APPENDIX D:

Asbestos Testing Reports

See the following reports:

1) "Alliant Asbestos-Containing Material Re-Inspection Report, Final – Revision 2; 05 June 2013"

2) "Eastern Analytical, Inc. Laboratory Report" (for PCBs in caulking and ACBMs) dated 7/30/18, with cover letter and summary from RPF Environmental to AECm dated 8/9/18

3) "RPF Environmental Testing Report" dated 11-15-18, with cover letter from AECm to City of Portsmouth dated 12-10-18

Asbestos-Containing Material Re-Inspection Report

PAUL A. DOBLE UNITED STATES ARMY RESERVE CENTER
125 Cottage Street
Portsmouth, NH 03801

Contract No GS-10F-0110V
Delivery Order W912QR-12-F-0207

Prepared for:

U.S. Army Corps of Engineers
Louisville District
600 Dr. Martin Luther King, Jr. Place
Louisville, Kentucky 40202-2232

and

99th Regional Support Command DPW ENV
5231 South Scott Plaza
Fort Dix, New Jersey 08640-5062

Submitted by:

Alliant Corporation
320 North Cedar Bluff Road
Suite 200
Knoxville, TN 37923-4524
DUNS: 01-024-9493
GSA Contract: GS-10F-0110V

Final – Revision 2; 05 June 2013

Certification 4 Form

CONTRACTOR STATEMENT OF INDEPENDENT TECHNICAL REVIEW

Alliant has completed the FINAL Asbestos-Containing Material Re-Inspection Report for the Paul A. Doble United States Army Reserve Center (NH008) in Portsmouth, New Hampshire in the 99th Regional Support Command.

Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project, as defined in the QCP. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions was verified. This included review of assumptions; methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing USACE policy.

Paul M. Shipp
Project Manager

05 JUNE 2013
Date

David Pope
Independent Technical Review

6-5-2013
Date

Significant concerns and the explanation of the resolution are as follows:

✓ No major technical concerns. All minor technical and editorial comments were documented and addressed.

_____ As noted, all concerns resulting from independent technical review of the project have been considered.

EXECUTIVE SUMMARY

Alliant Corporation (ALLIANT) conducted an Asbestos-Containing Material (ACM) Re-Inspection for at the Paul A. Doble United States Army Reserve Center (USARC), in Portsmouth, NH on 07 May 2013. The work was conducted for the U.S. Army Reserve 99th Regional Support Command under contract with the U.S. Army Corps of Engineers, Louisville District. The re-inspection was performed to confirm the results of an ACM inspection performed by others in September 1994 and to identify any potential ACM not identified previously in the initial inspection.

Two structures were inspected. These included:

Building #1 – Main Reserve Center
Building #2 – OMS Building

Each structure is one-story and is constructed of cinder block with exterior brick veneer walls and flat, sloping built-up roofs edged with metal coping. Interior finishes include plaster walls and ceilings in bathrooms and locker rooms, and gypsum board suspended ceilings throughout most of the remaining building. Flooring consists of vinyl and ceramic tile. The heating, ventilation, and air conditioning system includes a combination of radiators and air-handlers supplied by an oil-fired boiler. Building #1 is approximately 12,000 square feet (sf) and Building #2 is approximately 2,700 sf. The facility has functioned as a USARC administrative and training facility since 1958.

Homogeneous Areas

As detailed in the Asbestos Hazard and Emergency Response Act (AHERA), the U.S. Environmental Protection Agency (USEPA) defines a homogeneous area (HA) as an area of surfacing materials, thermal surface insulation, or miscellaneous material that is uniform in color and texture (USEPA AHERA). Sixteen HAs were identified during the 1994 inspection. No new HAs were identified during the re-inspection. The HAs identified during the 1994 Inspection include the following:

- 9” x 9” brown and tan checkerboard floor tile and underlying mastic, Main Reserve Building
- 12” x 12” tan floor tile and underlying black mastic adhesive, Main Reserve Building
- Gray floor grout in restrooms, Main Reserve Building
- Wall plaster, Main Reserve Building
- Ceiling plaster, Main Reserve Building
- Ceiling sheetrock, Main Reserve Building
- Skim coat on open end of fiberglass pipe in boiler room, Main Reserve Building
- White breeching insulation in boiler room, Main Reserve Building
- White ceiling sheetrock in boiler room, Main Reserve Building
- Green vibration damper cloth on ceiling mounted HVAC untis, Main Reserve Building
- 9” x 9” tan floor tile and underlying mastic, Main Reserve Building

- Mudded pipe fittings on fiberglass and layered paper pipe, Main Reserve Building
- Layered paper pipe insulation, Main Reserve Building
- Asbestos-cement transite board, OMS Building
- Gray window caulking, OMS Building
- Layered paper pipe insulation, OMS Building

ACMs

As a result of the 1994 inspection, six HAs were positively identified as ACM. The ACMs include:

- 9” x 9” brown and tan checkerboard floor tile and underlying mastic, Main Reserve Building
- 9” x 9” tan floor tile and underlying mastic, Main Reserve Building[1]
- Mudded pipe fittings on fiberglass and layered paper pipe, Main Reserve Building
- Layered paper pipe insulation, Main Reserve Building
- Asbestos-cement transite board, OMS Building
- Layered paper pipe insulation, OMS Building

Assumed ACM.

The following HAs were assumed to contain asbestos:

1994 Inspection

- None

2013 Re-Inspection

- None

[1] This material was removed during building renovations and was not observed during the re-inspection.

Table of Contents

APPENDICES

ACRONYMS AND ABBREVIATIONS

ACBM	asbestos-containing building material
ACM	asbestos-containing material
AHERA	Asbestos Hazard and Emergency Response Act
HA	homogeneous area
NESHAP	National Emissions Standards for Hazardous Air Pollutants
RSC	Regional Support Command
sf	square feet
USACE	United States Army Corps of Engineers
USARC	United States Army Reserve Center
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

Alliant Corporation (ALLIANT) has conducted an Asbestos-Containing Material (ACM) Re-Inspection at the Paul A. Doble United States Army Reserve Center (USARC), in Portsmouth, NH (Site). The re-inspection was performed under contract with the U.S. Army Corps of Engineers (USACE), Louisville District and for the 99th Regional Support Command (RSC) for the purposes of environmental compliance and planning in preparation for real estate actions to be exercised at 21 USARCs in Connecticut, Massachusetts, New Jersey, New Hampshire, New York, Pennsylvania, and Rhode Island. The scope of the services for this project consisted of conducting an update of a prior asbestos survey to perform current condition assessment and quantification of previously identified (confirmed or assumed) ACM, and to identify any potential ACM not discovered previously in the initial inspection. The previous ACM inspection was performed in September 1994 by Covina Environmental Consultants under subcontract to ABB Environmental Services. All documentation supplied by the 99th RSC relevant to the Site with respect to ALLIANT's contracted scope of services is included in Appendix A.

2.0 APPROACH

The following tasks were performed to meet the objectives of the project:

- *Document review* – ALLIANT personnel reviewed the September 1994 asbestos survey report by Covina Environmental Consultants.
- *Asbestos Re-Inspection* – ALLIANT personnel re-inspected all interior and exterior building areas at the Site. Those areas that were identified as ACM during the original inspection were observed in order to document material condition. The re-inspection included the identification of any new homogeneous areas (HAs) or suspect ACMs not previously identified in the original inspection. The buildings re-inspected consisted of the following:
    - Building #1 – Main Reserve Center
    - Building #2 – OMS Building
- *Photographic Log* - A photographic record of the ACMs was maintained. The Photographic Log and photos are included in Appendix B. The photographic documentation of all HAs presented in the original inspection report can be found in that document included as Appendix A.
- *Interview* – ALLIANT personnel interviewed site personnel.

2.1 Information Sources

Alliant conducted interviews to gather information regarding current facility condition, including facility construction, maintenance, and management history. Previous documentation provided by the 99th RSC for the Site were reviewed as part of this project and are attached as Appendix A. The Point(s) of Contact are listed in Section 3.*2 Facility Manager/Points of Contact.*

2.2 Limitations

Although this study attempts to confirm the presence of ACM, either previously identified or unidentified, it is possible that some area(s) of ACM escaped detection. Reasons for ACMs escaping detection may include the limitations of the study, the inaccuracy of available data sources, location inaccessibility, and/or the limited knowledge of Site personnel. Additionally, the roof was not accessible and therefore materials on the roof were not assessed.

3.0 SITE INFORMATION

Both structures are one-story and are constructed of cinder block with exterior brick veneer walls and flat, sloping built-up roofs edged with metal coping. Interior finishes include plaster walls and ceilings in bathrooms and locker rooms, and gypsum board suspended ceilings throughout most of the remaining building. Flooring consists of vinyl and ceramic tile. The heating, ventilation, and air conditioning system includes a combination of radiators and air-handlers supplied by an oil-fired boiler. Building #1 is approximately 12,000 square feet (sf) and Building #2 is approximately 2,700 sf. The facility has functioned as a USARC administrative and training facility since 1958.

3.1 Installation Name and Location

Facility ID: Paul A. Doble USARC
Facility Address: 125 Cottage Street, Portsmouth, NH 03801

3.2 Facility Manager/Point of Contacts

Regional Environmental Protection Specialist

Name: Dan O'Leary
Phone: 617-276-6673
Email: Daniel.j.Oleary4.ctr.mail.mil

Facility Manager

Name: Sergeant First Class Dana Davis
Phone: 603-436-5927

Inspector, Contractor and Contact Information

Inspector: James E. Steele
Contractor: Alliant Corporation
Address: 320 North Cedar Bluff Road, Suite 200
Knoxville, Tennessee 37923-4524
Phone: 865-934-2222
Fax: 865-769-0946
Email: jsteele@alliantcorp.com

The Inspector's Certification is provided in Appendix C.

3.3 Date of Inspection

Begin Date: 07 May 2013
End Date: 07 May 2013

4.0 ASBESTOS INSPECTION

4.1 Methods

This asbestos inspection was performed in accordance with the approved Project Work Plan (Alliant 2012).

Homogeneous materials were determined by conducting an initial building walkthrough to assess materials that were visually similar in color, texture, general appearance, and date of installation. If the inspector decided that a material was not similar in appearance and texture to other materials in the building, the inspector distinguished the material as unique and identified it as a new HA.

Following the United States Environmental Protection Agency (USEPA) inspection protocols, the inspector placed each identified suspect homogeneous material into one of the following USEPA classifications:

Friable ACM. National Emissions Standards for Hazardous Air Pollutants (NESHAP) defines a friable ACM as any material containing greater than 1 percent asbestos, which, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

Category I Non-friable ACM. NESHAP defines a Category I non-friable ACM as packing, gaskets, resilient floor covering including vinyl asbestos tiles (unless they become friable by being damaged or otherwise are in deteriorating condition), and asphalt roofing products that contain greater than 1 percent asbestos.

Category II Non-friable ACM. NESHAP defines a Category II non-friable ACM as any material, except for a Category I non-friable ACM, that contains greater than 1 percent asbestos and cannot be reduced to a powder by hand pressure when dry.

Additionally, suspect ACM were assessed for their general condition, using the terms "Good", "Damaged", or "Significantly Damaged". Good condition is defined as a material that is not damaged and/or is largely intact. Damaged is defined as a material that has less than 25 percent localized damage or less than 10 percent distributed damage. Significantly Damaged is defined as any material that has greater than 25 percent localized damage or greater than 10 percent distributed damage.

The inspector estimated the quantity of suspect ACM using visual estimation. This visual estimation was conducted using facility drawings (provided by the 99th RSC or Site personnel), pacing, counting tiles, and panels rather than measured take-offs. As a result, actual quantities may differ between visually estimated values and physical measurements. Estimated quantities for each building are summarized in the Bulk Sample Log of Table 1, Appendix D, and in the Damage and Exposure Assessment Forms, Functional Space Forms, and Homogenous Area Forms in Appendix E. For ease of evaluating the condition of building materials in the future, information on ACMs *only* has been presented in Table 2 with the exception of the "Condition" column which has been left blank. This column may be completed with the determined condition of the building material(s) at the time of the assessment. Table 2 is provided in Appendix D.

4.2 Interviews

The Facility Manager identified in Section 3.2 was interviewed and was questioned on site-specific information. The Facility Manager was not able to confirm if the information provided in the previous ACM investigation was accurate but was able to confirm that the tile in the kitchen had been removed during the building renovations at the facility. No additional information resulted from the interview.

4.3 Inspection Results

No samples were collected during the re-inspection on 07 May 2013. Based on the previous asbestos survey in 1994, asbestos was detected in the Main Building areas in the 9" x 9" brown and tan checkerboard floor tile and underlying mastic, 9" x 9" tan floor tile and underlying mastic in the Kitchen, mudded pipe fittings on fiberglass and layered paper pipe, and in layered paper pipe insulation. Also, asbestos-containing building material (ACBM) was identified in the OMS Building in the asbestos-cement transite board above the heater that was attached to the ceiling and in the layered paper pipe insulation on the pipes trend vertically up the walls and traverse the ceilings.

The Bulk Sample Log documenting previous analytical results is presented in Table 1 in Appendix D.

5.0 RECOMMENDATIONS

A regular maintenance schedule is recommended that includes a visual inspection of the condition of each HA. Removal of the ACBMs not necessary since they do not appear to have the potential of becoming friable during normal day-to-day activities conducted within the building(s). If future plans for the USARC require disturbance of the ACBMs, either through renovation or demolition, the ACBMs should be removed in compliance with Public Works Technical Bulletin 420-70-8 and other applicable standards.

6.0 INSPECTOR'S SIGNATURE

A comprehensive and thorough asbestos inspection was conducted on these facilities by certified and experienced Alliant Corporation asbestos inspectors. Every effort was made to identify all ACBM in the facility, but due to random sampling techniques mandated by EPA regulations and the non-destructive sampling policy for this project, the possibility always exists that some ACBM remains undetected. The information presented in the report is true and accurate to the best of my knowledge:

for

James E. Steele

6 JUN 13

Date

7.0 REFERENCES

7.1 Federal

40 CFR Part 763, Asbestos-Containing Materials in Schools; Subpart E, Final Rule; 52 FR 41846, October 30, 1987

U.S. EPA, Asbestos Hazard Emergency Response Act AHERA 3,5,7 Rule

U.S. EPA, Guidance for Controlling Asbestos-Containing Building Materials, 560/5-85-024, June 1985

U.S. EPA, Managing Asbestos in Place, 20T-2003, July 1990

7.2 U.S. Army

AR 200-1, Environmental Protection and Enhancement, Paragraph 8.2.h

AR 420-1, Facilities Engineering, Buildings and Structures, Paragraph 3-3

Department of the Army, Public Works Technical Bulletin (PWTB) 420-70-8, Installation Asbestos Management Program, (http://www.hnd.usace.army.mil/)

APPENDIX A

Previous Documentation

1994 ASBESTOS SURVEY REPORT

FINAL

ASBESTOS SURVEY REPORT
AND OPERATIONS AND MAINTENANCE PLAN
PAUL A. DOBLE ARMY RESERVE CENTER
125 COTTAGE STREET
PORTSMOUTH, NEW HAMPSHIRE

CONTRACT NO. DACA33-91-D-0006
DELIVERY ORDER NO. 42

JUNE 1998

ASBESTOS SURVEY REPORT

AND

OPERATIONS AND MAINTENANCE PLAN

PAUL A. DOBLE ARMY RESERVE CENTER

125 COTTAGE STREET

PORTSMOUTH, NEW HAMPSHIRE

CONTRACT NO. DACA33-91-D-0006

DELIVERY ORDER NO. 42

ASBESTOS SURVEY REPORT

AND

OPERATIONS AND MAINTENANCE PLAN

PAUL A. DOBLE ARMY RESERVE CENTER

125 COTTAGE STREET

PORTSMOUTH, NEW HAMPSHIRE

Conducted for:

Harding Lawson Associates
(formerly ABB Environmental Services, Inc.)
Corporate Place 128
107 Audubon Road
Wakefield, Massachusetts 01880

Surveys Performed by:

Covino Environmental Consultants, Inc.
300 Wildwood Avenue
Woburn, Massachusetts 01801

CEC Project 94.01163.09

CONTENTS

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EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers retained ABB Environmental Services, Inc. (ABB-ES) of Wakefield, Massachusetts to perform asbestos surveys of 41 Army Reserve Centers (ARCs) throughout New England during September, October and November, 1994. ABB-ES subcontracted with Covino Environmental Consultants, Inc. (CEC) to accomplish this task.

The objective of this task is twofold. First, the site specific surveys will provide the Army with information concerning the extent of asbestos-containing building materials (ACBM) at each facility, a hazard assessment, and an operations and maintenance (O&M) plan to properly address potential concerns. Second, the summary reports prepared for each facility will provide the information necessary to plan future remediation efforts at the facilities on a worst-first basis.

The facility surveyed for this report was the Paul A. Doble ARC, 125 Cottage Street, Portsmouth, New Hampshire. The facility consists of a Main Building and a Maintenance Building (OMS).

The Main Building at the site is used primarily for offices, classrooms, and a drill hall. The heating, ventilation, and air conditioning (HVAC) system includes a combination of radiators and air handlers supplied by an oil-fired boiler. The Main Building, which was constructed in 1956, contains 12,000 square feet of space.

The OMS is used for maintenance. The date of construction of the OMS is unknown. The OMS contains 2,700 square feet of space. The only HVAC in the building are gas-fired, ceiling mounted, blower units.

Michael Hickey and Glenn Nelson of CEC conducted the survey on September 16, 1994. The CEC inspectors performed visual inspections of all accessible interior areas, exterior areas, and rooftop areas. Observations were made for thermal system insulations, surfacing materials, and miscellaneous materials within mechanical spaces, office areas, classrooms, and maintenance areas. Whenever feasible, the spaces above suspended ceilings, within wall chases, high bay areas, etc., were also inspected. Because inspection was limited in such areas, assumptions about these areas were sometimes based on information contained in as-built drawings.

A revisit to the site was conducted between May 3 and May 11, 1995. The purpose of this visit was to address comments received from the Army following review of a draft version of this report. No additional suspect ACBM samples were taken during this visit. Any corrections resulting from this visit have been incorporated into this document.

EXECUTIVE SUMMARY (cont.)

Representative bulk samples of each type of suspect ACBM observed were collected for laboratory analysis. To determine asbestos content, the samples were analyzed using Polarized Light Microscopy with Dispersion Staining (PLM/DS) in accordance with EPA protocol. Suspect materials were classified as ACBM if the analytical results indicated an asbestos content of greater than one percent. If PLM/DS analytical results of floor tiles or mastic adhesives indicated an asbestos content of one percent or less, additional analysis by Transmission Electron Microscopy (TEM) was performed to more definitively determine the asbestos content of these materials.

Both friable ACBM (materials that, when dry, may be reduced to powder by hand pressure) and nonfriable ACBM were identified at the site. The only friable ACBM identified were layered paper pipe and gray mudded fitting insulation on domestic water pipes and gray mudded fittings on fiberglass insulated heating pipes. Nonfriable ACBM included floor tiles, underlying tile adhesive and asbestos-cement (transite) board.

CEC's assessment of the Portsmouth site is that the condition of most ACBM presents limited potential hazard. The layered paper pipe insulation and mudded fittings were observed throughout, but are not located in areas that are not highly susceptible to disturbance and fiber release. Mudded fittings behind the furnace have deteriorated. However, analytical results indicate that these fittings are nonasbestos. Based on the results of the assessment, no remedial actions are recommended at this time. However, an O&M plan should be implemented in order to minimize potential hazards.

For informational purposes only, cost estimates have been provided for removing and replacing ACBM (Table 3). The total estimated cost for removing and replacing friable ACBM is $16,610. The total estimated cost for removing and replacing nonfriable ACBM is $27,030.

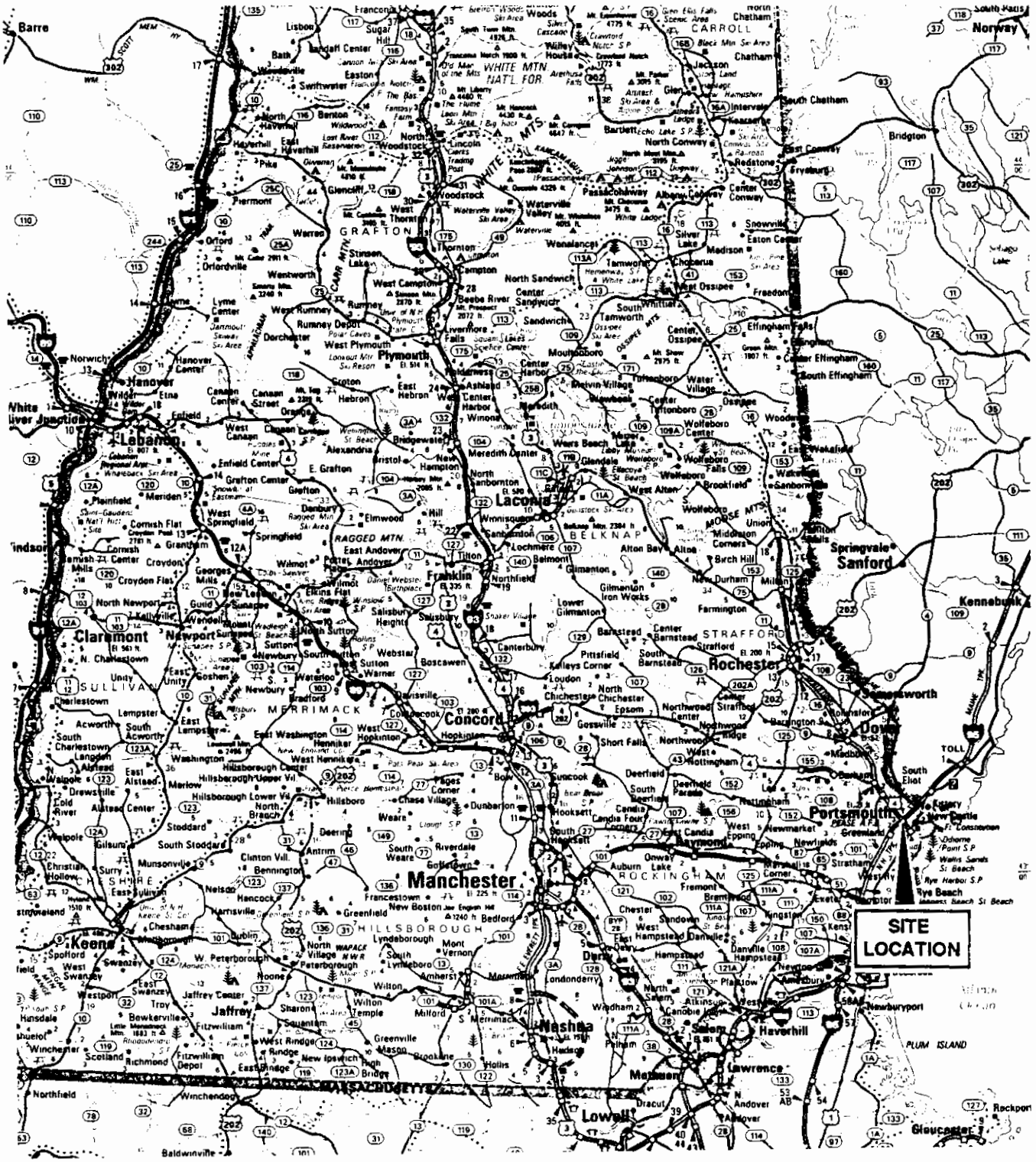
LIMITATIONS

Due to several limitations, further survey work will be required if future renovation or maintenance activities occur which result in demolition of any part of the existing building structure. These limitations include:

A. Since no core samples of roofing material were collected, only exposed surfaces of the roof were inspected;

B. Potentially hidden areas, such as wall cavities, the space between fixed ceilings and the ceiling deck, internal equipment parts, etc. may contain ACBM that was not accessible during the survey; and,

C. The inner cavity of fire doors, which sometimes contains ACBM insulation, were not inspected.



MAP DERIVED FROM RAND McNALLY & CO.

ABB Environmental Services, Inc.

FIGURE 1
VICINITY MAP
ASBESTOS SURVEY REPORT
PAUL A. DOBLE USARC
PORTSMOUTH, NEW HAMPSHIRE

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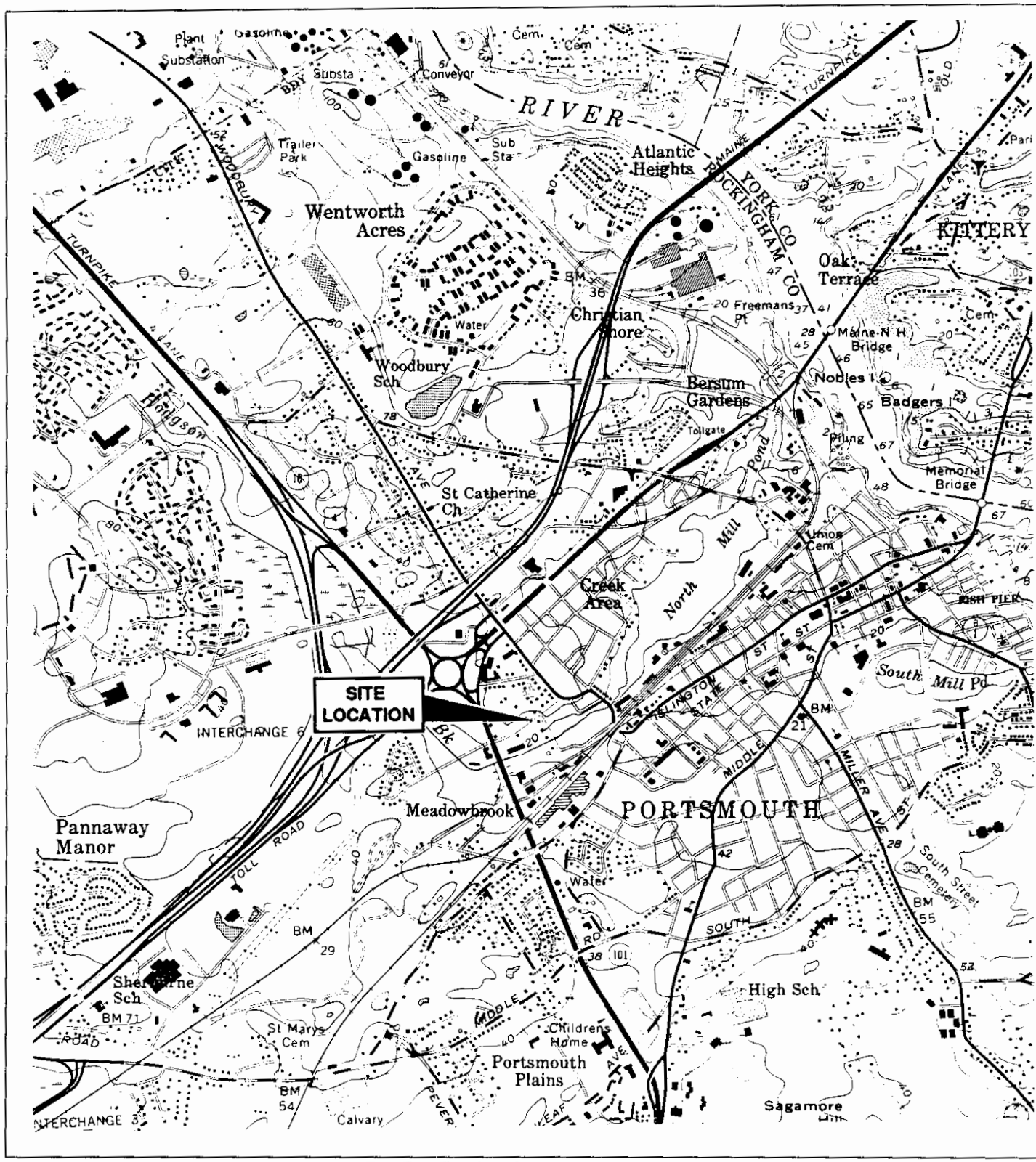

N. H.

QUADRANGLE LOCATION

SOURCE: U.S.G.S. TOPOGRAPHIC 7.5 MINUTE SERIES:
PORTSMOUTH, NH - MAINE 1956 PHOTOREVISED 1988

SCALE IN MILES 0 .5 1

SCALE IN FEET 0 1,000 2,000

N

ABB Environmental Services, Inc.

FIGURE 2
SITE LOCATION MAP
ASBESTOS SURVEY REPORT
PAUL A. DOBLE USARC
PORTSMOUTH, NEW HAMPSHIRE

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GLOSSARY

1. Asbestos - Includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these materials that have been chemically treated and/or altered.

2. Asbestos-Containing Material - (ACM) material composed of asbestos of any type and in any amount greater than 1% by area, either alone or mixed with other fibrous or nonfibrous materials.

3. Asbestos-Containing Building Material (ACBM) - Surfacing ACM, thermal system insulation ACM or miscellaneous ACM that is observed in or on interior structural members or other parts of a building.

4. Asbestos-Contaminated Area - Any surface/area where visibly damaged friable asbestos material is present.

5. Bulk Sample - A small portion of suspect ACM collected and placed into an airtight container for microscopic analysis.

6. Cellulose - Vegetative, plant fibers; paper, cotton, etc.

7. Fibrous Glass - Man made; spun or extruded from a resin.

8. Friable Asbestos Material - Any ACM that can be crumbled, pulverized or reduced to powder when dry, by hand pressure, and which releases asbestos particles to the environment.

9. Homogenous Area - A material that is uniform in texture and appearance, was installed at one time, and is unlikely to consist of more than one type or formulation of material.

10. Miscellaneous ACM - Any ACM which is not categorized as thermal system insulation or surfacing insulation.

11. Nonfriable Asbestos Material - Any ACM that cannot be crumbled, pulverized or reduced to powder when dry, by hand pressure.

12. Point Counting - A microscopic method of bulk sample analysis using a systematic, statistical approach to determine the percentage concentration of asbestos in a friable suspect ACM.

13. Polarized Light Microscopy - An optical microscopic technique used to distinguish between different types of asbestos fibers by their shape and unique optical properties.

GLOSSARY (cont.)

14. Resinously Bound Material - A material which is held together in a resinous matrix (e.g., mastic adhesive, roof flashing, etc.).

15. Surfacing ACM - An ACM which is spray or trowel-applied to a surface for acoustical, decorative or fireproofing purposes

16. Transmission Electron Microscopy (TEM) - A method of microscopic analysis which utilizes an electron beam that is focused onto a thin sample. As the beam penetrates (transmits) through the sample, the difference in densities produces an image on a fluorescent screen from which asbestos structures can be identified and quantified.

17. Thermal System Insulation ACM - (TSI) Any ACM which is applied to heating or mechanical equipment for the purpose of retaining heat or condensation.

18. Transite - An asbestos-cement board product. Typically applied in cooling towers, above heating elements, beneath wood floors, as wall board, etc.

INTRODUCTION

The U.S. Army Corps of Engineers retained ABB Environmental Services, Inc. (ABB-ES) of Wakefield, Massachusetts to perform asbestos surveys of 41 Army Reserve Centers (ARCs) throughout New England during September and October, 1994. ABB-ES sub-contracted with Covino Environmental Consultants, Inc. (CEC) to accomplish this task.

The purpose of these surveys is to identify, quantify, and assess materials at each site that are suspected of containing asbestos fibers and, when asbestos-containing building materials (ACBM) are identified, to prioritize their need for removal.

On September 16, 1994, three inspectors representing CEC performed an asbestos survey of the Paul A. Doble ARC located at 125 Cottage Street, Portsmouth, New Hampshire.

Michael Hickey performed the survey, assisted by Glenn Nelson. Each inspector is appropriately accredited to perform building inspections through having successfully completed an EPA-approved asbestos inspection training course. There are no certification requirements for performing asbestos inspections in nonschool settings in the State of New Hampshire.

Prior to the September 16th inspection, CEC obtained floor plans and heating plans of the site.

On the day of the inspection, the survey team met with the Facility Manager, Linda Loder, who provided information regarding the site as well as access to the buildings.

This report contains a description of the site (section 1), a discussion of the sampling methods (section 2), a description of the laboratory analytical methods and results (section 3) and conclusions and recommendations (section 4).

The results of the survey are summarized in tabular form (section 3). Table 1, the Suspect Material Inventory, provides a list of all suspect ACBM encountered by the CEC inspectors during the survey, the locations in which the materials were observed, their sample number(s), the materials' friability, and the analytical results for each type of suspect material. A suspect material was classified as an ACBM if PLM/DS analysis of one or more samples indicated the presence of asbestos in quantities greater than one percent.

Table 2, the Inventory of ACBM, presents the list of positively identified ACBM, including material location, condition, and accessibility. The assessment rating for exposure for each type of ACBM is based on the United States Army Environmental Center (USAEC) prioritization criteria.

INTRODUCTION (cont.)

CEC's conclusions and recommendations are stated in section 4. Table 3 presents CEC's cost estimates for totally removing and replacing ACBM identified during the survey.

Appendices A through F present bulk sample analytical results, drawings depicting locations of samples and of ACBM, photographic documentation, asbestos prioritizations forms, personnel and laboratory certifications, and the operations and maintenance plan.

1. SITE DESCRIPTION

The Paul A. Doble Army Reserve Center in Portsmouth, New Hampshire consists of a Main Building and a Maintenance Building (OMS). Facility plans indicate that the Main Building was constructed in 1956. No plans are available for the OMS.

The Main Building is a single-story building and is used primarily for offices, storage rooms, and classrooms, and it also contains an assembly hall and armory. The building is a concrete structure of 12,000 square feet, with brick exterior, and concrete floor. Building finishes include plaster walls and ceilings in bathrooms and locker rooms, and gypsum-board suspended ceilings throughout most of the remaining areas. Floor finishes were vinyl and ceramic tile.

Heating is supplied in the Main Building by an oil-fired boiler and distributed through forced hot-water supply-and-return piping to perimeter radiators. Additional heating for the assembly hall was supplied by air handlers.

Both friable and nonfriable ACBM were identified within the Main Building. Layered paper pipe and mudded fitting insulations on domestic water plumbing pipes and mudded fittings on fiberglass insulated heating pipes were the only friable ACBM noted. These insulated pipes were located throughout the building. Similar insulations may be located in wall cavities of bathrooms and locker rooms, and above sheetrock and plaster ceilings and any other location where plumbing and heating are supplied. Nonfriable ACBM included floor tiles, and their underlying mastic adhesives primarily located in the main corridors, offices, classrooms, kitchen, and entryways.

The OMS is a one-story structure used for maintenance work. The building is a wood-frame structure of 2,688 square feet, with concrete block walls and concrete floors. The building is heated by two ceiling-mounted blower units.

Friable ACBM observed included layered paper pipe insulation and associated mudded fittings. Nonfriable ACBM observed in the OMS included transite board on the ceiling above the blower units.

2. SAMPLING METHODS

The purpose of the survey was to identify both friable and nonfriable ACBM at the site.

In the course of collecting random bulk samples for laboratory analysis, every effort was made to identify all locations and types of suspect ACBM. All building materials other than wood, plastic, metal, rubber, glass, and most masonry products were considered to be suspect ACBM. Sampling often included multiple samples of the same type of material because inconsistencies in manufacturing processes and installation practices may have resulted in materials of similar construction having varied asbestos content.

Both the interior and exterior of each building were inspected. The survey included observations for the following types of suspect ACBM:

- thermal system insulation on pipes, tanks, boilers, and similar items;
- surfacing materials such as acoustical and decorative plasters, fireproofing on beams, columns, and ceiling decks, and other coatings applied by spray or trowel;
- miscellaneous friable materials such as ceiling tiles, gypsum wallboards, joint compounds, cloth gaskets, blown-in insulations, etc.; and
- miscellaneous nonfriable materials such as floor tiles, adhesives, cementitious wallboards, asphaltic roofing materials, etc.

To prevent the potential for future water leaks, bulk samples of asphaltic roofing materials were collected in such a manner that the integrity of the roofing system was not compromised. This was conducted by only collecting samples of flashings, shingles or the surface layer. Core sampling through the entire thickness of roofing systems was not performed. Asphaltic roofing materials that were not sampled should be assumed to contain asbestos, unless bulk sampling and analysis indicate otherwise.

Some friable building materials, such as fireproofing and most thermal insulations installed in 1980 or later, were also not considered to be suspect ACBM. Stored materials (gaskets, brake pads, gloves, etc.) that may contain asbestos but are not building materials were not included in the survey.

Since asbestos content of building materials was to be determined by the laboratory analysis of random bulk samples (RBS), CEC used a sampling protocol based on the following requirements of the Asbestos Hazard Emergency Response Act (AHERA):

2. SAMPLING METHODS (cont.)

A. Surfacing Material

1. At least three (3) RBS per type of material in each homogeneous area less than or equal to one thousand square feet (1,000 ft^2).

2. At least five (5) RBS per type of material in each homogeneous area greater than one thousand square feet (1,000 ft^2), but less than or equal to five thousand square feet (5,000 ft^2).

3. At least seven (7) RBS per type of material in each homogeneous area greater than five thousand square feet (5,000 ft^2).

B. Thermal System Insulation

1. At least three (3) RBS per type of homogeneous material.

2. At least one (1) RBS per type of patched thermal system insulation if the patched section is less than six linear or square feet (6 lf or 6 ft^2).

3. In a manner sufficient to determine whether the material is or is not ACBM, RBS from each mechanical system where cement or plaster is used on fittings such as tees, elbows, or valves.

4. Bulk samples were not collected of materials determined by visual and tactile inspection to be fiberglass, foam glass, rubber, or other materials because of their unique textures and colors that may be visually identified as non-ACBM. However, these materials are inspected to determine whether a layer of asbestos may be underneath the top layer of insulating material or whether an external skim coat exists.

C. Miscellaneous Material

Samples were collected in a manner sufficient to determine whether the material is ACBM or non-ACBM. The number of samples collected was influenced by the type and quantity of the suspect material.

2. SAMPLING METHODS (cont.)

Bulk sampling of suspect building materials was performed by collecting a small but representative portion of material into plastic vials with tightly fitting caps that were sealed immediately after sample collection. Insulation and other friable samples were collected using a knife with a lockable blade or a single-use hollow metal coring device. After sample collection, sampling devices were immediately cleaned to prevent cross-contamination of samples. Each sample was assigned a unique number that was recorded on the sample container. The sample number and location were also recorded on field data sheets. The locations from which bulk samples were collected were sealed with duct tape, caulking compound, or other suitable materials. Sample locations were labeled with the date and unique sample number using indelible markers. Samples were then transported and submitted to the CEC laboratory in Woburn, Massachusetts for microscopic analysis.

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3. LABORATORY ANALYTIC METHODS

The initial laboratory analyses were conducted on September 16, 1994, within ten working days of the site visit.

In order to identify asbestos content, samples were initially analyzed using Polarized Light Microscopy with Dispersion Staining (PLM/DS) in accordance with the United States Environmental Protection Agency's (EPA) Interim Method for the Determination of Asbestos in Bulk Insulation Samples (EPA 600/M4-82-020). A building material was classified as an ACBM if one or more samples indicated a result of greater than one percent (> 1%) asbestos.

