

**FORT GEORGE G. MEADE**  
**ASBESTOS MANAGEMENT PROGRAM**

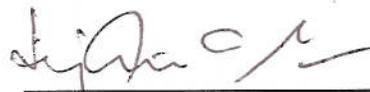
**Standing Operating Procedures (SOP)**

**October 2008**

**PROPONENT**

**DIRECTORATE OF PUBLIC WORKS**  
**ENVIRONMENTAL DIVISION**

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## CHAPTER 1

### GENERAL PROVISIONS

#### 1-1. INTRODUCTION:

Asbestos was used extensively in building materials during the years following World War II because of its durability, strength, ability to insulate, and fireproofing capability. Although asbestos-free substitute materials are being developed and utilized, asbestos materials continue to be encountered in Army facilities and applications. Asbestos-Containing Building Materials are still in use in construction. However, sprayed-on insulation and fireproofing applications of asbestos are banned by the US Environmental Protection Agency. Asbestos becomes a health hazard when it degrades into microscopic fibers. In an attempt to minimize environmental release and occupational and incidental exposure, the Directorate of Public Works (DPW) has conducted surveys for identifying asbestos-containing materials (ACMs) in post buildings and developed full management plans.

This management plan document is a subset of the full management plan. Rather than have one comprehensive document for the entire post, it was decided that surveys and management plans would be developed on a 'per building' basis. Information on each building would then be available. The survey report of each building will be maintained in the DPW Environmental Division (ED). The DPW ED shall be contacted for checking any impact on asbestos-containing building materials due to renovation, repair and self-help activities. Both friable and non-friable materials are assessed in the management plans in the same fashion as Asbestos Hazard Emergency Response Act (AHERA) protocols. The AHERA school standard is the strictest standard, hence offering a more complete analysis of the materials present. Additionally, exterior materials such as roofing and siding are checked. The management plan is a 'living document'. Periodic surveillance and documentation of repairs will be kept with the management plans to maintain a current working document for each building. Only after all asbestos-containing building materials are removed will the document be considered complete.

#### 1-2. PURPOSE:

- a. To establish safe and proper procedures that are in compliance with pertinent Federal, State and local regulations regarding asbestos handling activities.
- b. To maintain asbestos containing material in good condition and control the release of asbestos from both friable and non friable ACM.
- c. To minimize, to the greatest extent possible, the release of asbestos dust and their consequent human exposures.

### 1-3. SCOPE:

This SOP defines procedures and protocols used in the identification, control and removal of ACM from real properties at Fort Meade. This applies to all personnel, commands, directorates, activities, tenants, contractors, and organizations located or conducting operations at Fort Meade. This includes any activity engaged in the removal, disturbance, handling, or disposal of ACM or Presumed Asbestos Containing Material (PACM) which is defined as thermal system insulation and surfacing material found in buildings constructed no later than 1980 and not demonstrated to contain less than 1% asbestos.

### 1-4. POLICY:

The DPW policy is to identify all ACMs within its area of responsibility. Further, DPW will ensure control or abatement of all asbestos that poses an immediate health hazard. Asbestos that is non-friable and does not create an immediate health hazard will only be abated in conjunction with other projects involving renovation or demolition. For major renovation projects (individual rooms or buildings as a whole) all friable asbestos material will also be removed. Where it is economically feasible, non-friable materials will also be removed. For demolition projects, all asbestos material will be removed except for non-friable material that will not become friable during demolition, as defined by 40 CFR 61 Subpart M, paragraph 61.145.

### 1-5. APPLICABLE REGULATIONS:

#### a. ENVIRONMENTAL PROTECTION AGENCY (EPA) REGULATIONS:

- (1) 40 CFR 763 Subpart G, Asbestos Worker Protection
- (2) 40 CFR 61 Subpart M, EPA National Emission Standard for Asbestos
- (3) 40 CFR 763 Subpart I, Prohibition of the Manufacture, Importation, Processing, and Distribution in Commerce of Certain Asbestos-Containing Products; Labeling Requirements
- (4) 40 CFR 763 Subpart E, Asbestos-Containing Material in Schools

#### b. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS

- (1) 29 CFR 1926.1101, Construction Standard for Asbestos

(2) 29 CFR 1910.1001, General Industrial Standard for Asbestos

c. DEPARTMENT OF TRANSPORTATION (DOT) REGULATIONS

(1) 49 CFR Sections 171, 172, and 173, Packaging and transportation of asbestos-containing waste material.

d. MARYLAND DEPARTMENT OF ENVIRONMENT (MDE) REGULATIONS

(1) COMAR 26.11.21, Control of Asbestos

(2) COMAR 26.11.23, Asbestos Accreditation of Individuals

e. ARMY REGULATIONS:

(1) AR 200-1, Environmental Protection and Enhancement

(2) AR 420-70, Buildings and Structures

(3) AR 11-34, The Army Respiratory Protection Program

(4) AR 40-5, Preventive Medicine

(5) AR 385-10, The Army Safety Program

(6) Public Works Technical Bulletin No. 420-70-8, Installation Asbestos Program Management

(7) TB MED 513, Guidelines for the Evaluation and Control of Asbestos Exposure

(8) CEGS 13280, Corps of Engineers Guide Specification, Asbestos Abatement

f. OTHER REGULATIONS:

(1) Picerne Military Housing, Asbestos Containing Building Operations & Maintenance Manual

## 1-6. DEFINITIONS:

The following terms are topic specific to asbestos and are presented to clarify text used throughout this document.

**Asbestos:** A group of naturally occurring minerals that separate into fibers. Asbestos fibers are incombustible, are chemically resistant, and are characterized by the properties of thermal and electrical insulation. There are six asbestos minerals used commercially: chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite. This includes any of these minerals that has been chemically treated and/or altered.

**Asbestos abatement:** Procedures to remove ACM from buildings with the simultaneous control of the release of asbestos fibers. Additionally this includes activities or programs focused on the encapsulation, encasement, repair, and enclosure of ACM.

**Asbestos Containing Building Material (ACBM):** Surfacing ACM, Thermal System Insulation (TSI) ACM, or miscellaneous ACM found in or on interior structural ACBM members or other parts of a building. This definition is used in the AHERA regulations for school buildings.

**Asbestos Containing Materials (ACM):** The US EPA defines this as a material containing more than 1% by weight of the regulated asbestos minerals. OSHA defines it as any ACM product containing more than 0.1% by weight of regulated asbestos.

**Asbestos Management Coordinator:** The designated person from the DPW Environmental Division who maintains training requirements to be qualified as an Asbestos Inspector/Management Planner/Project Designer and serve as the “subject matter expert” of the program.

**Friable Asbestos:** Friable asbestos containing material refers to materials which are capable of being crumbled, pulverized, or reduced to powder by hand pressure when dry. Friable asbestos containing materials are usually found on overhead surfaces including steel beams, pipes, and ceilings. Occasionally it is found on walls, pipes, and boiler lagging which were applied by spraying and troweling. This may also include previously non-friable material which becomes broken or damaged by mechanical force.

**Hazardous waste:** Any material that no longer can be used for its intended purpose which exhibits the characteristics of ignitability, corrosivity, reactivity, or toxicity as identified in the U.S. Code of Federal Regulations, Title 40 - Protection of the Environment.

