated from percent damage, removal rate, and replacement rate.

** Fire Doors cannot be repaired. Repair cost for Fire Doors would reflect total removal and total replacement.

Table 3 - 2 **Inspection Inventory Summary**

Hooper Bay

New Armory

Building No 2

Homogeneous Area Number	Description of Material	Asbestos Containing	Quantity
1	12" x 12", Floor Tile, Tan	Yes	1350 SF
2	Gypsum Board	No	450 SF

Year Built and Square Footage:	1984 1360 SF
Building Number:	2
Building Description:	New Armory
Asbestos Program Manager:	Dave Bufo
Phone:	(907) 563-6436
Address:	Ogden 4040 B Street Anchorage, AK 99503
Inspector Name:	William Garibay
EPA Accreditation No:	5PSI 47402

Table 5 - 2 **Asbestos Homogeneous Area Summary**

Hooper Bay

New Armory 22-Sep-95

Building No 2 **Inspected**

Homogeneous Area : **No. 1** **12" x 12", Floor Tile, Tan**

Approximate Quantity: 1350 SF **No. of Occupants:** 36

Type of Material: ☐ TSI ☐ Surfacing Material ☑ Miscellaneous

Friable: ☐ Yes ☑ No

Accessible: ☐ Yes ☑ No

Located in a Plenum: ☐ Yes ☑ No

Material Location: Throughout building and in connecting hallway

Condition

Percent Damage: < 1 % ☐ Localized ☐ Distibuted

Type of Damage: ☐ Deterioration ☐ Water ☐ Physical

Overall Rating: ☑ Good ☐ Damaged ☐ Significantly Damage

Potential for Disturbance

	High 1	2	3	4	Low 5
Vibration:	☐	☐	☐	☐	☑
Contact:	☐	☐	☐	☐	☑
Air Erosion:	☐	☐	☐	☐	☑

Analytical Results

Sample Designation	Percent Asbestos:	Type of Asbestos
HB-02-1-01	5	Chrysotile
HB-02-1-02	3	Chrysotile
HB-02-1-03	3	Chrysotile

Comments: Asbestos is in the mastic and not in the tile.

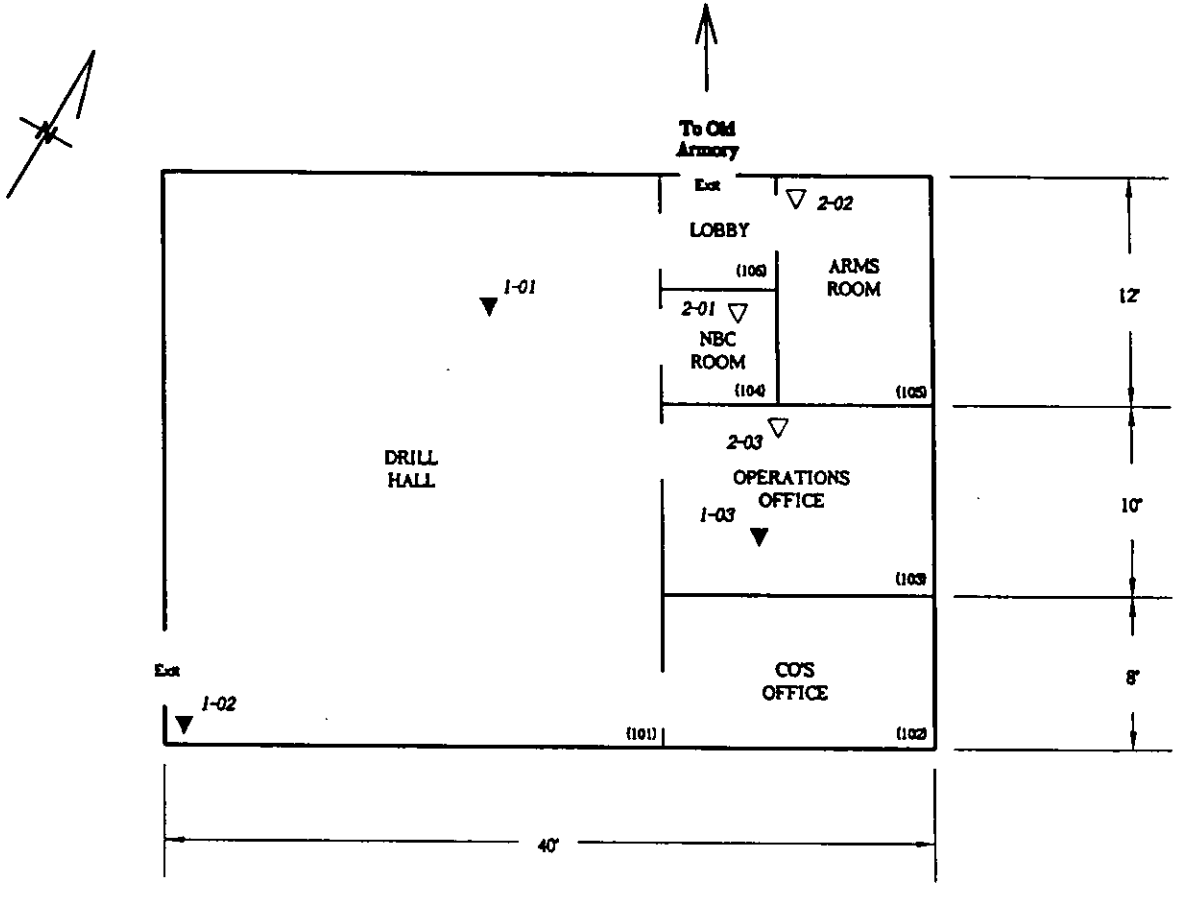
Recomended Response Action: O&M Program

Table 2 - 2 Sample Locations and Description

New Armory, Building No 2

Sample Number Prefix	Sample Number Suffix	Inspected	Description	Material Location	Quantity
HB-02-	1-01	9/22/95	12" x 12", Floor Tile, Tan	Throughout building and in connecting hallway	1350 SF
HB-02-	1-02	9/22/95	12" x 12", Floor Tile, Tan	Throughout building and in connecting hallway	1350 SF
HB-02-	1-03	9/22/95	12" x 12", Floor Tile, Tan	Throughout building and in connecting hallway	1350 SF
HB-02-	2-01	9/22/95	Gypsum Board	Ceilings and Interior Walls throughout building	450 SF
HB-02-	2-02	9/22/95	Gypsum Board	Ceilings and Interior Walls throughout building	450 SF
HB-02-	2-03	9/22/95	Gypsum Board	Ceilings and Interior Walls throughout building	450 SF

Note. Shaded sample numbers indicate asbestos containing material.



LEGEND

▼ 3-01 Locations where Asbestos was found.

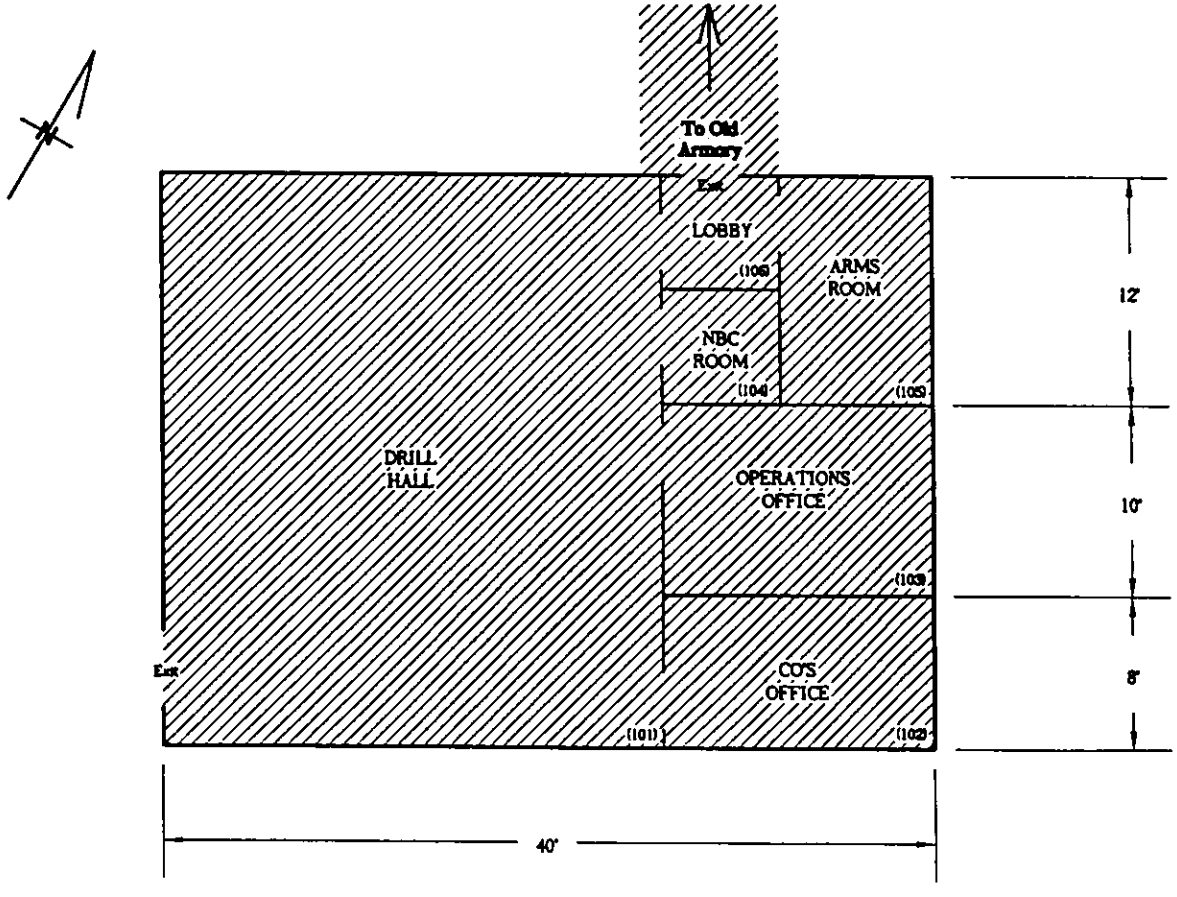
▽ 4-02 Locations where no Asbestos was found.