In instances where multiple bulk samples were collected from the same homogenous area, if the analytical result of the initial sample indicated the presence of asbestos at a concentration greater than one percent, subsequent bulk samples were not analyzed.

The EPA method is considered sensitive to the presence of asbestos at less than one percent of the overall sample composition for materials (a) that do not contain resinous matrices, and (b) that have asbestos fibers with diameters greater than one micrometer (> 1 μm).

For resinously bound materials, or for materials that may have very thin asbestos fibers (< 1 μm), PLM/DS analysis may yield false negative results, due to difficulties in separating suspect fibers from the resins that bind them. False negative results may also occur when the analyst is unable to detect very fine fibers due to the limits of resolution of the microscope used for PLM/DS analysis. Samples of floor tiles and floor tile adhesives are particularly difficult to analyze using PLM/DS. These materials contain resinous matrices, and they also typically contain very thin fibers due to grinding and other shearing processes conducted during manufacture. To positively identify the asbestos content of these types of materials, Transmission Electron Microscopy (TEM) is the preferred method. TEM provides greater resolution along with an elemental analysis of suspect fibers to identify asbestos.

Because of the aforementioned limitations of PLM/DS, samples of floor tiles and floor tile mastics were analyzed by TEM if the initial analytical results indicated an asbestos content of one percent or less. Briggs Associates, Inc. of Atlanta, Georgia conducted the TEM analysis using a semi-quantitative analysis. Results are reported as no asbestos detected, or as a light, moderate or heavy concentration of asbestos. If any asbestos is detected using this method, the material in all probability contains greater than one percent asbestos, and is therefore, classified as an ACBM.

3. LABORATORY ANALYTIC METHODS (cont.)

The EPA requires that samples of friable materials having an asbestos content of ten percent or less, as determined by visual estimation, be verified by the point-counting technique. Otherwise, the building owner or operator should assume that such materials contain greater than one percent asbestos. Therefore, friable samples with analytical results containing one percent or less asbestos should be analyzed by point-counting before disturbing the material. Point-counting is a systematic technique for estimating asbestos concentrations using PLM/DS.

A summary of the laboratory results are presented in Table 1, and the complete laboratory results are included in Appendix A.

In addition to identifying asbestos content, the survey quantified and assessed all ACBM identified at the site. Each type of ACBM was individually assessed using the United States Army Environmental Center (USAEC)-ACBM Assessment Checklist in order to determine priorities for remedial action. This checklist evaluates a suspect material based on damage factors and release factors. Damage factors include the physical condition of the materials, water damage, potential for human contact in terms of maintenance activity, type of material, and asbestos content. Release factors include friability, accessibility, activity, air movement, quantity, population potentially affected, and asbestos content. For each assessment factor, a numerical score is given. The numerical scores for both assessment categories have been totaled. In order to determine the Assessment Index (a letter designation from A to F) these totals are compared. "A" indicates a material with the highest priority for remedial action. "F" indicates a material with the lowest priority for remedial action. The results of this assessment/inventory are presented in Table 2.

TABLE 1

INVENTORY OF SUSPECT ACBM

Paul A. Doble Army Reserve Center
125 Cottage Street
Portsmouth, New Hampshire

September 16, 1994

Description of Suspect Material Main Building	Material Location	Material Classification	Friability	Sample Number(s)	Asbestos Content and Type
9" x 9" brown and tan checker-board pattern floor tile and underlying black mastic adhesive	Throughout	M	Nonfriable	09-01-01 (tile)	05% Chrysotile
				09-02-01 (mastic)	None detected (high Chrysotile)*
				09-03-01 (tile)	05% Chrysotile
12" x 12" tan floor tile and under-lying mastic black adhesive	West Entry	M	Nonfriable	09-04-01 (tile)	None detected
				09-05-01 (mastic)	None detected (None detected)*

T = Thermal System Insulation
S = Surfacing Material
M = Miscellaneous Material

* Result of Transmission Electron Microscopy

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TABLE 1

INVENTORY OF SUSPECT ACBM

Paul A. Doble Army Reserve Center
125 Cottage Street
Portsmouth, New Hampshire

September 16, 1994

Description of Suspect Material Main Building	Material Location	Material Classification	Friability	Sample Number(s)	Asbestos Content and Type
Gray floor grout	Restrooms	M	Nonfriable	09-06-01	None detected (None detected)*
Mudded pipe fittings on fiber-glass and layered paper pipe insula-tions	Throughout	T	Friable	09-07-01	<1% Amosite 15% Chrysotile
				09-07-02	Not analyzed
				09-07-03	Not analyzed
Wall plaster	Throughout	M	Moderately Friable	09-08-01	None detected
				09-08-02	None detected
Ceiling plaster	Throughout	M	Moderately Friable	09-09-01	None detected
				09-09-02	None detected
Ceiling sheetrock	Room 9	M	Moderately Friable	09-10-01	None detected
Layered paper pipe insulation	Throughout	T	Friable	09-11-01	20% Chrysotile
				09-11-02	Not analyzed
				09-11-03	Not analyzed

* Result of Transmission Electron Microscopy

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TABLE 1

INVENTORY OF SUSPECT ACBM

Paul A. Doble Army Reserve Center
125 Cottage Street
Portsmouth, New Hampshire

September 16, 1994

Description of Suspect Material Main Building	Material Location	Material Classification	Friability	Sample Number(s)	Asbestos Content and Type
Skim coat on open end of fiber-glass pipe run	Boiler Room	T	Friable	09-12-01 09-12-02 09-12-03	<1% Chrysotile None detected None detected
White Breeching insulation	Boiler Room	T	Friable	09-13-01 09-13-02 09-13-03	None detected None detected None detected
Ceiling sheet-rock (white)	Boiler Room	M	Moderately Friable	09-16-01	None detected
9" x 9" floor tile (tan) and underlying mastic adhesive	Kitchen	M	Nonfriable	09-17-01 (tile) 09-18-01 (mastic)	1% Chrysotile 1% Chrysotile
Green vibration damper cloth on ceiling mounted HVAC units	Assembly Hall	M	Nonfriable	09-23-01	None detected

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TABLE 1

INVENTORY OF SUSPECT ACBM

Paul A. Doble Army Reserve Center
125 Cottage Street
Portsmouth, New Hampshire

September 16, 1994

Description of Suspect Material OMS	Material Location	Material Classification	Friability	Sample Number(s)	Asbestos Content and Type
Asbestos-cement transite boards	At ceiling above heaters	M	Nonfriable	09-19-01	10% Chrysotile
Gray window caulking	Windows rear of building	M	Nonfriable	09-20-01	None detected
Layered paper pipe insulation (brown)	Along ceiling and walls	T	Friable	09-21-01	20% Chrysotile

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TABLE 2

INVENTORY OF ACBM

Paul A. Doble Army Reserve Center
125 Cottage Street
Portsmouth, New Hampshire

September 16, 1994

Description of ACBM MAIN BUILDING	ACBM Location	Material Classification	Approximate Quantity	Condition	Accessibility	Material Exposure Assessment Rating*
9" x 9" brown and tan checkerboard floor tile and underlying mastic adhesive	Throughout	M	5,580ft^2	Good	High	D
9" x 9" floor tile (tan) and underlying mastic adhesive	Kitchen	M	160ft^2	Good	High	E
Mudded pipe fittings on fiberglass and layered paper pipe	Throughout	T	255 fittings	Fair	Low	C
Layered paper pipe insulation	Throughout (including above inaccessible plaster ceiling outside Room #7)	T	250 ft	Fair	Low	D

T = Thermal System Insulation
S = Surfacing Material
M = Miscellaneous Material

* Assessment Index: Materials assigned an alphabetical exposure assessment rating from A to F based on damage and fiber release factors, with A representing a material with the highest priority for remedial action and F representing a material with the lowest priority for remedial action (See Appendix D for additional details).

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TABLE 2

INVENTORY OF ACBM

Paul A. Doble Army Reserve Center
125 Cottage Street
Portsmouth, New Hampshire

September 16, 1994

Description of ACBM OMS	ACBM Location	Material Classification	Approximate Quantity	Condition	Accessibility	Material Exposure Assessment Rating*
Asbestos-cement transite board	At ceilings above heaters	M	100 ft^2	Good	Low	F
Layered paper pipe insulation	Along ceiling and down walls	T	150 ft	Fair	Low	E

T = Thermal System Insulation
S = Surfacing Material
M = Miscellaneous Material

* Assessment Index: Materials assigned an alphabetical exposure assessment rating from A to F based on damage and fiber release factors, with A representing a material with the highest priority for remedial action and F representing a material with the lowest priority for remedial action (See Appendix D for additional details).

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4. CONCLUSIONS AND RECOMMENDATIONS

On the basis of CEC's inspection of the Main Building and the Maintenance Building of the Paul A. Doble Army Reserve Center in Portsmouth, New Hampshire, and of CEC's collection of random bulk samples of friable and nonfriable suspect asbestos-containing building materials and their analyses by CEC's laboratory, CEC concludes that:

(1) The layered paper and mudded pipe fitting insulations in the Main Building and OMS Building were the only friable ACBM identified at the site.

(2) Because of their location and condition, these friable materials are not readily susceptible to disturbance and fiber release.

(3) The nonfriable floor tiles, tile adhesives, and transite board appeared to be in good condition. Therefore, these materials should not be readily susceptible to airborne fiber release unless they are cut, ground, sanded, or similarly disturbed.

Therefore, CEC recommends that no remedial actions are needed at this site at the present time.

Although CEC finds it unnecessary to recommend any remedial actions at the site now, at the client's request, we have prepared cost estimates (Table 3) for the total removal and replacement of ACBM identified during the survey. These estimates are for informational purposes only and are not intended to be compared to actual prices an abatement contractor might estimate for a specific project.

The estimated cost to remove all the ACBM is approximately $30,320. The estimated cost to replace the ACBM with materials that do not contain asbestos is $13,320. The estimated cost for total removal and replacement of ACBM is $43,640.

Unit prices have been estimated based on typical 1994 costs for specific types of ACBM. These prices account for the labor, material, engineering controls, and expected transportation and disposal costs that would be incurred to remove and dispose of the ACBM.

TABLE 3. COST ESTIMATES FOR REMOVAL AND REPLACEMENT OF ACBM

Paul A. Doble Army Reserve Center
125 Cottage Street
Portsmouth, Massachusetts

Type of ACBM	Total Quantity	Unit Cost For Removal	Removal Cost	Unit Cost For Replacement	Replacement Cost
9" x 9" brown/tan floor tile and underlying mastic adhesive	5,580 ft^2	$3/$ft^2$	$16,740	$1.5/$ft^2$	$ 8,370
9" x 9" floor tile (tan) and underlying mastic adhesive	160ft^2	$3/$ft^2$	$480	$1.5/$ft^2$	$ 240
Mudded pipe fittings on fiberglass pipe	210	$40/ea	$ 8,400	$10/ea	$ 2,100
Layered paper pipe insulation	400 lf	$10/ft	$ 4,000	$4/ft	$ 1,600
Mudded fittings on layered paper pipe insulation	51[(1)]		---	$10/ea	$ 510
Transite board	100 sf	$7/$ft^2$	$ 700	$5/$ft^2$	$ 500
		TOTAL	**$30,320**	**TOTAL**	**$13,320**
		TOTAL REMOVAL AND REPLACEMENT COST		**$43,640**	

(1) Cost to remove mudded fittings on pipes covered with asbestos-containing straight-run insulations is included in linear foot measurements above.

APPENDIX A

RESULTS OF BULK SAMPLE ANALYSIS

LOCATION: **MAIN BUILDING**
PAUL A. DOBLE ARMY RESERVE CENTER
125 COTTAGE STREET
PORTSMOUTH, NH

PROJECT : 94.01163.09
PAGE : A-1

ANALYTICAL RESULTS OF BULK SAMPLES

SAMPLE DESCRIPTION	ANALYTICAL RESULTS	
09-01-01 BROWN 9" X 9" FLOOR TILE, WEST ENTRANCE	ASBESTOS-CHRYSOTILE CELLULOSE NON-FIBROUS MATERIAL	: 05% : < 01% : 95%
09-02-01 BLACK MASTIC UNDER FLOOR TILE, 02-01, 03-01	NO ASBESTOS DETECTED CELLULOSE NON-FIBROUS MATERIAL	 : 01% : 99%
09-03-01 TAN 9" X 9" FLOOR TILE, WEST ENTRANCE	ASBESTOS-CHRYSOTILE CELLULOSE NON-FIBROUS MATERIAL	: 05% : < 01% : 95%
09-04-01 TAN 12" X 12" FLOOR TILE, WEST ENTRY	NO ASBESTOS DETECTED CELLULOSE NON-FIBROUS MATERIAL	 : < 01% :
09-05-01 BLACK MASTIC UNDER FLOOR TILE, 04-01	NO ASBESTOS DETECTED CELLULOSE NON-FIBROUS MATERIAL	 : < 01% : 100%
09-06-01 GRAY FLOOR GROUT, WEST END LATRINE	NO ASBESTOS DETECTED CELLULOSE NON-FIBROUS MATERIAL	 : < 01% : 100%
09-07-01 WHITE PIPE FITTING ON FIBERGLASS INSULATED PIPE, WEST END LATRINE, ROOM #8	ASBESTOS-AMOSITE ASBESTOS-CHRYSOTILE FIBROUS GLASS CELLULOSE NON-FIBROUS MATERIAL	: < 01% : 15% : < 01% : 01% : 85%
09-07-02 PIPE FITTING, FROM PIPE INSULATED WITH ROLLED PAPER, ROOM #9	SAMPLE NOT ANALYZED	
09-07-03 WHITE PIPE FITTING PIPE INSULATED WITH FIBERGLASS, ROOM #05, MEN'S ROOM	SAMPLE NOT ANALYZED	

LOCATION: **MAIN BUILDING**
PAUL A. DOBLE ARMY RESERVE CENTER
125 COTTAGE STREET
PORTSMOUTH, NH

PROJECT : 94.01163.09
PAGE : A-2

ANALYTICAL RESULTS OF BULK SAMPLES

SAMPLE DESCRIPTION	ANALYTICAL RESULTS
09-08-01 WHITE WALL PLASTER, IN WEST END LATRINE, ROOM #8 CELLULOSE	NO ASBESTOS DETECTED : < 01% NON-FIBROUS MATERIAL: 100%
09-08-02 WALL PLASTER IN MEN'S ROOM #05, BATHROOM	NO ASBESTOS DETECTED CELLULOSE :<01% NON-FIBROUS MATERIAL: 100%
09-09-01 WHITE CEILING PLASTER, ROOM #8, LATRINE	NO ASBESTOS DETECTED CELLULOSE :<01% NON-FIBROUS MATERIAL: 100%
09-09-02 WHITE CEILING PLASTER, ROOM #05, BATHROOM	NO ASBESTOS DETECTED CELLULOSE :<01% NON-FIBROUS MATERIAL: 100%
09-10-01 WHITE CEILING SHEETROCK, ROOM #09	NO ASBESTOS DETECTED CELLULOSE :60% NON-FIBROUS MATERIAL:40%
09-11-01 TAN PIPE INSULATION, ROLLED PAPER, ROOM #09	ASBESTOS-CHRYSOTILE:20% CELLULOSE :80% NON-FIBROUS MATERIAL:<01%
09-11-02 TAN PIPE INSULATION (ROLLED PAPER), ROOM #12	SAMPLE NOT ANALYZED
09-11-03 PIPE INSULATION, ROLLED PAPER, ROOM #1	SAMPLE NOT ANALYZED
09-12-01 WHITE SKIM COAT ON FIBERGLASS PIPE RUN, BOILER ROOM	ASBESTOS-CHRYSOTILE:<01% FIBROUS GLASS:<01% CELLULOSE :<01% NON-FIBROUS MATERIAL: 100%

LOCATION: **MAIN BUILDING**
PAUL A. DOBLE ARMY RESERVE CENTER
125 COTTAGE STREET
PORTSMOUTH, NH

PROJECT : 94.01163.09
PAGE : A-3

ANALYTICAL RESULTS OF BULK SAMPLES

SAMPLE DESCRIPTION	ANALYTICAL RESULTS		
09-12-02 WHITE SKIM COAT ON FIBERGLASS PIPE RUN, BOILER ROOM	NO ASBESTOS DETECTED FIBROUS GLASS CELLULOSE OTHER FIBROUS MATERIAL - WOLLASTONITE NON-FIBROUS MATERIAL	: : < 01% : 01% : < 01% : 99%	
09-12-03 WHITE SKIM COAT ON FIBERGLASS PIPE RUN, BOILER ROOM	NO ASBESTOS DETECTED FIBROUS GLASS CELLULOSE NON-FIBROUS MATERIAL	: : < 01% : < 01% : 100%	
09-13-01 WHITE BREECHING MATERIAL, BOILER ROOM	NO ASBESTOS DETECTED FIBROUS GLASS CELLULOSE OTHER FIBROUS MATERIAL - SYNTHETIC NON-FIBROUS MATERIAL	: : 05% : 05% : 15% : 75%	
09-13-02 WHITE BREECHING MATERIAL, BOILER ROOM	NO ASBESTOS DETECTED FIBROUS GLASS CELLULOSE OTHER FIBROUS MATERIAL - SYNTHETIC NON-FIBROUS MATERIAL	: : 20% : 10% : 05% : 65%	
09-13-03 WHITE BREECHING MATERIAL, BOILER ROOM	NO ASBESTOS DETECTED FIBROUS GLASS CELLULOSE OTHER FIBROUS MATERIAL - SYNTHETIC NON-FIBROUS MATERIAL	: : 15% : 15% : 10% : 60%	
09-14-01 PIPE FITTING ON FIBERGLASS RUN IN BOILER ROOM	NO ASBESTOS DETECTED FIBROUS GLASS CELLULOSE NON-FIBROUS MATERIAL	: : < 01% : 60% : 40%	

LOCATION: **MAIN BUILDING**
PAUL A. DOBLE ARMY RESERVE CENTER
125 COTTAGE STREET
PORTSMOUTH, NH

PROJECT : 94.01163.09
PAGE : A-4

ANALYTICAL RESULTS OF BULK SAMPLES

SAMPLE DESCRIPTION	ANALYTICAL RESULTS		
09-14-02			
PIPE FITTING ON FIBERGLASS RUN, IN BOILER ROOM BEHIND FURNACE	NO ASBESTOS DETECTED		
	FIBROUS GLASS	:	< 01%
	CELLULOSE	:	60%
	NON-FIBROUS MATERIAL	:	40%
09-15-01			
COVERING ON FIBERGLASS INSULATION, BOILER ROOM BEHIND FURNACE	NO ASBESTOS DETECTED		
	FIBROUS GLASS	:	99%
	NON-FIBROUS MATERIAL	:	01%
09-16-01			
WHITE INTERIOR/BROWN PAPER SHEETROCK CEILING PANELS, BOILER ROOM BEHIND FURNACE	NO ASBESTOS DETECTED		
	CELLULOSE	:	45%
	NON-FIBROUS MATERIAL	:	55%
09-17-01			
TAN 9" X 9" FLOOR TILE, IN KITCHEN	ASBESTOS-CHRYSOTILE	:	01%
	CELLULOSE	:	< 01%
	NON-FIBROUS MATERIAL	:	99%
09-18-01			
BLACK MASTIC UNDERLYING SAMPLE #17-01	ASBESTOS-CHRYSOTILE	:	01%
	CELLULOSE	:	< 01%
	OTHER FIBROUS MATERIAL - SYNTHETIC	:	< 01%
	NON-FIBROUS MATERIAL	:	99%

LOCATION: **OMS**
PAUL A. DOBLE ARMY RESERVE CENTER
125 COTTAGE STREET
PORTSMOUTH, NH

PROJECT : 94.01163.09
PAGE : A-5

ANALYTICAL RESULTS OF BULK SAMPLES

SAMPLE DESCRIPTION	ANALYTICAL RESULTS		
09-19-01			
GRAY 4' X 8' TRANSITE SHEETS, AT HEATER, AT CEILING	ASBESTOS-CHRYSOTILE	:	10%
	CELLULOSE	:	01%
	NON-FIBROUS MATERIAL	:	89%
09-20-01			
GRAY WINDOW CAULKING, REAR OF MAINTENANCE BUILDING	NO ASBESTOS DETECTED		
	CELLULOSE	:	< 01%
	OTHER FIBROUS MATERIAL - UNSPECIFIED	:	< 01%
	NON-FIBROUS MATERIAL	:	100%
09-21-01			
BROWN ROLLED PIPE INSULATION	ASBESTOS-CHRYSOTILE	:	20%
	CELLULOSE	:	< 01%
	NON-FIBROUS MATERIAL	:	80%

LOCATION: PAUL A. DOBLE ARMY RESERVE CENTER
125 COTTAGE STREET
PORTSMOUTH, NEW HAMPSHIRE

PROJECT : 94.01163.09
PAGE : A-6

ANALYTICAL RESULTS OF BULK SAMPLES

SAMPLE DESCRIPTION	ANALYTICAL RESULTS
09-23-01 FRIABLE GREEN VIBRATION DAMPER CLOTH FROM HEATING UNIT AT CEILING IN ASSEMBLY HALL	NO ASBESTOS DETECTED OTHER FIBROUS MATERIAL : 80% - COTTON NON-FIBROUS MATERIAL : 20%

THESE SAMPLES WERE ANALYZED BY POLARIZED LIGHT MICROSCOPY WITH DISPERSION STAINING (PLM/DS) ACCORDING TO THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (US EPA) "INTERIM METHOD FOR THE DETERMINATION OF ASBESTOS IN BULK INSULATION SAMPLES" (EPA-600/M4-82-020). THIS METHOD IS GENERALLY CONSIDERED SENSITIVE TO THE PRESENCE OF ASBESTOS AT LESS THAN ONE PERCENT.

ALL NONASBESTOS FIBROUS MATERIALS DETECTABLE BY PLM/DS ARE ALSO IDENTIFIED. CEC MAKES NO JUDGMENTS PERTAINING TO THE TOXICITY OF THESE NONASBESTOS MATERIALS. NONASBESTOS FIBROUS MATERIALS TYPICALLY OBSERVED BY PLM/DS ARE DEFINED AS FOLLOWS:

- FIBROUS GLASS - MAN MADE; SPUN OR EXTRUDED FROM A RESIN
- CELLULOSE - VEGETATIVE, PLANT FIBERS; PAPER, COTTON, ETC.
- MINERAL WOOL (OR ROCK WOOL OR SLAG WOOL) - FIBERS MADE BY BLASTING COMPRESSED AIR THROUGH THE MOLTEN GLASSY RESIDUE OF METAL ORE
- WOLLASTONITE - NATURALLY OCCURRING METAMORPHIC CRYSTALLINE MINERAL OFTEN FOUND IN LIMESTONE
- SYNTHETIC - MAN MADE TEXTILE FIBERS
- HAIR - HUMAN, HORSE, OTHER
- UNSPECIFIED - UNIDENTIFIED NONASBESTOS FIBERS
- NONFIBROUS - UNSPECIFIED MINERAL GRAINS

ALL SAMPLES ARE STORED AT THE CEC LABORATORY FOR A PERIOD OF THREE MONTHS. FURTHER ANALYSIS OR RETURN OF SAMPLES MUST BE REQUESTED WITHIN THIS THREE MONTH PERIOD TO GUARANTEE THEIR AVAILABILITY.

LABORATORY CERTIFICATION # MA #AA000006

LABORATORY SUPERVISOR

TEM RESULTS

Briggs Associates, Inc.

ASBESTOS ANALYSIS BY TRANSMISSION ELECTRON MICROSCOPY (TEM), SELECTED AREA ELECTRON DIFFRACTION (SAED), AND ENERGY DISPERSIVE X-RAY MICROANALYSIS (EDXA)

SAMPLE DATA

CLIENT PROJECT: CEC Job 94.01163

Sample Location: #9, Portsmouth, NH

CLIENT: Covino Environmental Consultants, Inc.

DATE RECEIVED: 1/12/95

ANALYSIS: Floor Tile Asbestos Analysis by Modified Chatfield Method (Qualitative)

ANALYTICAL RESULTS

Lab ID No.	Client ID No.	Approximate Asbestos Content	Asbestos Type
1.17777	09-02-01	HA	CHR
2.17778	09-05-01	NAD	
3.17779	09-06-01	NAD	

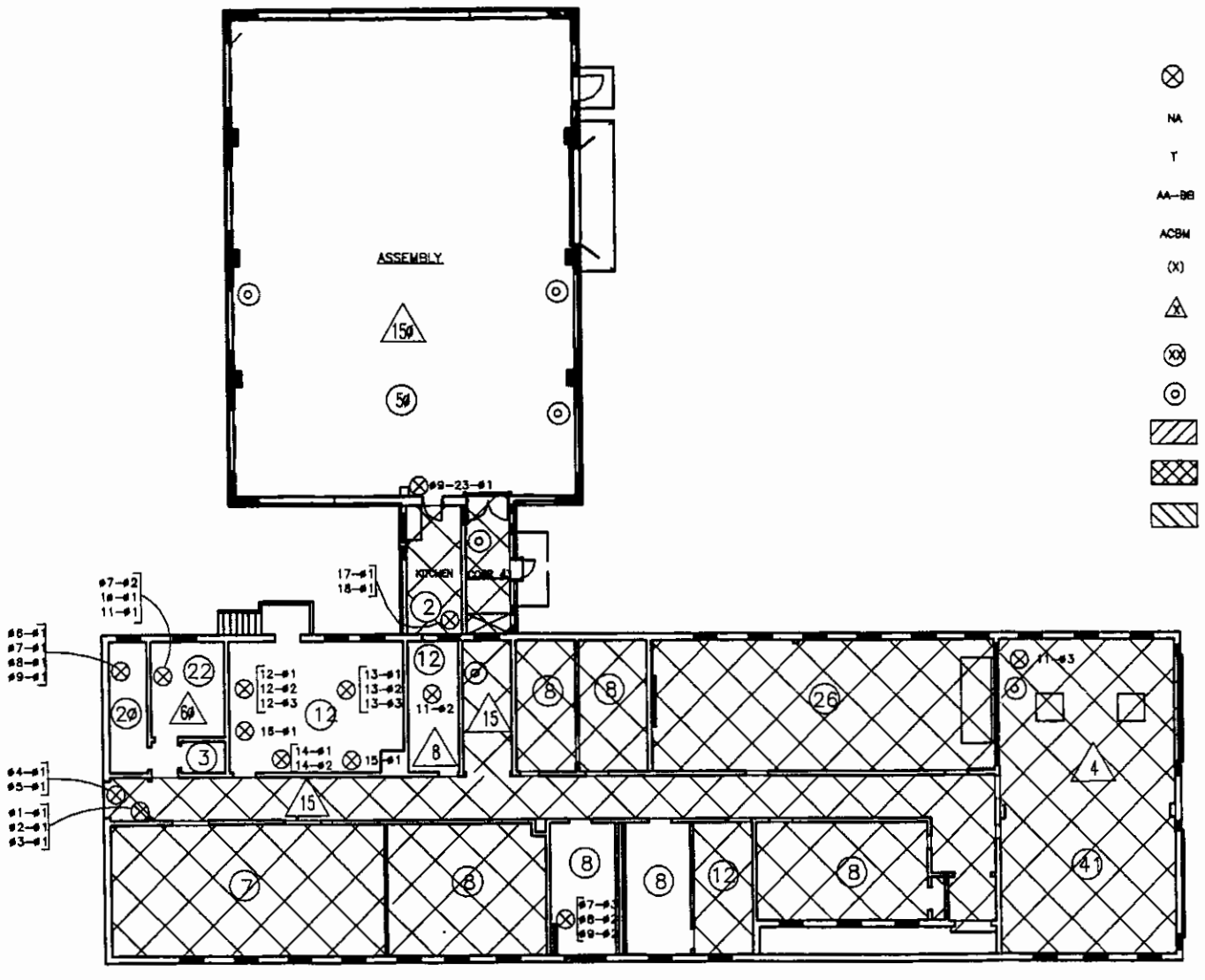
Notes: CHR=Chrysotile, AMP=Amphibole
NAD=No Asbestos Detected
SA=Slight Amount of Asbestos, MA=Moderate Amount of Asbestos, HA=High Amount of Asbestos

Analytical Method: The floor tile samples and their underlying mastic are analyzed in accordance with recommended protocol (modified Chatfield). The TEM analysis was performed using JEOL 100CX II with KEVEX energy dispersive X-ray spectrometer at a magnification of 19,000.

2001 Marietta Road, Atlanta, Georgia 30318
Tel (404) 355-4429 • Fax (404) 355-2339
Markham, ONT • Rockland, MA • Newton Upper Falls, MA • Pawtucket, RI • Columbia, MD • Nashville, TN • Orlando, FL

APPENDIX B

DRAWINGS DEPICTING SAMPLE AND ACBM LOCATIONS



MAIN BUILDING

LEGEND

- ⊗ BULK SAMPLE LOCATION
- NA NOT ACCESSIBLE
- T TRANSITE
- AA–BB SAMPLE DESCRIPTION: HOMOGENEOUS MATERIAL – SPECIFIC SAMPLE NUMBER
- ACBM ASBESTOS–CONTAINING BUILDING MATERIAL
- (X) NUMBER OF ACBM FITTINGS ON NON–ACBM INSULATED PIPE
- △ LINEAR FEET OF ACBM PIPE INSULATION
- ⊗ NUMBER OF MUDDED PIPE FITTINGS, INCLUDES FIBERGLASS AND PAPER INSULATED PIPE RUNS.
- ⊙ VERTICAL ACBM INSULATED PIPE RISER
- ACBM FLOOR TILE
- ACBM FLOOR TILE & MASTIC
- ACBM MASTIC

Revisions			
Symbol	Descriptions	Date	Approved

COVINO ENVIROMENTAL CONSULTANTS, INC.
3ø WILDWOOD AVENUE
WOBURN, MASSACHUSETTS ø18ø1

ARMY RESERVE CENTER
PORTSMOUTH, N.H.

Designed by:
Drawn by:
Checked by:
Reviewed by:
Approved by:

ASBESTOS SURVEY PLAN
PAUL A. DOBLE
UNITED STATES ARMY RESERVE CENTER
125 COTTAGE STREET
PORTSMOUTH, N.H. ø38ø1

Scale: NONE
Date: OCT. 1994
Drawing Code:
Sheet reference number:
Sheet ____ of ____

Plot Date:

5 4 1

D C B A

ON

2ø-ø1

RIAL – SPECIFIC SAMPLE NUMBER

IG BUILDING MATERIAL

ITTINGS ON NON-ACBM INSULATED PIPE

M PIPE INSULATION

D PIPE FITTINGS, INCLUDES
PAPER INSULATED PIPE RUNS.

LATED PIPE RISER

· MASTIC

SEE NOTE No. 1 T

SEE NOTE No. 1

15ø 4

OTES

) BOARD 128 SQ. FT. ABOVE CEILING HEATERS.

OMS BUILDING

Revisions			
bol	Descriptions	Date	Approved

IND ENVIROMENTAL CONSULTANTS, INC.
3ø ø WILDWOOD AVENUE
WOBURN, MASSACHUSETTS ø18ø1

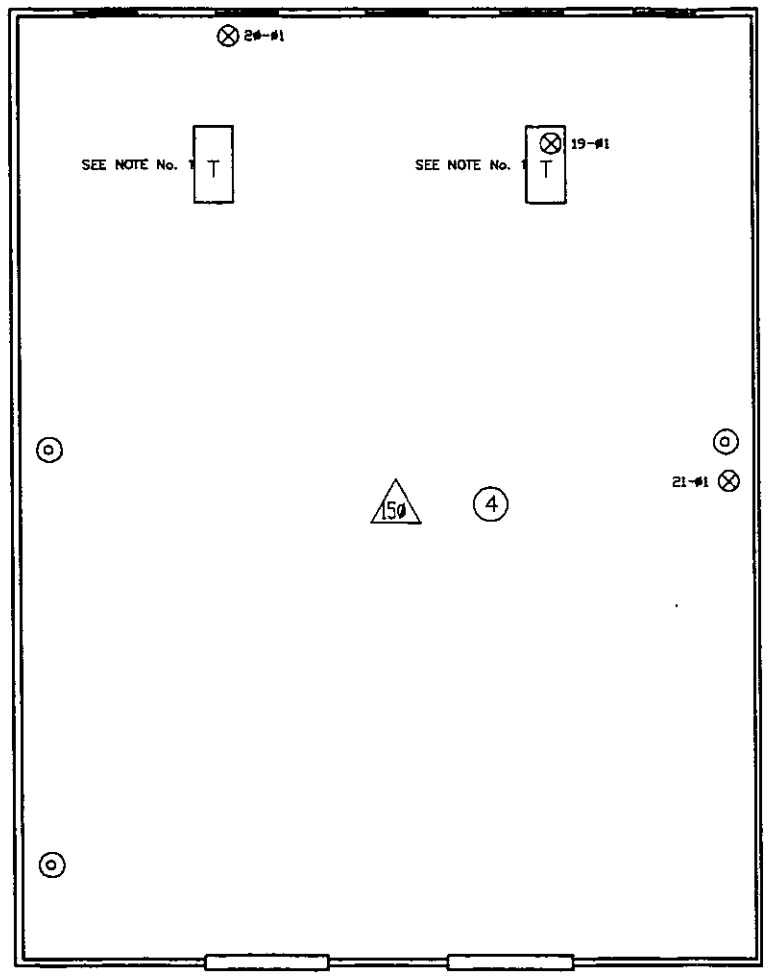
ARMY RESERVE CENTER
PORTSMOUTH, N.H.

signed by:
awn by:
ecked by:
viewed by:
proved by:

ASBESTOS SURVEY PLAN
PAUL A. DOBLE
UNITED STATES ARMY RESERVE CENTER
125 COTTAGE STREET
PORTSMOUTH, N.H. ø38ø1

Scale: NONE
Date: OCT. 1994
Drawing Code:
Sheet reference number:
Sheet ____ of ____

Plot Date:



OMS BUILDING

LEGEND

⊗	BULK SAMPLE LOCATION
NA	NOT ACCESSIBLE
T	TRANSITE
AA-BB	SAMPLE DESCRIPTION: HOMOGENEOUS MATERIAL - SPECIFIC SAMPLE NUMBER
ACBM	ASBESTOS-CONTAINING BUILDING MATERIAL
(X)	NUMBER OF ACBM FITTINGS ON NON-ACBM INSULATED PIPE
X	LINEAR FEET OF ACBM PIPE INSULATION
XX	NUMBER OF MUDDED PIPE FITTINGS, INCLUDES FIBERGLASS AND PAPER INSULATED PIPE RUNS.
⊙	VERTICAL ACBM INSULATED PIPE RISER
	ACBM FLOOR TILE
	ACBM FLOOR TILE & MASTIC
	ACBM MASTIC

DRAWING NOTES

1.- ASBESTOS CEMENT (TRANSITE) BOARD 128 SQ. FT. ABOVE CEILING HEATERS.

Revisions			
Symbol	Descriptions	Date	Approved

COVINO ENVIROMENTAL CONSULTANTS, INC.
300 WILDWOOD AVENUE
WOBURN, MASSACHUSETTS 01801

ARMY RESERVE CENTER
PORTSMOUTH, N.H.

Designed by:
Drawn by:
Checked by:
Reviewed by:
Approved by:

ASBESTOS SURVEY PLAN
PAUL A. DOBLE
UNITED STATES ARMY RESERVE CENTER
125 COTTAGE STREET
PORTSMOUTH, N.H. 03801

Scale: NONE
Date: OCT. 1994
Drawing Code:
Sheet reference numbers:
Sheet ____ of ____

Plot Date:

APPENDIX C

PHOTOGRAPHIC DOCUMENTATION

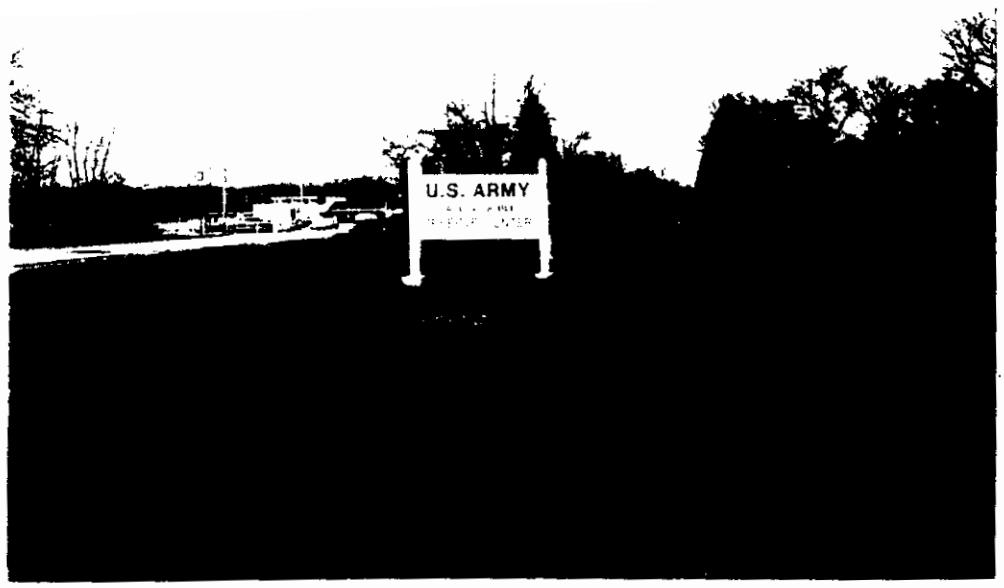


Photo 09-01. Paul A. Doble USARC sign in front of Main Building.

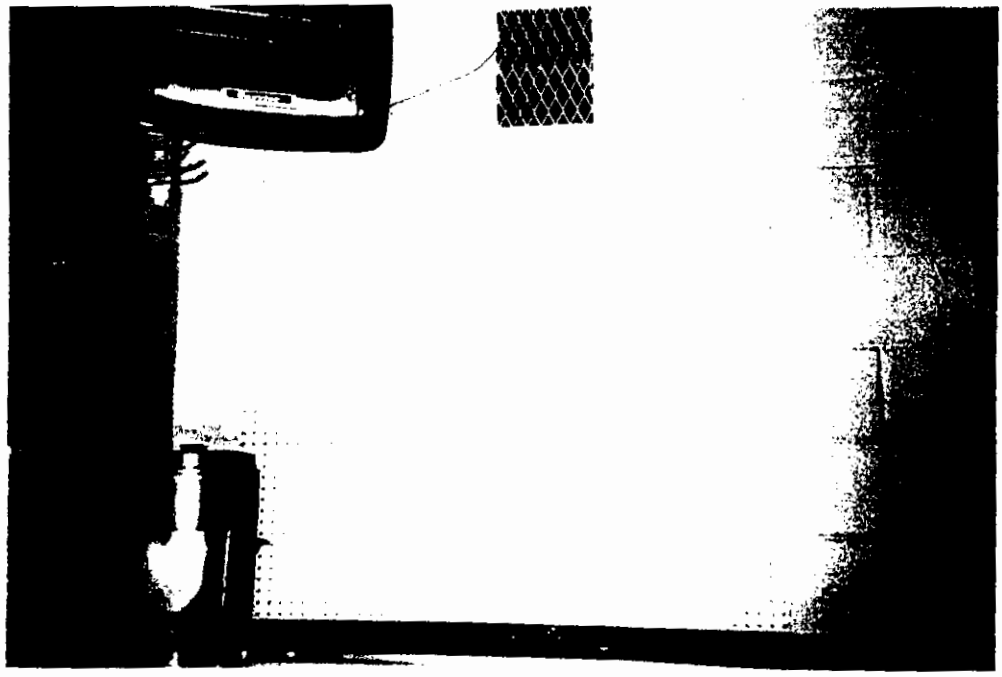


Photo 09-02. "Masonite" pressed wood particle wall pegboard in kitchen of Main Building.