**Miscellaneous ACM:** Interior building material on structural components, structural members or fixtures, such as floor and ceiling tiles. This does not include surfacing material or TSI.

**Non friable ACM:** Material of greater than 1 percent asbestos into which the fibers have been

locked by a bonding agent, coating, binder, or other material in order to prevent the release of fibers during any appropriate use, handling, storage, transportation, or processing. Non-friable asbestos containing materials are usually found in the form of roofing, flooring, and siding materials. When previously non-friable asbestos becomes damaged to the extent that when dry it may be crumbled, pulverized or reduced to a powder during the removal, renovation, or demolition process, it should now be categorized as “friable” material. This material is considered hazardous during removal and disposal procedures.

**Operations & Maintenance Program:** A program of work practices to maintain friable ACM in good condition, ensure clean up of asbestos fibers previously released, and (O&M) prevent further release by minimizing and controlling ACM disturbance or damage.

**Personal air samples:** An air sample taken with a sampling pump directly attached to the worker with the collecting filter and cassette placed in the worker’s breathing zone. These samples are required by the OSHA asbestos standards and the USEPA worker protection rule.

**Presumed Asbestos Containing Material (PACM):** Thermal system insulation and surfacing material found in buildings constructed no later than 1980.

**Regulated Asbestos-Containing Material (RACM):** Friable asbestos material, Category I non friable ACM that has become friable, Category I non friable ACM (vinyl asbestos tile, roofing felts, gaskets and packing) that will be or has been subjected to sanding, grinding, cutting, or abrading, or Category II non-friable ACM (asbestos board, transite, and asbestos shingles) that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

**Surfacing material:** Material that is sprayed, troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).

**Thermal system insulation (TSI):** ACM applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

**Time-Weighted Average (TWA):** In air sampling, this refers to the average air concentration of contaminants during a particular sampling period. Generally, this is based on an 8 hour work day of a 40 hour work week.

**CHAPTER 2**  
**RESPONSIBILITIES**

**2-1. ASBESTOS MANAGEMENT TEAM (AMT):**

In accordance with AR 200-1, the DPW shall establish an asbestos management team to develop and execute the Asbestos Management Plan (AMP). The AMT consists of representatives from the following as a minimum:

- Directorate of Public Works (DPW)
- Environmental Division (ED)
- Preventive Medicine/MEDDAC (PVNTMED)
- Installation Safety Office (ISO)
- Staff Judge Advocate (SJA)
- Public Affairs Office (PAO)
- Directorate of Contracting (DOC)
- IAP World Services
- Residential Community Initiatives / Picerne Military Housing
- Family Child Care/Child Development Services

The asbestos management team shall prepare, coordinate and execute an installation asbestos management plan as per AR 200-1.

Fort Meade's asbestos management team consists of members from the above listed organizations and a representative from Headquarters Command Battalion/902nd MI. All asbestos-related matters will be brought to the attention of one or more members of the Asbestos Management Team. Responsibilities of each area are summarized below.

**2-2. DIRECTORATE OF PUBLIC WORKS (DPW):**

**a. DPW Environmental Division (ED)/Asbestos Management Coordinator (AMC)**

- (1) Responsible for development and implementation of all aspects of the asbestos management program.
- (2) Responsible for arranging and coordinating the execution of the installation asbestos survey, on-going testing analysis and updating asbestos data.
- (3) Responsible for ensuring that notifications regarding asbestos abatement or removal are submitted in a timely manner to federal, state, and local agencies, as appropriate, to ensure

Fort Meade Garrison maintains compliance with notification requirements.

(4) Maintains all records relating to asbestos identification, control and removal actions, if so performed.

(5) Maintain asbestos containing material inventory for the properties surveyed under DPW projects.

(6) Ensure information is updated and available, so users, engineers, project designer, estimator, shop personnel, custodial and others can identify potential asbestos containing areas.

(7) Review project plans and specifications which may disturb existing asbestos containing building material for compliance with environmental regulations.

(8) Report and mitigate instances of environmental asbestos contamination to proper authorities (including PAO) and ensure appropriate actions are taken for removal or management in place (identification, sampling, isolation, initiation of contracting process for abatement, where applicable).

(9) DPW needs to provide a trained individual within the organization who must have successfully completed an EPA-approved Asbestos Inspector course. Annual refresher courses must be completed annually in order to maintain certification.

(10) Review and approve asbestos abatement plans.

(11) Serve as manager of the Asbestos Management Team and chair the asbestos management meeting quarterly as a subcommittee of the Environmental Quality Control Committee.

(12) Ensure that all maintenance personnel and all managed contract employees under DPW direct supervision who may have occasion to handle ACM are trained and educated as requirements dictate.

#### b. DPW Engineering Division

(1) Ensures adequate identification of asbestos containing material prior to the start of any construction project. Check existing survey and testing records available. Requests additional asbestos testing by the AMC, designer, or separate contract, as appropriate.

(2) Provide AMC with the results of any of the additional testing so that asbestos data can be updated.

(3) Provide AMC with results and documentation of all asbestos removal done through DPW contracts so that records of renovation and/or removal are updated.

(4) Forward copies of asbestos abatement plans to the Environmental Division and appropriate offices for review and approval.

(5) Ensure proper documentation (e.g. State and Federal notification forms) is sent to proper authorities with copies to the AMC prior to the start of any contracted abatement work.

(6) Inform the AMC of any asbestos fiber release incident so that proper response action can be taken.

(7) Coordinate with the AMC to ensure employees are properly trained and certified in asbestos matters in accordance with the federal and state requirements.

(8) Review all construction-related work orders to determine whether there is a potential asbestos impact. This determination is based on either a search through the existing installation asbestos survey data or a direct inspection of the buildings for areas to be affected by the construction and/or renovation.

(9) Ensure that Self-Help projects are reviewed for possible disturbance of asbestos materials. All ACM subject to disturbance in such projects must be abated by appropriately certified and licensed contractor personnel prior to turning the work over to the building occupants as a Self-Help project or occupancy.

(10) Request funding for asbestos abatement and control projects through O&M.

c. IAP World Services

(1) Provide quality assurance of contractor asbestos abatement and/or removal plans to ensure approved plans are followed throughout the project.

(2) Inform the AMC of any asbestos fiber release incident or abatement so that proper response action can be taken.

2-3. INSTALLATION SAFETY OFFICE (ISO):

a. Establish Quality Assurance/Quality Control procedures and monitor projects, report non-compliance, collaborate with staff, and advise Commander of status.

b. Monitor compliance of safety and OSHA regulations and advise Commander.

c. Investigate all asbestos-related reported hazards and accidents, site-specific or otherwise, and report outcomes to appropriate authorities to include PAO.

d. Review all reports from the asbestos abatement and keep them on file. The report shall include authorization to occupy the areas from the Industrial Hygienist and certification from contractor that details of the project were completed as specified.

#### 2-4. MEDICAL DEPARTMENT ACTIVITIES (MEDDAC):

##### a. Industrial Hygiene (IH)

(1) Advise about the types of personal protective equipment needed and the work practices to be used during asbestos operations.

(2) Coordinate with Safety and the Directorate of Public Works (DPW) personnel to provide assistance in the areas of exposure control and work practices.