NOTES

1. Numbers in parentheses correspond to room numbers in the text.
2. The prefix, HB-02-, was left off for readability.

FIGURE 3

Hooper Bay, AK Federal Scout Armory New Armory (#2)	Sampling Locations	0 10 Scale: 1"= 10'



LEGEND

12 x 12, Floor Tile, Tan (*1)

NOTES

1. Numbers in parentheses correspond to room numbers in the text.

FIGURE 4

Hooper Bay, AK Federal Scout Armory New Armory (*2)	Asbestos Containing Material	0 10 Scale: 1"= 10'

Table 3 - 3 **Inspection Inventory Summary**

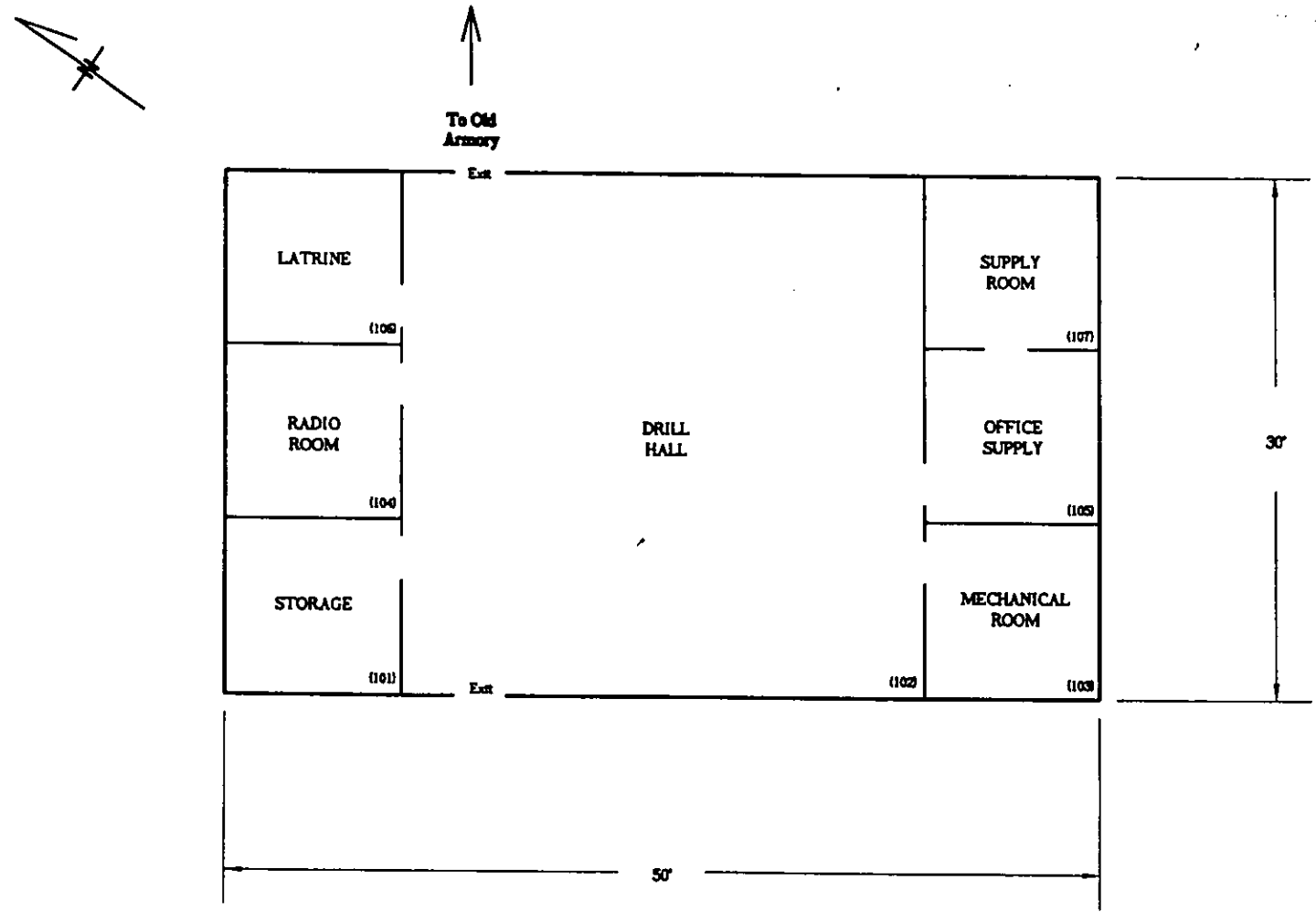
Hooper Bay

Training Building

Building No 3

Homogeneous Area Number	Description of Material	Asbestos Containing	Quantity
0		No	

Year Built and Square Footage:	1993 1660 SF
Building Number:	3
Building Description:	Training Building
Asbestos Program Manager:	Dave Bufo
Phone:	(907) 563-6436
Address:	Ogden 4040 B Street Anchorage, AK 99503
Inspector Name:	William Garibay
EPA Accreditation No:	5PSI 47402



NOTES

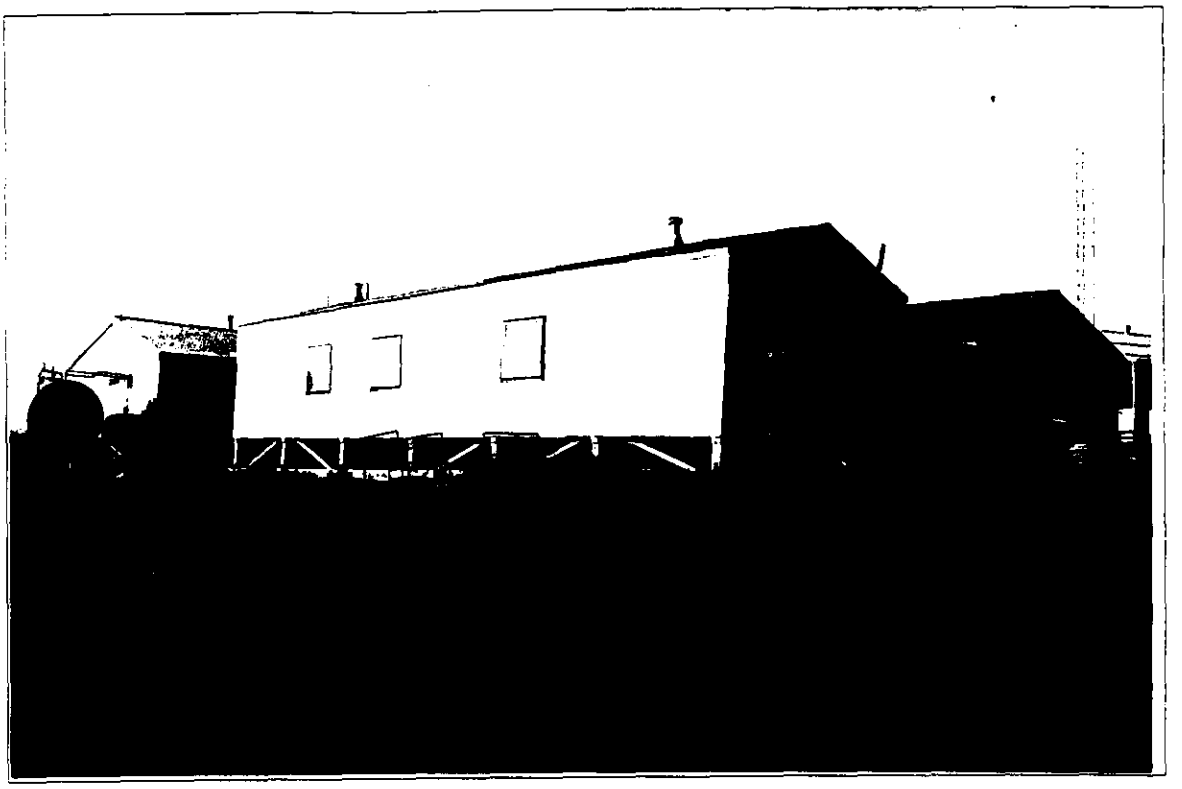
1. Numbers in parentheses correspond to room numbers in the text.