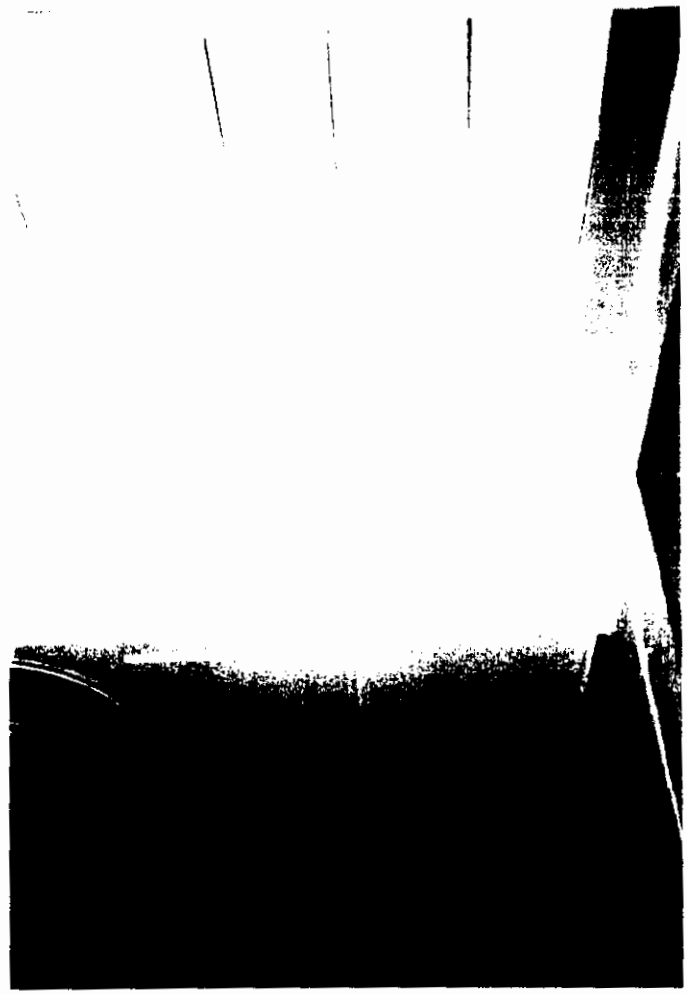


Photo 09-03. Three layered paper insulated domestic water lines penetrating into inaccessible ceiling chase located in hallway adjacent to Room #7 on First Floor of Main Building.

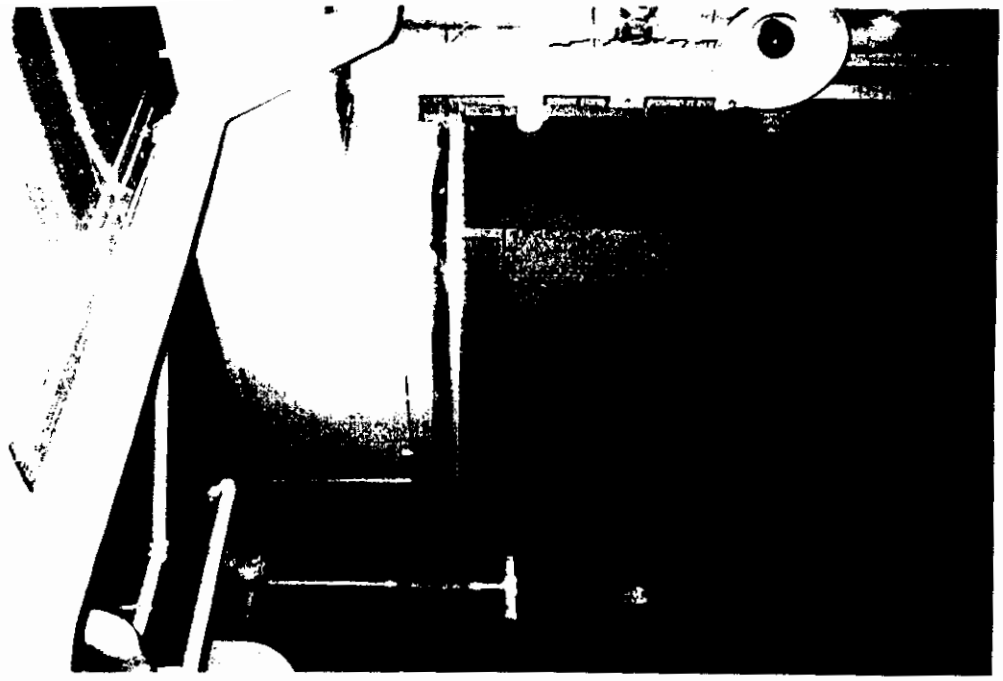


Photo 09-04. Green vibration damper cloth, and location of sample #09-23-01 from HVAC unit in Assembly Hall.

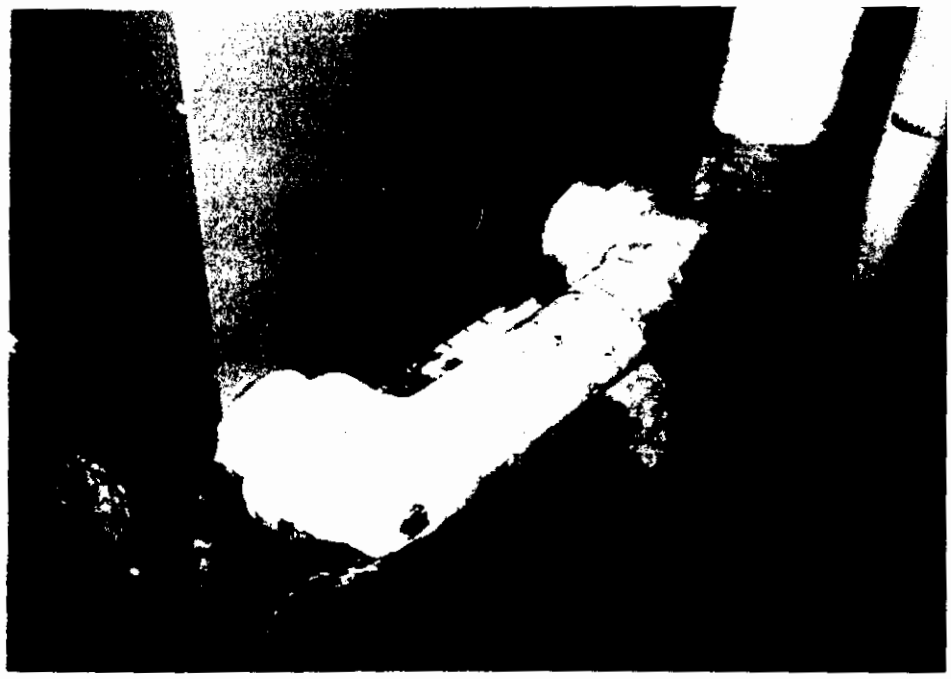


Photo 09-05. Damaged nonasbestos mud fittings at rear of boiler, boiler room of main building.

Photo 09-06. Breeching insulation, boiler room of main building.

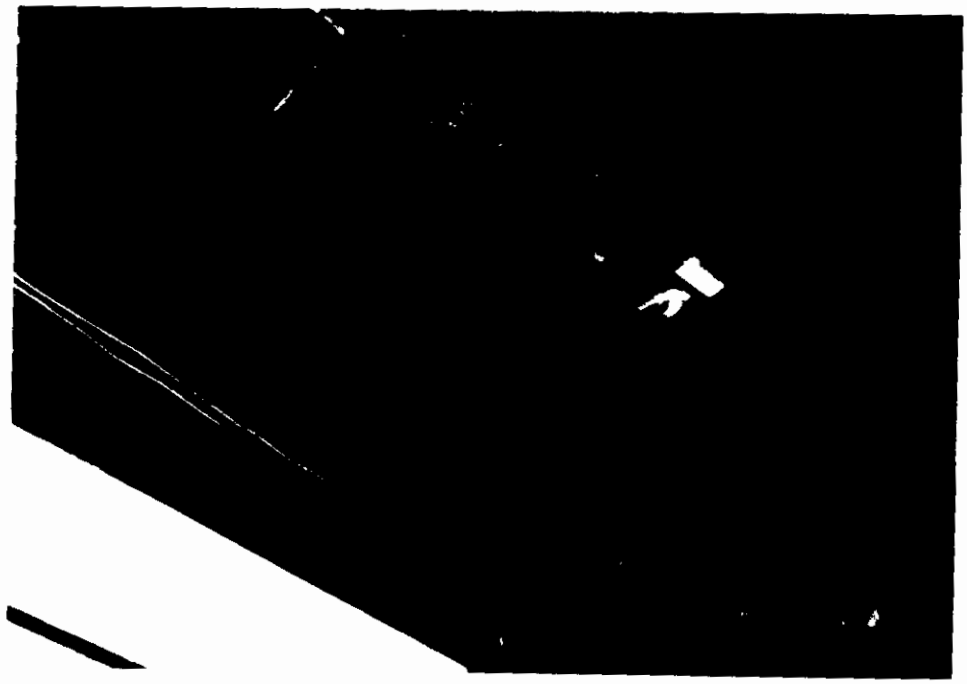


Photo 09-07. Ceiling sheetrock material, boiler room of main building.

APPENDIX D

ASBESTOS PRIORITIZATION FORMS

INSTRUCTIONS FOR COMPLETING USAEC ACBM ASSESSMENT CHECKLIST

1. Complete a separate form for each suspect asbestos-containing building material (SACBM) in a building. If a building no SACBM, insert "No SACBM Found" in the space labeled "SACBM I.D. No."

2. Complete all remaining items at the top of the form. If a SACBM exists essentially throughout a building, insert "Throughout Building" under "Room(s) or Area(s) Where Found." Otherwise, clearly list the rooms or areas where it was found (e.g., Entire Basement, Rooms 101-120, Attic Only, etc.)

3. To complete Parts I and II, circle the ratings which are appropriate for the particular SACBM. Use the largest circle ratings to calculate the Damage(D) Total and Exposure(E) Total when multiple ratings are circled. These totals repres the sum of the factor ratings for Parts I and II.

4. Note any other relevant observations in the space labeled at the bottom of the form, then determine the "Assessment Index" from the chart shown below.

5. The following provides further descriptions of the different possible scores for certain items. Refer to USAEC Figure 1a and 1b for further information about these items.

PART I: Damage Assessment Factors

A. Physical Damage: Use "0" for non-ACBM, nonfriable ACBM, or ACBM with <1%. Use "1" for less than 10% DAMAGE, or controlled space accessed by maintenance personnel only, or uncontrolled/unoccupied space. "2" = 10-50% damage. "3" = >50-75% damage. "5" = >75% damage.

B. Water Damage: Minor means <10%; major means >10%.

C. Potential Damage due to Routine Maintenance Activities: For sprayed or trowelled-on materials, this means whether the friable ACBM could be damaged by routine maintenance activities occurring at the indicated distances from the ACBM. Assign "3" also when access is required above a lay-in ceiling where surfacing ACBM is located.

D. Type of ACBM: Choose from list over.

E. Percent asbestos.

F. Damage(D) Total: Must be 0 if asbestos content is <1% or the material is nonfriable ACBM in good/fair condition; maxim score is 17.

PART II: Exposure Assessment Factors

A. Material Friability: Defined by USEPA as crumbled, pulverized, or reduced to powder when dry under hand pressure.

B. Occupant Accessibility to ACBM Fibers: Low: Isolated by barriers seldom breached; Moderate: barrier breached by routine maintenance activity; High: routinely accessible to other occupants.

C. Activity/Use: Low = Infrequent maintenance activities only; Moderate = Frequent maintenance activities only; High = Normal occupant activities.

D. Air Stream/Plenum: None means no perceptible air flow in the room or area; use 1 if an air flow is perceived but ACBM not likely affected; use 2 if ACBM is exposed to perceptible or occasional air streams; use 3 if ACBM present in supply ducts/plenums or recirculated air, subjected to routine turbulence, or abrupt air movement.

E. Area of visible surface or damaged ACBM.

F. Population: Use the following formula to calculate for occupied building rooms/areas:

$$\text{Average Occupancy} = \text{Outside Visitors} \times \frac{\text{Ave. Hours Spent}}{8 \text{ Hrs.}} + \text{No. Full-time 8-Hr. Building Occupants}$$

Unoccupied facilities capable of being used are given a worst-case scenario value of "5," plus additional value per the table over. Other unoccupied facilities (bunkers, sheds) will receive "Zero" population value.

G. Exposure(E) Total: Sum maximum scores for about Part II items; maximum score is 25.

H. Assessment Index: Enter the letter code determined from the following matrix:

Damage(D) Score	Exposure(E) Score				
	25-24	23-15	14-8	7-4	Zero
17-13	A	A	B	C	F
12-9	A	B	C	D	F
8-5	B	C	D	E	F
4-1	C	D	E	F	F
Zero	F	F	F	F	F

I. Other Relevant Observations.

devtext/DEVENS

F1-1 U

ASBESTOS PRIORITIZATION FORM

SITE CODE: 09- Portsmouth, NH
AREA/ROOM: 12-
EVALUATORS: MH, GN, DS
MATERIAL QUANTITY:
MATERIAL DESCRIPTION: 9x9" Brown w/ White + gold streaks and tan checkerboard pattern (~~Part of Brown + Tan Tile~~ Checkerboard Pattern)

BUILDING NAME: Main
SAMPLE NO(S).: 09-01-01, 09-03-01
DATE: 9-16-94
THICKNESS/SIZE & COLOR:

RELEASE ASSESSMENT

MATERIAL TYPE	COMMENTS
A 0 Friable: H=3, M=2, L=1 Non-friable=0	
B 0 Occupants Accessibility to ACBM Fibers Low = 0, Moderate = 1, High = 4	
C 2 Activity - None - 0, Low = 1, Moderate = 2, High = 3	
D 1 Air Movement/Plenum - None - 0, Low = 1, Moderate = 2, High = 3	
E 3 Amount of Visible Surface Area (ft^2): <10=0: 10 to <100=1: 100 to ≤1,000=2: >1,000=3	
F 2 Population: 1 to 9 or hall = 1: 10 to 200 = 2: 201 to 500 = 3: 501 to 1,000 = 4: > 1,000 = 5	
G 1 No ACBM or < 1% ACBM = 0, Non-friable ACBM in good to fair condition = 1, Non-friable ACBM in poor condition = 2, Friable ACBM in good condition = 3, Friable ACBM with damage = 5	
H 9 Release Factor Total (R) Max = 26: Min = 1 TOTAL R FACTOR = 9	

DAMAGE ASSESSMENT

A 1 Physical: None = 0, Minimal = 1, Low = 2, Moderate = 3, High = 5	
B 0 Water: None = 0, Minor = 1, Major = 2	
C 2 Potential for Contact by Maintenance Activity Low = 0, Moderate = 2, High = 3	
D 1 Type of Material: Surfacing Material = 4, HVAC = 3, Pipe or Boiler = 2, Ceilings/Walls = 1, Other = 0 to 1	
E 1 Asbestos Content (%): < 1% = 0, > 1 to < 30 = 1, > 30 to < 50 = 2, > 50 = 3	
F 5 Damage Factor Total (D) Max = 17, Min = 0 TOTAL D FACTOR = 5	G ASSESSMENT INDEX (Priority Ranking Value) = 45

ASBESTOS PRIORITIZATION FORM

SITE CODE: 09 - Portsmouth
AREA/ROOM: Throughout
EVALUATORS: _____
MATERIAL QUANTITY: 255 fittings
MATERIAL DESCRIPTION: PFs on F/G pipe insulation

BUILDING NAME: Main
SAMPLE NO(S).: 09-07-01, 02, 03
DATE: 2-16-94
THICKNESS/SIZE & COLOR: _____

(#02 - Rolled paper Pipe insul)

RELEASE ASSESSMENT

MATERIAL TYPE	COMMENTS
A 2 Friable: H=3, M=2, L=1 Non-friable=0	
B 1 Occupants Accessibility to ACBM Fibers Low = 0, Moderate = 1, High = 4	
C 1 Activity - None - 0, Low = 1, Moderate = 2, High = 3	
D 2 Air Movement/Plenum - None - 0, Low = 1, Moderate = 2, High = 3	
E 2 Amount of Visible Surface Area (ft^2): <10=0: 10 to <100=1: 100 to ≤1,000=2: >1,000=3	
F 2 Population: 1 to 9 or hall = 1: 10 to 200 = 2: 201 to 500 = 3: 501 to 1,000 = 4: > 1,000 = 5	
G 5 No ACBM or < 1% ACBM = 0, Non-friable ACBM in good to fair condition = 1, Non-friable ACBM in poor condition = 2, Friable ACBM in good condition = 3, Friable ACBM with damage = 5	
H 15 Release Factor Total (R) Max = 26: Min = 1 TOTAL R FACTOR = ____	

DAMAGE ASSESSMENT

A 2 Physical: None = 0, Minimal = 1, Low = 2, Moderate = 3, High = 5	
B 1 Water: None = 0, Minor = 1, Major = 2	
C 2 Potential for Contact by Maintenance Activity Low = 0, Moderate = 2, High = 3	
D 2 Type of Material: Surfacing Material = 4, HVAC = 3, Pipe or Boiler = 2, Ceilings/Walls = 1, Other = 0 to 1	
E 1 Asbestos Content (%): < 1% = 0, > 1 to < 30 = 1, > 30 to < 50 = 2, > 50 = 3	
F 8 Damage Factor Total (D) Max = 17, Min = 0 TOTAL D FACTOR = 8	G ASSESSMENT INDEX (Priority Ranking Value) = C

ASBESTOS PRIORITIZATION FORM

SITE CODE: 09- Portsmouth
AREA/ROOM: _____
EVALUATORS: _____
MATERIAL QUANTITY: 250ft.
MATERIAL DESCRIPTION: 26"ø Pipe insul (rolled paper)

BUILDING NAME: Main
SAMPLE NO(S).: ~~09-11-94~~ 09-11-01,02
DATE: 9-16-94
THICKNESS/SIZE & COLOR: _____

RELEASE ASSESSMENT

MATERIAL TYPE	COMMENTS
A 1 Friable: H=3, M=2, L=1 Non-friable=0	
B 1 Occupants Accessibility to ACBM Fibers Low = 0, Moderate = 1, High = 4	
C 1 Activity - None - 0, Low = 1, Moderate = 2, High = 3	
D 1 Air Movement/Plenum - None - 0, Low = 1, Moderate = 2, High = 3	
E 1 Amount of Visible Surface Area (ft^2): <10=0: 10 to <100=1: 100 to ≤1,000=2: >1,000=3	
F 2 Population: 1 to 9 or hall = 1: 10 to 200 = 2: 201 to 500 = 3: 501 to 1,000 = 4: > 1,000 = 5	
G 5 No ACBM or < 1% ACBM = 0, Non-friable ACBM in good to fair condition = 1, Non-friable ACBM in poor condition = 2, Friable ACBM in good condition = 3, Friable ACBM with damage = 5	
H 12 Release Factor Total (R) Max = 26: Min = 1 TOTAL R FACTOR = ____	

DAMAGE ASSESSMENT

A 2 Physical: None = 0, Minimal = 1, Low = 2, Moderate = 3, High = 5	
B 1 Water: None = 0, Minor = 1, Major = 2	
C 2 Potential for Contact by Maintenance Activity Low = 0, Moderate = 2, High = 3	
D 2 Type of Material: Surfacing Material = 4, HVAC = 3, Pipe or Boiler = 2, Ceilings/Walls = 1, Other = 0 to 1	
E 1 Asbestos Content (%): < 1% = 0, > 1 to < 30 = 1, > 30 to < 50 = 2, > 50 = 3	
F 8 Damage Factor Total (D) Max = 17, Min = 0 TOTAL D FACTOR = ____	G ASSESSMENT INDEX (Priority Ranking Value) = D

FT-4 17

ASBESTOS PRIORITIZATION FORM

SITE CODE: 09 - Portsmouth
AREA/ROOM: Kitchen
EVALUATORS:
MATERIAL QUANTITY: 8 x 20' = 160 SF
MATERIAL DESCRIPTION: 9" x 9" Floor Tile FT-4 Tan w/ Brown & White Streaks

BUILDING NAME: Main
SAMPLE NO(S).: 09-17-01
DATE: 7-16-04
THICKNESS/SIZE & COLOR:

RELEASE ASSESSMENT

MATERIAL TYPE	COMMENTS
A 0 Friable: H=3, M=2, L=1 Non-friable=0	
B 0 Occupants Accessibility to ACBM Fibers Low = 0, Moderate = 1, High = 4	
C 1 Activity - None - 0, Low = 1, Moderate = 2, High = 3	
D 1 Air Movement/Plenum - None - 0, Low = 1, Moderate = 2, High = 3	
E 2 Amount of Visible Surface Area (ft^2): <10=0: 10 to <100=1: 100 to ≤1,000=2: >1,000=3	
F 2 Population: 1 to 9 or hall = 1: 10 to 200 = 2: 201 to 500 = 3: 501 to 1,000 = 4: > 1,000 = 5	
G 1 No ACBM or < 1% ACBM = 0, Non-friable ACBM in good to fair condition = 1, Non-friable ACBM in poor condition = 2, Friable ACBM in good condition = 3, Friable ACBM with damage = 5	
H 7 Release Factor Total (R) Max = 26: Min = 1 TOTAL R FACTOR = 7	

DAMAGE ASSESSMENT

A 1 Physical: None = 0, Minimal = 1, Low = 2, Moderate = 3, High = 5	
B 1 Water: None = 0, Minor = 1, Major = 2	
C 2 Potential for Contact by Maintenance Activity Low = 0, Moderate = 2, High = 3	
D 1 Type of Material: Surfacing Material = 4, HVAC = 3, Pipe or Boiler = 2, Ceilings/Walls = 1, Other = 0 to 1	
E 1 Asbestos Content (%): < 1% = 0, > 1 to < 30 = 1, > 30 to < 50 = 2, > 50 = 3	
F 6 Damage Factor Total (D) Max = 17, Min = 0 TOTAL D FACTOR = 6	G ASSESSMENT INDEX (Priority Ranking Value) = E

ASBESTOS PRIORITIZATION FORM

SITE CODE: 04 - Portsmouth
AREA/ROOM: Kitchen
EVALUATORS:
MATERIAL QUANTITY: 160 SF
MATERIAL DESCRIPTION: Black mastic from FT-4 (09-17-01)

BUILDING NAME: Main
SAMPLE NO(S).: 09-18-01
DATE: 9-18-94
THICKNESS/SIZE & COLOR:

RELEASE ASSESSMENT

MATERIAL TYPE	COMMENTS
A 0 Friable: H=3, M=2, L=1 Non-friable=0	
B 0 Occupants Accessibility to ACBM Fibers Low = 0, Moderate = 1, High = 4	
C 0 Activity - None - 0, Low = 1, Moderate = 2, High = 3	
D 0 Air Movement/Plenum - None - 0, Low = 1, Moderate = 2, High = 3	
E 0 Amount of Visible Surface Area (ft^2): <10=0: 10 to <100=1: 100 to ≤1,000=2: >1,000=3	
F 2 Population: 1 to 9 or hall = 1: 10 to 200 = 2: 201 to 500 = 3: 501 to 1,000 = 4: > 1,000 = 5	
G 1 No ACBM or < 1% ACBM = 0, Non-friable ACBM in good to fair condition = 1, Non-friable ACBM in poor condition = 2, Friable ACBM in good condition = 3, Friable ACBM with damage = 5	
H 3 Release Factor Total (R) Max = 26: Min = 1 TOTAL R FACTOR = 3	

DAMAGE ASSESSMENT

A 0 Physical: None = 0, Minimal = 1, Low = 2, Moderate = 3, High = 5	
B 0 Water: None = 0, Minor = 1, Major = 2	
C 0 Potential for Contact by Maintenance Activity Low = 0, Moderate = 2, High = 3	
D 0 Type of Material: Surfacing Material = 4, HVAC = 3, Pipe or Boiler = 2, Ceilings/Walls = 1, Other = 0 to 1	
E 1 Asbestos Content (%): < 1% = 0, > 1 to < 30 = 1, > 30 to < 50 = 2, > 50 = 3	
F 1 Damage Factor Total (D) Max = 17, Min = 0 TOTAL D FACTOR = 1	G ASSESSMENT INDEX (Priority Ranking Value) = F

ASBESTOS PRIORITIZATION FORM

SITE CODE: 09- Portsmouth
AREA/ROOM: _____
EVALUATORS: _____
MATERIAL QUANTITY: 100 SF
MATERIAL DESCRIPTION: Transite shafts @ heater on ceiling deck

BUILDING NAME: Garage
SAMPLE NO(S).: 09-19-01
DATE: 9-16-94
THICKNESS/SIZE & COLOR: _____

RELEASE ASSESSMENT

MATERIAL TYPE	COMMENTS
A 6 Friable: H=3, M=2, L=1 Non-friable=0	
B 0 Occupants Accessibility to ACBM Fibers Low = 0, Moderate = 1, High = 4	
C 1 Activity - None - 0, Low = 1, Moderate = 2, High = 3	
D 1 Air Movement/Plenum - None - 0, Low = 1, Moderate = 2, High = 3	
E 2 Amount of Visible Surface Area (ft^2): <10=0: 10 to <100=1: 100 to ≤1,000=2: >1,000=3	
F 1 Population: 1 to 9 or hall = 1: 10 to 200 = 2: 201 to 500 = 3: 501 to 1,000 = 4: > 1,000 = 5	
G 1 No ACBM or < 1% ACBM = 0, Non-friable ACBM in good to fair condition = 1, Non-friable ACBM in poor condition = 2, Friable ACBM in good condition = 3, Friable ACBM with damage = 5	
H 6 Release Factor Total (R) Max = 26: Min = 1 TOTAL R FACTOR = 6	

DAMAGE ASSESSMENT

A 1 Physical: None = 0, Minimal = 1, Low = 2, Moderate = 3, High = 5	
B 0 Water: None = 0, Minor = 1, Major = 2	
C 0 Potential for Contact by Maintenance Activity Low = 0, Moderate = 2, High = 3	
D 1 Type of Material: Surfacing Material = 4, HVAC = 3, Pipe or Boiler = 2, Ceilings/Walls = 1, Other = 0 to 1	
E 1 Asbestos Content (%): < 1% = 0, > 1 to < 30 = 1, > 30 to < 50 = 2, > 50 = 3	
F 3 Damage Factor Total (D) Max = 17, Min = 0 TOTAL D FACTOR = 3	G ASSESSMENT INDEX (Priority Ranking Value) = 5

ASBESTOS PRIORITIZATION FORM

SITE CODE: 09- Portsmouth
AREA/ROOM: _____
EVALUATORS: _____
MATERIAL QUANTITY: 150 ft.
MATERIAL DESCRIPTION: ≤6" ϕ Pipe Insulation Rolled paper

BUILDING NAME: Garage
SAMPLE NO(S).: 09-21-01
DATE: 9-16-99
THICKNESS/SIZE & COLOR: _____

RELEASE ASSESSMENT

MATERIAL TYPE	COMMENTS
A 1 Friable: H=3, M=2, L=1 Non-friable=0	
B 0 Occupants Accessibility to ACBM Fibers Low = 0, Moderate = 1, High = 4	
C 1 Activity - None - 0, Low = 1, Moderate = 2, High = 3	
D 1 Air Movement/Plenum - None - 0, Low = 1, Moderate = 2, High = 3	
E 2 Amount of Visible Surface Area (ft^2): <10=0: 10 to <100=1: 100 to ≤1,000=2: >1,000=3	
F 1 Population: 1 to 9 or hall = 1: 10 to 200 = 2: 201 to 500 = 3: 501 to 1,000 = 4: > 1,000 = 5	
G 3 No ACBM or < 1% ACBM = 0, Non-friable ACBM in good to fair condition = 1, Non-friable ACBM in poor condition = 2, Friable ACBM in good condition = 3, Friable ACBM with damage = 5	
H 9 Release Factor Total (R) Max = 26: Min = 1 TOTAL R FACTOR = 9	

DAMAGE ASSESSMENT

A 1 Physical: None = 0, Minimal = 1, Low = 2, Moderate = 3, High = 5	
B 0 Water: None = 0, Minor = 1, Major = 2	
C 2 Potential for Contact by Maintenance Activity Low = 0, Moderate = 2, High = 3	
D 2 Type of Material: Surfacing Material = 4, HVAC = 3, Pipe or Boiler = 2, Ceilings/Walls = 1, Other = 0 to 1	
E 1 Asbestos Content (%): < 1% = 0, > 1 to < 30 = 1, > 30 to < 50 = 2, > 50 = 3	
F 6 Damage Factor Total (D) Max = 17, Min = 0 TOTAL D FACTOR = 6	G ASSESSMENT INDEX (Priority Ranking Value) = E

APPENDIX E

PERSONNEL AND LABORATORY CERTIFICATES

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 *

COVINO ENVIRONMENTAL CONSULTANTS, INC.
WOBURN, MA

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, 1995
Effective until

For the National Institute of Standards and Technology

NVLAP LAB CODE: 178

IEE

INSTITUTE FOR ENVIRONMENTAL EDUCATION, INC.

52B Cummings Park, Suite 315, Woburn, MA 01801

(617) 935-7370

Glenn Nelson

has successfully completed the 24 hour course

Asbestos Inspection Training

March 21-23, 1994	March 23, 1994
Course Date (s)	Examination Date
94-206-102-111	March 23, 1995
Certificate Number	Expiration Date
032-48-1661	
Social Security Number	President / Director of Training

IEE

INSTITUTE FOR ENVIRONMENTAL EDUCATION, INC.

52B Cummings Park, Suite 315, Woburn, MA 01801
(617) 935-7370

Michael Hickey

has successfully completed the 8 hour course

Asbestos Inspector/Management Planner Annual Refresher

March 24, 1994
Course Date

94-212-136-106
Certificate Number

004-62-5622
Social Security Number

March 24, 1994
Examination Date

March 24, 1995
Expiration Date

President / Director of Training

APPENDIX F

OPERATIONS AND MAINTENANCE PLAN

OPERATIONS AND MAINTENANCE PROGRAM

FOR

ASBESTOS-CONTAINING MATERIALS

AT

PAUL A. DOBLE ARMY RESERVE CENTER

125 COTTAGE STREET

PORTSMOUTH, NEW HAMPSHIRE

TABLE OF CONTENTS

PAGE

1. INTRODUCTION

The purpose of the Operations and Maintenance (O & M) Program is to minimize the exposure of all building occupants and visitors to airborne asbestos fibers. To accomplish this goal, the O & M Program contains information for cleaning already released asbestos fibers from surfaces, preventing future release by minimizing disturbance of and damage to asbestos-containing building materials (ACBM), and monitoring ACBM conditions throughout the building. Important O & M Program elements include alerting building occupants about the locations of ACBM, training maintenance staff in special procedures for cleaning and handling ACBM, establishing a process that assures that ACBM are not disturbed during facility repairs and renovations, and periodically reinspecting areas containing ACBM. The O & M Program also establishes a recordkeeping system that documents employee training, O & M activities, abatement of ACBM, and the results of periodic reinspections. All records generated as a result of implementing this O & M Program, as well as this document, shall be kept by a designated Asbestos Program Manager.

This O&M Plan, to a large extent is modeled upon the requirements of 40 CFR Part 763, the Asbestos Hazard Emergency Response Act (AHERA). Although the requirements for implementing an O&M Plan is only required for schools under the AHERA regulation, the EPA recommends in their Green Book inclusion of the O&M requirements in any building that has ACBM. Also, OSHA's recently reissued asbestos standard (29 CFR 1926.1101) has several O&M related provisions, including housekeeping and labeling requirements.

LIMITATIONS

Due to several limitations, further survey work will be required if future renovation or maintenance activities occur which result in demolition of any part of the existing building structure. These limitations include:

A. Since no core samples of roofing material were collected, only exposed surfaces of the roof were inspected;

B. Potentially hidden areas, such as wall cavities, the space between fixed ceilings and the ceiling deck, internal equipment and parts, etc. may contain ACBM that was not accessible during the survey; and,

C. The inner cavity of fire doors, which sometimes contains ACBM insulation, were not inspected.

2. NOTIFICATION

The Asbestos Program Manager shall establish a procedure for labeling ACBM identified in the building survey. Accessible materials in service areas identified as ACBM shall be marked with the following label:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

Labels shall be prominently displayed in readily visible locations in the service areas and shall remain posted until the labeled ACBM are removed.

Additionally, maintenance staff who may work closely with or otherwise encounter ACBM throughout the facility shall be notified of the locations of all ACBM. These employees shall be made aware of the results of the building survey so that they may be familiar with the types and locations of identified ACBM. These employees shall also be instructed to immediately report to the Asbestos Program Manager any evidence of disturbance or damage of ACBM, or any dust or debris that apparently originates from ACBM. All employees who may encounter ACBM as part of their work must have access to a list of "Emergency Contact Phone Numbers" (Fig. 2-1).

Figure 2 - 1

EMERGENCY CONTACT PHONE NUMBERS

Asbestos Program Manager _____

Office Phone # _____

Home Phone # _____

Beeper # _____

Asbestos Abatement Contractor _____

Phone # _____ Fax # _____

Contacts	Home Phone #	Beeper #
_____	_____	_____
_____	_____	_____

Industrial Hygiene Consultant _____

Phone # _____ Fax # _____

Contacts	Home Phone #	Beeper #
_____	_____	_____
_____	_____	_____

Building Security _____

Police _____

Fire _____

Medical Emergency _____

3. EMPLOYEE TRAINING

A. Training of Workers in the Trades (16 hours)

All staff members who work in the skilled trades (carpenters, electricians, plumbers, etc.) and who conduct activities that will result in the disturbance of ACBM shall receive training. Activities that have a high likelihood of disturbing ACBM include routine cleaning in areas where friable ACBM are located; small-scale projects of short duration (i.e., repair or removal of less than three (3) linear or square feet of ACBM); and plumbing, heating and air conditioning, electrical, and other maintenance activities in locations adjacent to ACBM. Training shall be provided before workers are assigned to activities that may disturb ACBM. The training course shall be a minimum of sixteen (16) hours in duration. The content of the training course shall include, but not be limited to, the following elements:

1. Information regarding types of ACBM and its various uses and forms.
2. Information on the health effects associated with asbestos exposure.
3. Descriptions of the proper methods of handling ACBM and activities that could result in exposure of the employee to asbestos.
4. Information on the use of High Efficiency Particulate Air (HEPA) filter-equipped dual-cartridge respirators and other personal protection during maintenance activities.
5. Hands-on training in the use of respiratory protection, other personal protective measures, good work practices, and engineering controls.
6. Information on the asbestos program requirements for medical surveillance.
7. Recognition of damage, deterioration, and delamination of asbestos materials.
8. Relevant federal, state, and local requirements.

B. Awareness Training for Custodial Workers (2 hours)

All employees who perform custodial or maintenance tasks that may involve the accidental disturbance of ACBM, and all persons who perform work in the immediate vicinity of ACBM, shall receive awareness training. This awareness training course shall be a minimum of two (2) hours in duration. The content of the awareness training course shall include, but not be limited to, the following elements:

1. Background information on asbestos, including its uses and forms.
2. Health effects of exposure to asbestos.
3. Worker protection programs, including the use of respirators and other personal protective equipment.
4. How to recognize ACBM and how to avoid disturbing it.
5. Recognition of ACBM damage and deterioration.
6. Proper response to fiber-release episodes.

3. EMPLOYEE TRAINING (cont.)

C. Training Concerning Prohibited Activities

All facility employees shall be made familiar with the locations of all ACBM identified at the facility. Certain routine maintenance activities shall be prohibited when ACBM are involved. Specifically, they shall also be instructed that:

1. No holes shall be drilled in ACBM.
2. No plants or pictures shall be hung on structures covered with ACBM.
3. No ACBM floor tile shall be sanded or buffed using high-speed (≥300 rpm) equipment in accordance with 29 CFR 1926.1101 (L) (3)(ii).
4. While moving furniture or other objects, employees shall not damage ACBM.
5. No curtains, drapes, or other dividers shall be installed in such a way that they damage ACBM.
6. Floors, ceilings, moldings or other surfaces in asbestos-contaminated environments shall not be dusted with a dry brush or swept with a dry broom.
7. No ordinary vacuuming equipment shall be used to clean up asbestos-containing debris.
8. Ceiling tiles below ACBM shall not be removed unless the employee wears the proper respirator protection, clears the area of other people, and observes proper disposal procedures for removing asbestos waste.
9. No ventilation system filters shall be removed unless the filters are wetted.
10. No ventilation system filters shall be shaken out.

D. Refresher Training

A refresher training course shall be required every two years for all employees who are involved in Operations and Maintenance activities and who have completed the 16-hour training. The refresher training course shall be a minimum of one day (8 hours) in duration and shall include:

1. Review and discussion of changes in and interpretation of applicable state and federal laws, regulations, policies, and guidelines.
2. A discussion of developments or changes in state-of-the-art procedures and equipment.
3. Review of key areas of initial training specific to Operations and Maintenance workers.

3. EMPLOYEE TRAINING (cont.)

E. Verifying Competence of Outside Contractors

The Asbestos Program Manager shall be required to verify that all outside contractors performing work in the facility that may involve disturbance or damage of ACBM have received the training appropriate to the work they are to perform (as outlined in Parts 3(A), (B), (C), and (D) above). The Asbestos Program Manager shall also require all outside contractors to sign a certificate of acknowledgment (fig. 3-1) that they have been informed about the location of all ACBM in the facility. All outside contractors must have access to the list of "Emergency Contact Phone Numbers" shown in Figure 2-1.

Figure 3 - 1

CONTRACTOR'S ASBESTOS NOTIFICATION AND ACKNOWLEDGMENT FORM

for _____ (Project)

On behalf of _____, the undersigned hereby acknowledges the presence and location of asbestos-containing material (ACM) within the buildings located at the Paul A. Doble Army Reserve Center located in Portsmouth, New Hampshire as further described herein. The undersigned agrees to avoid any contact with, or disturbance, of ACBM and to inform, and require, the same of all employees of the above-named company accordingly before they start any work at the building.

