

**REMOVAL OF ASBESTOS-CONTAINING MATERIAL**

Revised 3/30/2016

**ACKNOWLEDGEMENTS**

The Board of Regents of The University System of Georgia (USG/BOR)

**PART 1 - GENERAL**

**1.01 GENERAL DESCRIPTION OF WORK**

A. The scope of work for asbestos abatement at \_\_\_\_\_ involves the disturbance of the following friable/non-friable materials to be performed by a Georgia Licensed Asbestos Abatement Contractor:

1. Removal and proper disposal of ACM \_\_\_\_\_ (sq ft, ln ft, cu ft).

Material shall be determined to be Regulated Asbestos Containing Materials (RACM), Category I Non-Friable Materials or Category II Non-Friable Materials.

When Category I and II Non-Friable materials are disturbed they can become RACM, based on how they are disturbed. When these materials will possibly be rendered Friable, there must be prior approval from Responsible Unit Designated Person and DIO. ACM friability designation and potential designations can be found on Page 2 of the GA EPD Asbestos Project Notification Form (Appendix A). Category I & II must also comply with GA EPD Asbestos Solid Waste Disposal requirements.

B. These Asbestos Abatement Specifications are prepared to be in compliance with National Emission Standards for Hazardous Air Pollutants (NESHAP) and State of Georgia Environmental Protection Division (EPD) Requirements. However, it is important to note that Occupational Safety and Health Administration (OSHA) Regulations apply to materials with any detectable amount of asbestos.

C. All construction debris and trash generated by the abatement of asbestos-containing materials shall be removed from the area on a daily basis and disposed of as asbestos-containing waste.

D. If the project is determined to be under the jurisdiction of Asbestos Hazard and Emergency Response Act (AHERA) regarding schools K-12 and/or daycares, reference below.

1. USG/BOR extends the initial asbestos and lead inspections and O&M requirements to include Daycares on our campus.
2. For new construction and renovations, only Asbestos Free materials shall be installed.

**1.02 MEDICAL REQUIREMENTS**

A. Medical Examinations. Before exposure to airborne asbestos fibers, the Contractor will provide workers with a comprehensive medical examination as required by 29 CFR 1926.1101. This examination consists of a pulmonary function test and a chest x-ray at the discretion of the physician performing the physical. The same examination is required on an annual basis to all employees engaged in an occupation involving asbestos fibers.

B. Medical Records. The Contractor shall establish and maintain accurate medical surveillance records for each employee subject to medical surveillance by 29 CFR 1926.1101 and shall maintain the records for the duration of employment plus 30 years in accordance with 29 CFR 1910.20.

**1.03 TRAINING CERTIFICATION AND PROJECT SUPERVISION**

A. Supervision. An AHERA Accredited Asbestos Abatement Supervisor and OSHA Asbestos Competent Person shall be present at all times that asbestos abatement is in progress. All abatement (including preparation, removal and cleanup) of more than 10 square feet, 10 linear feet involving Regulated Asbestos Containing Material (RACM), must have at least one AHERA Accredited Supervisor present during all work. During abatement of regulated roofing projects, the Supervisor shall be in the immediate work area supervising the



1. Detach and wet clean removable electrical, heating, and ventilating equipment and other items which may be connected to asbestos surfaces.
2. Remove existing filters from HVAC system and dispose of as asbestos-contaminated waste.

## **PART 2 - PRODUCTS**

### **2.01 WETTING AGENTS AND ENCAPSULANTS**

- A. Surfactant. Provide water to which a surfactant has been added. Use a mixture of surfactant and water that results in wetting of the asbestos-containing material and retardation of fiber release during disturbance.
- B. Encapsulant. Provide an encapsulant designed specifically to lock down asbestos fibers following asbestos abatement. Use in strict compliance with manufacturer's instructions. If ACM material is to be left in-place, Responsible Unit Designated Person and DIO shall review and determine the best application should a bridging or penetrating encapsulant be required.

### **2.02 POLYETHYLENE PLASTIC SHEETING**

- A. Provide polyethylene plastic sheeting in the largest sheet size possible to minimize seams, 4-mil and 6-mil thickness, clear, frosted and/or black, as required.
- B. Where there is a probability of an ignition source or extensive heat, Polyethylene plastic sheeting shall be flame resistant (if required) and conform to the National Fire Protection Association Standard 701, "Small-Scale Fire Test for Flame-Resistant Textiles and Films."