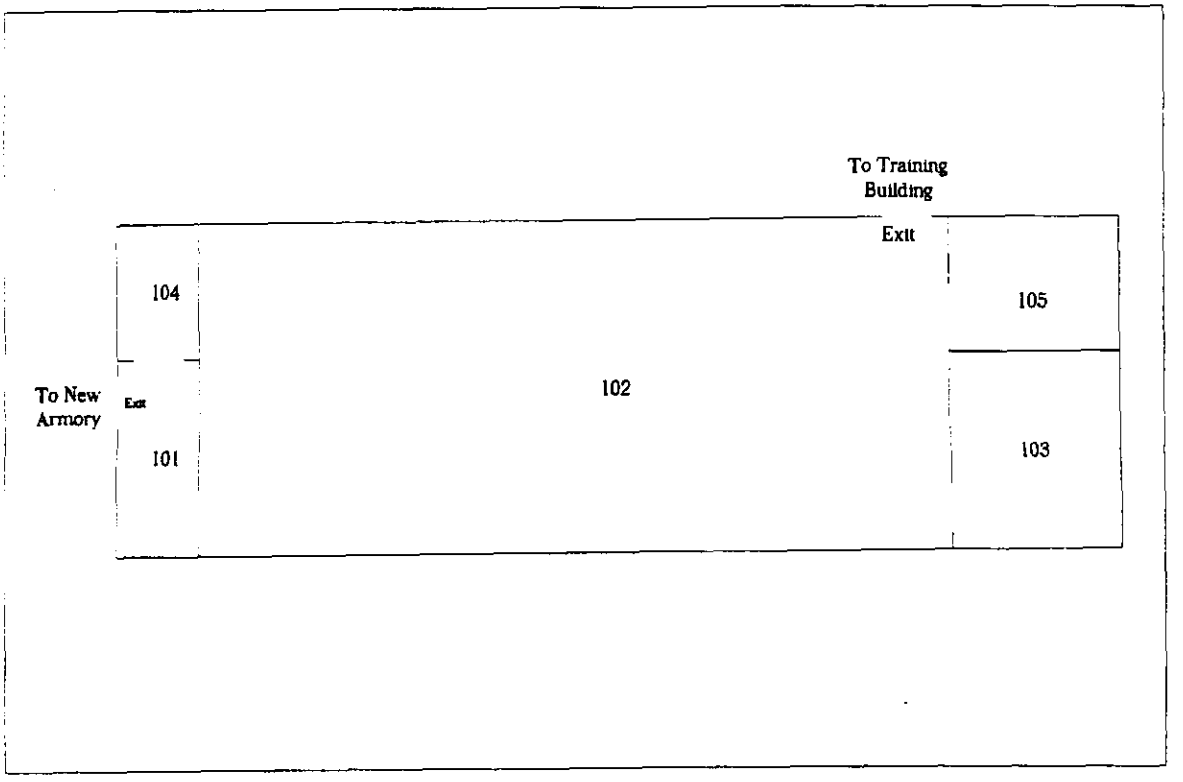
FIGURE 5

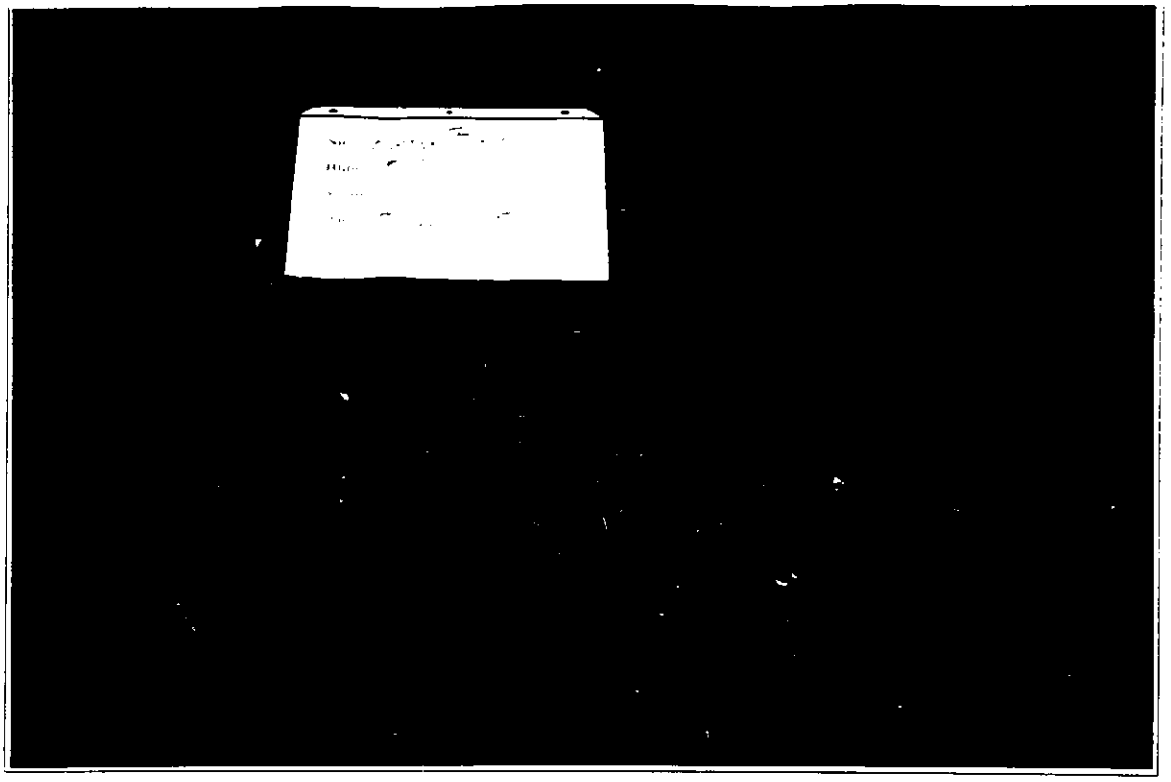
Hooper Bay, AK Federal Scout Armory Training Building (#3)	No samples Taken	0 10 Scale: 1" = 10'

APPENDIX A
PHOTOGRAPHS

Building Number 1 Old Armory

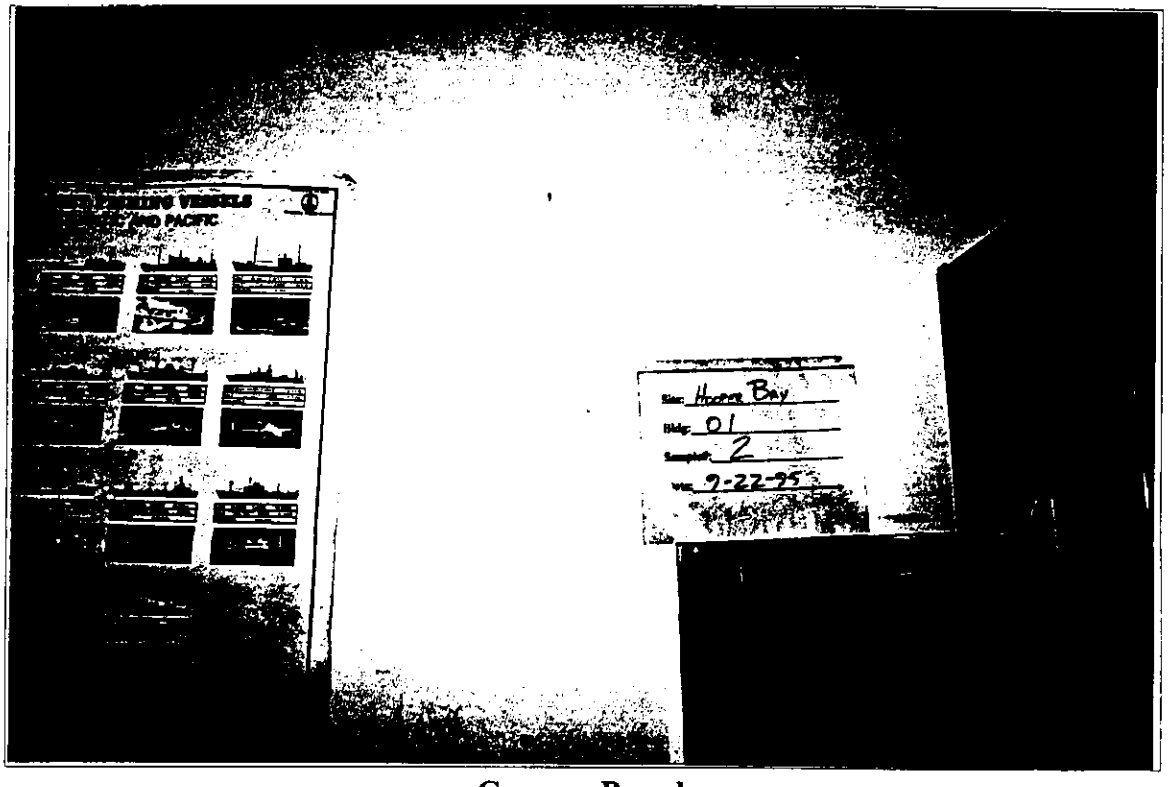






Rolled Flooring, Brown
Building No. *1* **HA No.** *1*
Old Armory
Hooper Bay, Alaska