Based on sample testing conducted by CEC, ACBM have been found in the building as described below:

A. **Main Building**

1. Thermal system layered paper pipe insulation and associated mud fittings located throughout.
2. Mudded fitting insulations on heating pipes insulated with fiberglass insulation throughout.
3. Vinyl floor tile and underlying adhesive throughout building.

B. **Maintenance Building (OMS)**

1. Asbestos-cement (transite) board on ceiling above blower units.
2. Thermal system layered paper pipe insulation and associated mud fittings along ceiling and down walls.

Any activities that could potentially disturb these materials, including but not necessarily limited to sanding, scraping, coring, drilling, hammering, removal, or anchoring are prohibited.

If you encounter any material that you suspect is ACM, or if you disturb any ACM in the course of your work, you agree to immediately stop all work and contact the project superintendent and the Asbestos Program Manager.

If you have any questions concerning this notice or the presence of ACM in the building, you shall contact the Asbestos Program Manager.

The return of one signed copy of this Notice constitutes your receipt of the above information and your agreement with the requirements contained herein.

Receipt Acknowledged by (Type or Print Name)_____

Signature _____ Date: _____

Title (Type or Print) _____

Company Name (Type or Print) _____

Company Address (Type or Print) _____

Company Telephone Number (Type or Print) _____

4. OPERATIONS AND MAINTENANCE ACTIVITIES

The O & M activities to be conducted at the facility shall include routine and emergency cleaning of areas and surfaces that are potentially asbestos-contaminated, (i.e., areas where visibly damaged friable ACBM exists on floors, on equipment, or on other surfaces), small scale projects of short duration for removal or repair of ACBM, and periodic reinspection of locations within the facility where ACBM have been identified. Employees involved in O & M activities shall be required to complete the O & M training specified in Part 3 of this O & M Program.

The following O & M activities are to be carried out only by employees with appropriate training:

1. Specific work practices for spot repairs of ACBM, and routine cleaning of asbestos-contaminated areas or surfaces.

   a. All persons other than those involved in the O & M activity shall be restricted from entry to the area by physically isolating the area. For spot repairs, airtight barriers shall be constructed to insure that asbestos fibers released during abatement activities are contained within the work area. The use of glovebags will be permitted in place of a barrier for repair of ACBM located on pipes.

   b. Warning signs shall be posted at the entrance to each work area. The warning sign shall read as follows:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA

   c. Air handling systems shall be shut off or temporarily modified to prevent entry of air from the work area into other parts of the building and to restrict other sources of air movement.

   d. All personnel within work areas shall be required to wear personal protective equipment. Full-body disposable fiber-resistant suits with foot coverings and hoods shall be worn over clothing while personnel remain within work areas. In addition, respirators shall be worn in accordance with the OSHA requirements for respiratory protection. At a minimum, half-mask dual-cartridge respirators equipped with HEPA filters shall be worn while remaining in each work area.

4. **OPERATIONS AND MAINTENANCE ACTIVITIES** (cont.)

e. When cleaning asbestos-contaminated floors or surfaces, personnel shall use proper work practices. Floors shall be cleaned by wet mopping, steam cleaning, and/or HEPA vacuuming. Other surfaces shall be cleaned by wet cleaning/wiping or by HEPA vacuuming. Vacuums without HEPA filtration shall not be used to clean asbestos-contaminated surfaces. Creating dust shall be avoided. All wet cloths, rags, or mops used to clean asbestos- contaminated surfaces shall be disposed of as described in Part 4.(4) below.

f. Spot repair shall be performed only on less than 3 linear feet or 3 square feet of insulation, and shall be conducted only in instances where asbestos abatement is not the principal purpose of the operation. Spot repairs of pipe, tank, or other thermal system insulation shall be conducted by patching sections of insulation using patching compounds of nonasbestos cement to fill in large gouges or missing sections of insulation. The insulation surfaces thus patched shall then be covered with fiberglass cloth impregnated with plaster. The fiberglass cloth shall be applied as follows:

i. Cut a sufficiently large section of fiberglass cloth to cover the affected areas of insulation. This cloth shall be wrapped around the entire diameter of the affected pipe.

ii. The fiberglass cloth shall be dipped in a bucket of water and carefully placed over the damaged section of insulation without creating dust or debris. The cloth shall be smoothed by hand so that the cloth remains firmly attached to the insulation.

iii. Any dust or debris created by this operation shall be cleaned by wet cleaning or HEPA vacuuming.

g. Documentation of all spot repairs shall be maintained with the permanent building records. This documentation shall include, as a minimum, the identity of the skilled trades worker performing the spot repair, the date the spot repair was performed, the specific location of the repair, the methods used, the quantity of the asbestos involved, and receipts for the disposal of any asbestos waste.

2. Specific work practices for spot removal of ACBM by glovebag technique.

4. **OPERATIONS AND MAINTENANCE ACTIVITIES** (cont.)

a. Glovebag operations shall be conducted in conformance with the work practices set forth in Appendix C of the Occupational Safety and Health Administration (OSHA) Asbestos Regulation for Construction (29 CFR 1926.58). A glovebag is a single-use device that shall be disposed of after removal of a single section of ACBM pipe insulation.

b. Glovebag operations shall be allowed only for removing less than three (3) linear feet of pipe insulation for operations where the principal purpose is not asbestos abatement. No ACBM insulation shall be removed without prior approval of the Asbestos Program Manager.

c. All requirements outlined in this Part 4 (1) (a), (b), (c), and (d) shall be adhered to when performing glovebag operations.

d. Glovebags shall be installed so that they completely cover the pipe in such a manner as to prevent leakage of air or asbestos fibers. The arms, open edges, and other openings in the glovebag shall be sealed with duct tape.

e. The ACBM shall be wetted before its removal and shall be maintained in a wet condition inside the glovebag.

f. The upper portion of the glovebag and surfaces from which asbestos has been removed shall be cleaned by wet wiping until no visible material remains.

g. Removed ACBM shall be deposited in the bottom of the glovebag. A HEPA vacuum shall be employed to exhaust excess air from the bag. NOTE: Do not use vacuums without HEPA filtration to exhaust excess air from the glovebag. The glovebag and its contents shall be removed from the pipe and immediately containerized in a second, labeled, 6-mil thick polyethylene bag before disposal.

3. Maintenance activities other than small-scale projects of short duration. NOTE: All fiber release episodes, major or minor, shall be immediately reported to the Asbestos Program Manager.

a. Minor fiber-release episode (i.e., the falling or dislodging of three (3) square or linear feet or less of friable ACBM).

i. Thoroughly saturate the debris using wet methods in such a manner as to minimize disturbance of fibers.

ii. Place the asbestos debris in a sealed, leak-proof container.

iii. Clean the area by HEPA vacuuming and wet wiping/mopping of all visible debris in the area. NOTE: Do not use vacuums without HEPA filtration to clean asbestos- contaminated surfaces. All wet cloths, rags, or mops used to clean asbestos debris shall be disposed of as described in Part 4.(4) below.

iv. Repair the area of damaged ACBM with materials such as asbestos-free spackling, plaster, cement, or insulation, or seal with latex paint or an encapsulant.

v. Only employees who have received appropriate O & M training shall perform this work.

4. **OPERATIONS AND MAINTENANCE ACTIVITIES** (cont.)

b. Major fiber-release episode (i.e., the falling or dislodging of more than three (3) square or linear feet of friable ACBM).
   i. Immediately restrict entry into the area and post signs to prevent entry into the area by persons other than those necessary to perform the response action.
   ii. Shut off or temporarily modify the air handling system to prevent the distribution of fibers to other areas in the building.
   iii. Contact the area supervisor.
   iv. Only a licensed Asbestos Abatement Contractor shall conduct the response action for any major fiber-release episode and only after the appropriate regulatory agencies are notified.

4. Waste disposal procedures

a. Wastes include process wastes, housekeeping wastes, removal job wastes, contaminated disposable protective clothing, and filters.
b. Vacuum bags and filters shall not be cleaned. Instead, they shall be sprayed with a fine water mist and placed into a labeled waste container.
c. Process and housekeeping wastes shall be wetted with water or a mixture of water and wetting agent (penetrating-type fluid) before packaging them in disposable containers.
d. ACBM from removal jobs shall be disposed of in leak-proof, double 6-mil thickness plastic bags, plastic-lined cardboard containers, or plastic-lined metal containers. These wastes, which shall be wet when removed, shall be sealed in containers before they dry out in order to minimize fiber release during handling.
e. All asbestos wastes generated at the facility shall be placed in a designated storage area(s). The asbestos waste shall be labeled, transported, and disposed of according to the United States Environmental Protection Agency (U.S. EPA) regulation Title 40 CFR Part 61.

5. PERIODIC REINSPECTION

At least once every six months, each building that contains ACBM or is assumed to contain ACBM shall be reinspected. The inspection shall be conducted by individuals familiar with the building and the locations of ACBM. Those individuals shall have been trained to perform O & M tasks or trained as Asbestos Inspectors. The findings of the reinspections shall be reported to the Asbestos Program Manager, and they shall be kept on file.

At a minimum, the following activities shall be performed during the reinspection:

1. Visually inspect all areas that are identified in the survey report as containing ACBM or as assumed to contain ACBM.
2. Record the date of the reinspection, name of the inspector, and changes in the condition of the materials, including damage due to water, contact, and other damage. Changes in building use that may have an impact on ACBM, such as installation of new equipment, shall be recorded.
3. Submit the information identified in the reinspection for inclusion in the survey report.

A checklist similar to the one in Figure 5-1 shall be used for the periodic reinspections.

In addition, air monitoring to detect airborne asbestos fibers in the building may be used to provide supplemental information during the physical and visual reinspection. Increases in airborne fiber concentrations from earlier levels may indicate unseen damage or disturbance to ACBM and may provide early warning of a potential problem to the Asbestos Program Manager.

Figure 5-1

CHECKLIST FOR
PERIODIC REINSPECTION
OF
ASBESTOS-CONTAINING BUILDING MATERIALS (ACBM)

Paul A. Doble Army Reserve Center
125 Cottage Street
Portsmouth, New Hampshire

Checklist

Name of Inspector _____

Date of Inspection _____

ACBM	LOCATION	CHANGE	NO CHANGE	COMMENTS
MAIN BUILDING				
Layered paper pipe insulation and associated mud fittings	throughout			
Mudded pipe fitting insulation on fiberglass insulated heating pipes	throughout			
Vinyl floor tiles and underlying mastic adhesives	throughout			
OMS				
Transite board	above blower unit			
Layered paper pipe and fitting insulations	along ceiling & wall			

6. **RECORDKEEPING**

The facility shall maintain records on employee training, personal air monitoring, medical surveillance, reinspection results, cleaning and other Operations and Maintenance activities, and asbestos abatement performed at the facility. In addition, minor and major fiber- release episodes shall be recorded and kept with this O & M Program.

Employee records concerning personal air monitoring and medical surveillance shall be maintained as outlined in the OSHA Regulation 1910.1001. This regulation requires that these records be kept on file for at least thirty (30) years.

For each preventive measure and response action taken for ACBM, the facility shall keep records of the following:

1. A detailed written description of the measure or action, including methods used, the location where the measure or action was taken, reasons for selecting the measure or action, starting and completion dates of the work, names and addresses of all contractors involved, and, if ACBM are removed, the name and location of the storage or disposal site of the ACBM. Refer to Appendix M for detailed procedures for each type of response action.

2. The name and signature of any person collecting any air sample, the locations where samples were collected, date of collection, the name and address of the laboratory analyzing the samples, the date of analysis, and the method of analysis.

3. A record of the periodic reinspection required every six (6) months; the name of the inspector, the date, and changes in the conditions of materials noted during the periodic inspection.

4. A description of Operations and Maintenance activities, the name of each person performing these activities, the start and completion dates of the activities, the locations where such activities occurred, a description of the activities used, including preventive measures, and, if ACBM are removed, the name and location of the storage or disposal site of the ACBM.

5. A description of each fiber-release episode, the date and location of the episode, the method of repair, preventive measures or response action taken, the name of each person performing the work, and, if ACBM are removed, the name and location of the storage or disposal site of the ACBM.

HISTORICAL RESOURCES INVENTORY

NH 008

			CODE
NHDHR Inventory #			
Included in Area			
County Rockingham			15
Town/City Portsmouth			
Address 125 Cottage Street			
Current owner 94th Regional Support Command			
Property Name Paul A. Doble U.S. Army Reserve Center			
Acreage 3.38			
Tax map/parcel#			
UTM ref. Z19 E355210 N4770010			
USGS Quadrangle Portsmouth, NH-ME **scale** 1:24000			
Use: present defense-military training			DEF
original defense-military training			DEF
Exterior building materials:			
Roof: tar, built-up		**Walls:** brick	BRI
Foundation: concrete slab	CON	**Chimney:** brick	BRI
# of stories: one		**Roof shape:** flat	RFL
Chimney location: rear		**Entry location:** front/ offset	
Sash type: metal	MET	**Plan configuration:** L-shaped	
Major alterations (with dates): none			
Condition: good		**Outbuildings:** two-bay	GRG
		(MS) maintenance	
		shop	
Setting: residential			
Architect/Builder: Reisner & Urbahn			
source: Ft. Devens Real Property Office Records			
Original construction date: 1958			
source: Ft. Devens Real Property Office Records			
____ multiple building campaigns (see back)			
Style or Type: Contemporary-American International			
Moved: _____ date: _____			
Surveyor: The Public Archaeology Laboratory, Inc.			
Recorded by: Matt Kierstead - Kirk Van Dyke			
Date of field survey: 5/5/95			

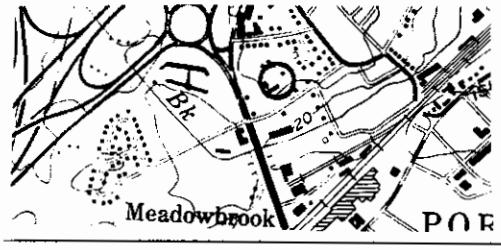
NEW HAMPSHIRE DIVISION OF HISTORICAL RESOURCES

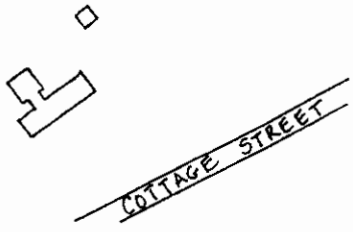
******* INDIVIDUAL RESOURCE INVENTORY FORM *******

(March 1991)

photograp
photograp
roll# _10_
negative

Location map indicate North with arrow





Project ID# _____

NHDHR Inventory # _____

NHDHR Inventory # _____ Continuation sheet used: yes _X_ no ___

ARCHITECTURAL DESCRIPTION AND COMPARATIVE EVALUATION:
See attached continuation sheet.

HISTORICAL BACKGROUND and role in Town's/City's development:
See attached continuation sheet.

NATIONAL REGISTER CRITERIA STATEMENT OF SIGNIFICANCE:

The Paul A. Doble USARC, Portsmouth is potentially NR eligible, meeting criteria A and C, within the Cold War context. The property is less than 50 years old, but possesses potential exceptional significance for its association with the development of Army Reserve facilities in the Cold War period and as an unaltered example of the Reisner & Urbahn standardized designs.

PERIOD OF SIGNIFICANCE: 1958-present

STATEMENT OF INTEGRITY: Excellent

BIBLIOGRAPHY and/or REFERENCES:
See attached continuation sheet.

APPLICABLE HISTORIC CONTEXT(S) with code:

Surveyor's Evaluation:

NR Listed:	**Individual**	___	**NR Criteria:** A	_X_	**NR eligible:**
	within district	___	B	___	**individual** _X_
			C	_X_	**within district** ___
Integrity	**yes**	___	D	___	**not eligible** ___
	no	___			**more info. needed** ___

SHPO office - Reviewed for Determination of Eligibility (date):

Community: Portsmouth
Property Address: 125 Cottage Street

ARCHITECTURAL DESCRIPTION ***(continued)***

The First Lieutenant Paul A. Doble United States Army Reserve Center, designed by Reisner & Urbahn and built in 1958 as a 200-man center, is an L-shaped, one-story structure, with a 158-foot by 48-foot administrative and classroom block, and a 72-foot by 52-foot drill hall wing connected to the main block at the southwest end by a narrow, 20-foot long corridor. All walls are cinder block with exterior brick veneer. All roofs are flat, and slope away slightly from a discrete center ridge for drainage. The main block is a long, low structure, with a flat, built-up roof which slightly overhangs the red brick walls. The double front entrance doors are located at the northeast end of a 20-foot long, four-foot deep recessed entrance area offset toward the northeast end of the front (southeast) elevation. The long, east front wall contains ten, square, recessed, metal-sash windows with two vertical panes, on slightly protruding concrete sills. These windows, which replace the original four- and six-pane, steel-sash units, continue into the recessed entrance area. The short stretch of wall to the northeast side of the entrance is a bare expanse of brick, with the legend "U.S. ARMY RESERVE" in small metal letters. The windows on the rear (northwest), and northeast elevations are similar, and the southwest elevation contains only double doors which open onto the central corridor. Interior features include administrative offices and classrooms arranged along a double-loaded corridor, a kitchen, arms vault, boiler room and equipment storage. The drill hall wing is a taller, 22-foot high structure, with a flat, built-up roof edged with metal coping. The drill hall wing is lit by six-foot high bands of replacement, metal sash windows which span the length of the tops of the long, northeast and southwest side walls. Each window bay has a slightly protruding concrete sill. The walls are divided into four wide bays by piers which express the location of the three steel I-beams which support the diagonally-braced, open-web steel roof joists. The northeast wall of the drill hall wing contains a roll-type garage door for vehicle access, and a personnel door. The drill hall wing has a thick concrete slab floor to support the weight of heavy military vehicles. The southeast and northwest end walls of the drill hall wing are unfenestrated brick.

One related outbuilding, the Maintenance Shop (MS), is located approximately 90 feet northeast of the drill hall. The maintenance shop, also designed by Reisner & Urbahn, and built in 1958, is a 53-foot by 46-foot, two-bay, one-story, brick vehicle garage, with a slightly pitched, built-up roof, capped with wide metal coping. Two large roll-type garage doors with small oval windows fill the front (southeast) bays, and the southwest and northeast side walls are divided into three bays by brick pilasters which support the roof beams. The maintenance shop is lit by a band of windows located high on the rear (northwest) elevation. A personnel access door is located in the southwest corner of the building.

The 1st Lt. Paul A. Doble Reserve Center is located on a 3.38-acre graded lot northwest of Cottage Street, in a residential neighborhood, approximately 200 yards east of U.S. Route 1. The land is open at the front (southeast) side, and fenced off beyond the front of the building. A paved walk leads to the front door. A gated, paved driveway is located at the northeast end of the building, and leads to a large parking area, and the maintenance shop. Landscaping is minimal, consisting of open, mowed lawns, trimmed yews, and small trees.

The 1st Lt. Paul A. Doble Reserve Center is an excellent, unaltered example of the main design phase of a series of similar reserve centers constructed across the United States from the early 1950s to the early 1960s. These spartan buildings were designed according to an architectural program developed by the U.S. Army Corps of Engineers and the New York architectural firm of Reisner & Urbahn, and a later incarnation, Urbahn, Brayton & Burrows. The reserve centers were built from a set of master plans, which were adapted as necessary to conform to military capacity requirements, and modified to conform to specific site

configurations. The reserve center design program combined the need for low cost, easy expansion, and uniformity with Contemporary, International Style-derived architectural features such as hard-edged rectangular massing, flat roofs, lack of ornamentation, and emphasis on simple materials and regular rhythms of fenestration. The use of the Contemporary Style, combined with the function and interior layout of the reserve centers, resulted in a building type which resembles primary school architecture, as well as corporate and municipal buildings of the period. Except for the replacement windows, the 1st Lt. Paul A. Doble Reserve Center retains its original appearance and architectural integrity.

HISTORICAL SIGNIFICANCE ***(continued)***

The United States Army Reserve (USAR) is a Federal military organization distinct from the full-time, professional Regular Army and the state National Guard. The USAR is maintained as a source of personnel to rapidly support the Regular Army in the event of conflict. The USAR is composed of "citizen-soldiers," civilians committed to a period of duty in exchange for benefits and pay. The history of the USAR has been characterized by conflict between the Regular Army, U.S. Presidents, and Congress over the combat role and funding of the USAR. This conflict resulted in early difficulties in reaching projected goals for equipment, facilities, and utilization. The USAR has its origins in the Colonial state militia, informally trained citizens organized against the British Army during the Revolution. The modern USAR has its roots in the Medical Act of 1908, which started a reserve force of medical officers. Distinct organizations of reserve officers and regulars participated in World War I. During the 1930s, the Works Projects Administration provided reserve officers with the opportunity to run Civilian Conservation Corps camps.

The USAR also sent soldiers into combat during World War II. The postwar period was a time of change for the USAR, as emerging Cold War defense philosophy called for a larger reserve force to augment the Regular Army. Reliance on nuclear detente during the Cold War drew attention away from the development of the USAR, and reduced its effectiveness in the Korean Conflict. The USAR was not a major participant in the Vietnam War, as President Lyndon Johnson anticipated the negative political implications of USAR mobilization for an unpopular war. Under Nixon's 1970 Total Force policy, the USAR was made an all-volunteer force with an increased combat role and increased benefits and pay. Overall, USAR equipment and facilities have been increased since World War II. These gains have been vital for USAR units in reaching unit size and readiness requirements.

The USAR remains an active element in the U.S. military establishment. In the event of mobilization, USAR units are assimilated into the Regular Army to provide service and support. Army reservists today are required to attend forty-eight 4-hour drills per year at a Reserve Center, where Army training staff instruct them in procedure and the use of equipment, and one 15-day intensive summer training camp. Military training personnel of the 98th Training Division are stationed at New England reserve centers to provide instruction. USAR activities in New England and New York are controlled by the 94th Regional Support Command (RSC) headquartered at Fort Devens, Massachusetts.

Prior to the end of World War II, defense policy makers were already planning for the Cold War. Defense plans called for an increased role for the Army Reserve, which was to augment the Regular Army in times of national emergency. The Army Reserve lacked proper facilities for training and equipment after World War II, and reserve units could not be activated without them. The War Department recommended that the Federal Government appropriate funds for armory (reserve center) land purchases and construction. This appropriation required Congressional approval, and in May 1946, H.R. 5762, a bill for armory construction funds was introduced into Congress. This bill failed due to disagreements over funding allocation and property ownership, as did six other pieces of legislation introduced over four years. On September 11, 1950, the 81st Congress passed H.R. 8594, the National Defense Facilities Act, which gave the reserve components $250 million for construction over five years. This bill was amended in 1955,

allocating another $25 million for reserve construction.

During this period the reserve components were developing the new reserve center concept. Proposed facility criteria and specifications were collected from numerous military agencies, and approved by the Secretary of Defense. From this information sketches and models were made by the Corps of Engineers, and reviewed by the parties involved. From the resulting comments the Corps of Engineers developed construction criteria, and finished drawings were made by selected outside architects and engineers such as Reisner & Urbahn. Reisner & Urbahn were known by the Corps of Engineers for successful work with National Guard armory design, and were awarded the commission for the New England reserve centers after funding was insured by passage of the National Defense Facilities Act. Due to similar facility needs the reserve center program was overseen by the National Guard Bureau. Designers recognized that due to changing military tactics and technology, instruction space would take precedence over the traditional drill hall in the new architectural environment they were designing. Other requirements included storage space and offices. The reserve centers were typically constructed using inexpensive materials, were devoid of ornamentation, and were designed to blend into their architectural surroundings. Standardization was important for construction efficiency and was key to facilitating the expansible nature of the design, which allowed for additional wings to be added to increase the capacity of the reserve center. The bulk of the Reisner & Urbahn reserve centers were constructed in the mid-1950s, particularly after the additional funds acquired by the amendment of the National Defense Facilities Act in 1955. The Reisner & Urbahn New England reserve center campaign ended in 1964, with 23 reserve centers constructed. After this large commission, reserve facility policy shifted to the utilization of existing defense facilities. This facility was built on land consisting of .9 acres purchased from Barbara J. Washburn for $2,400.00 on August 30, 1956; .39 acres purchased from William Hubbard, et ux, for $800.00 on November 15, 1956; 1.16 acres purchased from Estate of Jeremiah Regan for $4,500.00 on June 7, 1957; .93 acres purchased from John C. Sullivan, et ux, for $2,800.00 on August 30, 1956; for a total purchase price of $10,500.00 for 3.38 acres.

The function of this reserve center is to provide administrative, classroom, maintenance, and storage space to Army Reserve personnel and assigned Army Reserve units. The reserve center serves as a base of operations for specialized units that can be mobilized and assimilated into the Regular Army when required. At the reserve center, assigned Army Reserve units receive advanced individual training in the use of military equipment, weapons, tactics, and vehicles. In the event of mobilization with a draft, U.S. Army training instructors stationed at the reserve center are deployed to conduct basic training of draftees. Military instruction at the reserve center takes place in the classrooms and in the drill hall, which is used for general assemblies and drill practice and can accommodate large military vehicles. A kitchen is also associated with the drill hall. Administrative office space is provided for full-time unit support personnel, including the Facility Manager, who is responsible for the day-to-day operation and maintenance of the facility; and the Unit Administrator, who is responsible for unit personnel, pay, promotion, and supply. In the event that the assigned reserve units are mobilized, the reserve center also provides home support for the units. The reserve center also serves as an Army Reserve recruiting center.

This maintenance shop is a motor vehicle garage used by reserve center personnel for routine periodic maintenance and storage of smaller assigned unit vehicles. Tasks performed at the maintenance shop include oil changes, lubrication, battery filling, light running repairs, and minor maintenance such as tire changing, replacement of light bulbs, and minor painting, tuning and washing. Heavier repairs are performed at a centralized regional Area Maintenance Support Activity (AMSA) facility which is discussed on a separate form. The maintenance shop is now also used for unit equipment storage, with most assigned unit vehicles stored outdoors.

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Loder, Linda, Facility Manager
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National Archives and Records Administration, Washington, DC and College Park, MD
Record Groups 168, 319, and 407

Urbahn, Max
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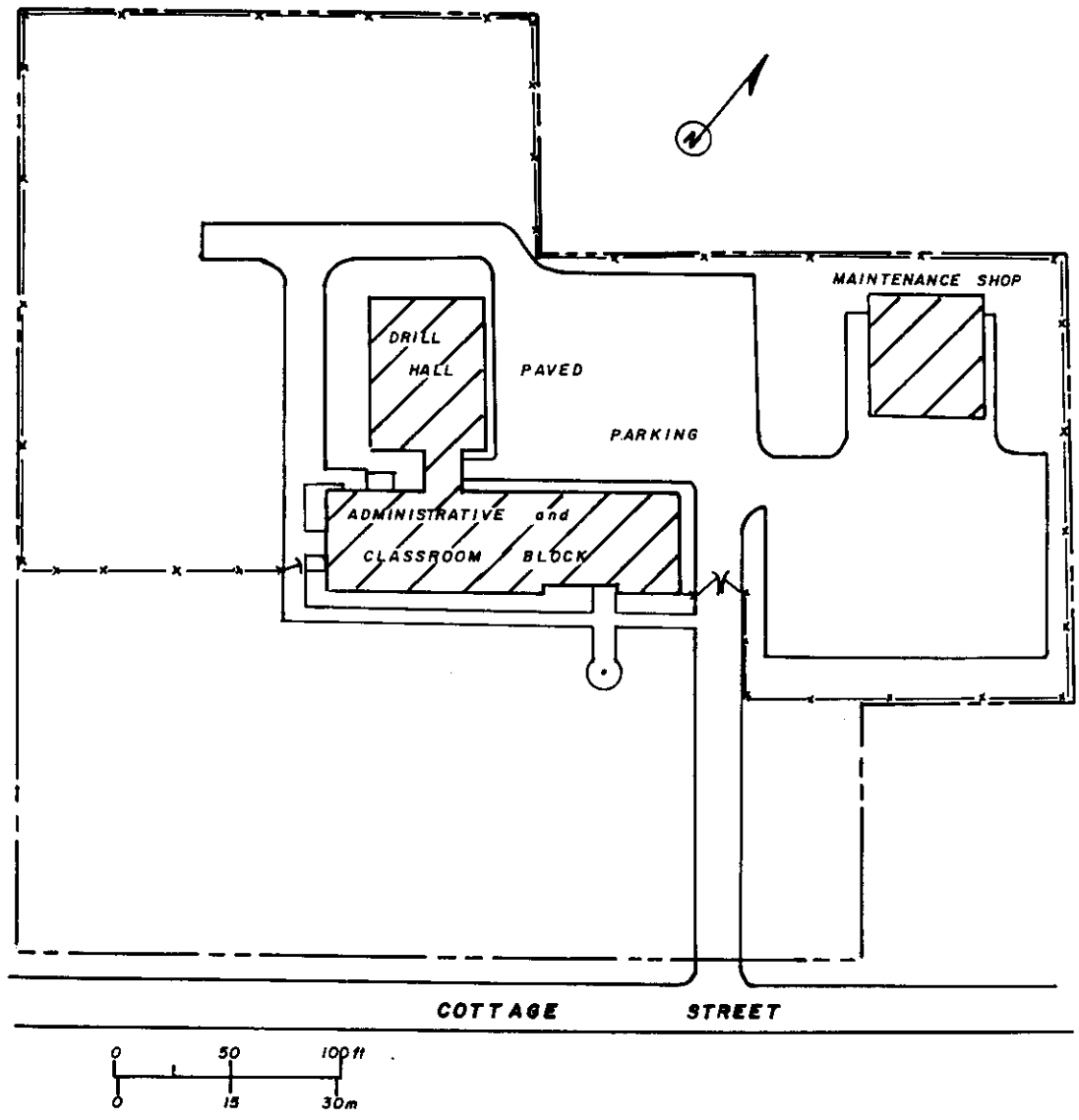
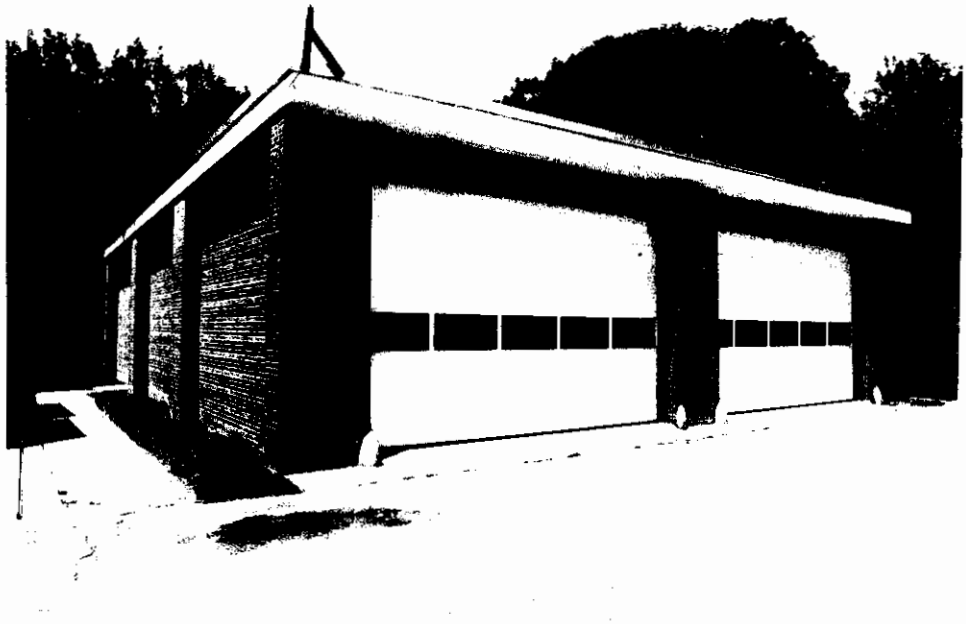
SITE PLAN OF THE FIRST LIEUTENANT PAUL A. DOBLE USARC



FIRST LIEUTENANT PAUL A. DOBLE USARC--PHOTOGRAPHS



APPENDIX B

Photographic Log

Building:	**Administrative**
Photograph:	**01**
Date:	**07 May 2013**

Description:

9” x 9” brown and tan checkerboard floor tile and underlying mastic.

Located in main reserve center. Approximately 1100 ft^2 had been removed and replaced with carpet or 12” x 12” vinyl floor tile.

Building:	**Administrative**
Photograph:	**02**
Date:	**07 May 2013**

Description:

9” x 9” floor tile (tan) and Underlying mastic adhesive in Kitchen.

Kitchen area was remodeled and expanded. No indication of any ACM floor tiles remaining after remodel.

Building: **Administrative**
Photograph: **03**
Date: **07 May 2013**

Description:

Mudded pipe fittings on fiberglass and layered paper pipe. Located throughout main reserve center.

Building: **Administrative**
Photograph: **04**
Date: **07 May 2013**

Description:

Mudded pipe fittings on fiberglass and layered paper pipe. Located throughout main reserve center.

Building: **Administrative** **Photograph:** **05** **Date:** **07 May 2013** Description: Layered Pipe insulation. Located throughout main reserve center.	

Building: **OMS** **Photograph:** **06** **Date:** **07 May 2013** Description: Asbestos Cement Transite board. Located in the ceiling above heater unit in OMS Building.	

Building: **OMS** **Photograph:** **07** **Date:** **07 May 2013** Description: Closeup of Asbestos Cement Transite board .	

Building: **OMS** **Photograph:** **08** **Date:** **07 May 2013** Description: Layered paper pipe insulation. Located in the OMS Building along the walls and through the overhead.	

APPENDIX C

Inspector’s Certification

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Solid and Hazardous Waste Management
Toxic Substances Program – Asbestos Section
401 Church Street
Fifth Floor, L & C Tower
Nashville, Tennessee 37243 - 1535

ACKNOWLEDGEMENT

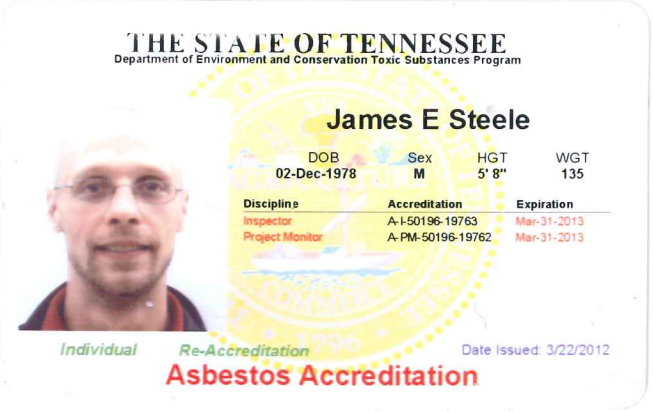
The Toxic Substances Program has completed a review of your asbestos accreditation application. Pursuant to Rule 1200-01-20 Asbestos Accreditation Requirements, you are being granted accreditation to conduct asbestos activities as outlined in the Rule.

Enclosed are your State of Tennessee asbestos credentials [identification card and certificate]. Asbestos identification cards should be carried at all times when conducting or performing active asbestos and/or abatement activities at schools or public and commercial buildings. The state accreditation programs issues accreditations to be valid for a period of one year, in order to for the issued accreditation to remain in effect applicants must complete their annual asbestos refresher(s) when required in the appropriate discipline(s). The training course completion certificated shall be maintained on site at all times when conducting or performing active asbestos and/or abatement activities in schools or public and commercial buildings.

If you have any questions regarding this matter, you may call me at (615) 532-2757, contact the Asbestos Program at (877) 252-2694 or e-mail us at TPMap.Notification@tn.gov.

Thomas C. Hill Jr.
Accreditation ASA
Toxic Substances Program

cc: Toxic Substances Program file



RESOLUTION, INCORPORATED
1101-A DARBYTOWN DRIVE
NASHVILLE, TN. 37207
(615) 865-8813

Certifies That

Certification

Number: ASBIR12101697

JAMES STEELE

Has on October 16, 2012, Knoxville, TN attended and successfully completed the requirements and passed the examination with a score of 70% or better on October 16, 2012, of the course entitled;

ASBESTOS INSPECTOR REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the States of Alabama, Arkansas, Indiana, Tennessee, and the Commonwealth of Kentucky. The above student received requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act (TSCA).

Conducted At: 402 Bearden Park Circle
Knoxville, TN 37919

Expiration Date: October 16, 2013

Inspector training_____
(pre-requisite to Management Planner training)

Ron Francis – Training Manager

Steve Swift - Instructor

M·E·T·A

Mayhew Environmental Training Associates

INCORPORATED

Certificate # 7ME01181202AIR0016

This is to certify that

James Steele

has on 01/18/2012, in Oak Ridge, TN
completed the requirements for asbestos accreditation under Section 206 of TSCA Title II, 15 U.S.C. 2646

AHERA Asbestos Building Inspector Refresher Course

as approved by the U.S.E.P.A. under 40 C.F.R. 763 (AHERA)
on 01/18/2012 - 01/18/2012 and passed the associated examination on 01/18/2012
with a score of 70% or better
CM = 0.50 Pts.

KANSAS MAYHEW EST. 1985 INC. 1987 ENVIRONMENTAL TRAINING ASSOCIATES SAFETY IN GOD ALONE

Robert W. Brooks

Instructor
Robert Brooks

President
Thomas Bradford Mayhew

Accreditation Expires: 1/18/13

META - P.O. Box 786 - Lawrence KS 66044 - 800-444-6382

M·E·T·A

Mayhew Environmental Training Associates

INCORPORATED

Certificate # 7ME11091001AIR0012

This is to certify that

James Steele

has on 11/09/2010, in Knoxville, TN
completed the requirements for asbestos accreditation under Section 206 of TSCA Title II, 15 U.S.C. 2646

AHERA Asbestos Building Inspector Refresher Course

as approved by the U.S.E.P.A. under 40 C.F.R. 763 (AHERA)
on 11/09/2010 - 11/09/2010 and passed the associated examination on 11/09/2010
with a score of 70% or better
CM = 0.50 Pts.

KANSAS MAYHEW EST. 1985 INC. 1987 ENVIRONMENTAL TRAINING ASSOCIATES SAFETY IN GOD ALONE

Instructor
Thomas Mayhew

Accreditation Expires: 11/9/11

President
Thomas Bradford Mayhew

META - P.O. Box 786 - Lawrence KS 66044 - 800-444-6382

M·E·T·A

Mayhew Environmental Training Associates

INCORPORATED

Certificate # 7ME12020902AI00005

This is to certify that

James Steele

has on 12/04/2009, in Knoxville, TN
completed the requirements for asbestos accreditation under Section 206 of TSCA Title II, 15 U.S.C. 2646

AHERA Asbestos Inspector Training

as approved by the U.S.E.P.A. under 40 C.F.R. 763 (AHERA)
on 12/02/2009 - 12/04/2009 and passed the associated examination on 12/04/2009
with a score of 70% or better
CM = 3.00 Pts.