### **2.03 ADHESIVES**

- A. Provide duct tape at least three inches wide with an adhesive formulated to stick aggressively to polyethylene plastic sheeting.
- B. Provide spray adhesive formulated to stick aggressively to polyethylene plastic sheeting.

### **2.04 DISPOSAL BAGS**

- A. Provide 6-mil thick, leak-tight polyethylene plastic bags labeled in accordance with Paragraph k (7) (iii), 29 CFR 1926.1101. Clear disposal bags are the preferred bag.

### **2.05 HIGH EFFICIENCY PARTICULATE AIR (HEPA) FILTERS**

- A. Provide a designed, constructed and maintained HEPA vacuum cleaner, air filtration machine, and respirators with filters capable of filtering particles of 0.3 microns or greater at 99.97% efficiency.

## **PART 3 - EXECUTION**

### **3.01 EQUIPMENT**

- A. Personal Protection
  - 1. Respirators. Provide workers with respirators that are the most comfortable and afford the best seal and protection. Cartridge filters shall be approved for respiratory protection against dusts, fumes and mists having a permissible exposure limit of less than 0.05 milligrams per cubic meter (N, R, P-100). At a minimum, workers shall be provided half-face, negative pressure respirators equipped with the required filter. A clean set of cartridge filters shall be provided to workers upon each entry into the regulated area. All individuals entering the asbestos control area after the commencement of asbestos removal work shall be required to wear respiratory protection.



- The negative pressure records shall be maintained at the job site for review and become a permanent part of the completion report for the project.
- D. The inlet sensor of the manometer shall be located at the farthest point from any source of make-up air
    - 1. The manometer must be calibrated prior to the start of each work shift
  - E. A high efficiency particulate air (HEPA) filtration system shall be used. The HEPA system shall be capable of collecting and retaining 99.97% of airborne particles with an aerodynamic diameter of .3 microns or larger.
  - F. Diminished pressure inside the regulated area shall be maintained with the use of HEPA filtered machines, shall exhaust directly to the exterior of the building, and shall have the capacity to produce, at a minimum,



**3.07 REMOVAL OF WALLBOARD/SHEETROCK, JOINT COMPOUND AND CEILING TEXTURES**

- A. When specified, specific wallboard/sheetrock and joint compound shall be removed from the building. This material shall be removed as friable asbestos containing material.
- B. The wallboard-joint compound shall be adequately wet prior to disturbance. The material shall be removed in pieces small enough to safely handle and package for disposal without allowing visible emissions.
- C. Chopping or breaking the material shall be allowed if kept wet and the air continually misted with amended water or a foaming agent. Scraping and/or use of a stiff bristle brush may be used to accomplish removal. Wire brushes and pressure washers are not to be used. Clean even cuts are required on the separation areas that are to remain.
- D. Once the material is removed, and while still wet, place in a 6-mil leak-tight container (bags, lined dumpster, etc.). Completely seal the disposal container with duct tape. Materials packaged inside the regulated area shall be removed without allowing the release of contamination or damaging the personnel decontamination



- C. All movable objects will be cleaned then removed from the regulated area. Pre-clean objects remaining in the regulated area using a HEPA vacuum and/or wet cleaning methods. Cover all objects with at least one



- G. The asbestos coated panels shall be adequately wet or foam prior to disturbance. The material shall be removed in complete pieces as installed if possible.
- H. Scraping and/or use of a stiff bristle brush may be used to accomplish clean-up when the panel is removed. Wire brushes and pressure washers are not to be used.
- I. If removal is accomplished on the exterior of the building, protective measures and regulated barriers shall be utilized to prevent contamination of any surrounding areas.
- J. Seal one layer of 6-mil polyethylene plastic sheeting to the base of the exterior wall directly below the material to be removed. Sheeting shall extend a minimum six feet to either side of the end wall. Allow the plastic sheeting to drape onto the ground and to a point not less than six feet from the exterior wall. This layer of plastic shall be weighted to prevent displacement by wind.