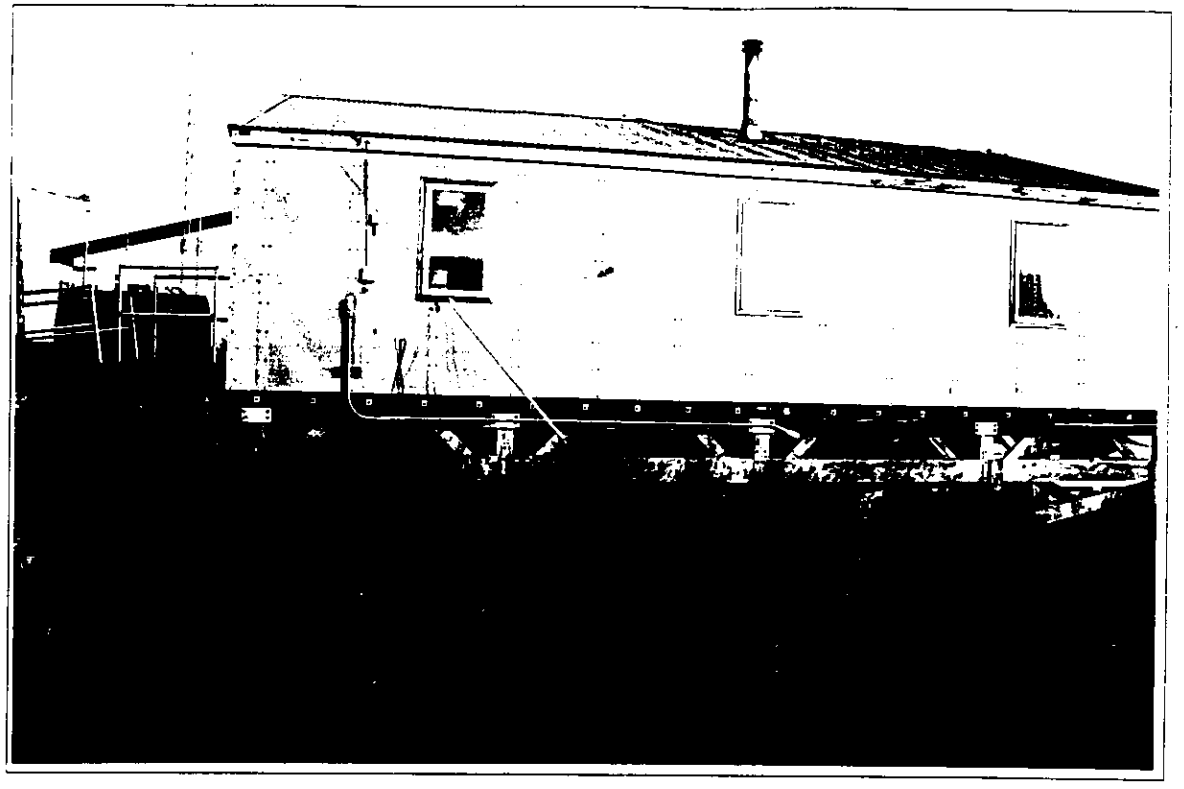
Photo No. *1*

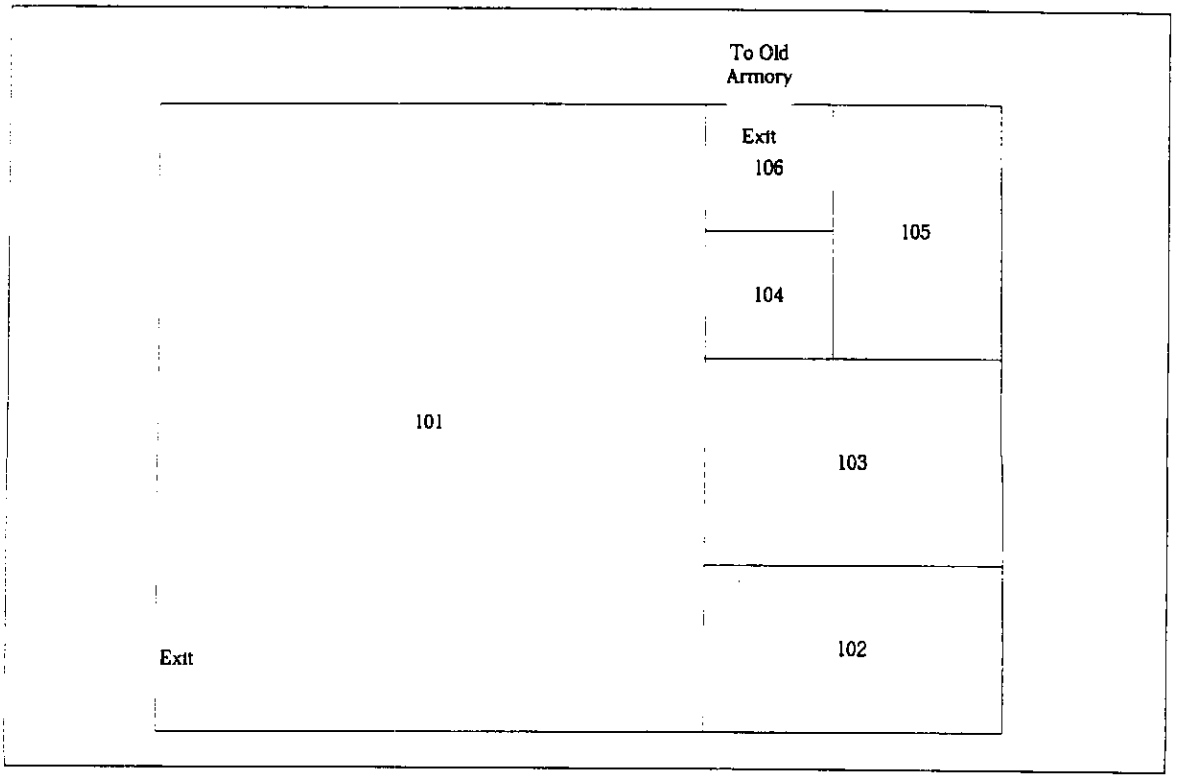


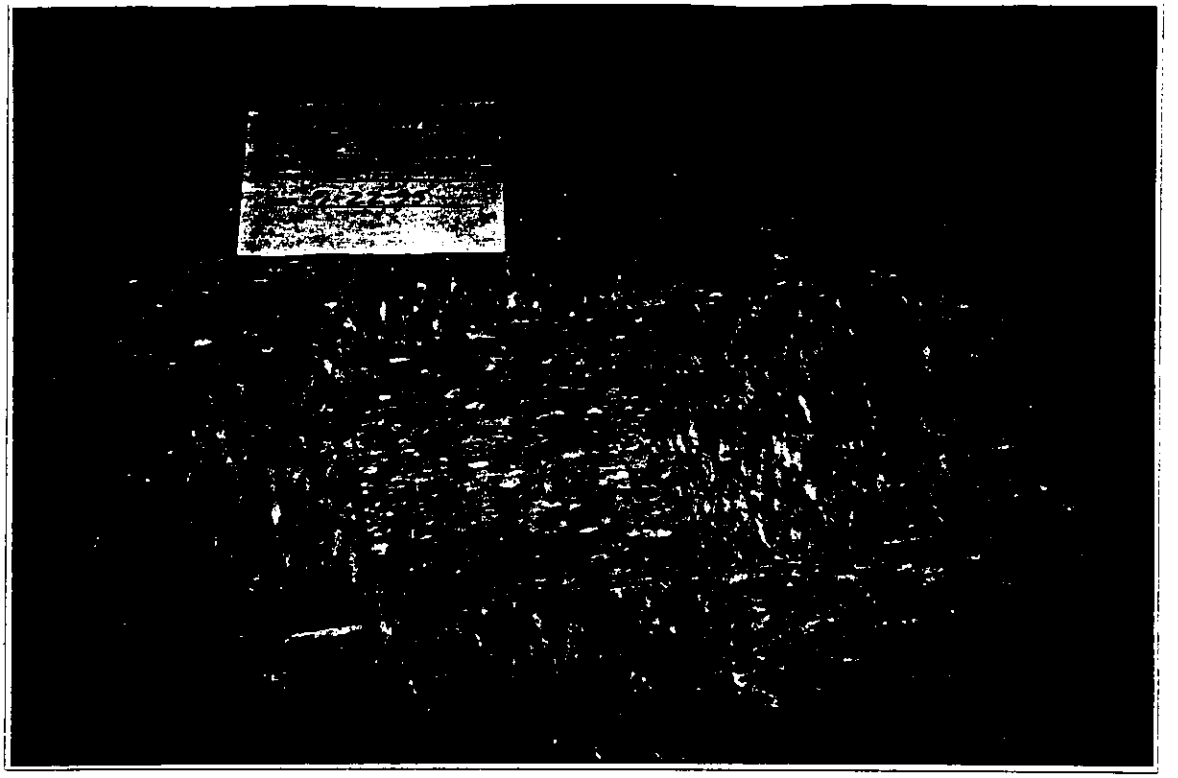
Gypsum Board
Building No. *1* **HA No.** *2*
Old Armory
Hooper Bay, Alaska