KANSAS MAYHEW EST. 1985 INC. 1987 ENVIRONMENTAL TRAINING ASSOCIATES SAFETY IN GOD ALONE

Accreditation Expires: 12/4/10

Instructor
Thomas Brennan

President
Thomas Bradford Mayhew

M E T A - P.O. Box 786 - Lawrence KS 66044 - 800-444-6382

RESOLUTION, INCORPORATED
1101-A DARBYTOWN DRIVE
NASHVILLE, TN. 37207
(615) 865-8813

TRAINING PROVIDER ACCREDITATION #A-TP-PMR-122-118

Certifies That

Certification

Number: ASBPMR12101705

JAMES STEELE

Has on October 17, 2012, in Knoxville, TN attended and successfully completed the requirements and passed the examination with a score of 70% or better on October 17, 2012, of the course entitled;

ASBESTOS PROJECT MONITOR REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the State of Tennessee. The above student received requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act (TSCA).

Conducted At: 402 Bearden Park Circle
Knoxville, TN 37919

Expiration Date: October 17, 2013

Inspector training_____
(pre-requisite to Management Planner training)

Ron Francis – Training Manager

Steve Swift – Instructor

RESOLUTION, INCORPORATED
1101-A DARBYTOWN DRIVE
NASHVILLE, TN. 37207
(615) 865-8813

TRAINING PROVIDER ACCREDITATION #A-TP-PMR-122-118

Certifies That

Certification Number: ASBPMR11101854

JAMES STEELE

Has on October 27, 2011, in Knoxville, TN attended and successfully completed the requirements and passed the examination with a score of 70% or better on October 27, 2011, of the course entitled;

ASBESTOS PROJECT MONITOR REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the State of Tennessee. The above student received requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act (TSCA).

Conducted At: 3306 Ragsdale Ave.
Knoxville, TN 37909

Expiration Date: October 27, 2012

Inspector training_____
(pre-requisite to Management Planner training)

Ron Francis – Training Manager

Ron Francis – Instructor

RESOLUTION, INCORPORATED
1101-A DARBYTOWN DRIVE
NASHVILLE, TN. 37207
(615) 865-8813

Certifies That

Identification

Number: ASBPMR10102771

James Steele

Has on October 4, 2010, in Knoxville, TN attended and successfully completed the requirements and passed the examination with a score of 70% or better on October 4, 2010, of the course entitled;

ASBESTOS PROJECT MONITOR REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the State of Tennessee. The above student received requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act (TSCA).

Conducted At: 3306 Ragsdale Ave.
Knoxville, TN 37909

Expiration Date: October 4, 2011

Inspector training_____
(pre-requisite to Management Planner training)

Ron Francis – Training Manager

Ron Francis – Instructor

RESOLUTION, INCORPORATED
1101-A DARBYTOWN DRIVE
NASHVILLE, TN. 37207
(615) 865-8813

Certifies That

Identification

Number: ASBPMI0910332

JAMES E. STEELE

Has on October 5-9, 2009, in Oak Ridge, TN attended and successfully completed the requirements and passed the examination with a score of 70% or better on October 9, 2009, of the course entitled;

ASBESTOS PROJECT MONITOR INITIAL

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the State of Tennessee. The above student received requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act (TSCA).

Conducted At: 130 Mitchell Road
Oak Ridge, Tennessee 37830

Expiration Date: October 9, 2010

Inspector training_____
(pre-requisite to Management Planner training)

ENVIRONMENTAL & SAFETY TRAINING SERVICES
EST. 1986
RESOLUTION, INC

Ron Francis – Training Manager

Ron Francis – Principal Instructor

APPENDIX D

Bulk Sample Log

Table 1
Bulk Sample Log
Paul A. Doble USARC/ Portsmouth, NH

HA	Sample No.	Date	Material Description	Bldg.[1]	Estimated Quantity	Condition[2]	Friable/ Non-Friable	Analytical Result (% asb.)
NR	09-01-01	09/16/94	Brown 9" x 9" Floor Tile, West Entrance	90001		Good	Non-Friable	5
NR	09-02-01	09/16/94	Black Mastic Under Floor Tile 02-01, 03-01	90001		Good	Non-Friable	HA CHR[3]
NR	09-03-01	09/16/94	Tan 9" x 9" Floor Tile, West Entrance	90001		Good	Non-Friable	5
NR	09-04-01	09/16/94	Tan 12" x 12" Floor Tile, West Entrance	90001		Good	Non-Friable	ND
NR	09-05-01	09/16/94	Black Mastic Under Floor Tile, 04-01	90001		Good	Non-Friable	ND
NR	09-06-01	09/16/94	Gray Floor Grout, West End Latrine	90001		Good	Non-Friable	ND
NR	09-07-01	09/16/94	White Pipe Fitting on Fiberglass Insulated Pipe, West End Latrine, Room #8	90001		Good	Friable	15
NR	09-07-02	09/16/94	Pipe Fitting From Pipe Insulation With Rolled Paper, Room #9	90001		Good	Friable	NR
NR	09-07-03	09/16/94	White Pipe Fitting on Fiberglass Insulated Pipe, Men's Room, Room #05	90001		Good	Friable	NR
NR	09-08-01	09/16/94	White Wall Plaster, West End Latrine, Room #8 Cellulose	90001		Good	Friable	ND
NR	09-08-02	09/16/94	Wall Plaster in Men's Room # 05, Bathroom	90001		Good	Friable	ND
NR	09-09-01	09/16/94	White Ceiling Plaster, Room #8, Latrine	90001		Good	Friable	ND
NR	09-09-02	09/16/94	White Ceiling Plaster, Room #05, Bathroom	90001		Good	Friable	ND
NR	09-10-01	09/16/94	White Ceiling Sheetrock, Room #9	90001		Good	Friable	ND
NR	09-11-01	09/16/94	Tan Pipe Insulation, Rolled Paper, Room #9	90001		Good	Friable	20
NR	09-11-02	09/16/94	Tan Pipe Insulation, Rolled Paper, Room #12	90001		Good	Friable	NR
NR	09-11-03	09/16/94	Pipe Insulation, Rolled Paper, Room #1	90001		Good	Friable	NR
NR	09-12-01	09/16/94	White Skim Coat on Fiberglass Pipe Run, Boiler Room	90001		Good	Friable	< 1
NR	09-12-02	09/16/94	White Skim Coat on Fiberglass Pipe Run, Boiler Room	90001		Good	Friable	ND
NR	09-12-03	09/16/94	White Skim Coat on Fiberglass Pipe Run, Boiler Room	90001		Good	Friable	ND
NR	09-13-01	09/16/94	White Breeching Material, Boiler Room	90001		Good	Friable	ND
NR	09-13-02	09/16/94	White Breeching Material, Boiler Room	90001		Good	Friable	ND
NR	09-13-03	09/16/94	White Breeching Material, Boiler Room	90001		Good	Friable	ND
NR	09-14-01	09/16/94	Pipe Fitting on Fiberglass Run, Boiler Room	90001		Good	Friable	ND
NR	09-14-02	09/16/94	Pipe Fitting on Fiberglass Run, Boiler Room	90001		Good	Friable	ND
NR	09-15-01	09/16/94	Covering on Fiberglas insulation, Boiler room Behind Furnace	90001		Good	Friable	ND
NR	09-16-01	09/16/94	White Interior/Brown Paper Sheetrock Ceiling Panels, Boiler Room Behind Furnance	90001		Good	Friable	ND
NR	09-17-01	09/16/94	Tan 9" x 9" Floor Tile, Kitchen	90001		Removed	Non-Friable	1
NR	09-18-01	09/16/94	Black Mastic Under Floor Tile #17-01	90001		Removed	Non-Friable	1
NR	09-19-01	09/16/94	Gray 4' x 8' Transite Sheets, at Heater, at Ceiling	90002		Good	Non-Friable	10
NR	09-20-01	09/16/94	Gray Window Caulking, Rear of Maintenance Building	90002		Good	Non-Friable	ND
NR	09-21-01	09/16/94	Brown Rolled Pipe Insulation	90002		Good	Friable	20

[1] 90001 – Main Building; 90002 –OMS Building

[2] Refer to Section 4.1 of report for Condition descriptions

[3] HA= High Amount of Asbestos; CHR = Chrysotile

NR - not reported

ND - none detected

Table 2
Bulk Sample Log
Paul A. Doble USARC/ Portsmouth, NH

HA	Sample No.	Date	Material Description	Bldg.[1]	Estimated Quantity	Condition[2]	Friable/ Non-Friable	Analytical Result (% asb.)
NR	09-01-01	09/16/94	9" x 9" Brown and Tan Floor Tile	90001	4584 ft^2		Non-Friable	5
NR	09-02-01	09/16/94	Black Mastic Under Floor Tile (under Brown and Tan Floor Tile)	90001	4584 ft^2		Non-Friable	HA CHR[3]
NR	09-07-01	09/16/94	Mudded Pipe Fitting on Fiberglass and Layered Paper Pipe	90001	260 elbow fittings		Friable	15
NR	09-11-01	09/16/94	Layered Paper Pipe Insulation - brown; along celing and walls	90001	250 lf		Friable	20
NR	09-19-01	09/16/94	Asbestos Cement Transite Sheets; at celing above heaters	90002	100 ft^2		Non-Friable	10
NR	09-21-01	09/16/94	Brown Rolled Pipe Insulation	90002	150 lf		Friable	20

[1] 90001 – Storage Building; 90002 – Maintenance Shop; 90003 – Reserve Center

[2] Refer to Section 4.1 of report for Condition descriptions

[3] HA= High Amount of Asbestos; CHR = Chrysotile

NR - not reported

ND - none detected

APPENDIX E

Damage and Exposure Assessment Forms
Functional Space and Homogenous Area Forms
Figure 1 – ACM Location Map

APPENDIX C
ARMY ASBESTOS - CONTAINING MATERIAL CHECKLIST

Part 1: Damage Assessment

Installation: PAUL A. DOBLE ARC Bldg/Rm No.: _____

Facility/Office: _____ Inspector Name/Date: STEELE 05/07/13

Functional Area: MAIN BUILDING

9x9 BROWN & TAN CHECKERBOARD FLOOR TILE AND UNDERLYING MASTIC

Physical. Assess damage based on evidence of surface accumulation; or the condition of the sprayed-on or troweled-on surface materials; or physical deterioration or delamination of materials using hand pressure.

0 (0)	None	*Non-asbestos materials; or no damage or evidence of material fallout; or material is in fair to good condition; or nonfriable ACM, (i.e., floor tile, wallboard, etc.); or (ACM) with less than one percent.
_____(1)	Minimal	*Isolated and very small areas (less than 10 percent) of material damage or fallout; or controlled space and accessed by maintenance personnel only; or uncontrolled/occupied space.
_____(2)	Low	*Visible evidence of some surface accumulation; or controlled space and accessed by maintenance personnel only; or uncontrolled/unoccupied space.
_____(3)	Moderate	*Visible evidence of small areas (less than 10 percent) of surface accumulation; or controlled space and accessed by maintenance personnel only; or uncontrolled/unoccupied space.
_____(5)	High	*Visible evidence of widespread surface accumulation; or uncontrolled space and easily accessed by occupants.

Water.

0 (0)	None	No water damage.
_____(1)	Minor	Visible water damage (less than 10 percent) of ACM.
_____(2)	Major	Visible water damage (greater than 10 percent) of ACM.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that do not apply.

Part I: Damage Assessment. *(Continued)*

Proximity to items for repair. If both A and B apply, score the one with the highest rating. (Check all that apply. Maximum of 3 points.)

A. *Sprayed-on or troweled-on.* Could the friable ACM be damaged by routine maintenance activities?

0 (0) No routine maintenance is performed within the areas.

_____(1) Equal to or greater than five ft.

_____(2) Equal to or greater than one ft but less than five ft.

_____(3) Less than one ft from routine maintenance areas or a ceiling panel contaminated with ACM must be removed.

B. *Pipe, boiler, or duct insulation.* Could damage occur as a result of routine maintenance or by occupants of building?

0 (0) No.

_____(3) Yes.

Type of ACM.

0 (0) *Non-asbestos materials; or nonfriable (ACM, (i.e., floor tile, wallboard, etc.) in good to fair condition; or ACM with less than one percent.

_____(1) Miscellaneous ACM (i.e., ceiling tiles, etc.)

_____(1) *Boiler; or pipe insulation; or other ACM insulation materials (not accessible to occupants).

_____(2) Nonfriable ACM (i.e., floor tile, wallboard, etc.) in poor condition.

_____(2) *Boiler; or pipe insulation; or other ACM insulation materials (accessible to occupants).

_____(3) *ACM on exterior of supply ducts; or capable of being introduced into air ducts (i.e., deteriorated ACM located in area of air ducts; or above suspended ceilings).

_____(4) *Sprayed-on; or troweled-on surface ACM (accessible to occupants).

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

Part I: Damage Assessment *(Continued)*

Percent asbestos.

_____(0)	Less than one percent ACM.
_____(1)	One to 30 percent ACM.
_____(2)	31 to 50 percent ACM.
_____(3)	Greater than 50 percent ACM.

Note: If the percent asbestos content is less than one percent or nonfriable asbestos (in good to fair condition) then the total for percent asbestos category will be zero (0).

DAMAGE (d) TOTAL_____(Max 20, Min 0)

Bulk sample results should be reported using the following format:

Sample No.	Type Asbestos	%	Source

Analysis Performed by (Lab/Name/Date)_____

Part II: Exposure Assessment

Material friability. USEPA definition: hand pressure can crumble, pulverize, or reduce to powder when dry.

0 (0)	Nonfriable	Material (i.e., floor tile, wallboard, binder's etc.) in good to fair condition.
_____(1)	Low Friability	Material difficult to crumble by hand.
_____(2)	Moderate Friability	Material fairly easy to dislodge and crush.
_____(3)	High Friability	Material easily reduced to powder; or broken by hand.

Occupant accessibility to ACM fibers.

_____(0)	Low Accessibility	*Materials are not exposed; or totally isolated by permanent barrier; or accessible only during infrequent, occasional maintenance activity; or no air flow from the friable insulating material location to occupants of the building or storage areas.

Part II: Exposure Assessment *(Continued)*

_____(1)	Moderate Accessibility	*Only a small percent of material exposed; or material above a suspended ceiling; or material contacted during maintenance or repair; or material exposed, but not accessible to activity of normal occupants.
4 (4)	High Accessibility	*A large percent of material exposed; or material accessible to occupants; or airborne transport during normal activities.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

Activity/use.

_____(0)	None	No activity/storage activities.
_____(1)	Low	Infrequent maintenance activities only.
_____(2)	Moderate	Frequent maintenance activities only.
3 (3)	High	Normal occupant activities.

Air stream/plenum.

_____(0)	None	No perceptible air flow in the room or area.
_____(1)	Present	Airflow and no evidence of ACM present.
✓ (2)	Present	ACM is exposed to perceptible or occasional air streams.
_____(3)	Present	*Airflow and evidence of ACM present in supply ducts/plenum; or recirculated; or subject to routine turbulence; or abrupt air movement.

Area of visible surface or damaged ACM.

✓ (0)	Less than 10 cubic or linear feet (small areas should be repaired as soon as possible).
_____(1)	10 to 100 cubic or linear feet.
_____(2)	100 to 1000 cubic or linear feet.
_____(3)	Greater than 1000 cubic or linear feet.

Part II: Exposure Assessment *(Continued)*

For occupied facilities only.

Population. This involves defining average occupancy as the total number of building occupants and outside visitor traffic into a room or area during an eight-hour period. For example, a reception area in a DEH shop has one person assigned to the area. There are 15 individuals (including the receptionist) assigned to the building. They have approximately 240 customers (visitors) in the building during an eight-hour period. On overage, each customer (visitor) is serviced and departs the building within 30 minutes.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

(outside visitors x time spent/8 hours) in area/room + building occupants = average occupancy

Example: ([240 visitors x 0.5 hours]/8 hours) + 15 occupants = 30. ..... Score as 2

_____(1) Less than nine or for corridors.

_____(2) 10 to 200.

_____(3) 201 to 500.

_____(4) 501 to 1000.

_____(5) Greater than 1000.

_____(5) Medical facilities, youth centers, childcare facilities, or residential buildings, regardless of the population, will be assigned to this category.

For unoccupied facilities only.

_____(0) No ACM or less than one percent.

_____(1) Nonfriable ACM in good or fair condition.

_____(2) Nonfriable ACM in poor condition.

_____(3) Friable ACM in good condition.

_____(5) Friable ACM with visible evidence of damage.

EXPOSURE (E) TOTAL _____ (Max 26, Min 0) Inspection (Date) _____

Note: Provide any other relevant information on observations in the space provided below. If additional space is needed, attach additional pages as necessary.

APPENDIX C
ARMY ASBESTOS - CONTAINING MATERIAL CHECKLIST

Part 1: Damage Assessment

Installation: PAUL A. DOBLE AFC Bldg/Rm No.: MAIN BUILDINGS

Facility/Office: _____ Inspector Name/Date: STEELE 05/07/13

Functional Area: MAIN BUILDINGS
LAYERED PAPER PIPE INSULATION

Physical. Assess damage based on evidence of surface accumulation; or the condition of the sprayed-on or troweled-on surface materials; or physical deterioration or delamination of materials using hand pressure.

0 (0)	None	*Non-asbestos materials; or no damage or evidence of material fallout; or material is in fair to good condition; or nonfriable ACM, (i.e., floor tile, wallboard, etc.); or (ACM) with less than one percent.
_____(1)	Minimal	*Isolated and very small areas (less than 10 percent) of material damage or fallout; or controlled space and accessed by maintenance personnel only; or uncontrolled/occupied space.
_____(2)	Low	*Visible evidence of some surface accumulation; or controlled space and accessed by maintenance personnel only; or uncontrolled/unoccupied space.
_____(3)	Moderate	*Visible evidence of small areas (less than 10 percent) of surface accumulation; or controlled space and accessed by maintenance personnel only; or uncontrolled/unoccupied space.
_____(5)	High	*Visible evidence of widespread surface accumulation; or uncontrolled space and easily accessed by occupants.

Water.

0 (0)	None	No water damage.
_____(1)	Minor	Visible water damage (less than 10 percent) of ACM.
_____(2)	Major	Visible water damage (greater than 10 percent) of ACM.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that do not apply.

Part I: Damage Assessment. *(Continued)*

Proximity to items for repair. If both A and B apply, score the one with the highest rating. (Check all that apply. Maximum of 3 points.)

A. *Sprayed-on or troweled-on.* Could the friable ACM be damaged by routine maintenance activities?

_____(0) No routine maintenance is performed within the areas.

__1__(1) Equal to or greater than five ft.

_____(2) Equal to or greater than one ft but less than five ft.

_____(3) Less than one ft from routine maintenance areas or a ceiling panel contaminated with ACM must be removed.

B. *Pipe, boiler, or duct insulation.* Could damage occur as a result of routine maintenance or by occupants of building?

_____(0) No.

__3__(3) Yes.

Type of ACM.

_____(0) *Non-asbestos materials; or nonfriable (ACM, (i.e., floor tile, wallboard, etc.) in good to fair condition; or ACM with less than one percent.

_____(1) Miscellaneous ACM (i.e., ceiling tiles, etc.)

_____(1) *Boiler; or pipe insulation; or other ACM insulation materials (not accessible to occupants).

_____(2) Nonfriable ACM (i.e., floor tile, wallboard, etc.) in poor condition.

__2__(2) *Boiler; or pipe insulation; or other ACM insulation materials (accessible to occupants).

_____(3) *ACM on exterior of supply ducts; or capable of being introduced into air ducts (i.e., deteriorated ACM located in area of air ducts; or above suspended ceilings).

_____(4) *Sprayed-on; or troweled-on surface ACM (accessible to occupants).

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

Part I: Damage Assessment *(Continued)*

Percent asbestos.

_____(0) Less than one percent ACM.

_____(1) One to 30 percent ACM.

_____(2) 31 to 50 percent ACM.

_____(3) Greater than 50 percent ACM.

Note: If the percent asbestos content is less than one percent or nonfriable asbestos (in good to fair condition) then the total for percent asbestos category will be zero (0).

DAMAGE (d) TOTAL_____(Max 20, Min 0)

Bulk sample results should be reported using the following format:

Sample No.	Type Asbestos	%	Source

Analysis Performed by (Lab/Name/Date)_____

Part II: Exposure Assessment

Material friability. USEPA definition: hand pressure can crumble, pulverize, or reduce to powder when dry.

_____(0)	Nonfriable	Material (i.e., floor tile, wallboard, binder's etc.) in good to fair condition.
_____(1)	Low Friability	Material difficult to crumble by hand.
2 (2)	Moderate Friability	Material fairly easy to dislodge and crush.
_____(3)	High Friability	Material easily reduced to powder; or broken by hand.

Occupant accessibility to ACM fibers.

0 (0)	Low Accessibility	*Materials are not exposed; or totally isolated by permanent barrier; or accessible only during infrequent, occasional maintenance activity; or no air flow from the friable insulating material location to occupants of the building or storage areas.

Part II: Exposure Assessment *(Continued)*

_____(1)	Moderate Accessibility	*Only a small percent of material exposed; or material above a suspended ceiling; or material contacted during maintenance or repair; or material exposed, but not accessible to activity of normal occupants.
_____(4)	High Accessibility	*A large percent of material exposed; or material accessible to occupants; or airborne transport during normal activities.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

Activity/use.

_____(0)	None	No activity/storage activities.
___1___(1)	Low	Infrequent maintenance activities only.
_____(2)	Moderate	Frequent maintenance activities only.
_____(3)	High	Normal occupant activities.

Air stream/plenum.

_____(0)	None	No perceptible air flow in the room or area.
___1___(1)	Present	Airflow and no evidence of ACM present.
_____(2)	Present	ACM is exposed to perceptible or occasional air streams.
_____(3)	Present	*Airflow and evidence of ACM present in supply ducts/plenum; or recirculated; or subject to routine turbulence; or abrupt air movement.

Area of visible surface or damaged ACM.

___0___(0)	Less than 10 cubic or linear feet (small areas should be repaired as soon as possible).
_____(1)	10 to 100 cubic or linear feet.
_____(2)	100 to 1000 cubic or linear feet.
_____(3)	Greater than 1000 cubic or linear feet.

Part II: Exposure Assessment *(Continued)*

For occupied facilities only.

Population. This involves defining average occupancy as the total number of building occupants and outside visitor traffic into a room or area during an eight-hour period. For example, a reception area in a DEH shop has one person assigned to the area. There are 15 individuals (including the receptionist) assigned to the building. They have approximately 240 customers (visitors) in the building during an eight-hour period. On overage, each customer (visitor) is serviced and departs the building within 30 minutes.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

(outside visitors x time spent/8 hours) in area/room + building occupants = average occupancy

Example: ([240 visitors x 0.5 hours]/8 hours) + 15 occupants = 30. ..... Score as 2

_____(1)	Less than nine or for corridors.
_____(2)	10 to 200.
_____(3)	201 to 500.
_____(4)	501 to 1000.
_____(5)	Greater than 1000.
_____(5)	Medical facilities, youth centers, childcare facilities, or residential buildings, regardless of the population, will be assigned to this category.

For unoccupied facilities only.

_____(0)	No ACM or less than one percent.
_____(1)	Nonfriable ACM in good or fair condition.
_____(2)	Nonfriable ACM in poor condition.
_____(3)	Friable ACM in good condition.
_____(5)	Friable ACM with visible evidence of damage.

EXPOSURE (E) TOTAL _____ (Max 26, Min 0) Inspection (Date) _____

Note: Provide any other relevant information on observations in the space provided below. If additional space is needed, attach additional pages as necessary.

APPENDIX C
ARMY ASBESTOS - CONTAINING MATERIAL CHECKLIST

Part 1: Damage Assessment

Installation: PAUL A DOBLE AFC Bldg/Rm No.: MAIN BUILDING

Facility/Office: _____ Inspector Name/Date: Steve 05/07/13

Functional Area: MAIN BUILDING MUDDED PIPE FITTINGS

Physical. Assess damage based on evidence of surface accumulation; or the condition of the sprayed-on or troweled-on surface materials; or physical deterioration or delamination of materials using hand pressure.

_____(0)	None	*Non-asbestos materials; or no damage or evidence of material fallout; or material is in fair to good condition; or nonfriable ACM, (i.e., floor tile, wallboard, etc.); or (ACM) with less than one percent.
_____(1)	Minimal	*Isolated and very small areas (less than 10 percent) of material damage or fallout; or controlled space and accessed by maintenance personnel only; or uncontrolled/occupied space.
_____(2)	Low	*Visible evidence of some surface accumulation; or controlled space and accessed by maintenance personnel only; or uncontrolled/unoccupied space.
_____(3)	Moderate	*Visible evidence of small areas (less than 10 percent) of surface accumulation; or controlled space and accessed by maintenance personnel only; or uncontrolled/unoccupied space.
_____(5)	High	*Visible evidence of widespread surface accumulation; or uncontrolled space and easily accessed by occupants.

Water.

_____(0)	None	No water damage.
_____(1)	Minor	Visible water damage (less than 10 percent) of ACM.
_____(2)	Major	Visible water damage (greater than 10 percent) of ACM.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that do not apply.

* SITE CONTACT SAID THAT PIPES WERE ENCAPSULATED / MATERIALS UNDER OUTER LAYERS SHOULD BE ASSUMED TO BE ORIGINAL

Part I: Damage Assessment. *(Continued)*

Proximity to items for repair. If both A and B apply, score the one with the highest rating. (Check all that apply. Maximum of 3 points.)

A. *Sprayed-on or troweled-on.* Could the friable ACM be damaged by routine maintenance activities?

_____(0) No routine maintenance is performed within the areas.

_____(1) Equal to or greater than five ft.

✓ (2) Equal to or greater than one ft but less than five ft.

_____(3) Less than one ft from routine maintenance areas or a ceiling panel contaminated with ACM must be removed.

B. *Pipe, boiler, or duct insulation.* Could damage occur as a result of routine maintenance or by occupants of building?

_____(0) No.

✓ (3) Yes.

Type of ACM.

_____(0) *Non-asbestos materials; or nonfriable (ACM, (i.e., floor tile, wallboard, etc.) in good to fair condition; or ACM with less than one percent.

_____(1) Miscellaneous ACM (i.e., ceiling tiles, etc.)

~~(1)~~ *Boiler; or pipe insulation; or other ACM insulation materials (not accessible to occupants).

_____(2) Nonfriable ACM (i.e., floor tile, wallboard, etc.) in poor condition.

✓ (2) *Boiler; or pipe insulation; or other ACM insulation materials (accessible to occupants).

_____(3) *ACM on exterior of supply ducts; or capable of being introduced into air ducts (i.e., deteriorated ACM located in area of air ducts; or above suspended ceilings).

_____(4) *Sprayed-on; or troweled-on surface ACM (accessible to occupants).

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

Part I: Damage Assessment *(Continued)*

Percent asbestos.

_____(0) Less than one percent ACM.

_____(1) One to 30 percent ACM.

_____(2) 31 to 50 percent ACM.

_____(3) Greater than 50 percent ACM.

Note: If the percent asbestos content is less than one percent or nonfriable asbestos (in good to fair condition) then the total for percent asbestos category will be zero (0).

DAMAGE (d) TOTAL_____(Max 20, Min 0)

Bulk sample results should be reported using the following format:

Sample No.	Type Asbestos	%	Source

Analysis Performed by (Lab/Name/Date)_____

Part II: Exposure Assessment

Material friability. USEPA definition: hand pressure can crumble, pulverize, or reduce to powder when dry.

_____(0)	Nonfriable	Material (i.e., floor tile, wallboard, binder's etc.) in good to fair condition.
✓(1)	Low Friability	Material difficult to crumble by hand.
_____(2)	Moderate Friability	Material fairly easy to dislodge and crush.
_____(3)	High Friability	Material easily reduced to powder; or broken by hand.

Occupant accessibility to ACM fibers.

✓(0)	Low Accessibility	*Materials are not exposed; or totally isolated by permanent barrier; or accessible only during infrequent, occasional maintenance activity; or no air flow from the friable insulating material location to occupants of the building or storage areas.

Part II: Exposure Assessment *(Continued)*

_____(1)	Moderate Accessibility	*Only a small percent of material exposed; or material above a suspended ceiling; or material contacted during maintenance or repair; or material exposed, but not accessible to activity of normal occupants.
_____(4)	High Accessibility	*A large percent of material exposed; or material accessible to occupants; or airborne transport during normal activities.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

Activity/use.

_____(0)	None	No activity/storage activities.
✓(1)	Low	Infrequent maintenance activities only.
_____(2)	Moderate	Frequent maintenance activities only.
_____(3)	High	Normal occupant activities.

Air stream/plenum.

✓(0)	None	No perceptible air flow in the room or area.
_____(1)	Present	Airflow and no evidence of ACM present.
_____(2)	Present	ACM is exposed to perceptible or occasional air streams.
_____(3)	Present	*Airflow and evidence of ACM present in supply ducts/plenum; or recirculated; or subject to routine turbulence; or abrupt air movement.

Area of visible surface or damaged ACM.

✓(0)	Less than 10 cubic or linear feet (small areas should be repaired as soon as possible).
_____(1)	10 to 100 cubic or linear feet.
_____(2)	100 to 1000 cubic or linear feet.
_____(3)	Greater than 1000 cubic or linear feet.

Part II: Exposure Assessment *(Continued)*

For occupied facilities only.

Population. This involves defining average occupancy as the total number of building occupants and outside visitor traffic into a room or area during an eight-hour period. For example, a reception area in a DEH shop has one person assigned to the area. There are 15 individuals (including the receptionist) assigned to the building. They have approximately 240 customers (visitors) in the building during an eight-hour period. On overage, each customer (visitor) is serviced and departs the building within 30 minutes.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

(outside visitors x time spent/8 hours) in area/room + building occupants = average occupancy

Example: ([240 visitors x 0.5 hours]/8 hours) + 15 occupants = 30. ..... Score as 2

_____(1)	Less than nine or for corridors.
_____(2)	10 to 200.
_____(3)	201 to 500.
_____(4)	501 to 1000.
_____(5)	Greater than 1000.
_____(5)	Medical facilities, youth centers, childcare facilities, or residential buildings, regardless of the population, will be assigned to this category.

For unoccupied facilities only.

_____(0)	No ACM or less than one percent.
_____(1)	Nonfriable ACM in good or fair condition.
_____(2)	Nonfriable ACM in poor condition.
_____(3)	Friable ACM in good condition.
_____(5)	Friable ACM with visible evidence of damage.

EXPOSURE (E) TOTAL _____ (Max 26, Min 0) Inspection (Date) _____

Note: Provide any other relevant information on observations in the space provided below. If additional space is needed, attach additional pages as necessary.

APPENDIX C
ARMY ASBESTOS - CONTAINING MATERIAL CHECKLIST

Part 1: Damage Assessment

Installation: PAUL A. DOBLE Bldg/Rm No.: OMS

Facility/Office: _____ Inspector Name/Date: Steele 5/07/13

Functional Area: OMS BUILDING LAYERED PAPER PIPE INSULATION

Physical. Assess damage based on evidence of surface accumulation; or the condition of the sprayed-on or troweled-on surface materials; or physical deterioration or delamination of materials using hand pressure.

0 (0)	None	*Non-asbestos materials; or no damage or evidence of material fallout; or material is in fair to good condition; or nonfriable ACM, (i.e., floor tile, wallboard, etc.); or (ACM) with less than one percent.
_____(1)	Minimal	*Isolated and very small areas (less than 10 percent) of material damage or fallout; or controlled space and accessed by maintenance personnel only; or uncontrolled/occupied space.
_____(2)	Low	*Visible evidence of some surface accumulation; or controlled space and accessed by maintenance personnel only; or uncontrolled/unoccupied space.
_____(3)	Moderate	*Visible evidence of small areas (less than 10 percent) of surface accumulation; or controlled space and accessed by maintenance personnel only; or uncontrolled/unoccupied space.
_____(5)	High	*Visible evidence of widespread surface accumulation; or uncontrolled space and easily accessed by occupants.

Water.

0 (0)	None	No water damage.
_____(1)	Minor	Visible water damage (less than 10 percent) of ACM.
_____(2)	Major	Visible water damage (greater than 10 percent) of ACM.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that do not apply.

Part I: Damage Assessment. *(Continued)*

Proximity to items for repair. If both A and B apply, score the one with the highest rating. (Check all that apply. Maximum of 3 points.)

A. *Sprayed-on or troweled-on.* Could the friable ACM be damaged by routine maintenance activities?

0 (0) No routine maintenance is performed within the areas.

_____(1) Equal to or greater than five ft.

_____(2) Equal to or greater than one ft but less than five ft.

_____(3) Less than one ft from routine maintenance areas or a ceiling panel contaminated with ACM must be removed.

B. *Pipe, boiler, or duct insulation.* Could damage occur as a result of routine maintenance or by occupants of building?

_____(0) No.

3 (3) Yes.

Type of ACM.

_____(0) *Non-asbestos materials; or nonfriable (ACM, (i.e., floor tile, wallboard, etc.) in good to fair condition; or ACM with less than one percent.

_____(1) Miscellaneous ACM (i.e., ceiling tiles, etc.)

_____(1) *Boiler; or pipe insulation; or other ACM insulation materials (not accessible to occupants).

_____(2) Nonfriable ACM (i.e., floor tile, wallboard, etc.) in poor condition.

2 (2) *Boiler; or pipe insulation; or other ACM insulation materials (accessible to occupants).

_____(3) *ACM on exterior of supply ducts; or capable of being introduced into air ducts (i.e., deteriorated ACM located in area of air ducts; or above suspended ceilings).

_____(4) *Sprayed-on; or troweled-on surface ACM (accessible to occupants).

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

Part I: Damage Assessment *(Continued)*

Percent asbestos.

_____(0) Less than one percent ACM.

_____(1) One to 30 percent ACM.

_____(2) 31 to 50 percent ACM.

_____(3) Greater than 50 percent ACM.

Note: If the percent asbestos content is less than one percent or nonfriable asbestos (in good to fair condition) then the total for percent asbestos category will be zero (0).

DAMAGE (d) TOTAL_____(Max 20, Min 0)

Bulk sample results should be reported using the following format:

Sample No.	Type Asbestos	%	Source

Analysis Performed by (Lab/Name/Date)_____

Part II: Exposure Assessment

Material friability. USEPA definition: hand pressure can crumble, pulverize, or reduce to powder when dry.

_____(0)	Nonfriable	Material (i.e., floor tile, wallboard, binder's etc.) in good to fair condition.
_____(1)	Low Friability	Material difficult to crumble by hand.
2 (2)	Moderate Friability	Material fairly easy to dislodge and crush.
_____(3)	High Friability	Material easily reduced to powder; or broken by hand.

Occupant accessibility to ACM fibers.

0 (0)	Low Accessibility	*Materials are not exposed; or totally isolated by permanent barrier; or accessible only during infrequent, occasional maintenance activity; or no air flow from the friable insulating material location to occupants of the building or storage areas.

Part II: Exposure Assessment *(Continued)*

_____(1)	Moderate Accessibility	*Only a small percent of material exposed; or material above a suspended ceiling; or material contacted during maintenance or repair; or material exposed, but not accessible to activity of normal occupants.
_____(4)	High Accessibility	*A large percent of material exposed; or material accessible to occupants; or airborne transport during normal activities.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

Activity/use.

0 (0)	None	No activity/storage activities.
_____(1)	Low	Infrequent maintenance activities only.
_____(2)	Moderate	Frequent maintenance activities only.
_____(3)	High	Normal occupant activities.

Air stream/plenum.

0 (0)	None	No perceptible air flow in the room or area.
_____(1)	Present	Airflow and no evidence of ACM present.
_____(2)	Present	ACM is exposed to perceptible or occasional air streams.
_____(3)	Present	*Airflow and evidence of ACM present in supply ducts/plenum; or recirculated; or subject to routine turbulence; or abrupt air movement.

Area of visible surface or damaged ACM.

0 (0)	Less than 10 cubic or linear feet (small areas should be repaired as soon as possible).
_____(1)	10 to 100 cubic or linear feet.
_____(2)	100 to 1000 cubic or linear feet.
_____(3)	Greater than 1000 cubic or linear feet.

Part II: Exposure Assessment *(Continued)*

For occupied facilities only.

Population. This involves defining average occupancy as the total number of building occupants and outside visitor traffic into a room or area during an eight-hour period. For example, a reception area in a DEH shop has one person assigned to the area. There are 15 individuals (including the receptionist) assigned to the building. They have approximately 240 customers (visitors) in the building during an eight-hour period. On overage, each customer (visitor) is serviced and departs the building within 30 minutes.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

(outside visitors x time spent/8 hours) in area/room + building occupants = average occupancy

Example: ([240 visitors x 0.5 hours]/8 hours) + 15 occupants = 30. ..... Score as 2

_____(1) Less than nine or for corridors.

_____(2) 10 to 200.

_____(3) 201 to 500.

_____(4) 501 to 1000.

_____(5) Greater than 1000.

_____(5) Medical facilities, youth centers, childcare facilities, or residential buildings, regardless of the population, will be assigned to this category.

For unoccupied facilities only.

_____(0) No ACM or less than one percent.

_____(1) Nonfriable ACM in good or fair condition.

_____(2) Nonfriable ACM in poor condition.

_____(3) Friable ACM in good condition.

_____(5) Friable ACM with visible evidence of damage.

EXPOSURE (E) TOTAL _____ (Max 26, Min 0) Inspection (Date) _____

Note: Provide any other relevant information on observations in the space provided below. If additional space is needed, attach additional pages as necessary.

APPENDIX C
ARMY ASBESTOS - CONTAINING MATERIAL CHECKLIST

Part 1: Damage Assessment

Installation: Paul A. Doyle ARC Bldg/Rm No.: OMS

Facility/Office: _____ Inspector Name/Date: Steele

Functional Area: OMS Building Asbesto Cement Transite Board

Physical. Assess damage based on evidence of surface accumulation; or the condition of the sprayed-on or troweled-on surface materials; or physical deterioration or delamination of materials using hand pressure.

0 (0)	None	*Non-asbestos materials; or no damage or evidence of material fallout; or material is in fair to good condition; or nonfriable ACM, (i.e., floor tile, wallboard, etc.); or (ACM) with less than one percent.
_____(1)	Minimal	*Isolated and very small areas (less than 10 percent) of material damage or fallout; or controlled space and accessed by maintenance personnel only; or uncontrolled/occupied space.
_____(2)	Low	*Visible evidence of some surface accumulation; or controlled space and accessed by maintenance personnel only; or uncontrolled/unoccupied space.
_____(3)	Moderate	*Visible evidence of small areas (less than 10 percent) of surface accumulation; or controlled space and accessed by maintenance personnel only; or uncontrolled/unoccupied space.
_____(5)	High	*Visible evidence of widespread surface accumulation; or uncontrolled space and easily accessed by occupants.

Water.

0 (0)	None	No water damage.
_____(1)	Minor	Visible water damage (less than 10 percent) of ACM.
_____(2)	Major	Visible water damage (greater than 10 percent) of ACM.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that do not apply.

Part I: Damage Assessment. *(Continued)*

Proximity to items for repair. If both A and B apply, score the one with the highest rating. (Check all that apply. Maximum of 3 points.)