### **3.13 REMOVAL OF PLASTER**

- A. When specified, all plaster and associated support structure shall be removed from the building. This material shall be removed as friable asbestos containing material.
- B. The plaster shall be adequately wet prior to disturbance. The material shall be removed in pieces small enough to safely handle and package for disposal.
- C. Chopping or breaking the material shall be allowed if kept wet and the air continually misted with water. Scraping and/or use of a stiff bristle brush may be used to aid in removal and cleaning. Wire brushes and pressure washers are not to be used. Diminished pressure shall be maintained at all times until final inspection and approval of the work area by the consultant.
- D. Once the material is removed, and while still wet, place in a 6-mil leak-tight container (bags, lined dumpster, etc.). Completely seal the disposal container with duct tape. Materials packaged inside the regulated area shall be removed without allowing the release of contamination or damaging the personnel decontamination area. If bulk loading materials, care shall be taken to prevent visible emissions both to the air and horizontal surfaces, and any visible emissions shall be immediately cleaned up.
- E. The Supervisor shall have additional safety discussions with DIO and the workers when removing plaster attached to wire lathe to prevent injury and cuts.

### **3.14 REMOVAL OF EXTERIOR WINDOW CAULKING**

- A. When specified, all window caulking shall be removed prior to window demolition. Spray a fine mist of amended water on the windows prior to removing the caulking. Once window caulking is removed, place it immediately into a plastic disposal bag. This material shall be removed intact as much as practical.
- B. A regulated area shall be established on the grounds surrounding the area in the facility by erecting barriers extending a minimum of fifteen (15) feet from the base of the facility. Warning tape and caution signs shall be used which will alert unprotected individuals and prevent them from accidentally entering the regulated area.
- C. Barriers shall be erected using two (2) strands of warning tape between stanchions: the first tape shall be twelve (12) inches from the ground; the second tape shall be no more than forty-eight (48) inches from the ground. Caution signs shall be suspended between the strands of warning tape no more than ten (10) feet apart. Warning signs shall read as follows:

DANGER  
ASBESTOS  
CANCER AND LUNG DISEASE HAZARD





#### **4.08 REMOVAL OF REGULATED AREA ISOLATION**

A. After all cleaning and testing requirements have been met:

1. Shut down and remove the air filtration system. Seal HEPA filtered fan units, HEPA vacuums and similar equipment with 6-mil polyethylene sheet and duct tape to form a tight seal at intake end before being moved from regulated area.
2. Remove critical barriers. Remove any small quantities of residual material found upon removal of



**PART 7 - PROJECT CLOSEOUT**

**7.01 DAMAGE REPAIR**

- A. Any damage to surfaces and/or building components, other than those designated for demolition, caused by the Contractor's activity or his workers shall be repaired or replaced at no additional cost to the Owner.

**7.02 FINAL CONSTRUCTION SITE CLEAN UP**

- A. Work of this section shall be performed once the Contractor has successfully passed all required final visual inspections and final air clearance testing of the regulated areas, and all asbestos-containing waste has been properly removed from the work site.
- B. Prior to Owner's Representative's final inspection, the Contractor shall remove from within and around the building all debris, w

13. GA EPD Project Completion Notification

- B. Post-submittals shall be bound in three-ring binders with each section tabbed or separated by a colored sheet of paper and cross-



## CERTIFICATE OF WORKERS ACKNOWLEDGMENT-ASBESTOS

**PROJECT NAME:** \_\_\_\_\_

**PROJECT ADDRESS:** \_\_\_\_\_

**CONTRACTOR'S NAME:** \_\_\_\_\_

**WORKING WITH ASBESTOS CAN BE DANGEROUS. INHALING ASBESTOS FIBERS HAS BEEN LINKED WITH VARIOUS TYPES OF CANCER. IF YOU SMOKE AND INHALE ASBESTOS FIBERS THE CHANCE THAT YOU WILL DEVELOP LUNG CANCER IS GREATER THAN THAT OF THE NON-SMOKING PUBLIC.**

Your employer's contract with the Owner for the above project requires that: You be supplied with the proper respirator and be trained in its use. You will be trained in safe work practices and in the use of the equipment found on the job. You will receive a medical examination. These things are to have been done at no cost to you.

**RESPIRATORY PROTECTION:** You must have been trained in the proper use of respirators, and informed of the type or respirator to be used on the above referenced project. You must be given a copy of the written respiratory protection manual issued by your employer. You must be equipped at no cost with the respirator to be used on the above project.

**TRAINING COURSE:** You must have been trained in the dangers inherent in handling asbestos and breathing asbestos dust and in proper work procedures and personal and area protective measures. The topics covered in the course must have included the following:

1. Physical characteristics of asbestos
2. Health hazards associated with asbestos
3. Respiratory protection
4. Use of protective equipment
5. Pressure Differential Systems
6. Work practices including hands-on or on-job training
7. Personal decontamination procedures
8. Air monitoring, personal and area

**MEDICAL EXAMINATION:**