Photo No. *2*

Building Number 2 New Armory







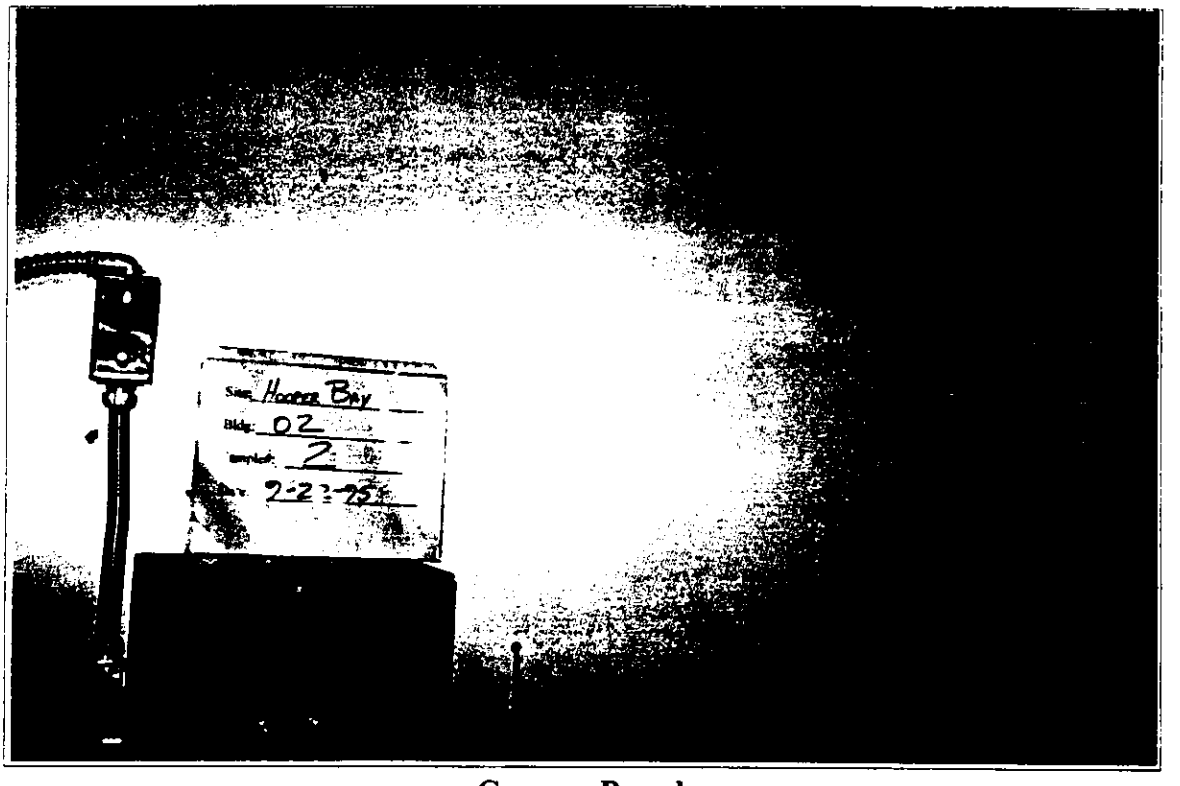
12" x 12", Floor Tile, Tan

Building No. *2* HA No. *1*

New Armory

Hooper Bay, Alaska

Photo No. *3*



Gypsum Board

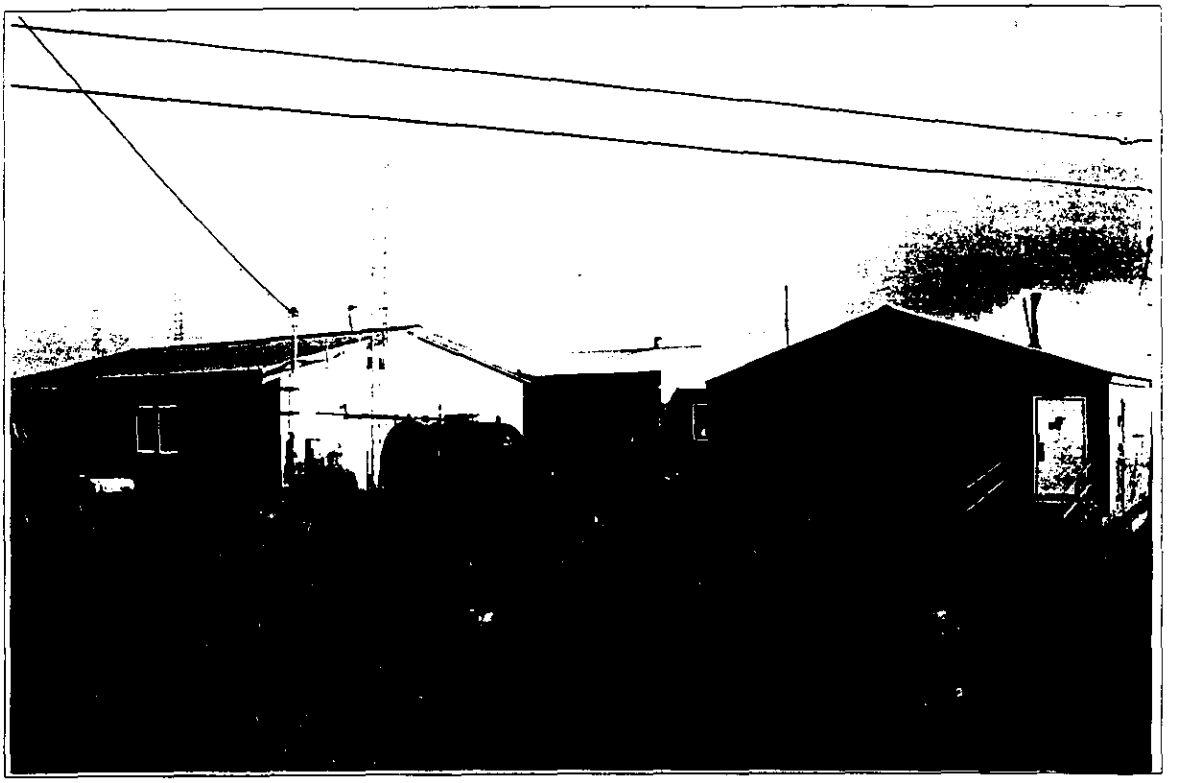
Building No. *2* HA No. *2*

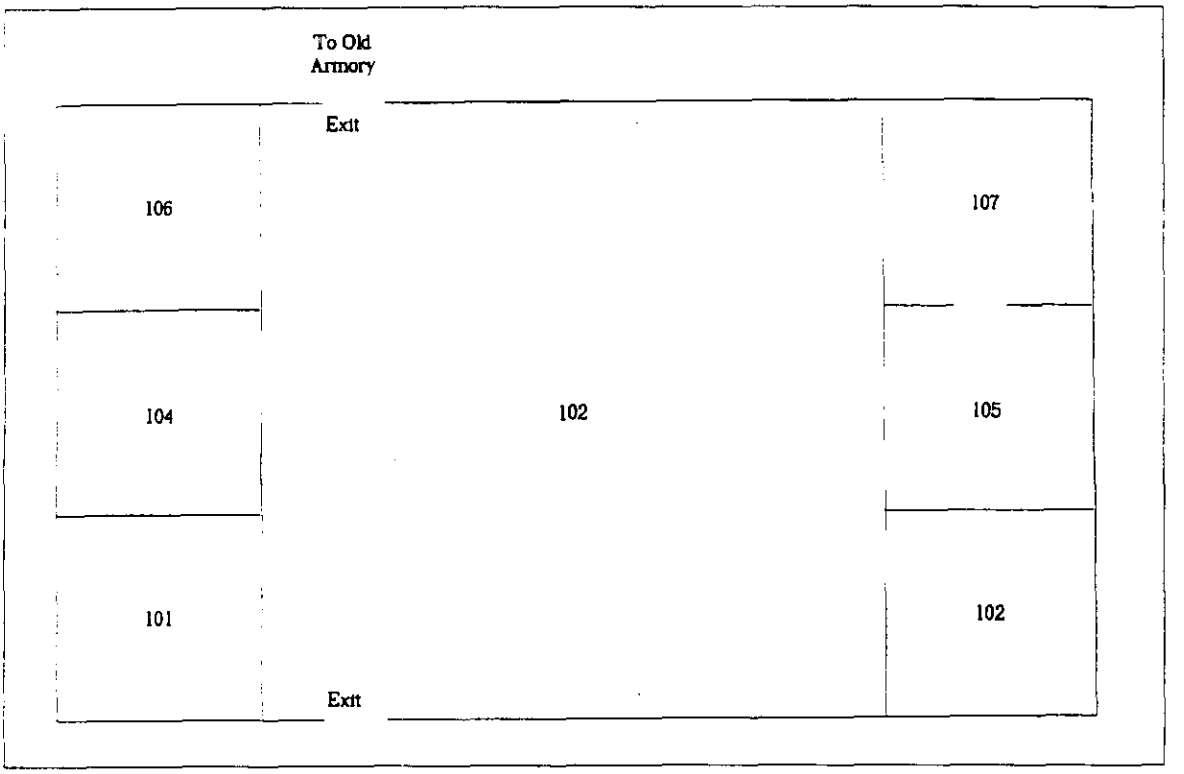
New Armory

Hooper Bay, Alaska

Photo No. *4*

Building Number 3 Training Building





APPENDIX B

ANALYTICAL RESULTS FROM EMSL/CHAIN OF CUSTODY REPORTS

Westmont, NJ 609-858-4800 | Piscataway, NJ 908-981-0550 | Carle Place, NY 516-997-7251 | Manhattan, NY 212-290-0052 | Melbourne, FL 407-725-5223 | Ann Arbor, MI 313-668-6810 | San Mateo, CA 415-570-5401 | Smyrna, GA 404-333-6066 | Greensboro, NC 910-297-1687 | Houston, TX 713-686-3635

EMSL

Ogden Environmental & Energy
1009 Commerce Park Drive
Suite 100
Oak Ridge, TN 37830

Friday, October 06, 1995

Ref Number: WT956183

POLARIZED LIGHT MICROSCOPY (PLM)

Project: 313000502/Ak Asbestos-Arng/Hooper Bay

SAMPLE	LOCATION	APPEARANCE	SAMPLE TREATMENT	ASBESTOS %	ASBESTOS TYPE	NONASBESTOS %	NONASBESTOS FIBROUS	NONASBESTOS %	NONASBESTOS NONFIBROUS
HB-01-1-01		Black Fibrous Heterogeneous	Teased		None Detected	30%	Cellulose	70%	Other
HB-01-1-02		Black Fibrous Heterogeneous	Teased		None Detected	30%	Cellulose	70%	Other
HB-01-1-03		Black Fibrous Heterogeneous	Teased		None Detected	25%	Cellulose	75%	Other
HB-01-2-01		White Fibrous Heterogeneous	Teased	< 1%	Chrysotile	25%	Cellulose	75%	Other
HB-01-2-02		White Fibrous Heterogeneous	Teased	< 1%	Chrysotile	20%	Cellulose	80%	Other
HB-01-2-03		White Fibrous Heterogeneous	Teased	< 1%	Chrysotile	25%	Cellulose	75%	Other

Comments: For all obviously heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. Also, *"# of Layers" refers to number of separable subsamples.*

Rodica Stanca
Analyst

Laboratory
Supervisor

Other Approved
Signatory

Westmont, NJ 609-858-4800 | Piscataway, NJ 908-981-0550 | Carle Place, NY 516-997-7251 | Manhattan, NY 212-290-0052 | Melbourne, FL 407-725-5223 | Ann Arbor, MI 313-668-6810 | San Mateo, CA 415-570-5401 | Smyrna, GA 404-333-5066 | Greensboro, NC 910-297-1487 | Houston, TX 713-686-3635

EMSL

Ogden Environmental & Energy
1009 Commerce Park Drive
Suite 100
Oak Ridge, TN 37830

Friday, October 06, 1995

Ref Number: WT956183

POLARIZED LIGHT MICROSCOPY (PLM)

Project: 313000502/Ak Asbestos-Arng/Hooper Bay

SAMPLE	LOCATION	APPEARANCE	SAMPLE TREATMENT	ASBESTOS %	ASBESTOS TYPE	NONASBESTOS %	NONASBESTOS FIBROUS	NONASBESTOS %	NONASBESTOS NONFIBROUS
HB-02-1-01 TILE		Grey Fibrous Heterogeneous	Teased		None Detected	5%	Cellulose	95%	Other
HB-02-1-01 MASTIC		Black Fibrous Heterogeneous	Teased	5%	Chrysotile	5%	Cellulose	90%	Other
HB-02-1-02 TILE		Grey Fibrous Heterogeneous	Teased/Crushed		None Detected	3%	Cellulose	97%	Other
HB-02-1-02 MASTIC		Black Fibrous Heterogeneous	Teased/Crushed	3%	Chrysotile	5%	Cellulose	92%	Other
HB-02-1-03 TILE		Grey Fibrous Heterogeneous	Teased/Crushed		None Detected	3%	Cellulose	97%	Other