A. *Sprayed-on or troweled-on.* Could the friable ACM be damaged by routine maintenance activities?

__0__(0) No routine maintenance is performed within the areas.

_____(1) Equal to or greater than five ft.

_____(2) Equal to or greater than one ft but less than five ft.

_____(3) Less than one ft from routine maintenance areas or a ceiling panel contaminated with ACM must be removed.

B. *Pipe, boiler, or duct insulation.* Could damage occur as a result of routine maintenance or by occupants of building?

__0__(0) No.

_____(3) Yes.

Type of ACM.

__0__(0) *Non-asbestos materials; or nonfriable (ACM, (i.e., floor tile, wallboard, etc.) in good to fair condition; or ACM with less than one percent.

__1__(1) Miscellaneous ACM (i.e., ceiling tiles, etc.)

_____(1) *Boiler; or pipe insulation; or other ACM insulation materials (not accessible to occupants).

_____(2) Nonfriable ACM (i.e., floor tile, wallboard, etc.) in poor condition.

_____(2) *Boiler; or pipe insulation; or other ACM insulation materials (accessible to occupants).

_____(3) *ACM on exterior of supply ducts; or capable of being introduced into air ducts (i.e., deteriorated ACM located in area of air ducts; or above suspended ceilings).

_____(4) *Sprayed-on; or troweled-on surface ACM (accessible to occupants).

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

Part I: Damage Assessment *(Continued)*

Percent asbestos.

_____(0)	Less than one percent ACM.
_____(1)	One to 30 percent ACM.
_____(2)	31 to 50 percent ACM.
_____(3)	Greater than 50 percent ACM.

Note: If the percent asbestos content is less than one percent or nonfriable asbestos (in good to fair condition) then the total for percent asbestos category will be zero (0).

DAMAGE (d) TOTAL_____(Max 20, Min 0)

Bulk sample results should be reported using the following format:

Sample No.	Type Asbestos	%	Source

Analysis Performed by (Lab/Name/Date)_____

Part II: Exposure Assessment

Material friability. USEPA definition: hand pressure can crumble, pulverize, or reduce to powder when dry.

0 (0)	Nonfriable	Material (i.e., floor tile, wallboard, binder's etc.) in good to fair condition.
_____(1)	Low Friability	Material difficult to crumble by hand.
_____(2)	Moderate Friability	Material fairly easy to dislodge and crush.
_____(3)	High Friability	Material easily reduced to powder; or broken by hand.

Occupant accessibility to ACM fibers.

0 (0)	Low Accessibility	*Materials are not exposed; or totally isolated by permanent barrier; or accessible only during infrequent, occasional maintenance activity; or no air flow from the friable insulating material location to occupants of the building or storage areas.

Part II: Exposure Assessment *(Continued)*

_____(1)	Moderate Accessibility	*Only a small percent of material exposed; or material above a suspended ceiling; or material contacted during maintenance or repair; or material exposed, but not accessible to activity of normal occupants.
_____(4)	High Accessibility	*A large percent of material exposed; or material accessible to occupants; or airborne transport during normal activities.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

Activity/use.

D (0)	None	No activity/storage activities.
_____(1)	Low	Infrequent maintenance activities only.
_____(2)	Moderate	Frequent maintenance activities only.
_____(3)	High	Normal occupant activities.

Air stream/plenum.

D (0)	None	No perceptible air flow in the room or area.
_____(1)	Present	Airflow and no evidence of ACM present.
_____(2)	Present	ACM is exposed to perceptible or occasional air streams.
_____(3)	Present	*Airflow and evidence of ACM present in supply ducts/plenum; or recirculated; or subject to routine turbulence; or abrupt air movement.

Area of visible surface or damaged ACM.

D (0)	Less than 10 cubic or linear feet (small areas should be repaired as soon as possible).
_____(1)	10 to 100 cubic or linear feet.
_____(2)	100 to 1000 cubic or linear feet.
_____(3)	Greater than 1000 cubic or linear feet.

Part II: Exposure Assessment *(Continued)*

For occupied facilities only.

Population. This involves defining average occupancy as the total number of building occupants and outside visitor traffic into a room or area during an eight-hour period. For example, a reception area in a DEH shop has one person assigned to the area. There are 15 individuals (including the receptionist) assigned to the building. They have approximately 240 customers (visitors) in the building during an eight-hour period. On overage, each customer (visitor) is serviced and departs the building within 30 minutes.

*Note: If any one or a combination of these criteria are met, assign the corresponding value and line out the criteria that does not apply.

(outside visitors x time spent/8 hours) in area/room + building occupants = average occupancy

Example: ([240 visitors x 0.5 hours]/8 hours) + 15 occupants = 30. ..... Score as 2

_____(1)	Less than nine or for corridors.
_____(2)	10 to 200.
_____(3)	201 to 500.
_____(4)	501 to 1000.
_____(5)	Greater than 1000.
_____(5)	Medical facilities, youth centers, childcare facilities, or residential buildings, regardless of the population, will be assigned to this category.

For unoccupied facilities only.

_____(0)	No ACM or less than one percent.
_____(1)	Nonfriable ACM in good or fair condition.
_____(2)	Nonfriable ACM in poor condition.
_____(3)	Friable ACM in good condition.
_____(5)	Friable ACM with visible evidence of damage.

EXPOSURE (E) TOTAL _____ (Max 26, Min 0) Inspection (Date) _____

Note: Provide any other relevant information on observations in the space provided below. If additional space is needed, attach additional pages as necessary.

Asbestos Containing Building Material Inventory by Functional Space

Customer:	Paul A. Doble ARC	**Project No.:**	4187-01				
Inspector:	James Steel	**Signature:**					
State of Accreditation:	TN	**Accred. No.:**	A-I-50196-19763				
Building:	Main Reserve Center Build	**Functional Space:**	Main Building	**No. of Occupants:**		**Duration of Exp. (hrs).:**	**Date:** 5/7/2013 **Time:** 0730

Sample No.	*ACBM Cat.	HA No.	Sample Location Description	Quant-ity	U/M	% Dmgd	*Access.	*Cond.	*Act.	Friable?	Photo?	% Asb.	Comments
	3	HA-PAD-001		4548	SF	0%	3	0	0	☐	☐		
	1	HA-PAD-002		255		0%	1	0	1	☐	☐		255 fitting throughout the Main Building
	1	HA-PAD-003		250	LF	0%	1	0	1	☐	☐		

General Functional Space Description (e.g., color, texture, application, date(s) of installation, use of the functional space)	
Ceilings:	Drop ceilings with pipes wrapped in TSI in interstitial space
Floors:	9" x 9" floor tiles throughout facility. Drill hall is concrete. 9" x 9" floor tiles (Kitchen) in previous inspection are not in evidence
Walls:	Cinderblock
Other: (Uses, etc.):	

*ACBM Category	*Accessibility	*Condition	*Activity
1-TSI 2-SM 3-Misc	0 – Not accessible 1 – Infrequently 2 – Occasionally 3 – Frequent	0 - Good; No visible damage 1 - Fair; <10% Dispersed Damage; <25% Localized Damage; Damaged 2 - Poor; >10% Dispersed Damage; >25% Localized Damage; Significantly Damaged	0 – Disturbance unlikely 1 – Disturbance infrequently 2 – Disturbance occasionally 3 – Disturbance frequently

Asbestos Containing Building Material Inventory by Functional Space

Customer:	Paul A. Doble ARC				**Project No.:**	4187-01					
Inspector:	James Steel	**Signature:**									
State of Accreditation:	TN	**Accred. No.:**	A-I-50196-19763								
Building:	OMS Building	**Functional Space:**	OMS Building Bay	**No. of Occupants:**	0	**Duration of Exp. (hrs).:**	0	**Date:**	5/7/2013	**Time:**	0730

Sample No.	*ACBM Cat.	HA No.	Sample Location Description	Quant-ity	U/M	% Dmgd	*Access.	*Cond.	*Act.	Friable?	Photo?	% Asb.	Comments
	3	HA-PAD-004		100	SF	0%	1	0	0	☐	☐		
	3	HA-PAD-005		150	LF	0%	1	0	0	☑	☐		
										☐	☐		

General Functional Space Description (e.g., color, texture, application, date(s) of installation, use of the functional space)	
Ceilings:	Pink fiberglass with wood beams. Transite boards still in place around heater in ceiling
Floors:	concrete
Walls:	Brick
Other: (Uses, etc.):	Pipe insulation

*ACBM Category	*Accessibility	*Condition	*Activity
1-TSI 2-SM 3-Misc	0 – Not accessible 1 – Infrequently 2 – Occasionally 3 – Frequent	0 - Good; No visible damage 1 - Fair; <10% Dispersed Damage; <25% Localized Damage; Damaged 2 - Poor; >10% Dispersed Damage; >25% Localized Damage; Significantly Damaged	0 – Disturbance unlikely 1 – Disturbance infrequently 2 – Disturbance occasionally 3 – Disturbance frequently

Asbestos Containing Building Material Inventory by Homogeneous Area

Customer: Paul A. Doble ARC

HA Description: 9” x 9” brown and tan checkerboard floor tile and underlying mastic

*ACBM Cat.	HA No.	Building	Functional Space	Quant-ity	U/M	% Dmgd	*Access.	*Cond.	*Act.	Friable?	Survey Date	% Asb.	Comments
3	HA-PAD-001	Main Reserve Center Building	Main Building	4548	SF	0%	3	0	0	☐	5/7/2013		
			Total Quantity:	4548	SF								

Reference Photographs

Photo Name(s):

Original Photo ID(s):

*ACBM Category	*Accessibility	*Condition	*Activity
1-TSI 2-SM 3-Misc	0 – Not accessible 1 – Infrequently 2 – Occasionally 3 – Frequent	0 - Good; No visible damage 1 - Fair; <10% Dispersed Damage; <25% Localized Damage; Damaged 2 - Poor; >10% Dispersed Damage; >25% Localized Damage; Significantly Damaged	0 – Disturbance unlikely 1 – Disturbance infrequently 2 – Disturbance occasionally 3 – Disturbance frequently

Asbestos Containing Building Material Inventory by Homogeneous Area

Customer: Paul A. Doble ARC

HA Description: Mudded pipe fittings on fiberglass and layered paper pipe

*ACBM Cat.	HA No.	Building	Functional Space	Quant-ity	U/M	% Dmgd	*Access.	*Cond.	*Act.	Friable?	Survey Date	% Asb.	Comments
1	HA-PAD-002	Main Reserve Center Building	Main Building	255		0%	1	0	1	☐	5/7/2013		255 fitting throughout the Main Building
			Total Quantity:	255									

Reference Photographs

Photo Name(s):

Original Photo ID(s):

*ACBM Category	*Accessibility	*Condition	*Activity
1-TSI 2-SM 3-Misc	0 – Not accessible 1 – Infrequently 2 – Occasionally 3 – Frequent	0 - Good; No visible damage 1 - Fair; <10% Dispersed Damage; <25% Localized Damage; Damaged 2 - Poor; >10% Dispersed Damage; >25% Localized Damage; Significantly Damaged	0 – Disturbance unlikely 1 – Disturbance infrequently 2 – Disturbance occasionally 3 – Disturbance frequently

Asbestos Containing Building Material Inventory by Homogeneous Area

Customer: Paul A. Doble ARC

HA Description: Layered Pipe insulation

*ACBM Cat.	HA No.	Building	Functional Space	Quant-ity	U/M	% Dmgd	*Access.	*Cond.	*Act.	Friable?	Survey Date	% Asb.	Comments
1	HA-PAD-003	Main Reserve Center Building	Main Building	250	LF	0%	1	0	1	☐	5/7/2013		
			Total Quantity:	250	LF								

Reference Photographs

Photo Name(s):

Original Photo ID(s):

*ACBM Category	*Accessibility	*Condition	*Activity
1-TSI 2-SM 3-Misc	0 – Not accessible 1 – Infrequently 2 – Occasionally 3 – Frequent	0 - Good; No visible damage 1 - Fair; <10% Dispersed Damage; <25% Localized Damage; Damaged 2 - Poor; >10% Dispersed Damage; >25% Localized Damage; Significantly Damaged	0 – Disturbance unlikely 1 – Disturbance infrequently 2 – Disturbance occasionally 3 – Disturbance frequently

Asbestos Containing Building Material Inventory by Homogeneous Area

Customer: Paul A. Doble ARC

HA Description: Asbestos Cement Transite board

*ACBM Cat.	HA No.	Building	Functional Space	Quant-ity	U/M	% Dmgd	*Access.	*Cond.	*Act.	Friable?	Survey Date	% Asb.	Comments
3	HA-PAD-004	OMS Building	OMS Building Bay	100	SF	0%	1	0	0	☐	5/7/2013		
			Total Quantity:	100	SF								

Reference Photographs

Photo Name(s):

Original Photo ID(s):

*ACBM Category	*Accessibility	*Condition	*Activity
1-TSI 2-SM 3-Misc	0 – Not accessible 1 – Infrequently 2 – Occasionally 3 – Frequent	0 - Good; No visible damage 1 - Fair; <10% Dispersed Damage; <25% Localized Damage; Damaged 2 - Poor; >10% Dispersed Damage; >25% Localized Damage; Significantly Damaged	0 – Disturbance unlikely 1 – Disturbance infrequently 2 – Disturbance occasionally 3 – Disturbance frequently

Asbestos Containing Building Material Inventory by Homogeneous Area

Customer: Paul A. Doble ARC

HA Description: Layered Pipe insulation

*ACBM Cat.	HA No.	Building	Functional Space	Quant-ity	U/M	% Dmgd	*Access.	*Cond.	*Act.	Friable?	Survey Date	% Asb.	Comments
3	HA-PAD-005	OMS Building	OMS Building Bay	150	LF	0%	1	0	0	☑	5/7/2013		
			Total Quantity:	150	LF								

Reference Photographs

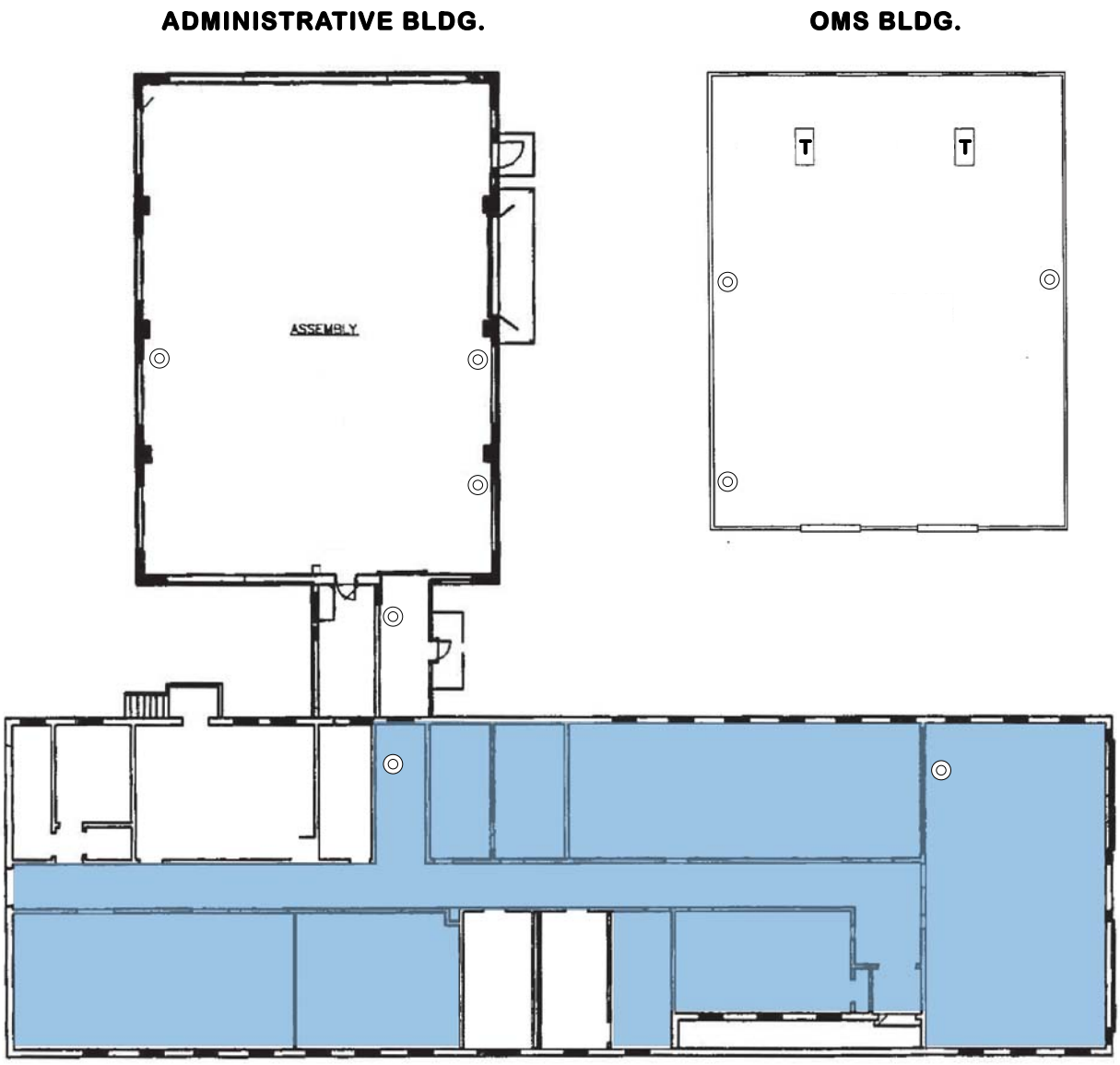
Photo Name(s):

Original Photo ID(s):

*ACBM Category	*Accessibility	*Condition	*Activity
1-TSI 2-SM 3-Misc	0 – Not accessible 1 – Infrequently 2 – Occasionally 3 – Frequent	0 - Good; No visible damage 1 - Fair; <10% Dispersed Damage; <25% Localized Damage; Damaged 2 - Poor; >10% Dispersed Damage; >25% Localized Damage; Significantly Damaged	0 – Disturbance unlikely 1 – Disturbance infrequently 2 – Disturbance occasionally 3 – Disturbance frequently

FIGURE 1 - ACM LOCATION MAP

PAUL A. DOBLE USAR CENTER
PORTSMOUTH, NH (NH008)



LEGEND

- Existing Floor Tile and Mastic ACM
- ◎ Vertical ACM Pipe Riser
- T Transite

Note: ACM Pipe Fittings, Pipe Wrap, and Mudded Joints present in all rooms.

Not to Scale

ALLIANT

RPF Environmental
TESTING & CONSULTING SERVICES
Hazardous Materials Inspection & Assessment
Asbestos, Mold, Lead Paint, Radon, PCBs
Air Quality Testing and Investigations
Industrial Hygiene, Safety & Training

August 9, 2018

Tim Nichols
AECm Architects/Engineers
Principal Engineer
13 Water Street
Newmarket, NH 03857

Re: Former Paul A. Doble US Army Reserve Center
125 Cottage St., Portsmouth, NH
Limited Building Survey Findings
RPF File No. 188695

Dear Mr. Nichols:

On July 30, 2018, RPF Environmental, Inc. (RPF) conducted a survey at the Former Paul A. Doble US Army Reserve Center located at 125 Cottage Street in Portsmouth, New Hampshire. The limited survey was performed in the affected exterior areas of the building, as designated by you, for accessible polychlorinated biphenyl (PCB) contaminated caulking and masonry materials and limited asbestos containing building material (ACBM) caulking, as indicated herein. Below is a summary of findings, discussion of the results and preliminary recommendations for proper management of the identified hazardous building material. Attached to this report are the survey data tables, laboratory results, survey methodologies and limitations.

This report is not intended to be used as an abatement specification or work plan. To proceed with abatement work, the following important steps are necessary:

1. A work plan or project design documents must be prepared prior to abatement by a certified abatement project designer. The abatement specification or work plan should then be used to solicit bids from qualified abatement contractors. Only properly licensed contractors should be used for asbestos abatement and disposal.

2. A qualified industrial hygiene/testing consultant should conduct sufficient testing and inspections of the work, independent of the abatement contractor. The consultant should also prepare final abatement reports for the work.

Summary of Findings

In accordance with our scope of work, dated July 19, 2018, RPF collected composite samples of suspect caulk and masonry at windows and doors designated by AECm to be analyzed for PCB content. Additionally, RPF analyzed the caulk samples collected for asbestos content in accordance with the initial asbestos inspection requirements prior to renovation or demolition work as stated in the state regulations and applicable federal regulations.

Depending on the extent of renovation and final construction plans, proper abatement and/or management of the materials will be required in accordance with applicable State and federal regulations. Renovation and demolition plans should be reviewed by a certified industrial hygienist and a licensed project designer for possible asbestos impact issues. Based on the impact assessment and planned usage, technical specifications should be prepared for abatement, as applicable. A management plan should also be prepared to address any asbestos or other hazardous material scheduled to remain after construction.

Discussion of Findings

Polychlorinated Biphenyls

PCBs have been shown to cause chronic toxic effects and are a human carcinogen. PCBs are toxic according to the U.S. EPA and are a regulated material. The two primary federal laws that affect the handling of PCBs are the Toxic Substance Control Act and the Superfund Law (CERCLA). Other regulations include various State requirements, Department of Transportation, U.S. OSHA, and the Resource Conservation and Recovery Act. The regulations establish various requirements for the removal, handling, storage and disposal of PCBs.

Nine (9) discrete samples of building caulking were collected from the locations, designated by you, and submitted for analysis to determine PCB content. These samples were comprised materials collected from various exterior window and door trim. In addition, four samples of masonry (brick) were collected from designated locations in accordance with the US EPA Standard Operating Procedure for Sampling Porous Surfaces for Polychlorinated Biphenyls (PCBs), May 2011. The sample types and locations are summarized in the following:

Sample Location	Description
073018C1	Caulk, white, south side, west window, top header
073018M2	Masonry, south side, west window
073018C3	Caulk, brown, south side, west end, side/bottom
073018M4	Masonry, south side, center window
073018C5	Caulk, white, south side, center window, top header
073018C6	Caulk, grey, south side, entry door, trim
073018M7	Masonry, south side, entry door
073018C8	Caulk, brown, east side, south window, side trim
073018C9	Caulk, brown, east side, north window, side trim
073018C10	Caulk, brown, north side, center office window, trim
073018C11	Caulk, grey, drill hall, east side, door frame trim
073018M12	Masonry, drill hall, east side, door
073018C13	Caulk, grey, west side, entry door to office wing, trim

All the samples were analyzed by Eastern Analytical, Inc. using EPA Method 8082. The results of this testing are included in Appendix A to this report. No detectable concentrations of PCBs were detected in any of the caulking or masonry samples collected. PCB-containing caulk is considered PCB bulk product waste if the concentration of PCBs in the caulk is greater than or equal to (≥) 50 ppm pursuant to 40 CFR § 761.3. PCB bulk product waste includes waste derived from manufactured products containing PCBs in a non-liquid state where the concentration at the time of designation for disposal is ≥50 ppm PCBs.

Asbestos-Containing Building Material

Asbestos is the name for a group of naturally occurring minerals that separate into strong, very fine fibers. The adverse health effects associated with asbestos exposure have been extensively studied for many years. Results of these studies and epidemiological investigations have demonstrated that inhalation of asbestos fibers may lead to increased risk of developing one or more diseases. In all cases, extreme care must be used not to disturb asbestos-containing materials or to create fiber release episodes.

In the accessible exterior, locations surveyed, RPF identified three (3) homogenous types of caulk. A brown caulk around the sides and bottoms of the windows, a white caulk along the tops of the windows, and a grey caulk around the exterior door trim of the designated locations. In accordance with current industry sampling protocols, a total of nine (9) samples were collected and submitted for analysis using polarized light microscopy. Asbestos containing material (ACM) is defined by current EPA regulations as materials having greater than 1% asbestos content.

As you can see in the enclosed results, included in Appendix B, greater than 1% asbestos was detected in the white caulk along the tops of the window headers and in the grey caulk along the tops and sides of the exterior doors and these materials are defined as ACM. No asbestos was detected in the samples of brown caulk along the sides and bottoms of the window openings.

Please note that a full inspection of the building was not performed during this limited testing. In the event that other materials or areas of the building will be impacted by planned upgrades, maintenance activity, renovation or demolition activity, please notify our office to arrange for additional site inspections, testing and analysis.

In general, ACM should be managed in accordance with current OSHA and EPA requirements, including but not limited to proper hazard communications, labeling, and maintenance of the ACM. It is recommended that an Operations and Maintenance Program be prepared and implemented to allow for the safe use and maintenance of buildings with ACM present.

Conclusions

Based on the findings off this limited testing, neither the caulking or masonry samples were found to contain PCBs above the detection limit although both the white and grey caulk were found to contain asbestos greater than 1% and are considered ACBM.

In accordance with current regulatory requirements, ACBM that may be impacted or disturbed (such that asbestos fiber release occurs) by renovation, demolition or other such activity must be removed by qualified, licensed firms.
Although regulations for removal of nonfriable ACBM are somewhat less stringent than the requirements for friable ACBM, it should be noted that nonfriable ACBM that is subjected to grinding, abrasion, and other forces, could be rendered friable. In this event, the nonfriable ACBM would be re-categorized friable ACBM.

ACBM that will not be impacted by renovation or demolition activity may be left in place if managed properly and if the materials are maintained in good condition. ACBM to remain in the building should be included in an asbestos management plan and operations and maintenance (O&M) program detailing the measures to be used to safely occupy the building until the ACBM is fully removed. An accredited Management Planner should prepare the O&M Program in accordance with the guidelines set forth in 40 CFR Part 763 (AHERA).

Sufficiently in advance of the start of renovation and/or remediation work, abatement project design should be completed. As part the initial design steps any planned renovation and demolition activity should be reviewed for potential impact on ACBM. Asbestos removal is highly regulated at the State and federal level, and in some cases, at the local level also. Notification to NH Air Resources is required 10-days prior to the start of interior abatement work and demolition. Only qualified, trained, and licensed firms, as applicable, should be engaged to complete asbestos removal or other abatement activity. Asbestos abatement work must be designed (abatement specifications or work plan prepared) by accredited personnel.

All employees and contractors that may access or otherwise disturb areas with suspect ACBM present should be notified of the presence of ACBM and possible hidden ACBM, and the need to use caution when proceeding with work. Appropriate notifications, labeling and other hazard communications should be completed to all employees, contractors and others in accordance with US OSHA regulations and other applicable requirements (including asbestos labeling in accordance with 29 CFR Part 1926). The scope of RPF services for this survey did not include labeling of ACBM or hazard communications to other employees, building occupants, contractors, or subcontractors.

Documentation of current ACBM conditions and in-depth hazard assessment is beyond the scope-of-work for this initial survey. With the exception of the specific testing and analysis detailed herein, no other samples of materials, oil, water, ground water, air, or other suspect hazardous materials were collected in the course of this inspection that supports or denies these conclusions. No additional services beyond those explicitly stated herein were performed and none should be inferred or implied. The summary and conclusions are based on reasonably ascertainable information as described in this report. RPF Environmental, Inc. makes no guarantees, warranties, or references regarding this property or the condition of the property after the period of this report.

If you have any questions at this time, or if you would like to discuss the remediation process, please call our office.

Sincerely,
RPF ENVIRONMENTAL, INC.

Allan D. Mercier, CMC
Field Operations Manager
Licensed Asbestos Inspector (NH Lic#AI316)

Enclosures:
Appendix A: PCB Analytical Results
Appendix B: Asbestos Analytical Results
Appendix C: Sample location drawing
Appendix D: Photographs
Appendix E: Summary of Methodology and Limitations

188695 Doble 073018 Report

APPENDIX A

Eastern Analytical, Inc.
professional laboratory and drilling services

Allan Mercier
RPF Environmental, Inc.
320 First NH Turnpike
Northwood , NH 03261

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 184826
Client Identification: AECm - Portsmouth | 188695
Date Received: 7/31/2018

Dear Mr. Mercier :

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.easternanalytical.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:
Solid samples are reported on a dry weight basis, unless otherwise noted
< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269), Vermont (VT1012) and New York (12072).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample (s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director | 8.6.18 Date | 17 # of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**

Client Designation: **AECm - Portsmouth | 188695**

Temperature upon receipt (°C): 18.9 **Received on ice or cold packs (Yes/No): Y**

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
184826.01	C01	7/31/18	7/30/18	solid	100.0	Adheres to Sample Acceptance Policy
184826.02	M02	7/31/18	7/30/18	solid	100.0	Adheres to Sample Acceptance Policy
184826.03	C03	7/31/18	7/30/18	solid	100.0	Adheres to Sample Acceptance Policy
184826.04	M04	7/31/18	7/30/18	solid	100.0	Adheres to Sample Acceptance Policy
184826.05	C05	7/31/18	7/30/18	solid	100.0	Adheres to Sample Acceptance Policy
184826.06	C06	7/31/18	7/30/18	solid	100.0	Adheres to Sample Acceptance Policy
184826.07	M07	7/31/18	7/30/18	solid	100.0	Adheres to Sample Acceptance Policy
184826.08	C08	7/31/18	7/30/18	solid	100.0	Adheres to Sample Acceptance Policy
184826.09	C09	7/31/18	7/30/18	solid	100.0	Adheres to Sample Acceptance Policy
184826.1	C10	7/31/18	7/30/18	solid	100.0	Adheres to Sample Acceptance Policy
184826.11	C11	7/31/18	7/30/18	solid	100.0	Adheres to Sample Acceptance Policy
184826.12	M12	7/31/18	7/30/18	solid	100.0	Adheres to Sample Acceptance Policy
184826.13	C13	7/31/18	7/30/18	solid	100.0	Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitability, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.
Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.

All results contained in this report relate only to the above listed samples.

References include:

1) EPA 600/4-79-020, 1983
2) Standard Methods for Examination of Water and Wastewater,20th Edition, 1998 and 22nd Edition, 2012
3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
4) Hach Water Analysis Handbook, 2nd edition, 1992

LABORATORY REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**
Client Designation: **AECm - Portsmouth | 188695**

Client Sample ID:	C01
Lab Sample ID:	184826.01
Matrix:	solid
Date Sampled:	7/30/18
Date Received:	7/31/18

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method	Analyst
PCB-1016	< 1	1	74	mg/kg	8/2/18	10:17	7/31/18	8082A	SG
PCB-1221	< 1	1	74	mg/kg	8/2/18	10:17	7/31/18	8082A	SG
PCB-1232	< 1	1	74	mg/kg	8/2/18	10:17	7/31/18	8082A	SG
PCB-1242	< 1	1	74	mg/kg	8/2/18	10:17	7/31/18	8082A	SG
PCB-1248	< 1	1	74	mg/kg	8/2/18	10:17	7/31/18	8082A	SG
PCB-1254	< 1	1	74	mg/kg	8/2/18	10:17	7/31/18	8082A	SG
PCB-1260	< 1	1	74	mg/kg	8/2/18	10:17	7/31/18	8082A	SG
PCB-1262	< 1	1	74	mg/kg	8/2/18	10:17	7/31/18	8082A	SG
PCB-1268	< 1	1	74	mg/kg	8/2/18	10:17	7/31/18	8082A	SG
TMX (surr)	**75 %R**			%	8/2/18	10:17	7/31/18	8082A	SG
DCB (surr)	**65 %R**			%	8/2/18	10:17	7/31/18	8082A	SG

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix.
Results are reported on a solids as received basis.
Detection limits elevated due to sample matrix.

LABORATORY REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**
Client Designation: **AECm - Portsmouth | 188695**

Client Sample ID:	M02
Lab Sample ID:	184826.02
Matrix:	solid
Date Sampled:	7/30/18
Date Received:	7/31/18

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method	Analyst
PCB-1016	< 0.2	0.2	15	mg/kg	8/2/18	11:08	7/31/18	8082A	SG
PCB-1221	< 0.2	0.2	15	mg/kg	8/2/18	11:08	7/31/18	8082A	SG
PCB-1232	< 0.2	0.2	15	mg/kg	8/2/18	11:08	7/31/18	8082A	SG
PCB-1242	< 0.2	0.2	15	mg/kg	8/2/18	11:08	7/31/18	8082A	SG
PCB-1248	< 0.2	0.2	15	mg/kg	8/2/18	11:08	7/31/18	8082A	SG
PCB-1254	< 0.2	0.2	15	mg/kg	8/2/18	11:08	7/31/18	8082A	SG
PCB-1260	< 0.2	0.2	15	mg/kg	8/2/18	11:08	7/31/18	8082A	SG
PCB-1262	< 0.2	0.2	15	mg/kg	8/2/18	11:08	7/31/18	8082A	SG
PCB-1268	< 0.2	0.2	15	mg/kg	8/2/18	11:08	7/31/18	8082A	SG
TMX (surr)	**82 %R**			%	8/2/18	11:08	7/31/18	8082A	SG
DCB (surr)	**73 %R**			%	8/2/18	11:08	7/31/18	8082A	SG

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix.
Results are reported on a solids as received basis.

LABORATORY REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**
Client Designation: **AECm - Portsmouth | 188695**

Client Sample ID:	C03
Lab Sample ID:	184826.03
Matrix:	solid
Date Sampled:	7/30/18
Date Received:	7/31/18

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method	Analyst
PCB-1016	< 2	2	146	mg/kg	8/2/18	10:36	7/31/18	8082A	SG
PCB-1221	< 2	2	146	mg/kg	8/2/18	10:36	7/31/18	8082A	SG
PCB-1232	< 2	2	146	mg/kg	8/2/18	10:36	7/31/18	8082A	SG
PCB-1242	< 2	2	146	mg/kg	8/2/18	10:36	7/31/18	8082A	SG
PCB-1248	< 2	2	146	mg/kg	8/2/18	10:36	7/31/18	8082A	SG
PCB-1254	< 2	2	146	mg/kg	8/2/18	10:36	7/31/18	8082A	SG
PCB-1260	< 2	2	146	mg/kg	8/2/18	10:36	7/31/18	8082A	SG
PCB-1262	< 2	2	146	mg/kg	8/2/18	10:36	7/31/18	8082A	SG
PCB-1268	< 2	2	146	mg/kg	8/2/18	10:36	7/31/18	8082A	SG
TMX (surr)	**50 %R**			%	8/2/18	10:36	7/31/18	8082A	SG
DCB (surr)	**60 %R**			%	8/2/18	10:36	7/31/18	8082A	SG

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix.
Results are reported on a solids as received basis.
Detection limits elevated due to sample matrix.

LABORATORY REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**
Client Designation: **AECm - Portsmouth | 188695**

Client Sample ID:	M04
Lab Sample ID:	184826.04
Matrix:	solid
Date Sampled:	7/30/18
Date Received:	7/31/18

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method	Analyst
PCB-1016	< 0.2	0.2	13	mg/kg	8/2/18	11:47	8/1/18	8082A	SG
PCB-1221	< 0.2	0.2	13	mg/kg	8/2/18	11:47	8/1/18	8082A	SG
PCB-1232	< 0.2	0.2	13	mg/kg	8/2/18	11:47	8/1/18	8082A	SG
PCB-1242	< 0.2	0.2	13	mg/kg	8/2/18	11:47	8/1/18	8082A	SG
PCB-1248	< 0.2	0.2	13	mg/kg	8/2/18	11:47	8/1/18	8082A	SG
PCB-1254	< 0.2	0.2	13	mg/kg	8/2/18	11:47	8/1/18	8082A	SG
PCB-1260	< 0.2	0.2	13	mg/kg	8/2/18	11:47	8/1/18	8082A	SG
PCB-1262	< 0.2	0.2	13	mg/kg	8/2/18	11:47	8/1/18	8082A	SG
PCB-1268	< 0.2	0.2	13	mg/kg	8/2/18	11:47	8/1/18	8082A	SG
TMX (surr)	**84 %R**			%	8/2/18	11:47	8/1/18	8082A	SG
DCB (surr)	**68 %R**			%	8/2/18	11:47	8/1/18	8082A	SG

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix.
Results are reported on a solids as received basis.

LABORATORY REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**
Client Designation: **AECm - Portsmouth | 188695**

Client Sample ID:	C05
Lab Sample ID:	184826.05
Matrix:	solid
Date Sampled:	7/30/18
Date Received:	7/31/18

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method	Analyst
PCB-1016	< 1	1	72	mg/kg	8/2/18	12:45	8/1/18	8082A	SG
PCB-1221	< 1	1	72	mg/kg	8/2/18	12:45	8/1/18	8082A	SG
PCB-1232	< 1	1	72	mg/kg	8/2/18	12:45	8/1/18	8082A	SG
PCB-1242	< 1	1	72	mg/kg	8/2/18	12:45	8/1/18	8082A	SG
PCB-1248	< 1	1	72	mg/kg	8/2/18	12:45	8/1/18	8082A	SG
PCB-1254	< 1	1	72	mg/kg	8/2/18	12:45	8/1/18	8082A	SG
PCB-1260	< 1	1	72	mg/kg	8/2/18	12:45	8/1/18	8082A	SG
PCB-1262	< 1	1	72	mg/kg	8/2/18	12:45	8/1/18	8082A	SG
PCB-1268	< 1	1	72	mg/kg	8/2/18	12:45	8/1/18	8082A	SG
TMX (surr)	**80 %R**			%	8/2/18	12:45	8/1/18	8082A	SG
DCB (surr)	**65 %R**			%	8/2/18	12:45	8/1/18	8082A	SG

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix.
Results are reported on a solids as received basis.
Detection limits elevated due to sample matrix.

LABORATORY REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**
Client Designation: **AECm - Portsmouth | 188695**

Client Sample ID:	C06
Lab Sample ID:	184826.06
Matrix:	solid
Date Sampled:	7/30/18
Date Received:	7/31/18

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method	Analyst
PCB-1016	< 0.2	0.2	14	mg/kg	8/2/18	11:57	8/1/18	8082A	SG
PCB-1221	< 0.2	0.2	14	mg/kg	8/2/18	11:57	8/1/18	8082A	SG
PCB-1232	< 0.2	0.2	14	mg/kg	8/2/18	11:57	8/1/18	8082A	SG
PCB-1242	< 0.2	0.2	14	mg/kg	8/2/18	11:57	8/1/18	8082A	SG
PCB-1248	< 0.2	0.2	14	mg/kg	8/2/18	11:57	8/1/18	8082A	SG
PCB-1254	< 0.2	0.2	14	mg/kg	8/2/18	11:57	8/1/18	8082A	SG
PCB-1260	< 0.2	0.2	14	mg/kg	8/2/18	11:57	8/1/18	8082A	SG
PCB-1262	< 0.2	0.2	14	mg/kg	8/2/18	11:57	8/1/18	8082A	SG
PCB-1268	< 0.2	0.2	14	mg/kg	8/2/18	11:57	8/1/18	8082A	SG
TMX (surr)	**60 %R**			%	8/2/18	11:57	8/1/18	8082A	SG
DCB (surr)	**49 %R**			%	8/2/18	11:57	8/1/18	8082A	SG

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix.
Results are reported on a solids as received basis.