(3) Provide technical assistance to the contacting officer's representative (COR) and contacting officer when abatement work is to be performed by a contractor.

##### b. Occupational Health (OH)

(1) Perform necessary medical examinations as required in the asbestos medical surveillance program.

(2) Maintain medical records for government employees.

#### 2-5. DIRECTORATE OF CONTRACTING (DOC):

a. Support the asbestos program by expediting asbestos sampling and abatement delivery orders on existing requirements contracts issued through the DOC.

b. When required by the DPW, expedite the solicitation process to procure asbestos abatement or sampling services in a timely manner.

c. Assist in resolving contractual disputes between the contractor and government.

## 2-6. STAFF JUDGE ADVOCATE (SJA):

- a. Responsible for providing consultation and addressing any liability or regulatory compliance issues relating to the asbestos abatement project.
- b. Assist in interpreting applicable laws and regulations.

## 2-7. PUBLIC AFFAIRS OFFICE (PAO):

- a. Responsible for informing Army and civilian personnel about the asbestos management plan using input from the AMT members and available media.
- b. Plan and conduct public affairs activities in support of the asbestos management program.

## 2.8 RESIDENTIAL COMMUNITY INITIATIVES / PICERNE MILITARY HOUSING

- a. Update asbestos surveys for Family housing units as necessary when abatement and repair activities are performed.
- b. Provide DPW-ED and DPW-Engineering with copies of any public notification(s).
- c. Ensure all new occupants are informed of asbestos containing materials within their quarters and of proper procedures to take to prevent accidental release. Distribute Fact Sheets about asbestos containing materials information to soldiers in-processing.
- d. Document that employees are properly trained in asbestos awareness matters.
- e. Inform the Asbestos Coordinator of any asbestos fiber release incident so that proper action may be taken by DPW and/or the garrison.

## CHAPTER 3

### QUALIFICATIONS AND TRAINING

#### 3-1. ASBESTOS MANAGEMENT TEAM TRAINING REQUIREMENTS:

All personnel involved in asbestos work shall meet the mandatory training requirements specified in 40 CFR Part 763, U.S.EPA Model Accreditation Program and COMAR 26.11.23, Asbestos Accreditation of Individuals for the particular type of asbestos work they are to perform. This chapter addresses these requirements for all Army and DA civilian personnel and contractor personnel who will have to deal with ACM. AR 420-70 and AR 200-1 require that AMT personnel directly involved in the management control of ACM be trained at a level consistent with the USEPA, AHERA and ASHARA, based on the situation. For the AMT to prepare, coordinate, and execute the AMP, it is necessary that those team members are actively involved in the technical aspects of the plan and be appropriately trained.

Materials in this chapter will, in varying degree, affect contractor personnel who may come into potential contact with ACM in the course of their work or may be directly involved in an asbestos abatement project. As part of the special O&M program, custodial and maintenance staff must attend asbestos awareness and even additional courses as they become increasingly involved with ACM. Training shall be provided prior to or at the time of initial assignment and at least annually thereafter.

##### a. Asbestos Inspector/Management Planner

DPW will be responsible for maintaining an accredited asbestos inspector/management planner within the organization. The individual must have successfully completed a 40 hour asbestos inspector/management planner course approved by the EPA. Annual refresher courses must be completed in order to maintain accreditation.

##### b. Asbestos Supervisor

All Class I & II asbestos work require an accredited/licensed Asbestos Supervisor to oversee the project. The individual must have successfully completed a 40 hour asbestos contractor/supervisor training course approved by the EPA. Annual refresher courses must be completed in order to maintain accreditation.

##### c. Asbestos Project Manager

Project managers observe abatement activities performed by contractors and generally serve as a building owner's representative to ensure that abatement work is completed according to specification and in compliance with all relevant statutes and regulations. The individuals

must have successfully completed a 40 hour asbestos project monitor course approved by the EPA and State of Maryland. Annual refresher courses must be completed in order to maintain accreditation.

It is essential that this installation have a sufficient number of appropriately trained personnel to accomplish the work anticipated in the AMP. All personnel associated with asbestos contract scopes of work will be trained in the following subjects, based upon their level of involvement: building inspector; management planner, project designer, asbestos abatement procedures and practices for workers and supervisors, to meet federal, state, and local requirements.

### 3-2. TRAINING FOR CUSTODIANS AND MAINTENANCE WORKERS FOR O&M PROGRAMS:

It is essential that all custodial and maintenance staff be well informed about the asbestos problem to achieve a successful O&M program. All custodial staff and maintenance workers, under the AHERA regulations, require 16 hours of training. The USEPA recognizes three levels of training at the O&M level for custodial and maintenance workers.

#### a. Level I: Awareness training

This course is for custodians and maintenance workers whose normal duties would not bring them into contact with ACM; they may, however, disturb this material accidentally.

#### b. Level II: O&M training

This is special O&M training designed for workers involved in general maintenance and asbestos material repair.

#### c. Level III: Abatement worker training

This training is designed for asbestos abatement workers who will come into direct, contact with ACM to remove, disturb, encapsulate, or enclose it. Each worker must receive a certificate of training for each level of training completed.

3-3. RECOMMENDED TRAINING FOR DEPARTMENT OF THE ARMY PERSONNEL ENGAGED IN ASBESTOS MANAGEMENT OR ABATEMENT:

**Recommended Training for Department of the Army (DA) Personnel Engaged in Asbestos Management or Abatement**

TITLE	RECOMMENDED MINIMUM LEVEL OF TRAINING
Asbestos Management Coordinator (AMC)	Supervisor/contractor, building inspector, and management planner.
DPW project designer/ Contract scope of work developer/Specialist	Project designer and/or supervisor/contractor
DPW on-site project inspector	Project monitor and/or supervisor/contractor.
Installation asbestos survey inspector	Inspector (Survey team leader should also be a certified management planner.)
Safety Office representative	Management planner, project monitor or supervisor/contractor, as responsibilities require.
Public Affairs Office representative	Level I or Level II O&M training as appropriate.
Chief, building maintenance	Supervisor/contractor or asbestos abatement worker as appropriate.
Maintenance workers (electricians, plumbers, and heating and ventilation specialist)	Level I or Level II O&M training for in-house and contracted personnel. Level II for selected individuals such as master electricians and plumbers, as appropriate.

## CHAPTER 4

### THE INSTALLATION ASBESTOS SURVEY AND ASSESSMENT

#### 4-1. INSTALLATION ASBESTOS SURVEY:

In order to effectively prevent human exposure to asbestos hazards on Army-owned property and maintain compliance with all pertinent regulations, the Directorate of Public Works is responsible for the oversight of the conducting of installation-wide asbestos surveys for highly suspect and suspect post buildings to identify the existence and extent of asbestos, and to assess the condition of all asbestos containing materials in the buildings. These survey results of inspections, risk assessments/exposure assessments will be used to properly manage asbestos hazards on Army-controlled properties at Fort Meade. Surveys are conducted on a contract basis by a competent firm. The survey reports are maintained by the DPW Environmental Division and made available upon request.

#### 4-2. ASSESSMENT CATEGORIES AND RESPONSE ACTIONS:

The following assessment categories and response actions will be used for corrective action plans.

