

Auburn University Class I & II Asbestos Abatement Work Practices

(extracted from AU Asbestos Control Program available at <https://cws.auburn.edu/rms/pm/occupationalSafety>)

5.0 CLASS I AND II ABATEMENT PROJECT SUBMITTALS

5.1 Pre-Work Submittals

Abatement contractors shall submit the following in a bound notebook to AU or our designated representative at the mandatory pre-construction conference prior to beginning any friable or non-friable Asbestos abatement work:

1. A detailed plan, developed by a Project Designer, describing the procedures proposed for use in complying with the requirements of the project specifications. The plan shall include the location and layout of the regulated area, critical barriers, decontamination areas, the sequencing of Asbestos work and methods to be used to assure the safety of building occupants, workers, and visitors to the site. The plan shall also include methods for controlling visible emissions in the work area and the containerization of Asbestos debris.
2. A signed statement by the contractor that the contractors' employees who will be on site have had medical examinations by a licensed physician in the last 12 months.
3. A copy of the contractor's written OSHA Hazard Communication Program, contingency/emergency plan, and safety program.
4. Documentation that the contractor is currently licensed by ADEM for Asbestos abatement. **Note: License documentation is mandatory prior to beginning any friable or non-friable ACM or PACM work.**
5. Documentation of timely notification to ADEM and documentation of project fees paid.
6. Certificates of accreditation (Asbestos training) for each employee of the contractor who will be on site.
7. Documentation of respirator training and fit testing for each employee of the contractor who will be on the site. Fit test documentation shall be less than or equal to 6 months old at the end of the project.
8. Letter from an ADEM approved disposal site to be used indicating that the ACM removed from the site will be accepted for disposal.
9. A listing of authorized personnel to be granted access to work area.
10. All necessary permits, licenses, and insurance.
11. Documentation of contractor's notifications to Risk Management & Safety, Maintenance & Operations, and Design and Construction Services regarding the abatement project schedule.
12. The names and numbers of person(s) to be contacted on behalf of the contractor in cases of emergency.
13. Material Safety Data Sheets (MSDSs) for chemicals that will be used or that will be present at the job site.

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5.2 Project Closeout Submittals

Abatement contractors shall submit the following to AU or our designated representative in a bound notebook upon completion of the Asbestos abatement project:

1. Copies of daily project sign-in/sign-out logs and daily project log forms (including descriptions of unique or unusual events during the project).
2. A copy of final clearance certification.
3. A copy of the Completion Certification to the ADEM.
4. Copies of waste manifests, disposal documents and any other relevant records.
5. Documentation certifying that all replacement materials are Asbestos-free.

6.0 CLASS I AND II ASBESTOS MINIMUM WORK PRACTICES

The following are minimum procedures pertinent to Class I and II Asbestos abatement. These procedures should not be construed as a complete list of requirements for abatement jobs.

1. "Asbestos Health Hazard" danger signs shall be posted at all entrances to the work area per CFR 1910.1001(j)(3) and CFR 1926.1101.(k) .
2. Isolation of the work area from occupied areas of the building shall be provided using 6ml polyethylene barriers and air locks. Anything or anyone leaving the work area shall be properly decontaminated.
3. Negative air pressure shall be maintained within the work area at a pressure differential of -0.02 inches of water relative to the outside environment. A minimum of 4 air changes per hour shall be achieved within the work area throughout the project. At a minimum, high efficiency particulate air (HEPA) filters used in negative air machines shall be replaced after 600 hours of continuous use.
4. Negative air pressure shall be maintained continuously in the work area from the beginning of the Asbestos abatement project until final air clearance is achieved.
5. AU shall provide and/or disconnect electrical services as needed upon the written request of the contractor. AU shall also identify appropriate power sources for contractor's use prior to beginning the project. The contractor's electrical equipment shall be ground fault protected.
6. Industry-accepted Asbestos removal procedures shall be utilized. Visible evidence of Asbestos debris shall be removed using methods such as HEPA vacuuming, wet wiping, wet brushing, wet scraping and other state-of-the-art techniques or better. Dry sweeping shall be prohibited in the work area. All areas and surfaces shall be cleaned and restored to original condition or better.
7. Abated surfaces shall **not** be sealed or encapsulated until final visual inspection and clearance test results are accepted by AU or our designated

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- representative.
8. Pigmented sealants/encapsulants shall be sprayed on abated surfaces after Asbestos has been removed and after acceptable final clearance has been achieved.
 9. Projects involving contaminated soil crawl space areas shall generally require a minimum of 3 inches of surface soil removal within a 6-foot distance of the Asbestos source.
 10. In preparation for ACM waste disposal, the contractor shall remove and properly containerize all Asbestos-contaminated materials including disposable coveralls and polyethylene sheets. Contaminated materials shall be adequately wetted and packaged in sealed leak-tight containers [OSHA 29 CFR 1926.1101(1)(2) and DOT 49 CFR Part 173.216] with approved OSHA and US DOT labels [1910.1001(j)(4) and OSHA 29 CFR 1926.1101(k)(8) and DOT 49 CFR 173 Subpart E], identifying the contents as Asbestos materials. Wet Asbestos waste shall be placed into labeled leak-tight wrappings and/or containers according to industry standards or better.
 11. ACM waste containers shall be transported in enclosed vehicles to an ADEM approved disposal site. The contractor shall complete *Asbestos Disposal Manifest Forms* and shall send the appropriate copy to AU or our designated representative at the same time that waste is sent for disposal.
 12. Contractors shall pay applicable disposal fees.