HB-02-1-03 MASTIC		Black Fibrous Heterogeneous	Teased/Crushed	3%	Chrysotile	5%	Cellulose	92%	Other

Comments: For all obviously heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. Also, "# of Layers" refers to number of separable subsamples.

Rodica Stanca
Analyst

Laboratory
Supervisor

Other Approved
Signatory

Westmont, NJ 609-858-4800 | Piscataway, NJ 908-981-0560 | Carle Place, NY 516-997-7251 | Manhattan, NY 212-290-0052 | Melbourne, FL 407-725-5223 | Ann Arbor, MI 313-668-6810 | San Mateo, CA 415-570-5401 | Smyrna, GA 404-333-6068 | Greensboro, NC 910-297-1457 | Houston, TX 713-686-3635

EMSL

Ogden Environmental & Energy
1009 Commerce Park Drive
Suite 100
Oak Ridge, TN 37830

Friday, October 06, 1995

Ref Number: WT956183

POLARIZED LIGHT MICROSCOPY (PLM)

Project: 313000502/Ak Asbestos-Arng/Hooper Bay

SAMPLE	LOCATION	APPEARANCE	SAMPLE TREATMENT	ASBESTOS %	ASBESTOS TYPE	NONASBESTOS %	NONASBESTOS FIBROUS	NONASBESTOS %	NONASBESTOS NONFIBROUS
HB-02-2-01		Brown/White Fibrous Heterogeneous	Teased		None Detected	20%	Cellulose	80%	Other
HB-02-2-02		Brown/White Fibrous Heterogeneous	Teased		None Detected	20%	Cellulose	80%	Other
HB-02-2-03		Brown/White Fibrous Heterogeneous	Teased		None Detected	15%	Cellulose	85%	Other

Comments: For all obviously heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. Also, "# of Layers" refers to number of separable subsamples.

Rodica Stanca
Analyst

Laboratory
Supervisor

Other Approved
Signatory

CHAIN OF CUSTODY

DESCRIPTION

GB	Gypsum Board	FT	Floor Tile
CT	Ceiling Tile	TSI	Thermal Systems Insulation
SM	Surfacing Material	Misc.	Miscellaneous

LAB ID# ____

CLIENT OGDEN ENVIRONMENTAL & ENERGY

ADDRESS 1009 Commerce Park Drive, Suite 100

CITY Oak Ridge

STATE TN ZIP 37830

PHONE NO. (615) 481-8002

FAX NO. (615) 482-4074

PROJECT NUMBER 313000502

PROJECT NAME AK ASBESTOS - ARNG

SAMPLED BY GARIBAY / ANDERSON

SAMPLE SITE HOOPER BAY

PURCHASE ORDER NUMBER 5-32-P2-150200

PROJECT MANAGER (person to receive data) DAVE BUFO

FAX DATA BY ASAP

NEED FINAL RESULTS BY ____

SAMPLE ID	DATE	DESCRIPTION	PLM	LAB USE ONLY
1) HB-01-1-01	9 [illegible] 95	FT	X	
2) HB-01-1-02	↓	FT	↓	
3) HB-01-1-03		FT		
4) HB-01-2-01		GB		
5) HB-01-2-02		GB		
6) HB-01-2-03		GB		
7) HB-02-1-01		FT		
8) HB-02-1-02		FT		
9) HB-02-1-03		FT		
10) HB-02-2-01		GB		
11) HB-02-2-02		GB		
12) HB-02-2-03	↓	GB	↓	
13)				
14)				
15)				
16)				
17)				
18)				
19)				
20)				
TOTAL NUMBER OF SAMPLES	12			

RELINQUISHED BY:	DATE	TIME (Military)	RECEIVED BY:	DATE	TIME
Todd Anderson	9 [illegible] 95	10:00	R Romano		
	/ /				
	/ /				

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

TURN AROUND TIME

☒ (NORMAL) 2 WEEKS

RUSH: ☐ 24 HOURS ☐ 48 HOURS ☐ 72 HOURS ☐ 1 WEEK

SAMPLE DISPOSAL INSTRUCTIONS

SPECIAL INSTRUCTIONS:

95 SEP 29 AM 10:07

WESTMONT, N.J. [illegible]

White Copy - Lab Yellow Copy - File

APPENDIX C

INSPECTOR ACCREDITATION CERTIFICATES

psi Professional Service Industries, Inc.