Each ACBM and suspected ACBM assumed to be ACM is classified into one of the following classifications (categories):

CATEGORY	TYPE OF MATERIAL	CONDITION
1A	Friable thermal system insulation ACM	Damaged
1B	Friable thermal system insulation ACM	Significantly damaged
2	Friable surfacing ACM	Damaged
3	Friable surfacing ACM	Significantly damaged
4A	Friable miscellaneous ACM	Damaged
4B	Friable miscellaneous ACM	Significantly damaged
5	Friable ACBM (undamaged)	Potential for damage
6	Friable ACBM (undamaged)	Potential for significant damage
7	Friable ACBM or friable suspected ACBM (undamaged)	N/A
8	Non-friable ACM or suspected ACM	N/A

Thermal insulation, even in good condition, has been assigned to category 1A because any penetration into the protective covering exposes the friable insulation within. Minor repairs are often required to repair the damaged areas.

Appropriate response actions must be selected and implemented in a timely manner consistent with the assessments made by the accredited inspector from the management plan. Appropriate response actions for each assessment category are listed below:

<b>Category</b>	<b>Appropriate Response Actions</b>
1A and 1B	<ul style="list-style-type: none"> <li>- At least repair the damaged area</li>   <li>- Remove the damaged material if it's not feasible to repair the damage due to technological factors</li>   <li>- Maintain all thermal insulation ACM and its covering in an intact state and undamaged condition</li> </ul>
2 and 4A	<ul style="list-style-type: none"> <li>- Encapsulation</li>   <li>- Enclosure</li>   <li>- Removal</li>   <li>- Repair of the damaged material</li> </ul>
3 and 4B	<ul style="list-style-type: none"> <li>- Immediately isolate the functional space and restrict access unless isolation is not necessary to protect human health and the environment</li>   <li>- Removal</li>   <li>- Enclosure</li>   <li>- Encapsulation</li> </ul>
5	<ul style="list-style-type: none"> <li>- Implement O &amp; M</li> </ul>
6 and 7	<ul style="list-style-type: none"> <li>- Implement O &amp; M</li>   <li>- Institute preventive measures appropriate to eliminate the reasonable likelihood that the</li> </ul>

	<p>ACM or its covering will become significantly damaged, deteriorated, or delaminated</p> <ul style="list-style-type: none"> <li>- Remove the material as soon as possible if appropriate preventive measures cannot be effectively implemented, or unless other response actions are determined to protect human health and the environment</li> <li>- Immediately isolate the area and restrict access if necessary to avoid an imminent and substantial endangerment to human health or the environment</li> </ul>
8	- Implement O & M

The response action selected shall be sufficient to protect human health and the environment. However, the least burdensome response action may be selected. Nothing in this management plan shall be construed to prohibit removal of ACBM from a building at any time, should removal be the preferred response action.

Appropriate response actions involve the implementation of special operations and maintenance procedures, construction of enclosures, encapsulation, removal, or a combination of these techniques.

#### 4-3. PERIODIC SURVEILLANCE & ON GOING TESTING:

a. A periodic surveillance of buildings will be performed by the DPW Engineering Division or Environmental Division to ensure that ACMs are in good condition and findings of the inspection report do not differ.

b. Every fiber release incident and unusual event that occurs at a work site or any changes in the condition of the building material shall be recorded.

c. Sampling results obtained from renovation and repair projects will be maintained at the DPW Environmental Division.

d. Additional surveys or more extensive testing required ensuring adequate identification of all asbestos materials during design and prior to construction of maintenance and repair projects are the responsibility of the project manager. Contracts for additional surveys will be executed through DPW Engineering. Additional asbestos samples collected by trained in-house personnel may be analyzed through the delivery order contract for sampling being managed by ED. Copies of all surveys and testing results will be provided to the Asbestos Coordinator.

#### 4-4. PROCEDURE FOR HANDLING HAZARDOUS ASBESTOS AREAS:

a. Potential hazardous asbestos areas are identified from asbestos surveys, tests, or reports to the Asbestos Coordinator as fiber release incidents of known asbestos materials.

b. When deemed necessary, the Asbestos Coordinator may regulate access to asbestos hazardous areas to ensure the safety of workers and building occupants. Information regarding such areas will be forwarded to the Industrial Hygienist and Installation Safety Office for review of actions, monitoring recommendations, and comments addressing the health hazards.

c. The Asbestos Coordinator will finalize recommendations for actions to eliminate the asbestos hazards. If the action requires closure or partial closure of subject area, after DPW approval, the user will be notified.

d. The Asbestos Coordinator will coordinate with DPW Engineering Division for action by an appropriately licensed and approved contractor firm.

e. The Asbestos Coordinator will notify the user of completed actions and when they may safely return to the area.

## CHAPTER 5

### SPECIAL OPERATION AND MAINTENANCE PROCEDURES

#### 5-1. GENERAL:

This O&M program is not an abatement action, its purpose is to manage the asbestos situation until an abatement action becomes necessary or feasible. This program is not intended to be substituted for permanent, large scale abatement, but a safe, controlled method of working with ACM to prevent the release of asbestos fibers into the air. Asbestos should not be removed for the sole purpose of eliminating asbestos. An O&M program shall be used whenever possible. This program is designed to reduce future release by minimizing the disturbance of or damage to ACM; periodically monitor the condition of ACM in the building; facilitate the cleanup of previously released asbestos fibers during the building's use; inform building employees of the proper methods of working with ACM. The special O&M program must remain in effect until all ACM is removed or the building is demolished.

Any O&M removal will be limited to operations where removal is secondary to another job, such as pipe fitting replacement and repair of electrical wiring, where contact with the ACM is either a possibility or a certainty. Any accidental damage to ACM by weather, physical means, leaking pipes, etc., will be repaired in the same fashion. Any large scale (more than 20 LF a day or a single mechanical unit) ACM removal project will demand the use of a licensed abatement contractor following an approved asbestos abatement plan developed specifically for that project.

Whenever ACM is allowed to remain in place, an Asbestos O&M program should be implemented to assure that the ACM are not disturbed. A comprehensive O&M program provides for specialized training of custodial and maintenance personnel in the recognition of ACM, cleaning and maintenance techniques, and re-inspection of ACM for signs of deterioration. This program should be updated annually to comply with EPA, OSHA and the State of Maryland regulations.

#### 5-2. ORGANIZATION AND PLANNING:

There will be an O&M team set up to handle emergencies dealing with asbestos. The DPW will identify a functional manager to actively support the program and ensure coordination of asbestos-related activities and training with the BASEOPS contractor responsible for maintenance and repair of installation real property. The functional manager and staff will be primarily responsible for this special O&M program's implementation. The Asbestos Management Coordinator is responsible for furnishing technical advice in developing and monitoring the special O&M program. The team will be equipped with all equipment and supplies necessary to perform work safely and to prevent the spread of the asbestos.