8.0 PROHIBITED PRACTICES

1. High-speed abrasive disc saws that are not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air.
2. Sand blasting of ACM or PACM.
3. Compressed air used to remove Asbestos, or materials containing Asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air.
4. Dry sweeping, shoveling or other dry clean-up of dust and debris containing ACM and PACM.
5. Dry buffing of ACM or PACM floor tile at speeds greater than 300 rpm.
6. Use of unapproved floor buffing machines.
7. Stripping or finishing that does not utilize low abrasive pads and operate at speeds lower than 300 rpm and wet methods.

Note: Refer to Section 16.0 for projects involving floor tile/mastic or any other projects involving Negative Exposure Assessments.

9.0 CLEANING STANDARDS

1. Inaccessible Asbestos materials (e.g. in wall cavities, etc.) may be sealed or

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- encapsulated in-place with prior approval of AU or our designated representative.
2. All surfaces in the work area and decontamination unit shall be wet wiped, HEPA vacuumed, and cleaned and all debris shall be properly disposed.
 3. All areas of the abatement project shall be subject to visual inspection and air sampling by AU and/or our designated representative. Aggressive air sampling procedures shall be used as part of final clearance testing of work areas where required by AU or our designated representative.

10.0 SITE SECURITY MEASURES

AU and our designated representative shall have access to the work area for inspection at all times.

Supervision of the ACM abatement work shall be performed by an accredited Competent Person (as defined by OSHA 29 CFR 1926.1101) employed by the contractor at all times.

The work area shall be restricted to authorized, trained, and properly protected personnel.

Entry into the work area by unauthorized individuals shall be reported immediately to the project supervisor and AU or our designated representative and shall be documented in the project log.

15.0 EXPOSURE MONITORING

15.1 Class III and IV Abatement Projects

Initial and periodic personnel monitoring shall be conducted for AU employees who are, or may reasonably be expected to be, exposed to airborne concentrations at or above PEL and/or STEL in accordance with OSHA 29 CFR 1910.1001(d). Personnel monitoring will be performed during the Asbestos work to demonstrate that breathing zone concentrations were maintained below the PELs. Additionally, baseline air samples from the work site prior to Asbestos work may be conducted. Presently, the PELs for Asbestos are 0.1 fibers per cubic centimeter of air as an 8-hour time weighted average and 1.0 fibers per cubic centimeter of air as averaged over a 30- minute period.

15.1.1 Exceptions to Initial Monitoring

Where AU has relied upon objective data that demonstrate that Asbestos is not capable of being released in airborne concentrations at or above the TWA permissible exposure limit and/or excursion limit under the expected conditions of processing, use, or handling, then no initial monitoring is required.

15.2 Class I and II Abatement Projects

1. AU or our designated representative may require the contractor to conduct daily personal air sampling on abatement workers according to the procedures outlined in OSHA 29 CFR 1926.1101.
2. AU or our designated representative shall conduct exposure and assessment monitoring in accordance with OSHA 29 CFR 1926.1101 (f) in order to gauge the effectiveness of the abatement work methods.

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3. Any laboratory selected for analyzing air samples shall possess current certification verifying their participation in the NIST, NVLAP and the AIHA PAT program. The laboratory shall also have demonstrated ability in analyzing clearance air samples using Phase Contrast Microscopy (PCM) and transmission electron microscopy (TEM). Analysts for the laboratory shall have successfully completed the National Institute for Occupational Safety and Health (NIOSH) 582 course (or equivalent) and show proficiency in the NIOSH 7400 analytical method for fiber counting as published in the NIOSH Manual of Analytical Methods.
4. A complete record of **all** air sampling results and other records such as pump calibration data shall be furnished to the college/AU or their designated representative upon request.

Note : AU or our designated representative as justification to eliminate the need to collect air samples on the project shall not accept air sample results from the contractor's previous projects unless a Negative Exposure Assessment per §16 is performed. The contractor shall conduct personal and area air sampling for a minimum of two days on the project before any decision to terminate sampling will be made. Such air sampling shall continue until the University or our designated representative notifies the contractor that it may be discontinued.

15.3 Final Clearance Certification

1. The designated representative is responsible for conducting final project clearance testing.
2. Final clearance testing records shall be maintained by AU and include the results of visual inspections, equipment used, number of samples taken, sample locations, dates, airflow rates and time sampled.
3. All equipment, instruments and procedures used for final clearance testing shall be state- of-the-art or better.
4. Based on the size and configuration of the work area and the type of ACM or PACM being removed, the designated representative shall determine the number and type(s) of visual inspections and the total number of air samples necessary to achieve final clearance certification for the project. In addition, the designated representative shall determine whether aggressive or static air sampling will be required.
5. For larger abatement projects (especially those involving friable ACM) and for facilities that will be re-occupied, the work area is considered clean when there is no visible residue present on work area surfaces and when the result of each air sample collected and analyzed by TEM reading is less than 70 structures per square cc.
6. Asbestos abatement projects performed in or near occupied areas shall require aggressive air sampling with TEM analysis for final clearance tests.
7. When the tested area(s) fail to meet the specified level of cleanliness, the area shall be re- cleaned by the contractor (at the contractor's expense) and re-sampled under the supervision of the designated representative. Repeated cleaning and clearance

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testing shall be required (at the expense of the contractor) until the acceptable final clearance level is achieved.

8. The AU or its designated representative may require additional air samples and/or additional analysis as needed.
9. Any questions concerning the Asbestos abatement specifications or clearance testing procedures shall be directed to the designated representative.