Asbestos Management Planner

Refresher Training Course
IDPH and IDEM Accredited

William P. Garibay

312-82-9067

has successfully completed the EPA-Approved Asbestos Management Planner Refresher Training Course and passed the examination, with a score of 70% or above for the purposes of accreditation required under Section 206 of Title II of the Toxic Substance Control Act (TSCA). Conducted by Professional Service Industries, Inc., 510 East 22nd Street, Lombard, Illinois 60148, 1-800-346-2860.
Continuing Education Units awarded: 0.4

The Continuing Education Unit

Location: Oak Ridge, TN *Examination: October 28, 1994*

Course Date: October 28, 1994 *Expiration Date: October 28, 1995*

Director of Training:

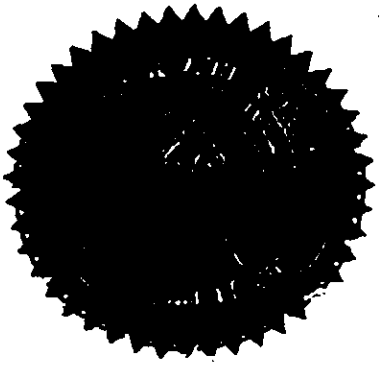
PROFESSIONAL SERVICE INDUSTRIES, INC. psi

Certificate Number 5PSI 47398 PR

APPENDIX D

LABORATORY ACCREDITATION CERTIFICATES

The American Industrial Hygiene Association



is proud to acknowledge that

EMSL Analytical, Inc.

Westmont, NJ

Laboratory ID# 7012

has fulfilled the requirements for Industrial Hygiene Laboratory Accreditation and has earned distinguished recognition as an

AIHA IH Accredited Laboratory

Originally Accredited February 1, 1989, current certificate effective February 1, 1995 until February 1, 1998, subject to continued compliance with AIHA accreditation criteria.

August 18, 1995

President
American Industrial Hygiene Association

Date Prepared

381

Chairman
IH Laboratory Accreditation Committee

Certificate Number

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO/IEC GUIDE 58:1993
ISO 9002:1994

Certificate of Accreditation

EMSL ANALYTICAL, INC.
SAN MATEO, CA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

July 1, 1996
Effective until

For the National Institute of Standards and Technology

NVLAP-01C (4-95)

NVLAP LAB CODE: 101048-3

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO/IEC GUIDE 58:1993
ISO 9002:1994

Certificate of Accreditation

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

EMSL ANALYTICAL, INC.
SAN MATEO, CA

Is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

AIRBORNE ASBESTOS FIBER ANALYSIS

July 1, 1996
Effective until

For the National Institute of Standards and Technology

NVLAP-01C (4-95)

NVLAP LAB CODE: 101048-3

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO/IEC GUIDE 58:1993
ISO 9002:1994

Certificate of Accreditation

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

EMSL ANALYTICAL, INC.
WESTMONT, NJ

Is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

AIRBORNE ASBESTOS FIBER ANALYSIS

July 1, 1996
Effective until

For the National Institute of Standards and Technology

NVLAP/01C (4-95)

NVLAP LAB CODE: 101048-0

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO/IEC GUIDE 58:1993
ISO 9002:1994

Certificate of Accreditation

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

EMSL ANALYTICAL, INC.
WESTMONT, NJ

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

July 1, 1996
Effective until

For the National Institute of Standards and Technology

NVLAP-01C (4-89)

NVLAP LAB CODE: 101043-0

The American Industrial Hygiene Association

is proud to acknowledge that

Analytical Environmental Services, Inc.

Atlanta, GA

Laboratory ID# 9096

has fulfilled the requirements for
Industrial Hygiene Laboratory Accreditation
and has earned distinguished recognition as an

AIHA Accredited Laboratory

since March 1, 1994 through March 1, 1997

subject to continued compliance with AIHA accreditation criteria.

President
American Industrial Hygiene Association

March 1, 1994
Date Prepared

Donald J. Hart

Chairman
Laboratory Accreditation Committee

505
Certificate Number

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO/IEC GUIDE 58:1993
ISO 9002:1994

Certificate of Accreditation

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

ANALYTICAL ENVIRONMENTAL SERVICES, INC.
ATLANTA, GA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

September 30, 1996
Effective until

For the National Institute of Standards and Technology
NVLAP Lab Code: 102033-0

NVLAP-01C (4-95)

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

ACCREDITATIONS

AIHA
American Industrial Hygiene Association
Metals, Organic Solvents, Fiber Analysis
Lab # 9096

ELPAT
American Industrial Hygiene Association
Lead in Soil, Wipe and Paint Samples
Lab # 9096

NVLAP
National Voluntary Laboratory Accreditation Program
Asbestos Fiber Analysis by PLM
Lab # 102033

ELAP
Environmental Laboratory Approval Program
Waste Water, Solid and Air Emmission Analysis
Lab # 11379

ODH
Ohio Department of Health
Lead Sample Analysis
Lab # 10003

PAT
Proficiency Analytical Testing
Fiber, Metals & Organic Solvents
Lab # 30540-002

SCDHEC
South Carolina Department of Health
Clean Water Act Parameters
Lab # 98016001

TDUST
Tennessee Division of Underground Storage Tanks

National Institute of Standards and Technology

NVLAP®

National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO/IEC GUIDE 58:1993
ISO 9002:1994

Scope of Accreditation

BULK ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 102033-0**

ANALYTICAL ENVIRONMENTAL SERVICES, INC.
3781 Presidential Parkway, Suite 111
Atlanta, GA 30340
Mr. Ady Padan
Phone: 404-457-8177 Fax: 404-457-8188

NVLAP Code	*Designation*
18/A01	U.S. EPA's "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" as found in 40 CFR, Part 763, Subpart F, App. A, or the current U.S. EPA method for the analysis of asbestos in building material

September 30, 1996

Effective until

For the National Institute of Standards and Technology

APPENDIX E

COMPANIES PROVIDING COST ESTIMATES

1. **Central Environmental, Inc.**
Contact: Stuart M. Jacques
700 East 46th Avenue
Anchorage AK 99503
Phone: (907) 561-0125
Fax: (907) 561-0178

2. **Asbestos Removal Specialists of Alaska, Inc.**
Contact: John H. Abrams
1189 Van Horn Road
Fairbanks AK 99701-7415
Phone: (907) 451-8550
Fax: (907) 452-6374

APPENDIX F

IMPORTANT INFORMATION ABOUT YOUR ASBESTOS INSPECTION

OGDEN

Important Information About Your Environmental Site Evaluation/Assessment

Imagine purchasing a site for $500,000, only to learn later during construction, that hazardous materials have been discovered, that you are legally obliged to remove them before work may continue. and that the unanticipated cost will be $5 million, or more.

The risks are real. There is no way of eliminating them, but they can be managed by relying on a qualified engineering firm to perform an environmental site evaluation/assessment, also known as preacquisition site assessment, or PSA.

RELY ON A QUALIFIED FIRM. THE COST OF OWNING A POLLUTED SITE CAN BE IMMENSE AND YOU MAY HAVE TO BEAR IT ALL YOURSELF.

Insurance will not ordinarily pay for cleanup because most policies exclude pollution coverage. You may be unable to force prior owners to pay unless they have previously assumed the obligation in writing. Even the option of abandoning the site may be unavailable to you.

Although evaluations/assessments are required by law in some states, no current ordinance, regulation, code, or standard is known to prescribe what an assessment must consist of. This is as it should be. For an assessment to be effective, those who design it need flexibility to adequately consider the unique set of factors created by the site itself and your own particular risk management objectives.

Although reliance on a competent consultant is necessary to manage your risk, it does not eliminate your risk. the engineers who perform evaluations or assessments generally are engaged to determine if a site is affected by hidden problems. If they could see the unseeable, they would know precisely where to look and what methods to apply, but engineers are not clairvoyant. Even the most rigorous professional assessment may fail to identify al existing conditions. This potential creates risk. **The risk is yours.** Do not look to your engineering consultant to assume it. Your engineer serves as your professional advisor to provide guidance and opinions based on analysis and judgment. Were professional firms to accept your risk in addition to their own, the cost of performing evaluations or assessments would be prohibitive.

A FIRM UNCONCERNED ABOUT ITS OWN RISK CANNOT BE EXPECTED TO CARE ABOUT YOURS.

It is essential to work with a consultant who understands the risks involved, who can explain them to you clearly, and who can competently apply appropriate technical measures to reduce those risks to levels you can tolerate. The technical measures usually are pursued in stages, with each step being based on information obtained from the previous one.