### 5-3. EMERGENCIES:

In the event of an unexpected asbestos release, the following procedures shall be implemented:

- a. The occupants shall leave the area immediately.
- b. The area shall be closed off to all personnel except the asbestos response team.
- c. Signs shall be posted warning of the danger.
- d. Verbal warnings shall be given to all other occupants in the building.
- e. The Asbestos Management Coordinator shall be immediately notified of the situation.
- f. The occupants of that area shall be moved to another area where they can be decontaminated and away from others to prevent further cross-contamination.
- g. The area shall remain closed until the results of the bulk analysis and/or the air sample is analyzed to determine the extent of contamination.
- h. The building occupants shall be notified immediately of the accident if the results of the tests are positive.
- i. If the results are positive, then no further action shall be taken until the DPW approves the abatement/clearance plan.
- j. If the contract IH has the ability to read on site (air samples) this may only be needed for bulk samples. DPW maintains an environmental testing contract with a local laboratory which can provide sampling and results within 24 hours. The testing is currently managed by ED.
- k. If the results of the tests from the area are positive, the area shall remain closed until it is cleaned and the final air sample results are taken. All items in the area must remain in place until the area has been decontaminated.
- l. Notify the Installation Safety Office.

NOTE: State and federal regulations are designed to protect the occupants of the location from exposure to asbestos. This program can work if all employees understand the danger of asbestos and the consequences of failure to follow these regulations.

## CHAPTER 6

### ASBESTOS MAINTENANCE & ABATEMENT PROCEDURES

#### 6-1. GENERAL:

Asbestos containing material will be removed by contract in all cases. All federal and state regulations must be followed. Employees will be sufficiently isolated from asbestos removal to ensure no exposure to asbestos fibers. Contract removal may be conducted by individual asbestos abatement contracts, as delivery order in a requirements contract, or as part of a related construction contract. Contractors will be responsible for proper notification to state and federal agencies. Copies of this notification will be provided to the COR, Asbestos Coordinator, and the Installation Safety Office and the Environmental Division **prior to the start of on-site work**. The project manager should also ensure that a copy is placed in the project folder. The contractor will submit an asbestos abatement plan to the DPW for approval prior to the start of work. A copy of this plan will be sent to the Asbestos Coordinator for review and approval. The plan will also be forwarded to Installation Safety Office and Industrial Hygiene for review. Upon completion of the removal project, a report will be provided to the DPW with a copy to the Environmental Office, ATTN: Asbestos Coordinator, detailing the ACM that was removed from the area abated. Also, records must be maintained by the facility manager.

#### 6-2. MAINTENANCE & ABATEMENT PROCEDURES:

Personnel contracted to perform any maintenance and abatement of asbestos shall be certified and licensed, as appropriate. All procedures must be in strict accordance with all applicable Federal, State, and local laws, policies, and regulations.

#### 6-3. NOTIFICATIONS:

##### a. Initial Notification

(1) The Maryland Department of the Environment (MDE) and the Environmental Protection Agency require notification to the MDE Air & Radiation Management Administration in writing at least 10 days prior to the commencement of an asbestos project. The state notification form shall be used for all notification. Notification of less than 10 days may be allowed in case of emergencies. Notification for emergency removal projects will be submitted to MDE within 24 hours of initiation of the project. Emergency projects must be approved by MDE. Emergency projects include but not limited to:

- leaking or ruptured pipes

- accidentally damaged or fallen asbestos that could expose non-asbestos workers or the public
- unplanned mechanical outages or repairs essential to work process that require asbestos removal and could only be removed safely during the mechanical outage

(2) Amended notification.

Amended notification may be submitted for modifications. Amended notices for changes of start up dates, or project completion dates and any project cancellation must be submitted in a timely manner.

(3) For Operation and Maintenance type projects, which are less than 10 sf. or 20 l.f. of repair and maintenance of asbestos/substrate, notification is not required.

(4) Notification of all asbestos encapsulation projects (non-NESHAP) will be provided to MDE Air & Radiation Management Administration prior to commencing work.

(5) For asbestos removal/renovation operations that are NESHAP (160 sf. or 260 l.f. or greater of RACM) size shall notify MDE Air & Radiation Management Administration and EPA Region III at least 10 working days before work commences.

(6) For non-NESHAP asbestos renovation projects, notifications to MDE Division of Asbestos will be sent prior to start of project.

(7) For all building demolition projects notifications to MDE Air & Radiation Management Administration and EPA region III will be sent at least 10 working days before work commences.

b. Re-notifications

(1) Shall be sent to MDE at least 10 working days before a new start date which is before the original start date (NESHAP).

(2) Shall be sent as soon as possible when the new start date is later than the original start date but no later than the new start date.

(3) Shall be sent when the amount of RACM originally estimated changes by more than 20 percent.

(4) Shall be sent when the completion date changes as soon as possible.

## CHAPTER 7

### PERSONAL PROTECTIVE EQUIPMENT

#### 7-1. GENERAL:

Selection of personal protective equipment should be based upon consultation between the Preventive Medicine, Industrial Hygienist, and the Installation Safety Office based on the requirements in the OSHA regulations. Each person who is authorized and qualified to conduct asbestos related work must be provided with appropriate PPE. It is responsibility of the project supervisor to ensure that any items of PPE that are expended are replaced promptly and disposed of as per regulations.

#### 7-3. RESPIRATORY PROTECTION:

Respiratory protection is required for specific classes of asbestos work any time ACM is disturbed. Respirator selection for asbestos abatement is regulated under OSHA 1926.1101 and OSHA 1910.134. This selection should be performed in concert with Safety and Industrial Hygiene Services. The appropriate type of respirators must be provided for all classes of asbestos abatement at no cost to the workers where exposure to airborne asbestos may take place.

During activities involving ACM, employees may be exposed to high concentrations of asbestos fibers for short periods of time. When an employee is exposed to concentrations of airborne asbestos which are above the maximum standards established by OSHA, the regulations require implementation of feasible engineering controls and/or administrative controls to reduce employee exposure. If the work space is regulated or engineering controls are being implemented, respiratory protection shall be provided. Respiratory protection is required any time ACM is disturbed, including the testing of suspected ACM. In addition to providing respiratory protective equipment, DPW will have a written respiratory protection program IAW 29CFR 1910.134, 29CFR 1926.1101, and AR 11-34. Respirators must be inspected prior to and after use and at least annually. When initially provided with a respirator, the employee must be instructed on its use, care, and limitations.

Medical Surveillance must take place prior to an employee using respiratory protection.