LABORATORY REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**
Client Designation: **AECm - Portsmouth | 188695**

Client Sample ID:	M07
Lab Sample ID:	184826.07
Matrix:	solid
Date Sampled:	7/30/18
Date Received:	7/31/18

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method	Analyst
PCB-1016	< 0.2	0.2	13	mg/kg	8/2/18	12:06	8/1/18	8082A	SG
PCB-1221	< 0.2	0.2	13	mg/kg	8/2/18	12:06	8/1/18	8082A	SG
PCB-1232	< 0.2	0.2	13	mg/kg	8/2/18	12:06	8/1/18	8082A	SG
PCB-1242	< 0.2	0.2	13	mg/kg	8/2/18	12:06	8/1/18	8082A	SG
PCB-1248	< 0.2	0.2	13	mg/kg	8/2/18	12:06	8/1/18	8082A	SG
PCB-1254	< 0.2	0.2	13	mg/kg	8/2/18	12:06	8/1/18	8082A	SG
PCB-1260	< 0.2	0.2	13	mg/kg	8/2/18	12:06	8/1/18	8082A	SG
PCB-1262	< 0.2	0.2	13	mg/kg	8/2/18	12:06	8/1/18	8082A	SG
PCB-1268	< 0.2	0.2	13	mg/kg	8/2/18	12:06	8/1/18	8082A	SG
TMX (surr)	**83 %R**			%	8/2/18	12:06	8/1/18	8082A	SG
DCB (surr)	**67 %R**			%	8/2/18	12:06	8/1/18	8082A	SG

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix.
Results are reported on a solids as received basis.

LABORATORY REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**
Client Designation: **AECm - Portsmouth | 188695**

Client Sample ID:	C08
Lab Sample ID:	184826.08
Matrix:	solid
Date Sampled:	7/30/18
Date Received:	7/31/18

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method	Analyst
PCB-1016	< 2	2	147	mg/kg	8/2/18	14:29	8/1/18	8082A	SG
PCB-1221	< 2	2	147	mg/kg	8/2/18	14:29	8/1/18	8082A	SG
PCB-1232	< 2	2	147	mg/kg	8/2/18	14:29	8/1/18	8082A	SG
PCB-1242	< 2	2	147	mg/kg	8/2/18	14:29	8/1/18	8082A	SG
PCB-1248	< 2	2	147	mg/kg	8/2/18	14:29	8/1/18	8082A	SG
PCB-1254	< 2	2	147	mg/kg	8/2/18	14:29	8/1/18	8082A	SG
PCB-1260	< 2	2	147	mg/kg	8/2/18	14:29	8/1/18	8082A	SG
PCB-1262	< 2	2	147	mg/kg	8/2/18	14:29	8/1/18	8082A	SG
PCB-1268	< 2	2	147	mg/kg	8/2/18	14:29	8/1/18	8082A	SG
TMX (surr)	**50 %R**			%	8/2/18	14:29	8/1/18	8082A	SG
DCB (surr)	**60 %R**			%	8/2/18	14:29	8/1/18	8082A	SG

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix.
Results are reported on a solids as received basis.
Detection limits elevated due to sample matrix.

LABORATORY REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**
Client Designation: **AECm - Portsmouth | 188695**

Client Sample ID:	C09
Lab Sample ID:	184826.09
Matrix:	solid
Date Sampled:	7/30/18
Date Received:	7/31/18

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method	Analyst
PCB-1016	< 2	2	139	mg/kg	8/2/18	14:39	8/1/18	8082A	SG
PCB-1221	< 2	2	139	mg/kg	8/2/18	14:39	8/1/18	8082A	SG
PCB-1232	< 2	2	139	mg/kg	8/2/18	14:39	8/1/18	8082A	SG
PCB-1242	< 2	2	139	mg/kg	8/2/18	14:39	8/1/18	8082A	SG
PCB-1248	< 2	2	139	mg/kg	8/2/18	14:39	8/1/18	8082A	SG
PCB-1254	< 2	2	139	mg/kg	8/2/18	14:39	8/1/18	8082A	SG
PCB-1260	< 2	2	139	mg/kg	8/2/18	14:39	8/1/18	8082A	SG
PCB-1262	< 2	2	139	mg/kg	8/2/18	14:39	8/1/18	8082A	SG
PCB-1268	< 2	2	139	mg/kg	8/2/18	14:39	8/1/18	8082A	SG
TMX (surr)	**60 %R**			%	8/2/18	14:39	8/1/18	8082A	SG
DCB (surr)	**50 %R**			%	8/2/18	14:39	8/1/18	8082A	SG

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix.
Results are reported on a solids as received basis.
Detection limits elevated due to sample matrix.

LABORATORY REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**
Client Designation: **AECm - Portsmouth | 188695**

Client Sample ID:	C10
Lab Sample ID:	184826.1
Matrix:	solid
Date Sampled:	7/30/18
Date Received:	7/31/18

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method	Analyst
PCB-1016	< 2	2	143	mg/kg	8/2/18	14:49	8/1/18	8082A	SG
PCB-1221	< 2	2	143	mg/kg	8/2/18	14:49	8/1/18	8082A	SG
PCB-1232	< 2	2	143	mg/kg	8/2/18	14:49	8/1/18	8082A	SG
PCB-1242	< 2	2	143	mg/kg	8/2/18	14:49	8/1/18	8082A	SG
PCB-1248	< 2	2	143	mg/kg	8/2/18	14:49	8/1/18	8082A	SG
PCB-1254	< 2	2	143	mg/kg	8/2/18	14:49	8/1/18	8082A	SG
PCB-1260	< 2	2	143	mg/kg	8/2/18	14:49	8/1/18	8082A	SG
PCB-1262	< 2	2	143	mg/kg	8/2/18	14:49	8/1/18	8082A	SG
PCB-1268	< 2	2	143	mg/kg	8/2/18	14:49	8/1/18	8082A	SG
TMX (surr)	**50 %R**			%	8/2/18	14:49	8/1/18	8082A	SG
DCB (surr)	**50 %R**			%	8/2/18	14:49	8/1/18	8082A	SG

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix.
Results are reported on a solids as received basis.
Detection limits elevated due to sample matrix.

LABORATORY REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**
Client Designation: **AECm - Portsmouth | 188695**

Client Sample ID:	C11
Lab Sample ID:	184826.11
Matrix:	solid
Date Sampled:	7/30/18
Date Received:	7/31/18

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method	Analyst
PCB-1016	< 0.2	0.2	15	mg/kg	8/2/18	12:16	8/1/18	8082A	SG
PCB-1221	< 0.2	0.2	15	mg/kg	8/2/18	12:16	8/1/18	8082A	SG
PCB-1232	< 0.2	0.2	15	mg/kg	8/2/18	12:16	8/1/18	8082A	SG
PCB-1242	< 0.2	0.2	15	mg/kg	8/2/18	12:16	8/1/18	8082A	SG
PCB-1248	< 0.2	0.2	15	mg/kg	8/2/18	12:16	8/1/18	8082A	SG
PCB-1254	< 0.2	0.2	15	mg/kg	8/2/18	12:16	8/1/18	8082A	SG
PCB-1260	< 0.2	0.2	15	mg/kg	8/2/18	12:16	8/1/18	8082A	SG
PCB-1262	< 0.2	0.2	15	mg/kg	8/2/18	12:16	8/1/18	8082A	SG
PCB-1268	< 0.2	0.2	15	mg/kg	8/2/18	12:16	8/1/18	8082A	SG
TMX (surr)	**58 %R**			%	8/2/18	12:16	8/1/18	8082A	SG
DCB (surr)	**49 %R**			%	8/2/18	12:16	8/1/18	8082A	SG

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix.
Results are reported on a solids as received basis.

LABORATORY REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**
Client Designation: **AECm - Portsmouth | 188695**

Client Sample ID:	M12
Lab Sample ID:	184826.12
Matrix:	solid
Date Sampled:	7/30/18
Date Received:	7/31/18

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method	Analyst
PCB-1016	< 0.2	0.2	15	mg/kg	8/2/18	12:26	8/1/18	8082A	SG
PCB-1221	< 0.2	0.2	15	mg/kg	8/2/18	12:26	8/1/18	8082A	SG
PCB-1232	< 0.2	0.2	15	mg/kg	8/2/18	12:26	8/1/18	8082A	SG
PCB-1242	< 0.2	0.2	15	mg/kg	8/2/18	12:26	8/1/18	8082A	SG
PCB-1248	< 0.2	0.2	15	mg/kg	8/2/18	12:26	8/1/18	8082A	SG
PCB-1254	< 0.2	0.2	15	mg/kg	8/2/18	12:26	8/1/18	8082A	SG
PCB-1260	< 0.2	0.2	15	mg/kg	8/2/18	12:26	8/1/18	8082A	SG
PCB-1262	< 0.2	0.2	15	mg/kg	8/2/18	12:26	8/1/18	8082A	SG
PCB-1268	< 0.2	0.2	15	mg/kg	8/2/18	12:26	8/1/18	8082A	SG
TMX (surr)	**81 %R**			%	8/2/18	12:26	8/1/18	8082A	SG
DCB (surr)	**68 %R**			%	8/2/18	12:26	8/1/18	8082A	SG

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix.
Results are reported on a solids as received basis.

LABORATORY REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**
Client Designation: **AECm - Portsmouth | 188695**

Client Sample ID:	C13
Lab Sample ID:	184826.13
Matrix:	solid
Date Sampled:	7/30/18
Date Received:	7/31/18

	Result	RL	Dilution Factor	Units	Date / Time Analyzed		Date Prepared	Method	Analyst
PCB-1016	< 1	1	64	mg/kg	8/2/18	12:35	8/1/18	8082A	SG
PCB-1221	< 1	1	64	mg/kg	8/2/18	12:35	8/1/18	8082A	SG
PCB-1232	< 1	1	64	mg/kg	8/2/18	12:35	8/1/18	8082A	SG
PCB-1242	< 1	1	64	mg/kg	8/2/18	12:35	8/1/18	8082A	SG
PCB-1248	< 1	1	64	mg/kg	8/2/18	12:35	8/1/18	8082A	SG
PCB-1254	< 1	1	64	mg/kg	8/2/18	12:35	8/1/18	8082A	SG
PCB-1260	< 1	1	64	mg/kg	8/2/18	12:35	8/1/18	8082A	SG
PCB-1262	< 1	1	64	mg/kg	8/2/18	12:35	8/1/18	8082A	SG
PCB-1268	< 1	1	64	mg/kg	8/2/18	12:35	8/1/18	8082A	SG
TMX (surr)	**35 %R**			%	8/2/18	12:35	8/1/18	8082A	SG
DCB (surr)	**40 %R**			%	8/2/18	12:35	8/1/18	8082A	SG

Acid clean-up was performed on the samples and associated batch QC. Detection limits elevated in response to the lower initial mass used for analysis. A lower initial mass was used due to the nature of the sample matrix.
Results are reported on a solids as received basis.
Detection limits elevated due to sample matrix.

QC REPORT

EAI ID#: **184826**

Client: **RPF Environmental, Inc.**

Batch ID: 636686-30836/S073118PCB2

Client Designation: **AECm - Portsmouth | 188695**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.02	0.12 (93 %R)	0.12 (91 %R) (2 RPD)	8/1/2018	mg/kg	40 - 140	30	8082A
PCB-1221	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/1/2018	mg/kg			8082A
PCB-1232	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/1/2018	mg/kg			8082A
PCB-1242	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/1/2018	mg/kg			8082A
PCB-1248	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/1/2018	mg/kg			8082A
PCB-1254	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/1/2018	mg/kg			8082A
PCB-1260	< 0.02	0.13 (99 %R)	0.13 (101 %R) (2 RPD)	8/1/2018	mg/kg	40 - 140	30	8082A
PCB-1262	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/1/2018	mg/kg			8082A
PCB-1268	< 0.02	< 0.02 (%R N/A)	< 0.02 (%R N/A) (RPD N/A)	8/1/2018	mg/kg			8082A
TMX (surr)	87 %R	91 %R	86 %R	8/1/2018	% Rec	30 - 150	30	8082A
DCB (surr)	83 %R	84 %R	85 %R	8/1/2018	% Rec	30 - 150	30	8082A

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

APPENDIX B

AECm ARCHITECTS / ENGINEERS
125 Cottage Street, Portsmouth
Limited Exterior Caulk Sampling

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: July 30, 2018

Sample ID	Description	Asbestos Content	Asbestos Components	Fibrous Components	Non Fibrous Components
073018C1	Caulk, white, south side, west window, top sill	Positive	5%Chrysotile	--	95%Other
073018C3	Caulk, brown, south side, west end, side/bottom	None Detected		--	100%Other
073018C5	Caulk, white, south side, center window, top sill	Positive	5%Chrysotile	--	95%Other
073018C6	Caulk, grey, south side, entry door, trim	Positive	3%Chrysotile	--	97%Other
073018C8	Caulk, brown, east side, south window, side trim	None Detected		--	100%Other
073018C9	Caulk, brown, east side, north window, side trim	None Detected		--	100%Other
073018C10	Caulk, brown, north side, center office window, trim	None Detected		--	100%Other
073018C11	Caulk, grey, drill hall, east side, door frame trim	Positive	3%Chrysotile	--	97%Other
073018C13	Caulk, grey, west side, entry door to office wing, trim	Positive	2%Chrysotile	--	98%Other

188695

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

NVLAP Lab Code: 200664-0

Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Project: 188695 AECm Portsmouth

Lab Order ID: 51819419
Analysis ID: 51819419_PLM
Date Received: 7/31/2018
Date Reported: 8/2/2018

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
073018C1 *51819419PLM_1*	Caulk, white, south side, west window, top sill	5% Chrysotile		95% Other	White Non Fibrous Homogeneous Ashed, Dissolved
073018C3 *51819419PLM_2*	Caulk, brown, south side, west end, side/bottom	None Detected		100% Other	Brown Non Fibrous Homogeneous Ashed, Dissolved
073018C5 *51819419PLM_3*	Caulk, white, south side, center window, top sill	5% Chrysotile		95% Other	White Non Fibrous Homogeneous Ashed, Dissolved
073018C6 *51819419PLM_4*	Caulk, grey, south side, entry door, trim	3% Chrysotile		97% Other	Brown Non Fibrous Homogeneous Ashed, Dissolved
073018C8 *51819419PLM_5*	Caulk, brown, east side, south window, side trim	None Detected		100% Other	Brown Non Fibrous Homogeneous Ashed, Dissolved
073018C9 *51819419PLM_6*	Caulk, brown, east side, north window, side trim	None Detected		100% Other	Brown Non Fibrous Homogeneous Ashed, Dissolved
073018C10 *51819419PLM_7*	Caulk, brown, north side, center office window, trim	None Detected		100% Other	Brown Non Fibrous Homogeneous Ashed, Dissolved
073018C11 *51819419PLM_8*	Caulk, grey, drill hall, east side, door frame trim	3% Chrysotile		97% Other	Gray Non Fibrous Homogeneous Ashed, Dissolved

Philip Szabo (9)

Analyst

Approved Signatory

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

NVLAP Lab Code: 200664-0

Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Project: 188695 AECm Portsmouth

Lab Order ID: 51819419
Analysis ID: 51819419_PLM
Date Received: 7/31/2018
Date Reported: 8/2/2018

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
073018C13	Caulk, grey, west side, entry door to office wing, trim	**2% Chrysotile**		**98% Other**	Gray Non Fibrous Homogeneous
51819419PLM_9					Ashed, Dissolved

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

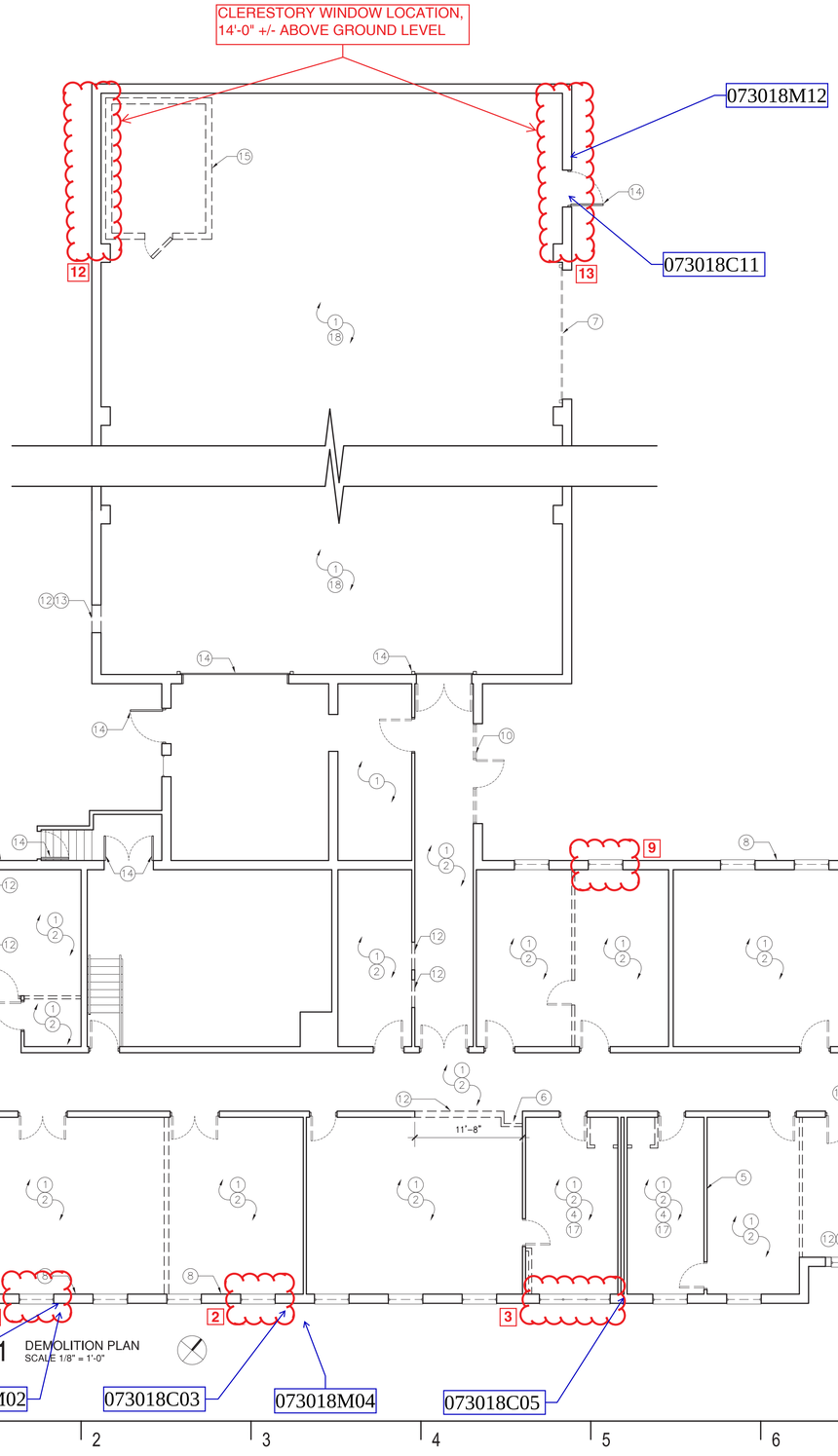
Philip Szabo (9)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

APPENDIX C



PCB SURVEY NOTES:
1) THE EXTENT OF THE SURVEY SHALL CONSIST OF THE CLOUDED DOOR AND WINDOW LOCATIONS INDICATED ON THE FLOOR PLAN.
2) CONSULTANT IS RESPONSIBLE FOR THE TESTING OF PCBs IN THE DOOR AND WINDOW CAULKING AT ALL LOCATIONS.
3) CONSULTANT IS RESPONSIBLE FOR OBTAINING COMPLETE SAMPLES WHICH INCLUDE CAULK FROM PREVIOUS DOOR AND WINDOW INSTALLATIONS THAT MAY HAVE BEEN LEFT INTACT.
4) MASONRY SHALL BE TESTED FOR PCBs AT (1) DOOR AND (3) WINDOW LOCATIONS. SPECIFIC LOCATIONS TO BE DETERMINED IN THE FIELD.

DEMOLITION GRAPHIC KEY

DOOR TO BE REMOVED

WINDOW TO BE REMOVED

PARTITION TO BE DEMOLISHED

GENERAL DEMOLITION NOTES

1. CONTRACTOR SHALL REVIEW THE ASBESTOS SURVEY REPORT TO IDENTIFY ALL A.C.M. IN THE LIMITS OF DEMOLITION PRIOR TO COMMENCING WORK. ALL A.C.M. WITHIN THE LIMITS OF WORK SHALL BE REMEDIATED BY A LICENSED ABATEMENT COMPANY IN ACCORDANCE WITH NHDES REGULATIONS. CONTRACTOR SHALL OBTAIN ALL REQUIRED ABATEMENT PERMITS.

2. CONTRACTOR SHALL INVENTORY ALL EXISTING FURNISHINGS AND APPLIANCES AND PROVIDE TO OWNER. OWNER SHALL IDENTIFY ALL FURNISHINGS TO REMAIN. DURING CONSTRUCTION, CONTRACTOR SHALL STORE ALL EXISTING FURNISHINGS TO REMAIN.

3. CONTRACTOR IS RESPONSIBLE FOR TRANSPORTATION AND DISPOSAL OF ALL REMOVED MATERIALS, FIXTURES, AND FURNISHINGS AT A PERMITTED LANDFILL OR RECYCLING FACILITY.

4. CONTRACTOR SHALL OBTAIN (4) REPRESENTATIVE SAMPLES OF WINDOW CAULKING AND ANALYZE FOR PCBS PRIOR TO DEMOLITION. PROVIDE ANALYTICAL TEST RESULTS TO OWNER.

5. REMOVE ALL EXISTING WALL-MOUNTED MATERIAL INCLUDING SIGNAGE, BOARDS, CASES, SHELVING, WINDOW COVERINGS, DECOR, ETC; SEE GENERAL DEMO. NOTE 2.

6. REMOVE ALL EXISTING FURNISHINGS INCLUDING FURNITURE, LOCKERS, STORAGE, ETC; SEE GENERAL DEMO. NOTE 2.

7. REMOVE ALL EXISTING WINDOWS U.O.N.

8. REMOVE ALL EXISTING DOORS U.O.N.

DEMOLITION KEY NOTES

1. REMOVE ANY FLOOR COVERING, BASE AND ADHESIVE, AND PREPARE FOR NEW FLOORING. ALL ASBESTOS CONTAINING FLOOR TILES AND MASTIC SHALL BE REMEDIATED BY AN NH LICENSED ABATEMENT COMPANY IN ACCORDANCE WITH NHDES REGULATIONS.
2. REMOVE EXISTING ACT CEILING GRID AND GWB CEILING ABOVE; SEE MECHANICAL DWGS FOR EXTENT OF MECHANICAL EQUIPMENT & DUCTWORK REMOVAL AND ELECTRICAL DWGS FOR EXTENT OF LIGHTING & ELECTRICAL REMOVAL.
3. REMOVE EXISTING OPERABLE ACCORDIAN PARTITION AND TRACK.
4. REMOVE EXISTING PLUMBING FIXTURES; CUT AND CAP. SEE PLUMBING DWGS.
5. PROVIDE ROOF PENETRATION AS REQUIRED FOR FIREPLACE VENTING PER SPECIFICATION.
6. REMOVE EXISTING WATER FOUNTAIN; CUT AND CAP.
7. REMOVE EXISTING OVERHEAD DOOR, TRACK & ASSOCIATED EQUIP.
8. REMOVE THROUGH WALL AIR CONDITIONING UNIT AND PREPARE FOR INFILL.
9. REMOVE METAL STORAGE CAGE
10. REMOVE EXISTING ALUMINUM STOREFRONT
11. REMOVE EXISTING CONCRETE RAMP; SEE CIVIL DWGS.
12. REMOVE AREA OF WALL IN PREPARATION FOR NEW OPENING; COORDINATE SIZE AND LOCATION OF OPENING WITH CONSTRUCTION PLAN AND DOOR SCHEDULE.
13. RETAIN REMOVED BRICK FOR PATCHING AND INFILL.
14. DOOR EXISTING TO REMAIN
15. REMOVE AND DISPOSE OF MUNITIONS VAULT
16. SELECTIVE DEMOLITION OF EXISTING EXTERIOR SOFFIT; COORDINATE WITH ARCHITECT IN FIELD.
17. REMOVE EXISTING TOILET PARTITIONS, WALL TILE AND WALL-MOUNTED ACCESSORIES.
18. EXISTING CLEARSTORY WINDOWS TO REMAIN

MANYPENNY | MURPHY ARCHITECTURE
96 PENHALLOW STREET, PORTSMOUTH, NH 03801 TEL: 603-319-8199

LICENSED ARCHITECT
BRIAN C. MURPHY
No. 03807
THE STATE OF NEW HAMPSHIRE

CLIENT

PORTSMOUTH
SENIOR ACTIVITY
CENTER

125 COTTAGE ST,
PORTSMOUTH, NH

REVISIONS		
No.	DESCRIPTION	DATE
1	75% SUBMISSION	12/15/2017
2	95% SUBMISSION	01/12/2018
3	100% SUBMISSION	02/23/2018

DEMOLITION PLAN

PROJECT NO.:	PROJECT#
DATE ISSUED:	02/23/2018
SCALE:	
DRAWN BY:	ECC
REVIEWED BY:	BPM

D101

PROJECT PHASE:
FOR CONSTRUCTION

APPENDIX D

1. Former Paul A. Doble US Army Reserve Center, 125 Cottage St. Portsmouth, NH

2. Sample locations 073018C01 (south side, west window, top header) and 073018M02 (masonry)

3. Sample locations 073018C03 (south side, west end, side/bottom) and 073018M04 (masonry)

4. Sample locations 073018C05 (south side, center window, top header)

5. Sample location 073018C06 (south side, entry door, trim) and 073018C07 (masonry)

6. Sample location 073018C08 (east side, south window, side trim)

EXAMPLE PICTURES		RPF Environmental TESTING & CONSULTING SERVICES
Site Address: AECm Former Paul A. Doble US Army Reserve Center 125 Cottage St., Portsmouth, NH		www.airpf.com **888-SAFE AIR** **File No. 188695**

7. Sample location 073018C09 (east side, north window, side trim)

8. Sample location 073018C10 (north side, center office window, trim)

9. Sample location 073018C11 (drill hall, east side, door frame trim) and 073018M12 (masonry)

10. Sample location 073018C13 (west side, entry door to office wing, trim)

EXAMPLE PICTURES		RPF Environmental TESTING & CONSULTING SERVICES
Site Address: AECm Former Paul A. Doble US Army Reserve Center 125 Cottage St., Portsmouth, NH		www.airpf.com **888-SAFE AIR** **File No. 188695**

APPENDIX E

Summary of Methodology: Asbestos-Containing Building Materials Survey

EPA accredited inspector(s) surveyed accessible space in the building or site areas included within the RPF Scope of Work (SOW) to identify suspect asbestos-containing building material (ACBM). Suspect ACBM was inventoried and categorized into homogeneous groups of materials. To the extent indicated in the report, samples were then extracted from the different groups of homogeneous materials in accordance with applicable State and federal rules and regulations. For surveys in which the SOW included full inspections of the affect space, sampling methodologies were based on the requirements set forth in 40 CFR Part 763 (EPA) and 29 CFR Part 1926.1101 (OSHA). For preliminary or limited surveys, findings apply to only the affected material or space as indicated in the RPF SOW and Report and additional inspection and testing will be required to satisfy regulatory obligations associated with renovation, demolition, maintenance and other occupational safety and health requirements.

Collected samples were individually placed into sealed containers, labeled, and submitted with proper chain of custody forms to the RPF NVLAP-accredited vendor laboratory. Sample containers and tools were cleaned after each sample was collected. Samples were analyzed for asbestos content using polarized light microscopy (PLM). Although PLM is the method currently recognized in State and federal regulations for asbestos identification in bulk samples, PLM may not be sensitive enough to detect all of the asbestos fibers in certain types of materials, such as floor tile and other nonfriable ACBM. In the event that more definitive results are requested in cases of with negative or trace results of asbestos are detected, RPF recommends that confirmation testing be completed using transmission electron microscopy.

For each homogeneous group of suspect material, a "stop at first positive" (SFP) method may have been employed during the analysis. The SFP method is based on current EPA sampling protocols and means that if one sample within a homogeneous group of suspect material is found to contain >1% asbestos, then further analysis of that specific homogenous group samples is terminated and the entire homogeneous group of material is considered to be ACBM regardless of the other sample results. This is based on the potential for inconsistent mix of asbestos in the product yielding varying findings across the different individual samples collected from the same homogeneous group. Unless otherwise noted in the report, sample groups found to have 1% to <10% asbestos content are assumed to be ACBM; to rebut this assumption further analysis with point count methods are required.

Inaccessible and hidden areas, including but not limited to wall/floor/ceiling cavity space, space with obstructed access (such as fiberglass insulation above suspended ceilings), sub floors, interiors of mechanical and process equipment, and similar spaces were not included in the inspection and care should be used when accessing these areas in the future. Unless otherwise noted in the RPF Report, destructive survey techniques were not employed during this survey.

In the event that additional suspect materials are encountered that are not addressed in this report, the materials should be properly tested by an accredited inspector. For example, during renovation and demolition it is likely that additional suspect material will be encountered and such suspect materials should be assumed to be hazardous until proper inspection and testing occurs.

RPF followed applicable industry standards; however, various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspection, assumptions regarding the determination of homogenous groups of suspect material, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar material. Also reference the Limitations document attached to the report.

Summary of Methodology: Polychlorinated Biphenyls, Mercury and Refrigerants

Various, accessible fluorescent light fixtures were inspected to determine if the ballasts contain a "No PCBs" label. Ballasts that do not have the "No PCBs" label are assumed to contain PCB.

Only limited fixtures were checked based on accessibility and safety concerns. Further inspection will be required during the course of construction, maintenance, renovation and demolition.

Various equipment and machinery within the building may also contain PCB oils. Specific findings relating to such equipment and machinery were not included in the RPF SOW.

It is common to find fluorescent light bulbs, thermostats and switches are present in buildings. RPF performed a visual inspection of specific areas included in the RPF SOW in an attempt to identify such materials. Findings are limited to the specific accessible space accessed by RPF.

Various compressor and refrigerant equipment may be present and is should be assumed that such equipment contains Freon or other chlorofluorocarbons unless otherwise tested or documented. Although general comment may be provided in the RPF Report, the specific identification of all potential Freon and CFCs is not included in the RPF SOW.

The findings may or may not be fully representative of all of the entire building. Confirmation testing and analysis of PCB, refrigerants and mercury was not included in the RPF SOW.

RPF followed applicable industry standards; however, RPF does not warrant or certify that all hazardous material in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspection, electrical safety considerations, and assumptions relating to areas or material being representative of other locations which in fact may not be representative. Also reference the Limitations document attached to the report.

LIMITATIONS

1. The observations and conclusions presented in the Report were based solely upon the services described herein, and not on scientific tasks or procedures beyond the RPF Environmental, Inc. Scope of Work (SOW) as discussed in the proposal and/or agreement. The conclusions and recommendations are based on visual observations and testing, limited as indicated in the Report, and were arrived at in accordance with generally accepted standards of industrial hygiene practice and asbestos professionals. The nature of this survey or monitoring service was limited as indicated herein and in the report or letter of findings. Further testing, survey, and analysis is required to provide more definitive results and findings.

2. For site survey work, observations were made of the designated accessible areas of the site as indicated in the Report. While it was the intent of RPF to conduct a survey to the degree indicated, it is important to note that not all suspect ACBM material in the designated areas were specifically assessed and visibility was limited, as indicated, due to the presence of furnishings, equipment, solid walls and solid or suspended ceilings throughout the facility and/or other site conditions. Asbestos or hazardous material may have been used and may be present in areas where detection and assessment is difficult until renovation and/or demolition proceeds. Access and observations relating to electrical and mechanical systems within the building were restricted or not feasible to prevent damage to the systems and minimize safety hazards to the survey team.

3. Although assumptions may have been stated regarding the potential presence of inaccessible or concealed asbestos and other hazardous material, full inspection findings for all asbestos and other hazardous material requires the use of full destructive survey methods to identify possible inaccessible suspect material and this level of survey was not included in the SOW for this project. For preliminary survey work, sampling and analysis as applicable was limited and a full survey throughout the site was not performed. Only the specific areas and /or materials indicated in the report were included in the SOW. This inspection did not include a full hazard assessment survey, full testing or bulk material, or testing to determine current dust concentrations of asbestos in and around the building. Inspection results should not be used for compliance with current EPA and State asbestos in renovation/demolition requirements unless specifically stated as intended for this use in the RPF report and considering the limitations as stated therein and within this limitations document.

4. Where access to portions of the surveyed area was unavailable or limited, RPF renders no opinion of the condition and assessment of these areas. The survey results only apply to areas specifically accessed by RPF during the survey. Interiors of mechanical equipment and other building or process equipment may also have asbestos and other hazardous material present and were not included in this inspection. For renovation and demolition work, further inspection by qualified personnel will be required during the course of construction activity to identify suspect material not previously documented at the site or in this survey report. Bordering properties were not investigated and comprehensive file review and research was not performed.

5. For lead in paint, observations were made of the designated accessible areas of the site as indicated in the Report. Limited testing may have been performed to the extent indicated in the text of the report. In order to conduct thorough hazard assessments for lead exposures, representative surface dust testing, air monitoring and other related testing throughout the building, should be completed. This type of in depth testing and analysis was beyond the scope of services for the initial inspection. For lead surveys with XRF readings, it is recommended that surfaces found to have LBP or trace amount of lead detected with readings of less than 4 mg/cm^2 be confirmed using laboratory analysis if more definitive results are required. Substrate corrections involving destructive sampling or damage to existing surfaces (to minimize XRF read-through) were not completed. In some instances, destructive testing may be required for more accurate results. In addition, depending on the specific thickness of the paint films on different areas of a building component, differing amounts of wear, and other factors, XRF readings can vary slightly, even on the same building component. Unless otherwise specifically stated in the scope of services and final report, lead testing performed is not intended to comply with other state and federal regulations pertaining to childhood lead poisoning regulations.

6. Air testing is to be considered a "snap shot" of conditions present on the day of the survey with the understanding that conditions may differ at other times or dates or operational conditions for the facility. Results are also limited based on the specific analytical methods utilized. For phase contrast microscopy (PCM) total airborne fiber testing, more sensitive asbestos-specific analysis using transmission electron microscopy (TEM) can be performed upon request.

7. For asbestos bulk and dust testing, although polarize light microscopy (PLM) is the method currently recognized in State and federal regulations for asbestos identification in bulk samples, some industry studies have found that PLM may not be sensitive enough to detect all of the asbestos fibers in certain nonfriable material, vermiculate type insulation, soils, surface dust, and other materials requiring more sensitive analysis to identify possible asbestos fibers. In the event that more definitive results are requested, RPF recommends that confirmation testing be completed using TEM methods or other analytical methods as may be applicable to the material. Detection of possible asbestos fibers may be made more difficult by the presence of other non-asbestos fibrous components such as cellulose, fiber glass, etc., by binder/matrix materials which may mask or obscure fibrous components, and/or by exposure to conditions capable of altering or transforming asbestos. PLM 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.

8. For hazardous building material inspection or survey work, RPF followed applicable industry standards; however, RPF does not warrant or certify that all asbestos or other hazardous materials in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due to several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspect, assumptions regarding the determination of homogenous groups of suspect material, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar material.

9. Full assessments often requires multiple rounds of sampling over a period of time for air, bulk material, surface dust and water. Such comprehensive testing was beyond the scope of RPF services. In addition clearance testing for abatement, as applicable, was based on the visual observations and limited ambient area air testing as indicated in the report and in accordance with applicable state and federal regulations. The potential exists that microscopic surface dust remains with contaminant present even in the event that the clearance testing meets the state and federal requirements. Likewise for building surveys, visual observations are not sufficient alone to detect possible contaminant in settled dust. Unless otherwise specifically indicated in the report, surface dust testing was not included in the scope of the RPF services.

10. For abatement or remediation monitoring services: RPF is not responsible for observations and test for specific periods of work that RPF did not perform full shift monitoring of construction, abatement or remediation activity. In the event that problems occurred or concerns arouse regarding contamination, safety or health hazards during periods RPF was not onsite, RPF is not responsible to provide documentation or assurances regarding conditions, safety, air testing results and other compliance issues. RPF may have provided recommendations to the Client, as needed, pertaining to the Client's Contractor compliance with the technical specifications, schedules, and other project related issues as agreed and based on results of RPF monitoring work. However, actual enforcement, or waiving of, contract provisions and requirements as well as regulatory liabilities shall be the responsibility of Client and Client's Contractor(s). Off-site abatement activities, such as waste transportation and disposal, were not monitored or inspected by RPF.

11. For services limited to clearance testing following abatement or remediation work by other parties: The testing was limited to clearance testing only and as indicated in the report and a site assessment for possible environmental health and safety hazards was not performed as part of the scope of this testing. Client, or Client's abatement contractor as applicable, was responsible for performing visual inspections

of the work area to determine completeness of work prior to air clearance testing by RPF.

12. For site work, including but not limited to air clearance testing services, in which RPF did not provide full site safety and health oversight, abatement design, full shift monitoring of all site activity, RPF expresses no warranties, guarantees or certifications of the abatement work conducted by the Client or other employers at the job site(s), conditions during the work, or regulatory compliance, with the exception of the specific airborne concentrations as indicated by the air clearance test performed by RPF during the conditions present for the clearance testing. Unless otherwise specifically noted in the RPF Report, visual inspections and air clearance testing results apply only to the specific work area and conditions present during the testing. RPF did not perform visual inspections of surfaces not accessible in the work area due to the presence of containment barriers or other obstructions. In these instances, some contamination may be present following RPF clearance testing and such contamination may be exposed during and after removal of the containment barriers or other obstructions following RPF testing services. Client or Client's Contractor is responsible for using appropriate care and inspection to identify potential hazards and to remediate such hazards as necessary to ensure compliance and a safe environment.

13. The survey was limited to the material and/or areas as specifically designated in the report and a site assessment for other possible environmental health and safety hazards or subsurface pollution was not performed as part of the scope of this site inspection. Typically, hazardous building materials such as asbestos, lead paint, PCBs, mercury, refrigerants, hydraulic fluids and other hazardous product and materials may be present in buildings. The survey performed by RPF only addresses the specific items as indicated in the Report.

14. For mold and moisture survey services, RPF services did not include design or remediation of moisture intrusion. Some level of mold will remain at the site regardless of RPF testing and Contractor or Client cleaning efforts. RPF testing associated with mold remediation and assessments is limited and may or may not be representative of other surfaces and locations at the site. Mold growth will occur if moisture intrusion deficiencies have not been fully remedied and if the site or work areas are not maintained in a sufficiently dry state. Porous surfaces in mold contaminated areas which are not removed and disposed of will likely result in future spore release, allergen sources, or mold contamination.

