

# **WVU DESIGN GUIDELINES & CONSTRUCTION STANDARDS**

## **DIVISION 00 – AE AND PROFESSIONAL SERVICES**

### SECTION 005008 – ASBESTOS

#### **PART 1 - GENERAL**

##### 1.1. DEFINITIONS

A.	FM	Facilities Management
B.	EHS	Environmental Health and Safety
C.	PM	Project Manager
D.	EPA	Environmental Protection Agency
E.	OSHA	Occupational Safety and Health Administration
F.	PCM	Phase Contrast Microscopy
G.	TEM	Transmission Electron Microscopy
H.	ACBM	Asbestos-Containing Building Material
I.	WVDEP	WV Department of Environmental Protection
J.	NESHAP	National Emission Standards for Hazardous Air Pollutants
K.	DOT	Department of Transportation
L.	TSI	Thermal System Insulation

1.2. Any deviation from the following instructions must be approved during design by WVU FM Personnel and WVU EHS.

1.3. The purpose of the standard is to ensure all employees and workers dealing with any construction, repair, or renovation projects containing asbestos follow the guidelines established for proper sampling, handling, and disposal of the material. All workers, on the University property, shall use this process for all asbestos building inspection survey and abatement related work.

1.4. All asbestos building inspection survey and abatement projects shall comply with State, Federal, and Local regulations as well as WVU design guidelines.

1.5. The following section is to be used as a guideline in order to assist in developing and selecting appropriate abatement protocols. These are the classifications and related training requirements per WV Code:

A. Small Abatement:

1. Small abatement is  $> 3$  to  $\leq 49$  square feet or  $3$  to  $< 260$  linear feet (glove bag).
  - a. Qualified asbestos workers shall have a current WV Asbestos Worker license.
  - b. An asbestos design shall be available upon request from EHS
  - c. 10-days prior to work notification needs submitted to Federal and State agencies and copy provided to PM who shall provide to EHS
  - d. Regulated work area shall use glove bag and/or wet removal methods per EPA guidelines.
  - e. Asbestos waste shall not exceed one waste bag per job.

B. Medium Abatement:

1. Medium abatement is  $\geq 50$  to  $< 160$  square feet or  $< 260$  linear feet (glove bag).

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- a. Qualified asbestos abatement contractors shall have a current WV Asbestos Contractor license.
- b. Qualified asbestos workers shall have a current WV Asbestos Worker or Supervisor license.
- c. Follow OSHA/EPA/State asbestos abatement guidelines.
- d. Asbestos project design must be approved by EHS and on-site.
- e. 10-days prior to work notification needs submitted to Federal and State agencies and copy provided to PM who shall provide to EHS
- f. Negative pressure containments must be exhausted outside building.
- g. Notify EHS when project has been scheduled.
- h. Perform third-party visual and final air clearance using EHS approved sampling methods (PCM vs TEM).
- i. Contractor shall provide air sampling results to PM who shall provide to EHS.
- j. Building occupant relocation may be required.
- k. Night, weekend, or holiday work scheduled may be required.

C. Large Abatement:

1. Large abatement is  $\geq 160$  square feet or  $\geq 260$  linear feet.
  - a. Includes all requirements in the above sections as well as:
  - b. Notify EHS prior to planning stage of project.
  - c. 10-days prior to work notification needs submitted to Federal and State agencies and copy provided to PM who shall provide to EHS.
  - d. Project may require continuous third-party perimeter air monitoring using PCM methods for floor tile/mastic work. TEM clearance methods may be necessary for friable materials abatement.

1.6. WVU Asbestos Abatement Best Practices

- A. For friable ACBM, Class I Projects, contractors shall adhere to WVU's best practices as listed below as well as state and federal regulations pertaining to asbestos work.

1. Abatement area shall be clear of furnishings. This is usually completed by WVU staff prior to contractors beginning abatement work, unless other arrangements are agreed to by the Project Manager and Contractor.
2. Post Asbestos Warning signs at each regulated area. Warning signs should read as follows:

DANGER  
ASBESTOS  
MAY CAUSE CANCER  
CAUSES DAMAGE TO LUNGS  
AUTHORIZED PERSONNEL ONLY

3. Containment areas and de-con areas shall be lined in 6 mil black plastic wherever in view of the public.
4. All perimeter doors must be covered in 6 mil black plastic to prevent building occupants from inadvertently entering abatement areas.

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5. Exhaust air must be vented outside the building and away from walk ways or building air intakes.
6. A manometer shall be visible during abatement to ensure a minimum of -0.02 column inches of water pressure is maintained inside the containment as required by OSHA and documentation of pressure readings shall be provided to the PM.
7. Asbestos workers are not permitted to wear protective suits and respirators anywhere outside of the abatement area.
8. Noise levels must be kept to a minimum to prevent disruption of building occupants.
9. Only No-Odor mastic remover shall be used unless otherwise permitted by EHS.
10. Pre-labeled asbestos bags are not permitted for use as general trash bags.
11. The WVU PM shall contract the third-party air monitor services.
12. No un-authorized WVU personnel will enter the containment. The WVU PM can authorize a trained employee to enter the containment during or after working hours.
13. The project manager may have a third-party monitor perform exterior perimeter monitoring on large projects involving > 50 square feet of friable material.
14. Asbestos waste must be double bagged in 6 mil asbestos disposal bags. The bags must be goose-neck tied and sealed with duct tape.
15. Asbestos waste (even though properly bagged) must not be stored in public areas.
16. Dumpsters shall be lined, labeled, covered, and secured. If a truck or trailer is used in lieu of a dumpster, the truck or trailer must be lined, labeled, covered, and secured.