APPENDIX A

ASBESTOS SURVEY RECORDS AVAILABLE

195	219	229	239	249	294	392	393	546	948	979	1250
1251	1252	1945	1957	1976	1978	2120	2121	2122	2201	2206	2212
2214	2220	2234	2240	2241	2242	2243	2246	2253	2257	2271	2275
2276	2282	2286	2480	2482	2490	2630	2724	2788	3000	3900	4201
4203	4215	4216	4217	4230	4407	4415	4419	4424	4431	4463	4471
4473	4550	4552	4553	4554	4650	4674	4703	4704	4705	4707	4717
4720	4721	6330	6530	7100	7915	8451	8452	8465	8476	8477	8478
8479	8486	8487	8501	8543	8544	8545	8551	8601	8605	8606	8607
8608	8609	8612	8688	8698	8699	9580	9581	9582	9583	9584	9598
9599	9801	9802	9803	9804	9805	9810	9827	9828	9829		

**APPENDIX B**

**ASBESTOS SURVEY RECORDS NOT TRACEABLE**

<b>4</b>	<b>5</b>	<b>48</b>	<b>53</b>	<b>54</b>	<b>55</b>	<b>56</b>	<b>73</b>	<b>75</b>	<b>77</b>	<b>78</b>	<b>105</b>
<b>118</b>	<b>201</b>	<b>218</b>	<b>375</b>	<b>60G</b>	<b>61A</b>	<b>700</b>	<b>830</b>	<b>845</b>	<b>850</b>	<b>855</b>	<b>900</b>
<b>902</b>	<b>909</b>	<b>910</b>	<b>951</b>	<b>1007</b>	<b>1900</b>	<b>2011</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>2018</b>	<b>2022</b>	<b>2031</b>	<b>2045</b>	<b>2050</b>	<b>2118</b>	<b>2119</b>	<b>2204</b>	<b>2222</b>	<b>2244</b>	<b>2245</b>	<b>2248</b>
<b>2249</b>	<b>2281</b>	<b>2300</b>	<b>2301</b>	<b>2302</b>	<b>2486</b>	<b>2491</b>	<b>2501</b>	<b>2502</b>	<b>2587</b>	<b>2590</b>	<b>2786</b>
<b>2789</b>	<b>2790</b>	<b>2793</b>	<b>2794</b>	<b>2849</b>	<b>3100</b>	<b>3102</b>	<b>3400</b>	<b>3482</b>	<b>3901</b>	<b>4214</b>	<b>4250</b>
<b>4272</b>	<b>4273</b>	<b>4307</b>	<b>4324</b>	<b>4325</b>	<b>4327</b>	<b>4331</b>	<b>4409</b>	<b>4411</b>	<b>4413</b>	<b>4418</b>	<b>4419</b>
<b>4425</b>	<b>4426</b>	<b>4427</b>	<b>4432</b>	<b>4471</b>	<b>4523</b>	<b>4528</b>	<b>4542</b>	<b>4548</b>	<b>4549</b>	<b>4551</b>	<b>4555</b>
<b>4556</b>	<b>4587</b>	<b>4630</b>	<b>4680</b>	<b>4706</b>	<b>4709</b>	<b>4725</b>	<b>6220</b>	<b>6222</b>	<b>6300</b>	<b>6328</b>	<b>6400</b>
<b>6401</b>	<b>6402</b>	<b>6403</b>	<b>6404</b>	<b>6405</b>	<b>6406</b>	<b>6407</b>	<b>6408</b>	<b>6409</b>	<b>6500</b>	<b>6600</b>	<b>6619</b>
<b>6800</b>	<b>6802</b>	<b>6866</b>	<b>6970</b>	<b>7500</b>	<b>8470</b>	<b>8472</b>	<b>8475</b>	<b>8480</b>	<b>8482</b>	<b>8483</b>	<b>8484</b>
<b>8485</b>	<b>8489</b>	<b>8492</b>	<b>8502</b>	<b>8541</b>	<b>8549</b>	<b>8550</b>	<b>8686</b>	<b>8687</b>	<b>8690</b>	<b>8860</b>	<b>8870</b>
<b>8890</b>	<b>8891</b>	<b>8900</b>	<b>9585</b>	<b>9806</b>	<b>9807</b>	<b>9809</b>	<b>9830</b>	<b>9831</b>	<b>9839</b>		

**APPENDIX C**  
**SAMPLE ASBESTOS SURVEY**

ASBESTOS SURVEY AND MANAGEMENT PLAN

FOR

CORPS OF ENGINEERS

AT FORT GEORGE G. MEADE, MD

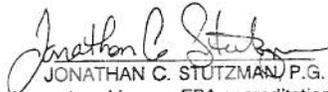
BUILDING 195

CONTRACT NUMBER DACA01-94-D-0005

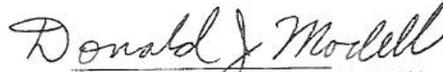
DELIVERY ORDER NUMBER 0058

BCM PROJECT NO. 09-5000-58

PREPARED BY:

  
JONATHAN C. STUTZMAN P.G.

Asbestos Inspectors License EPA accreditation No. 100-170  
Asbestos Management Planner EPA accreditation No. 200-116



REVIEWED BY DONALD J. MODELL, R.E.M., P.H.M.  
SENIOR TECHNICAL CONSULTANT

MARCH 1997  
FINAL REPORT

600 WEST SERVICE ROAD

WASHINGTON DULLES INTERNATIONAL AIRPORT

CHANTILLY, VIRGINIA 22021

P.O. BOX 17497

WASHINGTON, DC 20041

DISCLAIMER

Asbestos survey information contained herein was obtained during those survey dates specified. Conclusions based on survey results are intended to be only representative of this period and do not purport to predict or represent future facility changes, conditions or events. Only accessible facility areas were physically examined or sampled. Inaccessible facility areas are herein defined as wherever materials are fixed/concealed behind building walls, floor tile, floors, ceilings or inside mechanical equipment. Accessible areas have removable barriers (i.e., locked doors) which do not require excessive force to gain entrance.

1.0 EXECUTIVE SUMMARY

The Department of the Army Corps of Engineers (COE) at Fort George G. Meade, Maryland retained BCM Engineers Inc. to conduct a building materials inspection at various buildings throughout the base to determine the presence of asbestos-containing materials (ACM). The inspection and sampling program was conducted on December 3, 1996. This included a visual inspection of the buildings to locate suspect materials, assessment of the condition of these materials, collection of bulk samples from the identified suspect materials and create scaled drawings of sample locations and ACM. BCM personal obtained scaled drawings for the referenced building.

Thirty-four (34) samples were analyzed for asbestos content. Laboratory analysis revealed the presence of asbestos in three (3) of these samples.

Samples were analyzed by Polarized Light Microscopy/Dispersion Staining (PLM), Method 40 CFR Part 763, Appendix A to Subpart F. In addition samples were analyzed using Positive Stop Methodology. The Positive Stop Method is an industrywide practice, defined as follows: For most building materials, three or more samples are obtained for accuracy in defining a homogeneous area. When the laboratory is analyzing these homogeneous groups of samples, if the first sample is positive (asbestos-containing), the remaining samples of the homogenous group are not analyzed. This procedure is repeated until a positive sample is found or all samples in a homogeneous area are analyzed. A building material is considered asbestos-containing if at least one of the homogeneous samples is asbestos-containing.

Table 1.1 describes the suspect materials which were sampled, the homogeneous area number, the location, the quantity and the laboratory result. Refer to Section 5.0 for details of the Management Plan and Table 5.7 for details of specific building ACM and recommended response actions.