The initial stage of an assessment usually comprises an historical review of the site. Typical tasks associated with an historical review might include, among others:

- reviewing public documents to chronicle site ownership for the past 30, 40, or more years;
- investigating the site's regulatory history to learn about permits granted or citations issued;
- determining prior uses of the site and those adjacent to it;
- reviewing available topographic and real estate maps, historical aerial photos, geologic information, and hydrologic data;
- reviewing readily available published information about surface and subsurface conditions;
- evaluating the potential for naturally occurring hazards, such as radon gas, asbestos, or methane;
- interviewing public officials with respect to local concerns.

WAITING UNTIL THE LAST MINUTE CAN DILUTE THE QUALITY OF WORK AND INCREASE RISK.

Because so many aspects of an historical review require reliance on third parties, it is essential to give your consultant adequate lead time. Following the hysterical review, or in conjunction with it, your consultant will

probably performs site reconnaissance. This means "walking" the site, using any current maps, aerial photos, or development plans available. Particular concerns are distressed vegetation, ground stains, trash, landfills, depression, and evidence of any below-grade tanks or other potential contaminant sources. Discussions with site personnel, former employees, and adjacent property owners can also be of value, particularly with respect to any chemical use, storage, treatment, or disposal practices, past or present. In cases where buildings, piping, or transformers exist on the site, site reconnaissance should be expanded to consider the potential for asbestos or PCB contamination.

Some clients direct their consultants to terminate a PSA without sampling when historical review and site reconnaissance alone indicate that hazardous materials probably are not present. Other clients prefer additional review as a general risk reduction measure, or when prior findings or professional intuition suggest the site may be "dirty."

Additional review can take a variety of forms. Many consultants proceed by collecting samples of subsurface materials for visual evaluation and laboratory analysis. If these procedures indicate the presence of hazardous substances, the client is so informed. Follow-up activity then might include additional subsurface sampling to help determine the source of contamination or contaminant migration paths. Qualitative and/or quantitative chemical testing may also be appropriate to evaluate the contaminants' composition.

In those instances where the client believes some type of contaminant is present, the consultant is usually engaged to provide a comprehensive survey, including groundwater analysis. This would be followed by a report of findings. Depending on the workscope, the report may identify the procedures necessary to mitigate hazardous conditions (assuming they are found) and the likely cost of performing the required remedial measures.

TO CERTIFY THAT CERTAIN CONDITIONS EXIST, WHEN IT IS IMPOSSIBLE TO KNOW THEY EXIST, MAY BE RULED A NEGLIGENT ACT.

Most consulting engineers will refuse to certify--i.e., warrant--that a site is free of contaminants, because it is impossible to know if such a condition exists. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas that showed no signs of contamination when previously sampled. A prudent consultant can only provide an opinion.

WHY INDEMNIFICATION AND/OR LIMITATION OF MONETARY EXPOSURE IS IMPORTANT TO THE CLIENT AND THE ENGINEER.

Idemnifications are important concerns to the engineer because of court rulings which make consulting engineers liable to any party who foreseeably could be damaged by their negligent acts. As a consequence, a consulting engineer engaged by a buyer could be sued by a site's owner because the consultant's discovery of hazardous materials effectively destroyed the land's value. Even though the consultant's position would likely be upheld in court, the claim would have to be defended, and the cost of defense might be many times larger than the fee earned for conducting the assessment. For reasons such as this, most assessment contracts include provisions which make clients responsible for project-related liabilities that consultants are powerless to control.

Also, our client (the buyer) may be sued by the current landowner for reduced property value if waste is discovered. As a result, the potential buyer in the assessment agreement should address this potential problem so that both the potential buyer and the engineer are "held harmless" for the possible discovery of waste.

ONE OF THE OBLIGATIONS OF YOUR CONSULTING ENGINEER/SCIENTIST IS TO PROTECT THE SAFETY, PROPERTY, AND WELFARE OF THE PUBLIC.

Occasionally, a geotechnical engineering/subsurface waste management (remediation) investigation will disclose the existence of conditions that may endanger the safety, health, property, or welfare of the public. Your consulting engineer/scientist may be obligated under rules of professional conduct, statutory or common law to notify yourself and others of these conditions.

The preceding paragraphs are based on information provided by the ASFE/Association of Engineering Firms in the Geosciences, Silver Spring, Maryland.

ADA–Americans With Disabilities Act:
9K series – The design and operation of the BEST® cylindrical lock meets the intent of the standard for ANSI A117.1 section 404.2.6

Builders Hardware Manufacturers Association:
9K series – Listed by BHMA for A156.2, Series 4000, Grade 1.

Underwriters Laboratories®:
9K series – Listed by Underwriters Laboratories for use on 3 Hr, A label for single or double swinging doors.

Florida Building Code and Miami-Dade County Code:
9K series – ⅞" latch throw – Listed by Florida Building Code and Miami-Dade County at ± 75 PSF for single doors.

9K series – ½" latch throw – Listed by Florida Building Code and Miami Dade County at ± 80 PSF for single doors and ± 50 PSF for double doors.

California State Fire Marshal:
9K series – Listed with California State Fire Marshal.
9K series 14 & 15 lever conforms with California Title 24.

Backset – 2 ¾" standard, 3 ¾" and 5" available.

Chassis – Critical latch and chassis components are brass or corrosion-treated steel. 2 ⅛" diameter to fit 2 ⅛" hole in door . (Conforms to ANSI A115.2). Lost Motion feature available as an option. (see page 5 for options/features).

Door thickness – Available for 1 ⅜" to 2 ¼" doors only. Spacers available for 1 ⅜" doors.

Roses – C – 3" Convex; K – 3" Convex-no ring; D – 3 ½" Convex; L – 3 ½" Convex-no ring

Products protected by one or more of the following patents:
5,590,555 5,794,472 Other products patent pending.

Finish – (BHMA)	US	DESCRIPTION
605	3	bright brass
606	4	satin brass
611	9	bright bronze
612	10	satin bronze
613	10B	oxidized satin bronze, oil rubbed
618	14	bright nickel plated
619	15	satin nickel plated
622	19	flablack
625	26	bright chromium plated
626	26D	satin chromium plated
690	20	dark bronze

Antimicrobial Finish
626AM satin chrome plated with UltraShield™ antimicrobial protected coating

The Stanley Security Solutions UltraShield™ finish inhibits the growth of bacteria and other microbes on the surface of the hardware.

NOTE: Stanley's UltraShield™ option is recommended for use on any hardware application where product cleanliness is a high priority. i.e; Hospital/Healthcare, Elderly Care, Education, Transportation, Food-Service, Hospitality.

Latch – Solid brass ⅝" throw. Front 2 ⅜" x 1 ⅛" beveled.

Lever handles – Lever handles are a high-quality zinc alloy. Trim components are brass or bronze. Body is approximately ⅞" in diameter; Handle is approximately 4 ½" long (from center-line of chassis). #14 and #15 levers conform to California Administrative Code Title 19 and Title 24. All three styles of levers conform to the Illinois Accessibility Standard.

Mounting – In addition to standard door preparation (ANSI A115.2 for 1 ⅜" doors), two additional holes are needed for through-bolts. Through-bolts require two ⅜" diameter holes located at 12 o'clock and 6 o'clock positions. A drill jig can be ordered to insure accuracy of the holes. (see KD303 page 5).

Projection on door – Approx. 2 ⅜" when mounted on 1 ¾" door.

Strike – **STK:** Conforms to ANSI A115.2 (2 ⅜" x 1 1/8" with curved lip & box). S3: Conforms to ANSI A115.2 for 1 ⅜" doors (4 ⅞" x 1 ¼" with curved lip). S3-⅞: Conforms to ANSI A115.2 for 1 ⅛" doors (4 ⅞" x 1 ⅛" flat)

HOW TO ORDER

9K	3	7	AB	15	A	STK	626	
Series	**Backset**	**Core Housing**	**Function Code**	**Lever Style**	**Rose Style**	**Strike Package**	**Finishes**	**Options**
9K	3 – 2 ¾" 4 – 3 ¾" 5 – 5"	0 – keyless 7 – 7-pin housing accepts all BEST® cores	AB – entrance D – storeroom L – privacy N – passage R – classroom etc. pages 6-9	14 – curved return 15 – contour angle return 16 – curved no return pages 4-5	C – 3" convex D – 3 ½" convex K – 3" convex - no ring L – 3 ½" convex - no ring pages 4-5	STK – 2 ¾" ANSI S3 – 4 ⅞" ANSI S3 – 7/8 – ⅞" flat strike page11	605 606 611 612 613 618 619 622 625 626 690	AL – abrasive lever LL – lead lined LM – lost motion ROE – request to exit** SH – security head screws TL – tactile lever 3/4 – ¾" throw latch 7/8" LTC – flat lip strike NOTE: specify inside (I), outside (O), or both (B) for AL, TL options page 5

*Handles are made from a zinc alloy, and have been plated to be equivalent in appearance to the finishes listed.
For information on 9K non-IC products please refer to BEST's non-IC keying products brochure.
**ROE option requires modification to chassis and is sold with assembly unit only.