15. Existing reports, drawings, and analytical results provided by the Client to RPF, as applicable, were not verified and, as such, RPF has relied upon the data provided as indicated, and has not conducted an independent evaluation of the reliability of these data.

16. Where sample analyses were conducted by an outside laboratory, RPF has relied upon the data provided, and has not conducted an independent evaluation of the reliability of this data.

17. All hazard communication and notification requirements, as required by U.S. OSHA regulation 29 CFR Part 1926, 29 CFR Part 1910, and other applicable rules and regulations, by and between the Client, general contractors, subcontractors, building occupants, employees and other affected persons were the responsibility of the Client and are not part of the RPF SOW.

18. The applicability of the observations and recommendations presented in this report to other portions of the site was not determined. Many accidents, injuries and exposures and environmental conditions are a result of individual employee/employer actions and behaviors, which will vary from day to day, and with operations being conducted. Changes to the site and work conditions that occur subsequent to the RPF inspection may result in conditions which differ from those present during the survey and presented in the findings of the report.

RPF Environmental
TESTING & CONSULTING SERVICES
Hazardous Materials Inspection & Assessment
Asbestos, Mold, Lead Paint, Radon, PCBs
Air Quality Testing and Investigations
Industrial Hygiene, Safety & Training

December 10, 2018

Tim Nichols
AECm Architects/Engineers
Principal Engineer
13 Water Street
Newmarket, NH 03857

Re: Former Paul A. Doble US Army Reserve Center
125 Cottage St., Portsmouth, NH
Limited Building Survey Findings
RPF File No. 188695

Dear Mr. Nichols:

On November 15, 2018, RPF Environmental, Inc. (RPF) conducted a limited survey at the Former Paul A. Doble US Army Reserve Center located at 125 Cottage Street in Portsmouth, New Hampshire. The limited survey was performed in interior of the building, as designated by you or your site representative, for accessible asbestos containing building material (ACBM), as indicated herein. This limited survey was conducted as a follow-up to a previous limited survey conducted of exterior window sealants by RPF that was conducted on July 30, 2018. Below is a summary of findings, discussion of the results and preliminary recommendations for proper management of the identified ACBM. Attached to this report are the survey data tables, laboratory results, survey methodologies and limitations.

This report is not intended to be used as an abatement specification or work plan. To proceed with abatement work, the following important steps are necessary:

1. A work plan or project design documents must be prepared prior to abatement by a certified abatement project designer. The abatement specification or work plan should then be used to solicit bids from qualified abatement contractors. Only properly licensed contractors should be used for asbestos abatement and disposal.

2. A qualified industrial hygiene/testing consultant should conduct sufficient testing and inspections of the work, independent of the abatement contractor. The consultant should also prepare final abatement reports for the work.

Summary of Findings

The Former Paul A. Doble US Army Reserve Center is comprised of a single-story, masonry building with offices and storage rooms in the front and a larger assembly hall in the rear. The scope of the survey included accessible ACBM in accordance with the initial asbestos inspection requirements prior to renovation or demolition work as stated in the state regulations and applicable federal regulations.

This survey was limited to the materials identified as being disturbed by a planned renovation to the building as detailed in demolition plan D101 provided by your office (included as Appendix B).

Existing survey and testing information provided by Client to RPF during this project includes a limited building survey report from RPF Environmental dated July 30, 2018, and an Asbestos Containing Material Re-Inspection Report prepared by Alliant Corporation dated June 5, 2013. Based on the review of the existing survey records, the following materials are identified as ACBM:

- Pipe and Fitting Insulation
- 9" Floor Tile and Black Mastic
- Exterior Window Trim Caulk
- Exterior Door Trim Caulk

At the time of this survey, RPF identified several types of additional suspect asbestos-containing building material (ACBM) were observed by RPF, including friable and nonfriable suspect material. Based on the testing performed by RPF, asbestos was detected in the following materials:

- Building Seam Caulk
- Interior Door Caulk
- Gypsum Board and Joint Compound
- Blackboard Adhesive (assumed)

Except for the window caulking, exterior portions of the building were not included in this survey.

Depending on the extent of renovation and final construction plans, proper abatement and/or management of the materials will be required in accordance with applicable State and federal regulations. Renovation and demolition plans should be reviewed by a certified industrial hygienist and an accredited project designer for possible asbestos impact issues. Based on the impact assessment and planned usage, technical specifications should be prepared for abatement, as applicable. A management plan should also be prepared to address any asbestos or other hazardous material scheduled to remain after construction.

Discussion of Findings

Asbestos is the name for a group of naturally occurring minerals that separate into strong, very fine fibers. The adverse health effects associated with asbestos exposure have been extensively studied for many years. Results of these studies and epidemiological investigations have demonstrated that inhalation of asbestos fibers may lead to increased risk of developing one or more diseases. In all cases, extreme care must be used not to disturb asbestos-containing materials or to create fiber release episodes.

In the accessible locations surveyed, RPF identified six (6) homogeneous groups of accessible suspect asbestos-containing building material. Suspect materials were identified based on current industry standards, EPA, and other guideline listings of potential suspect ACBM.

The following is a summary list of the suspect ACBM identified and sampled during this survey:

- Floor Caulk
- Interior Door Caulk
- Suspended Ceiling Tiles
- Seam Caulk
- Window Wall Caulk
- Gypsum Board and Joint Compound
- Ceramic Wall Tile Grout
- Plaster (previously tested)
- Ceramic Floor Tile Grout (previously tested)

A total of fourteen (14) samples were extracted from the different groups of suspect material in accordance with EPA sampling protocols. Of the samples collected by RPF, asbestos was detected in three (3) groups of suspect ACBM.

Table 1 of Appendix A includes a list of ACBM and accessible asbestos identified in the building, EPA category listings, and asbestos content. A listing of the different homogenous groups of suspect material identified, samples collected, and analytical results is included in Appendix A. Confirmation testing was included in the RPF scope of work for limited materials only. For the purposes of this survey, any items previously found to contain asbestos are assumed ACBM.

With the exception of the accessible pipe insulation, the boiler room was specifically excluded from the scope of this limited survey at the direction of your onsite representative. RPF was instructed that the boiler room was not being renovated as part of this project.

The ACBM identified during this survey consists of friable and nonfriable material. The nonfriable ACBM was observed to be in good to fair condition and, left undisturbed and properly managed, is unlikely to cause any major fiber release episodes. Overall, the friable ACM consists of pipe and fitting insulation that was observed to be in fair condition throughout most of the building with the exception of damaged pipe fitting insulation observed in Room 2. Care should be used to prevent further damage and to ensure that dust is not disturbed and made airborne in areas with damaged ACBM. Access to the damaged piping locations should be restricted until proper cleaning and abatement has been completed.

As you can see in the analytical results, some of the composite samples of wallboard and joint compound material were found to have trace amounts (<1%) of asbestos present. Current definitions for ACBM include materials found to have greater than 1% asbestos content. Layered analysis of this composite material was performed, and asbestos was not detected in the wallboard layer and 3% asbestos was detected in the joint compound. Therefore, the joint compound is classified as ACBM.

Although the standard polarized light method of analysis was completed pursuant to current state and federal regulations, it is recommended that the composite samples of gypsum and joint, that were found to have trace amounts of asbestos be confirmed using point-count analytical methods for more definitive results. If confirmed to contain less than 1% asbestos, the material would not be regulated in the State of NH as an ACBM for removal and disposal, although the material is still regulated by OSHA for worker exposures, engineering controls and related safe work practices. Please refer to the information sheet regarding asbestos in gypsum and joint compound included in Appendix D for additional information. If you would like to arrange for this additional lab work, please contact our office as soon as possible.

Suspect materials encountered at the site subsequent to this survey, which are not included on the enclosed listings of suspect material sampled, should be assumed to be ACBM until proper testing proves otherwise (for example prior to any disturbance due to maintenance, renovation or demolition activity). Please notify RPF in this event to arrange for proper testing and assessments. Please reference the attached methodology and limitations.

Conclusions

Based on the survey findings, the building was found to contain ACBM. Damaged ACBM should be repaired and/or removed and appropriate surface decontamination performed by qualified personnel.

In accordance with current regulatory requirements, ACBM that may be impacted or disturbed (such that asbestos fiber release occurs) by renovation, demolition or other such activity must be removed by qualified, licensed firms. Although regulations for removal of nonfriable ACBM are somewhat less stringent than the requirements for friable ACBM, it should be noted that nonfriable ACBM that is subjected to grinding, abrasion, and other forces, could be rendered friable. In this event, the nonfriable ACBM would be re-categorized friable ACBM.

ACBM that will not be impacted by renovation or demolition activity may be left in place if managed properly and if the materials are maintained in good condition. ACBM to remain in the building should be included in an asbestos management plan and operations and maintenance (O&M) program detailing the measures to be used to safely occupy the building until the ACBM is fully removed. An accredited Management Planner should prepare the O&M Program in accordance with the guidelines set forth in 40 CFR Part 763 (AHERA).

Sufficiently in advance of the start of renovation and/or remediation work, abatement project design should be completed. As part the initial design steps any planned renovation and demolition activity should be reviewed for potential impact on ACBM. Asbestos removal is highly regulated at the State and federal level, and in some cases, at the local level also. Notification to NH Air Resources is required 10-days prior to the start of interior abatement work and demolition. Only qualified, trained, and licensed firms, as applicable, should be engaged to complete asbestos removal or other abatement activity. Asbestos abatement work must be designed (abatement specifications or work plan prepared) by accredited personnel.

All employees and contractors that may access or otherwise disturb areas with suspect ACBM present should be notified of the presence of ACBM and possible hidden ACBM, and the need to use caution when proceeding with work. Appropriate notifications, labeling and other hazard communications should be completed to all employees, contractors and others in accordance with US OSHA regulations and other applicable requirements (including asbestos labeling in accordance with 29 CFR Part 1926). The scope of RPF services for this survey did not include labeling of ACBM or hazard communications to other employees, building occupants, contractors, or subcontractors.

Documentation of current ACBM conditions and in-depth hazard assessment is beyond the scope-of-work for this initial survey. With the exception of the specific testing and analysis detailed herein, no other samples of materials, oil, water, ground water, air, or other suspect hazardous materials were collected in the course of this inspection that supports or denies these conclusions. No additional services beyond those explicitly stated herein were performed and none should be inferred or implied. The summary and conclusions are based on reasonably ascertainable information as described in this report. RPF Environmental, Inc. makes no guarantees, warranties, or references regarding this property or the condition of the property after the period of this report.

If you have any questions at this time, or if you would like to discuss the remediation process, please call our office.

Sincerely,
RPF ENVIRONMENTAL, INC.

Allan D. Mercier, CMC
Field Operations Manager
Licensed Asbestos Inspector

Enclosures:
Appendix A: Data and Analytical Tables
Appendix B: Drawing Showing ACM Locations
Appendix C: Photographs
Appendix D: NH Only-Special Note for Gypsum Wall Board Layering and Analysis Methods
Appendix E: Summary of Methodology and Limitations

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APPENDIX A

TABLE 1

AECm ARCHITECTS / ENGINEERS
Former Paul A. Doble US Army Reserve Center
125 Cottage Street, Portsmouth
Limited Bulk Material Survey

SUMMARY OF ACBM & ASBESTOS IDENTIFIED

Building Material	Location	Approximate Quantity	EPA Category	Asbestos Results
9" Floor Tile and Black Mastic	Throughout building in Rooms 1, 2, 3, 4, 5, 6, 7, 8, 10, 13, 15, 17, 18, and Corridors.	5,750 square feet	Category I Nonfriable	Previously Identified (Alliant)
Pipe and Fitting Insulation	Room 18, Corridor, Drill Hall and Boiler Room	300 linear feet	Friable ACM	Previously Identified (Alliant)
Pipe Fitting Insulation (on fiberglass runs)	Throughout building in Rooms 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 16, 17,18, 20, Drill Hall and Boiler Room	275 fittings	Friable ACM	Previously Identified (Alliant)
Exterior Window Caulk	Throughout Exterior of Building at edges of window openings	400 linear feet (26 openings)	Category II Nonfriable	Previously Identified (RPF)
Exterior Door Caulk	Throughout exterior of building at edges of door openings	75 linear feet (4 openings)	Category II Nonfriable	Previously Identified (RPF)
Interior Building Seam Caulk	Throughout building at building seams	120 linear feet	Category II Nonfriable	3% Chrysotile
Interior Door Caulk	Throughout building interior around door frames	450 linear feet (28 openings)	Category II Nonfriable	3% Chrysotile
Gypsum Board and Joint Compound (as composite material)	Divider walls between Rooms 3/5, 8/10, 4/7, & 15/17	460 square feet	Non-ACM	Trace Chrysotile
Joint Compound (as an individual material)	Divider walls between Rooms 3/5, 8/10, 4/7, & 15/17 at nail heads and seam edges	46 square feet	Category II Nonfriable	3% Chrysotile
Chalkboard Adhesive	Rooms 1, 2, & 5, underneath chalkboards mounted to walls	110 square feet	Category II Nonfriable	Assumed (inaccessible)

Notes:

- Table 1 does not include a listing of all ACBM and suspect ACBM present at the site, only the materials found to be ACBM during the limited testing of this limited survey. Full testing and inspections are required to further identify the types, locations and quantities of ACBM present at this site.
- Please note that Category 1 and Category 2 nonfriable ACM are recategorized as friable and/or RACM under certain conditions. Current State asbestos regulations are more strict and comprehensive than the EPA NESHAPs requirements.
- All quantities are approximate only and should be confirmed during abatement project design and abatement bidding.
- It is possible that some concealed or inaccessible ACBM is present. Care should be used when renovating/demolishing inaccessible building space. Further explorative survey work may be necessary during design and/or in conjunction with demolition.

TABLE 2

AECm ARCHITECTS / ENGINEERS
Former Paul A. Doble US Army Reserve Center
125 Cottage Street, Portsmouth
Limited Bulk Material Survey

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: November 15, 2018

Sample ID	Description	Asbestos Content	Asbestos Components	Fibrous Components	Non Fibrous Components
111518HG1a	Floor caulk, grey/tan, Drill Hall	None Detected		--	100% Other
111518HG1b	Floor caulk, grey/tan, Drill Hall	None Detected		--	100% Other
111518HG2a	Interior Door Caulk, grey, hallway at Room 4	Positive	3% Chrysotile	--	97% Other
111518HG2b	Interior Door caulk, grey, Room 12	*SFP		--	--
111518HG3a	Suspended ceiling tiles, grey, Room 4	None Detected		15% Cellulose 80% Fiber Glass	1% Other 4% Perlite
111518HG3b	Suspended ceiling tiles, grey, Room 2	None Detected		15% Cellulose 80% Fiber Glass	1% Other 4% Perlite
111518HG5a	Seam caulk, grey, hallway by Room 4	Positive	3% Chrysotile	--	97% Other
111518HG5b	Seam caulk, grey, hallway by window wall	*SFP		--	--
111518HG6a	Window Wall Caulk, grey, hallway at window wall, outer trim	None Detected		--	100% Other
111518HG6b	Window Wall Caulk, grey, hallway at window wall, outer trim	None Detected		--	100% Other
111518HG7a	Gypsum board and joint compound, white, Room 10 wall *gypsum board: none detect – joint compound: 3% chrysotile*	Positive	<1% Chrysotile	10% Cellulose	90% Other
111518HG7b	Gypsum board and joint compound, white, Room 13 wall *gypsum board: none detect – joint compound: 3% chrysotile*	Positive	<1% Chrysotile	10% Cellulose	90% Other
111518HG8a	Grout, white, women's bathroom, wall	None Detected		--	100% Other
111518HG8b	Grout, white, men's bathroom, wall	None Detected		--	100% Other

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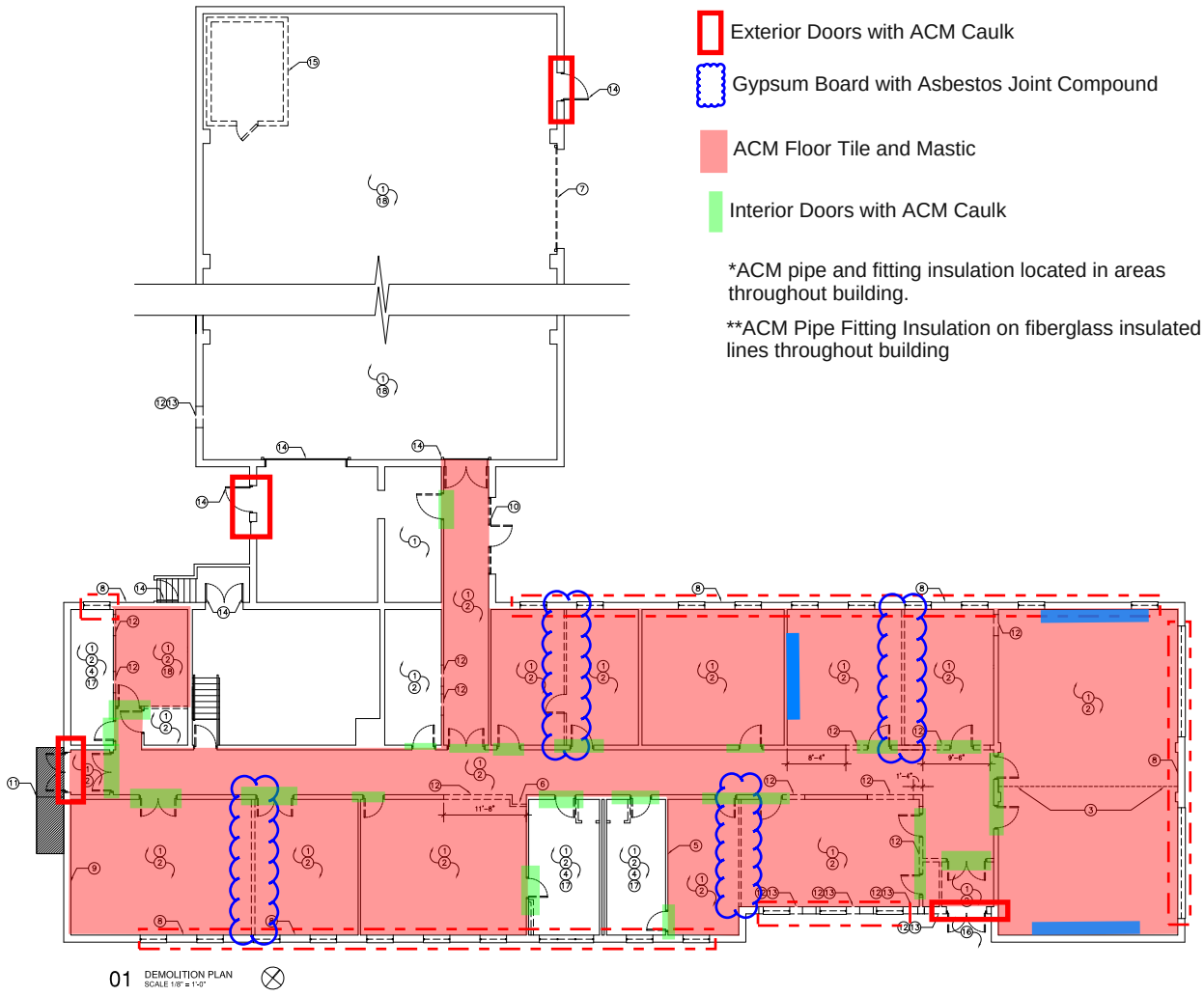
Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

APPENDIX B



01 DEMOLITION PLAN
SCALE 1/8" = 1'-0"

ACM Chalkboard GLue Daubs

Exterior Windows with ACM Caulk

Exterior Doors with ACM Caulk

Gypsum Board with Asbestos Joint Compound

ACM Floor Tile and Mastic

Interior Doors with ACM Caulk

*ACM pipe and fitting insulation located in areas throughout building.

**ACM Pipe Fitting Insulation on fiberglass insulated lines throughout building

DEMOLITION GRAPHIC KEY

DOOR TO BE REMOVED

WINDOW TO BE REMOVED

PARTITION TO BE DEMOLISHED

GENERAL DEMOLITION NOTES

1. OWNER SHALL ABATE ALL ASBESTOS CONTAINING MATERIALS PRIOR TO DEMOLITION. ANY SUSPECTED HAZARDOUS MATERIALS ENCOUNTERED DURING DEMOLITION SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER IMMEDIATELY.

2. CONTRACTOR SHALL INVENTORY ALL EXISTING FURNISHINGS AND APPLIANCES AND PROVIDE TO OWNER. OWNER SHALL IDENTIFY ALL FURNISHINGS TO REMAIN. DURING CONSTRUCTION, CONTRACTOR SHALL STORE ALL EXISTING FURNISHINGS TO REMAIN.

3. CONTRACTOR IS RESPONSIBLE FOR TRANSPORTATION AND DISPOSAL OF ALL REMOVED MATERIALS, FIXTURES, AND FURNISHINGS AT A PERMITTED LANDFILL OR RECYCLING FACILITY.

4. REMOVE EXISTING CONCRETE SLAB AS REQUIRED FOR NEW PLUMBING AND PITCH TO NEW FLOOR DRAINS. COORDINATE WITH PLUMBING DRAWINGS.

5. REMOVE ALL EXISTING WALL-MOUNTED MATERIAL INCLUDING SIGNAGE, BOARDS, CASES, SHELVING, WINDOW COVERINGS, DECOR, ETC; SEE GENERAL DEMO. NOTE 2.

6. REMOVE ALL EXISTING FURNISHINGS INCLUDING FURNITURE, LOCKERS, STORAGE, ETC; SEE GENERAL DEMO. NOTE 2.

7. REMOVE ALL EXISTING WINDOWS U.O.N.

8. REMOVE ALL EXISTING DOORS U.O.N.

DEMOLITION KEY NOTES

1. SEE GENERAL DEMOLITION NOTE 1.
2. REMOVE EXISTING ACT CEILING GRID AND GWB CEILING ABOVE; SEE MECHANICAL DWGS FOR EXTENT OF MECHANICAL EQUIPMENT & DUCTWORK REMOVAL AND ELECTRICAL DWGS FOR EXTENT OF LIGHTING & ELECTRICAL REMOVAL.
3. REMOVE EXISTING OPERABLE ACCORDIAN PARTITION AND TRACK.
4. REMOVE EXISTING PLUMBING FIXTURES; CUT AND CAP. SEE PLUMBING DWGS.
5. COORDINATE WITH HVAC CONTRACTOR TO PROVIDE ROOF PENETRATION AS REQUIRED FOR FIREPLACE VENTING PER SPECIFICATION.
6. REMOVE EXISTING WATER FOUNTAIN; CUT AND CAP.
7. REMOVE EXISTING OVERHEAD DOOR, TRACK & ASSOCIATED EQUIP.
8. REMOVE THROUGH WALL AIR CONDITIONING UNIT AND PREPARE FOR INFILL.
9. REMOVE METAL STORAGE CAGE
10. REMOVE EXISTING ALUMINUM STOREFRONT
11. REMOVE EXISTING CONCRETE RAMP; SEE CIVIL DWGS.
12. REMOVE AREA OF WALL IN PREPARATION FOR NEW OPENING; COORDINATE SIZE AND LOCATION OF OPENING WITH CONSTRUCTION PLAN AND DOOR SCHEDULE.
13. RETAIN REMOVED BRICK FOR PATCHING AND INFILL.
14. DOOR EXISTING TO REMAIN
15. REMOVE AND DISPOSE OF MUNITIONS VAULT
16. SELECTIVE DEMOLITION OF EXISTING EXTERIOR SOFFIT; COORDINATE WITH ARCHITECT IN FIELD.
17. REMOVE EXISTING TOILET PARTITIONS, WALL TILE AND WALL-MOUNTED ACCESSORIES.
18. EXISTING CLERESTORY WINDOWS TO REMAIN

MANYPENNY | MURPHY ARCHITECTURE
80 PENHALLOW STREET, PORTSMOUTH, NH 03801
TEL: 603-431-5456

LICENSED ARCHITECT
BRIAN PAUL MURPHY
No. 03807
STATE OF NEW HAMPSHIRE

CLIENT

PORTSMOUTH SENIOR ACTIVITY CENTER

125 COTTAGE ST.
PORTSMOUTH, NH

REVISIONS		
No.	DESCRIPTION	DATE
1	75% SUBMISSION	12/15/2017
2	95% SUBMISSION	01/12/2018
3	100% SUBMISSION	02/23/2018
4	ISSUED FOR BID	09/12/2018

DEMOLITION PLAN

PROJECT NO.:	PROJECT#
DATE ISSUED:	02/23/2018
SCALE:	
DRAWN BY:	ECC
REVIEWED BY:	BPM

D101

PROJECT PHASE:
FOR CONSTRUCTION

APPENDIX C

1. Former Paul A. Doble US Army Reserve Center

2. Typical ACM 9” Floor Tile and Black Mastic throughout

3. Typical ACM Pipe and Fitting Insulation located throughout building

4. Typical ACM Fitting Insulation on fiberglass insulated piping runs throughout building

5. Typical windows with ACM trim caulk located throughout building

6. Typical door opening with ACM caulk at trim located throughout building

EXAMPLE PICTURES		RPF Environmental TESTING & CONSULTING SERVICES
Site Address: AECm ARCHITECTS / ENGINEERS Former Paul A. Doble US Army Reserve Center		www.airpf.com **888-SAFE AIR** **File No. 188841**

APPENDIX D

Special Note for Gypsum Wall Board Layering and Analysis Methods: NH

Current definitions for ACBM include materials found to have greater than 1% asbestos content by polarized light microscopy (PLM). In some cases the joint compound may be found to contain, for example, 2-5% asbestos and the gypsum layer is non-detect for asbestos. Based on the typical volume of a total sample with both materials, often times this may result in a sample concentration of trace, or less than 1% asbestos as a composite material.

Based on current NH DES and EPA NESHAP regulations, composite wallboard and joint compound materials typically can be classified as non-regulated ACM if as a composite they are found to contain <1% asbestos and may be disposed of as standard C&D solid waste.

However, OSHA requirements would still apply for work practices and engineering controls for the removal of the gypsum and joint compound. In addition, the requirements of each individual State that the waste would travel through or be disposed of in, along with the individual requirements of any landfills used would also need to be reviewed. For instance in the case of Massachusetts, they have indicated that regardless of the composite analysis results, if the joint compound is found to be ACBM *as a single layer*, then all the waste stream must be handled as regulated asbestos waste if it is in or transported through the State, as much waste is.

As a result, the approach for sampling is to start with composite PLM samples of both joint compound and gypsum board. A sufficient number of samples are collected per EPA protocols and if no asbestos is found in the homogenous group, then that sample set is categorize as non-ACBM.

If a composite sample is found to contain trace asbestos, then in an effort to address the State and federal regulations, the sample is then analyzed further by individual layer. If any individual layer is found to have trace amounts of asbestos, then the EPA requires further analysis using point count PLM methods for quantification. In some cases with low borderline concentrations, point count may also be recommended regardless to confirm concentrations.

Finally in cases with certain sample matrixes, the analyst may also suggest further analysis with transmission electron microscopy (TEM) on a case by case basis.

This is a summary of approach only. Each sampling situation also requires review by the onsite inspector based on their observations and additional pertinent site information.

For further information, please contact RPF Environmental, Inc.

APPENDIX E

Summary of Methodology: Asbestos-Containing Building Materials Survey

EPA accredited inspector(s) surveyed accessible space in the building or site areas included within the RPF Scope of Work (SOW) to identify suspect asbestos-containing building material (ACBM). Suspect ACBM was inventoried and categorized into homogeneous groups of materials. To the extent indicated in the report, samples were then extracted from the different groups of homogeneous materials in accordance with applicable State and federal rules and regulations. For surveys in which the SOW included full inspections of the affect space, sampling methodologies were based on the requirements set forth in 40 CFR Part 763 (EPA) and 29 CFR Part 1926.1101 (OSHA). For preliminary or limited surveys, findings apply to only the affected material or space as indicated in the RPF SOW and Report and additional inspection and testing will be required to satisfy regulatory obligations associated with renovation, demolition, maintenance and other occupational safety and health requirements.

Collected samples were individually placed into sealed containers, labeled, and submitted with proper chain of custody forms to the RPF NVLAP-accredited vendor laboratory. Sample containers and tools were cleaned after each sample was collected. Samples were analyzed for asbestos content using polarized light microscopy (PLM). Although PLM is the method currently recognized in State and federal regulations for asbestos identification in bulk samples, PLM may not be sensitive enough to detect all of the asbestos fibers in certain types of materials, such as floor tile and other nonfriable ACBM. In the event that more definitive results are requested in cases of with negative or trace results of asbestos are detected, RPF recommends that confirmation testing be completed using transmission electron microscopy.

For each homogeneous group of suspect material, a "stop at first positive" (SFP) method may have been employed during the analysis. The SFP method is based on current EPA sampling protocols and means that if one sample within a homogeneous group of suspect material is found to contain >1% asbestos, then further analysis of that specific homogenous group samples is terminated and the entire homogeneous group of material is considered to be ACBM regardless of the other sample results. This is based on the potential for inconsistent mix of asbestos in the product yielding varying findings across the different individual samples collected from the same homogeneous group. Unless otherwise noted in the report, sample groups found to have 1% to <10% asbestos content are assumed to be ACBM; to rebut this assumption further analysis with point count methods are required.

Inaccessible and hidden areas, including but not limited to wall/floor/ceiling cavity space, space with obstructed access (such as fiberglass insulation above suspended ceilings), sub floors, interiors of mechanical and process equipment, and similar spaces were not included in the inspection and care should be used when accessing these areas in the future. Unless otherwise noted in the RPF Report, destructive survey techniques were not employed during this survey.

In the event that additional suspect materials are encountered that are not addressed in this report, the materials should be properly tested by an accredited inspector. For example, during renovation and demolition it is likely that additional suspect material will be encountered and such suspect materials should be assumed to be hazardous until proper inspection and testing occurs.

RPF followed applicable industry standards; however, various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspection, assumptions regarding the determination of homogenous groups of suspect material, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar material. Also reference the Limitations document attached to the report.

LIMITATIONS

1. The observations and conclusions presented in the Report were based solely upon the services described herein, and not on scientific tasks or procedures beyond the RPF Environmental, Inc. Scope of Work (SOW) as discussed in the proposal and/or agreement. The conclusions and recommendations are based on visual observations and testing, limited as indicated in the Report, and were arrived at in accordance with generally accepted standards of industrial hygiene practice and asbestos professionals. The nature of this survey or monitoring service was limited as indicated herein and in the report or letter of findings. Further testing, survey, and analysis is required to provide more definitive results and findings.

2. For site survey work, observations were made of the designated accessible areas of the site as indicated in the Report. While it was the intent of RPF to conduct a survey to the degree indicated, it is important to note that not all suspect ACBM material in the designated areas were specifically assessed and visibility was limited, as indicated, due to the presence of furnishings, equipment, solid walls and solid or suspended ceilings throughout the facility and/or other site conditions. Asbestos or hazardous material may have been used and may be present in areas where detection and assessment is difficult until renovation and/or demolition proceeds. Access and observations relating to electrical and mechanical systems within the building were restricted or not feasible to prevent damage to the systems and minimize safety hazards to the survey team.

3. Although assumptions may have been stated regarding the potential presence of inaccessible or concealed asbestos and other hazardous material, full inspection findings for all asbestos and other hazardous material requires the use of full destructive survey methods to identify possible inaccessible suspect material and this level of survey was not included in the SOW for this project. For preliminary survey work, sampling and analysis as applicable was limited and a full survey throughout the site was not performed. Only the specific areas and /or materials indicated in the report were included in the SOW. This inspection did not include a full hazard assessment survey, full testing or bulk material, or testing to determine current dust concentrations of asbestos in and around the building. Inspection results should not be used for compliance with current EPA and State asbestos in renovation/demolition requirements unless specifically stated as intended for this use in the RPF report and considering the limitations as stated therein and within this limitations document.

4. Where access to portions of the surveyed area was unavailable or limited, RPF renders no opinion of the condition and assessment of these areas. The survey results only apply to areas specifically accessed by RPF during the survey. Interiors of mechanical equipment and other building or process equipment may also have asbestos and other hazardous material present and were not included in this inspection. For renovation and demolition work, further inspection by qualified personnel will be required during the course of construction activity to identify suspect material not previously documented at the site or in this survey report. Bordering properties were not investigated and comprehensive file review and research was not performed.

5. For lead in paint, observations were made of the designated accessible areas of the site as indicated in the Report. Limited testing may have been performed to the extent indicated in the text of the report. In order to conduct thorough hazard assessments for lead exposures, representative surface dust testing, air monitoring and other related testing throughout the building, should be completed. This type of in depth testing and analysis was beyond the scope of services for the initial inspection. For lead surveys with XRF readings, it is recommended that surfaces found to have LBP or trace amount of lead detected with readings of less than 4 mg/cm^2 be confirmed using laboratory analysis if more definitive results are required. Substrate corrections involving destructive sampling or damage to existing surfaces (to minimize XRF read-through) were not completed. In some instances, destructive testing may be required for more accurate results. In addition, depending on the specific thickness of the paint films on different areas of a building component, differing amounts of wear, and other factors, XRF readings can vary slightly, even on the same building component. Unless otherwise specifically stated in the scope of services and final report, lead testing performed is not intended to comply with other state and federal regulations pertaining to childhood lead poisoning regulations.

6. Air testing is to be considered a "snap shot" of conditions present on the day of the survey with the understanding that conditions may differ at other times or dates or operational conditions for the facility. Results are also limited based on the specific analytical methods utilized. For phase contrast microscopy (PCM) total airborne fiber testing, more sensitive asbestos-specific analysis using transmission electron microscopy (TEM) can be performed upon request.

7. For asbestos bulk and dust testing, although polarize light microscopy (PLM) is the method currently recognized in State and federal regulations for asbestos identification in bulk samples, some industry studies have found that PLM may not be sensitive enough to detect all of the asbestos fibers in certain nonfriable material, vermiculate type insulation, soils, surface dust, and other materials requiring more sensitive analysis to identify possible asbestos fibers. In the event that more definitive results are requested, RPF recommends that confirmation testing be completed using TEM methods or other analytical methods as may be applicable to the material. Detection of possible asbestos fibers may be made more difficult by the presence of other non-asbestos fibrous components such as cellulose, fiber glass, etc., by binder/matrix materials which may mask or obscure fibrous components, and/or by exposure to conditions capable of altering or transforming asbestos. PLM 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.

8. For hazardous building material inspection or survey work, RPF followed applicable industry standards; however, RPF does not warrant or certify that all asbestos or other hazardous materials in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due to several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspect, assumptions regarding the determination of homogenous groups of suspect material, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar material.

9. Full assessments often requires multiple rounds of sampling over a period of time for air, bulk material, surface dust and water. Such comprehensive testing was beyond the scope of RPF services. In addition clearance testing for abatement, as applicable, was based on the visual observations and limited ambient area air testing as indicated in the report and in accordance with applicable state and federal regulations. The potential exists that microscopic surface dust remains with contaminant present even in the event that the clearance testing meets the state and federal requirements. Likewise for building surveys, visual observations are not sufficient alone to detect possible contaminant in settled dust. Unless otherwise specifically indicated in the report, surface dust testing was not included in the scope of the RPF services.

10. For abatement or remediation monitoring services: RPF is not responsible for observations and test for specific periods of work that RPF did not perform full shift monitoring of construction, abatement or remediation activity. In the event that problems occurred or concerns arouse regarding contamination, safety or health hazards during periods RPF was not onsite, RPF is not responsible to provide documentation or assurances regarding conditions, safety, air testing results and other compliance issues. RPF may have provided recommendations to the Client, as needed, pertaining to the Client's Contractor compliance with the technical specifications, schedules, and other project related issues as agreed and based on results of RPF monitoring work. However, actual enforcement, or waiving of, contract provisions and requirements as well as regulatory liabilities shall be the responsibility of Client and Client's Contractor(s). Off-site abatement activities, such as waste transportation and disposal, were not monitored or inspected by RPF.

11. For services limited to clearance testing following abatement or remediation work by other parties: The testing was limited to clearance testing only and as indicated in the report and a site assessment for possible environmental health and safety hazards was not performed as part of the scope of this testing. Client, or Client's abatement contractor as applicable, was responsible for performing visual inspections

of the work area to determine completeness of work prior to air clearance testing by RPF.

12. For site work, including but not limited to air clearance testing services, in which RPF did not provide full site safety and health oversight, abatement design, full shift monitoring of all site activity, RPF expresses no warranties, guarantees or certifications of the abatement work conducted by the Client or other employers at the job site(s), conditions during the work, or regulatory compliance, with the exception of the specific airborne concentrations as indicated by the air clearance test performed by RPF during the conditions present for the clearance testing. Unless otherwise specifically noted in the RPF Report, visual inspections and air clearance testing results apply only to the specific work area and conditions present during the testing. RPF did not perform visual inspections of surfaces not accessible in the work area due to the presence of containment barriers or other obstructions. In these instances, some contamination may be present following RPF clearance testing and such contamination may be exposed during and after removal of the containment barriers or other obstructions following RPF testing services. Client or Client's Contractor is responsible for using appropriate care and inspection to identify potential hazards and to remediate such hazards as necessary to ensure compliance and a safe environment.

13. The survey was limited to the material and/or areas as specifically designated in the report and a site assessment for other possible environmental health and safety hazards or subsurface pollution was not performed as part of the scope of this site inspection. Typically, hazardous building materials such as asbestos, lead paint, PCBs, mercury, refrigerants, hydraulic fluids and other hazardous product and materials may be present in buildings. The survey performed by RPF only addresses the specific items as indicated in the Report.

14. For mold and moisture survey services, RPF services did not include design or remediation of moisture intrusion. Some level of mold will remain at the site regardless of RPF testing and Contractor or Client cleaning efforts. RPF testing associated with mold remediation and assessments is limited and may or may not be representative of other surfaces and locations at the site. Mold growth will occur if moisture intrusion deficiencies have not been fully remedied and if the site or work areas are not maintained in a sufficiently dry state. Porous surfaces in mold contaminated areas which are not removed and disposed of will likely result in future spore release, allergen sources, or mold contamination.

15. Existing reports, drawings, and analytical results provided by the Client to RPF, as applicable, were not verified and, as such, RPF has relied upon the data provided as indicated, and has not conducted an independent evaluation of the reliability of these data.

16. Where sample analyses were conducted by an outside laboratory, RPF has relied upon the data provided, and has not conducted an independent evaluation of the reliability of this data.

17. All hazard communication and notification requirements, as required by U.S. OSHA regulation 29 CFR Part 1926, 29 CFR Part 1910, and other applicable rules and regulations, by and between the Client, general contractors, subcontractors, building occupants, employees and other affected persons were the responsibility of the Client and are not part of the RPF SOW.

18. The applicability of the observations and recommendations presented in this report to other portions of the site was not determined. Many accidents, injuries and exposures and environmental conditions are a result of individual employee/employer actions and behaviors, which will vary from day to day, and with operations being conducted. Changes to the site and work conditions that occur subsequent to the RPF inspection may result in conditions which differ from those present during the survey and presented in the findings of the report.