**TABLE 1.1**  
**SAMPLING DESCRIPTION & LOCATION FOR SUSPECTED ASBESTOS-CONTAINING MATERIALS**

SAMPLE NO.	BUILDING & HOMO AREA	SUSPECT MATERIAL DESCRIPTION	SAMPLING LOCATION	ESTIMATED QUANTITY	LAB RESULT & TYPE
195-01	01	2x2 Fissured ceiling tile	Main room	3,675 SF	ND
195-02		2x2 Fissured ceiling tile	Hallway		ND
195-03		2x2 Fissured ceiling tile	Hallway		ND
195-04	02	Carpet mastic	Main room	5,328 SF	ND
195-05		Carpet mastic	Kitchen		ND
195-06		Carpet mastic	Office		ND
195-07A	03	9x9 Checker brown/black floor tile	Main room	1,600 SF	10% (1)
195-07B		Floor tile mastic	Main room		ND
195-08A		9x9 Checker brown/black floor tile	Kitchen		NA
195-08B		Floor tile mastic	Kitchen		ND
195-09A		9x9 Checker brown/black floor tile	Conference room		NA
195-09B		Floor tile mastic	Conference room		ND
195-10A	04	12x12 Tan floor tile	Men's room	450 SF	ND
195-10B		Floor tile mastic	Men's room		ND
195-11A		12x12 Tan floor tile	Women's room		ND

195-11B	Floor tile mastic		Women's room		ND
195-12A	12X12 Tan floor tile		Men's room		ND
195-12B	Floor tile mastic		Men's room		ND
195-13	Baseboard mastic	05	Hallway	500 LF	2% (4)
195-14	Baseboard mastic		Men's room		NA
195-15	Baseboard mastic		Hallway		NA
195-16A	12X12 Grey/blue floor tile	06	Lobby entry	40 SF	ND
195-16B	Floor tile mastic		Lobby entry		ND
195-17A	12X12 Grey/blue floor tile		Lobby entry		ND
195-17B	Floor tile mastic		Lobby entry		ND
195-18A	12X12 Grey/blue floor tile		Lobby entry		ND
195-18B	Floor tile mastic		Lobby entry		ND
195-19	Drywall system	07	Men's room	960 SF	ND
195-20	Drywall system		Men's room		ND
195-21	Drywall system		Hallway		ND
195-22	Roof shingles	08	Roof	5,000 SF	ND
195-23	Roof shingles		Roof		ND
195-24	Roof shingles		Roof		ND

TRACE = <1% ASBESTOS  
 ND = NONE DETECTED  
 NA = NOT ANALYZED BECAUSE PREVIOUS HOMOGENEOUS AREA SAMPLE POSITIVE  
 NRP = NO MASTIC PRESENT OR IN QUANTITIES TOO SMALL TO ANALYZE PROPERLY  
 ASBESTOS TYPES (VALUES IN BOLD ARE ASBESTOS CONTAINING MATERIALS)  
 (1) = CHRYSOTILE  
 (2) = AMOSITE  
 (3) = CROCIDOLITE  
 (4) = ANTHOPHYLLITE  
 (5) = TREMOLITE/ACTINOLITE

195-25	09	Wallboard insulation	Mechanical room	8 SF	30% (1)
--------	----	----------------------	-----------------	------	---------

TRACE = <1% ASBESTOS  
 ND = NONE DETECTED  
 NA = NOT ANALYZED BECAUSE PREVIOUS HOMOGENEOUS AREA SAMPLE POSITIVE  
 NRP = NO MASTIC PRESENT OR IN QUANTITIES TOO SMALL TO ANALYZE PROPERLY  
 ASBESTOS TYPES (VALUES IN BOLD ARE ASBESTOS CONTAINING MATERIALS)  
 (1) = CHRYSOTILE  
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 (3) = CROCIDOLITE  
 (4) = ANTHOPHYLLITE  
 (5) = TREMOLITE/ACTINOLITE

## 2.0 SURVEY METHODS

### 2.1 Methods/Conditions

The survey methods utilized were in accordance with EPA and Commonwealth of Virginia Code, Chapter 654, requirements. The surveys were performed by inspectors licensed by the Commonwealth of Virginia.

Asbestos survey requirements defined by the Department of General Services Standard (Commonwealth of Virginia) were changed by the enactment of Senate Bill No. 177 (April 1987). The redefined standard requires the assessment of both friable and non-friable materials containing more than one (1) percent asbestos.

### 2.2 Visual Inspection

Buildings were surveyed per the defined scope of work. All accessible areas of the buildings were inspected to identify both friable and non-friable, known or suspected asbestos-containing materials (ACM). Inaccessible areas such as behind walls, above plaster or sheetrock ceiling with no access panels, and inside boilers were not inspected. Inaccessible areas were recorded.

The materials identified were then classified into homogeneous areas. These materials include, but are not limited to: thermal insulation; ceiling tile; acoustical, decorative, or another materials applied to walls, ceilings, floors, structural members, piping and equipment; roofing materials; and wall siding. In defining the homogeneous areas uniformity in color, texture, and age are key criteria. The inspector may consider the functional space as a criteria, but this may not always be necessary or appropriate.

The conditions of all materials identified was recorded. These conditions include related material type, quantity, physical properties, condition, exposure potential, type of occupancy, and accessibility.

### 2.3 Bulk Sampling Methods

The materials identified, both friable and non-friable, were sampled, except where sampling would alter the integrity of the material or the material was inaccessible for sampling (i.e. height of a material).

Sampling equipment utilized during the survey are as follows:

1. Clear plastic bags for sample containers.
2. Trowels, putty knives, coring devices.
3. Sprayer filled with amended water or encapsulant.
4. Spray adhesive.
5. Personal protective equipment.
6. Appropriate emergency cleanup equipment.

The number of samples for each homogeneous area/were determined as follows:

1. Sprayed or troweled material - three random samples for each visually or functionally different material or known different application for up to 1,000 sq. ft., five random samples from 1,000 to 5,000 sq. ft., Baseboard mastic random samples from 5,000 to 10,000 sq. ft., and for every 5,000 sq. ft. over 10,000 sq. ft. one additional random sample will be taken. This rule applies to homogeneous material on each floor only.
2. Pipe and duct insulation - a minimum of one sample for every 150 linear feet of material of varying size or visual appearance per floor. Samples shall be taken where material is damaged or exposed where possible, to avoid breaching intact covering.
3. Valve or fitting mud - three samples of valve material or elbow mud for each insulated line of varying diameter or visual appearance per floor or area.
4. Boilers, tanks, and furnaces - three samples per unit if homogeneous.
5. Patchwork - one sample of each patch or repair.
6. Ceiling or acoustical tile - three samples for each material of varying visible appearance per floor.

2.4 Identification of Sample Locations

The materials identified were randomly sampled, the location of each sample can be found in Appendix D - Floor Plans.

2.5 Competent Personnel

The asbestos inspectors have EPA certified asbestos inspector training. A copy of the inspectors certificate can be found in Appendix C - Accreditation Certifications.

2.6 Laboratory Analysis

The analytical laboratory, BCM Engineers, Inc. of Norristown, Pennsylvania is NVLAP certified and is AIHA approved for PLM analysis. A copy of the accreditation certificates can be found in Appendix C - Accreditation Certifications.

3.0

AIR MONITORING

Air samples were not collected at this time, but buildings with areas of damaged friable asbestos-containing materials should be tested in an effort to determine fiber concentration within the building.

The analysis method for air samples is NIOSH Method 7400 Phase Contrast Microscopy (PCM). This method counts fibers that meet certain physical criteria, but does not distinguish between asbestos and non-asbestos fibers. The results are recorded as fibers per cubic centimeter of air (f/cc).

OSHA has established a current permissible exposure limit of 0.1 f/cc. An employer must ensure that no employee is exposed to an airborne concentration in excess of this level over an eight hour time weighted average (TWA).