### **PART 2 - PLANNING**

- 2.1. The WVU EHS department shall be notified in the planning stages of all planned or emergency asbestos building inspection survey and abatement related work.
- 2.2. Obtain any available existing asbestos data or surveys from EHS.
- 2.3. As needed, an asbestos building inspection survey shall be performed prior to renovation and/or demolition activities by a WV licensed Asbestos Inspector. The inspection and sampling procedures shall follow the specifications of 40 CFR Part 763, Subpart E. This includes, but is not limited to, the following minimum sampling requirements:
  - A. Miscellaneous Materials – 2 samples per homogenous area
  - B. TSI – 3 samples per homogenous area
  - C. Surfacing Materials – follow the AHERA 3-5-7 rule

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All asbestos samples collected at WVU shall be numbered in the following format:

Building Name Abbreviation (provided by WVU PM) Sample Date – Homogenous Area – Sample Number  
*Example:* Mountainlair sampled on May 11, 2020 → MTL 051120-1B-1

- 2.4. Large projects require a professional hazardous materials consultant to develop an asbestos abatement design. Often the same firm can conduct the survey, develop the asbestos design, and conduct the third-party air monitoring.
- 2.5. EHS should be consulted to determine the appropriate air monitoring analysis, for example, PCM versus TEM.
- 2.6. Contractors shall submit the required 10-day notification and asbestos design to the WVDEP and all other appropriate agencies and CC the PM, who shall transmit to EHS to review and approve.
- 2.7. Calculations for negative air for the containment shall be included with the project design. The calculations should take into consideration seals and cracks that may be present in the containment.

### **PART 3 - EXECUTION**

- 3.1. Notify EHS that asbestos building inspection survey and abatement activities are ready to begin.
- 3.2. The asbestos building inspection survey procedures shall follow the specifications of 40 CFR Part 763, Subpart E.
- 3.3. Any asbestos containing materials within the project area are to be removed or enclosed/encapsulated, following all federal, state and local regulations, prior to potential disturbance. WVU will hire the third-party asbestos monitoring firm.
- 3.4. All removals, repairs, encapsulation or any activities which may disturb asbestos containing materials must be performed in accordance with NESHAP, WV State Regulations, Title 64 West Virginia Legislative Rules Division of Health Series 63, and 29 CFR 1926.1101.
- 3.5. Under no circumstances should any contractor disturb potential asbestos containing materials prior to the materials being tested.
- 3.6. Asbestos containing materials shall be disposed of at EPA licensed landfills per EPA regulations. Transportation of asbestos shall follow all pertinent EPA (40 CFR part 61 section 150) and DOT (49 CFR parts 171 and 172) standards.

### **PART 4 - COMPLETION**

- 4.1. Final clearance results shall be reviewed with WVU PM and EHS prior to disassembly of containment areas.
- 4.2. Submittals and Closeout Documents shall be submitted to the WVU PM who shall transmit to EHS. The Documents are to include:

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- A. A copy of the asbestos inspection report identifying or ruling out asbestos containing materials, if available. Asbestos inspectors must include the following information in their survey report:
  - 1. Date of survey
  - 2. A table (listing all of the materials sampled and identified ACM) with the following information:
    - a. Description of material (color, texture, pattern)
    - b. Material location
    - c. Condition of the material (good, poor)
    - d. Identification of the material (friable or non-friable)
    - e. Percent and type of asbestos
    - f. Approximate quantity of the material
  - 3. Chain of custody documentation
  - 4. A copy of the laboratory analytical results
  - 5. Sample location map
  - 6. Photo log of each homogenous material sampled
  - 7. A copy of the accredited inspector's license
- B. A copy of the asbestos project design. The asbestos project design shall be provided to WVU EHS prior to the work beginning.
- C. A copy of the 10-day notification. The 10-day notification shall be provided to WVU EHS prior to the work beginning.
- D. A copy of the following licenses. Licenses shall be provided to WVU EHS prior to the work beginning.
  - 1. Asbestos Contractor's license
  - 2. Asbestos Inspector's license
  - 3. Asbestos Designer license
  - 4. Asbestos licenses for all supervisors that will be onsite.
  - 5. Asbestos licenses for all workers that will be onsite.
- E. A copy of the negative pressure readings from the project when completed.
- F. A copy of the waste shipping manifest as soon as possible.
- G. A copy of the air clearance monitoring results (Final Clearance Report). Air monitoring shall be performed by a qualified third-party professional hired by WVU.

END OF SECTION 005008