4.0 BUILDING 195 (Office Building)

4.1 Description of Building Construction

The building is a single-story block and masonry structure with a loft and a roof. The size of the building is 4,000 SF.

4.2 Description of Suspect Materials

The suspect materials found include floor tile and associated mastic, baseboard mastic, drywall system, ceiling tile, carpet mastic, wallboard insulation and roof shingles.

4.3 Sampling Scheme

There are nine homogeneous area. On December 3, 1996, a survey and sampling program was performed at this facility. Twenty-five samples of suspect materials were collected. The sample locations can be found in Appendix D - Floor Plans.

4.4 Results of Analysis

Of the twenty-five samples collected, three contained asbestos. A summary of the samples collected and the laboratory results are listed in Table 1.1. The laboratory data sheets are contained in Appendix B.

4.5 Survey Results

Based on the visual assessment and the laboratory analysis floor tile, baseboard mastic and wallboard insulation contain asbestos.

4.6 Inaccessible Areas

Materials hidden behind permanent walls or fixtures and materials inside mechanical equipment were not inspected or sampled.

## APPENDIX D

### SAMPLE ASBESTOS PROJECT NOTIFICATION

**MD DEPARTMENT OF THE ENVIRONMENT • ASBESTOS LICENSING/ENFORCEMENT DIVISION • ASBESTOS PROJECT NOTIFICATION**

1800 Washington Blvd., Suite 725 • BALTIMORE MD 21230-1720

<b>OFFICE USE ONLY</b> →		Notification ID:				
<b>Notification Type:</b> (Check one) → <input type="checkbox"/> [O] ORIGINAL [First Notice THIS Project] <input type="checkbox"/> [R] Revision Revision # Original Submit Date: _____ <i>[If THIS is a revision]</i> Revision Date: _____ <i>[Date of THIS Revision]</i>		Resp Agency: S Variance Request Attached? (Y/N) Received Date: → Postmark Date: →				
<input type="checkbox"/> [P] Postpone → <input type="checkbox"/> [C] Cancel →		<input type="checkbox"/> [R] Reschedule <input type="checkbox"/> [R] Reschedule				
<b>If this is a Revision, what are you revising?</b> <input type="checkbox"/> Start Date <input type="checkbox"/> Complete Date <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Quantity			Initials/Date:			
Type of Project    NESHAP → <input type="checkbox"/> [N] Renovation <input type="checkbox"/> [D-N] Demolition <input type="checkbox"/> [D-N] DEMO ONLY (no asbestos) [Operation]:    Non-NESHAP → <input type="checkbox"/> [S-N] Renovation <input type="checkbox"/> [D-N] Demolition <input type="checkbox"/> [S-N] Encapsulation						
<b>I. JOB/SITE DATA</b> Emergency? <input type="checkbox"/> Yes <input type="checkbox"/> No    Asbestos Present? <input type="checkbox"/> Yes <input type="checkbox"/> No						
Enter PROJECT [Site/Building] NAME below: ↓ _____						
Street Address:			Region: 03			
County ID: <small>[From below]</small>	City:	State: MD	Zip:			
01 Allegany    04 Calvert    07 Cecil    10 Frederick    13 Howard    16 Prince George    19 Somerset    22 Wicomico	02 Anne Arundel    05 Caroline    08 Charles    11 Garrett    14 Kent    17 Queen Anne    20 Talbot    23 Worcester	03 Baltimore    06 Carroll    09 Dorchester    12 Harford    15 Montgomery    18 St Mary    21 Washington    24 Baltimore City				
Project/Site Location Description: (BE SPECIFIC!...Bldg, Room, Floor # etc.)						
Building Size: (SQ FT)	No. Floors:	Present/Prior Use: B-Ship, C-Commercial, G-Government, H-Hospital, I-Industrial, O-Office, P-Public Building, R-Residence, S-School, U-University/College, V-Vacant, T-Other	Present Use:			
(LN FT)	Age:		Prior Use:			
<b>II. ASBESTOS/PROJECT DATA</b>						
Amount of Asbestos	RACM Removed	Nonfriable Not Removed		Nonfriable Removed		Unit
		CAT I	CAT II	CAT I	CAT II	
Pipes						LnPt
Surface Area						SqFt
Vol Off Fac Component						CuFt
Removal/Encapsulation/Demolition → Start Date:		Completion Date:		# of Workers:		
Project Supervisor:		Days Worked:		Hours Worked:		
<b>III. RESPONSIBLE PARTIES</b>				Describe asbestos (e.g. pipe insulation, boiler breaching, floor tile, etc.)		
<b>A. Asbestos Contractor:</b>				MD License #:		
Project Contact:				Telephone:		
<b>B. Other [including Demolition] Contractor:</b>						
Address:				Contact:		
City, State, Zipcode:				Telephone:		
<b>C. Owner:</b>						
Address:				Contact:		
City, State, Zipcode:				Telephone:		

<b>III. RESPONSIBLE PARTIES (continued)</b>	
<b>D. Waste Transporter:</b>	
Address:	Contact:
City, State, Zipcode	Telephone:
<b>E. Landfill:</b>	
Address:	Contact:
City, State, Zipcode	Telephone:
<b>IV. WORK PRACTICES</b>	
A. Procedure, including analytical method, if appropriate, used to detect the presence of asbestos. <i>(Use additional sheets, if necessary)</i>	
B. Description of planned demolition, renovation, or encapsulation work and method(s) to be used: <i>(Use additional sheets, if necessary)</i>	
C. Description of work practices and engineering controls to be used to prevent emissions of asbestos at the demolition, renovation and/or encapsulation site: <i>(Use additional sheets, if necessary)</i>	
D. EMERGENCY RENOVATIONS: Date and Hours of Emergency: (MM/DD/YY) Time: Description of the sudden, unexpected event: <i>(Use additional sheets, if necessary)</i>	
Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable financial burden: <i>(Use additional sheets, if necessary)</i>	
E. Description of procedures to be followed in the event that unexpected asbestos is found or previously nonfriable asbestos material becomes crumbled, pulverized, or reduced to powder. <i>(Use additional sheets, if necessary)</i>	
F. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40 CFR PART 61, SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION, RENOVATION OR ENCAPSULATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS.	
Signature _____	Date _____
G. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.	
Signature _____	Date _____
H. IN ADDITION TO THE INFORMATION REQUIRED BY NESHAP REGULATIONS, MARYLAND REQUIRES THAT THE FOLLOWING INFORMATION BE PROVIDED AT THE TIME OF NOTIFICATION: EMPLOYEE INFORMATION. ON A SEPARATE PAGE, PROVIDE THE FOLLOWING INFORMATION FOR EACH EMPLOYEE NOT LISTED ON SCHEDULE I OF "APPLICATION FOR LICENSE TO REMOVE/ENCAPSULATE ASBESTOS" WHO WILL HANDLE ASBESTOS ON THIS PROJECT: 1) FULL NAME; 2) SOCIAL SECURITY NUMBER; 3) NAME OF ORGANIZATION THAT PROVIDED APPROVED TRAINING COURSE; AND 4) DATE OF MOST RECENT APPROVED TRAINING COURSE ATTENDED.	