

1) Purpose

This document is intended to specify the scope of services required of Asbestos Contractor in asbestos inspection projects at Kennesaw State University (KSU). These specifications include contractor's qualification, inspection criteria and final submittals. The Contractor is required and will be presumed to be familiar with the stipulations of this document for the performance of their contracted services.

The purpose of this procedure is to ensure compliance with the applicable asbestos control regulations and to minimize exposure of University's personnel, and contractors to asbestos fibers from campus building materials during building maintenance, renovation or demolition.

2) Scope

This policy applies to all asbestos abatement work on KSU facilities regardless of the size of the abatement.

3) Definitions

a) Asbestos

Any member of six fibrous silicate materials that occurs naturally in the earth's crust, including Amphiboles and Serpentine (chrysotile, amosite, crocidolite, and fibrous tremolite, anthophyllite, and actinolite).

b) Asbestos NESHAP

The National Emissions Standard for Hazardous Air Pollutants for asbestos is a set of federal regulations designed to control the emission of asbestos fibers from construction and demolition activities.

c) Suspect regulated asbestos containing material

A material that is likely to be asbestos but has not been positively identified through analysis by a NIST or EPA accredited laboratory.

d) Friable & Non-friable asbestos

Friable asbestos is typically loose degraded material that will crumble, flake, or otherwise release dust when disturbed. Examples are spray on acoustic material, flaking plaster, and water damaged pipe insulation. According to NESHAP, friable asbestos is a material that contains more than 1% asbestos, and when dry, can be crumbled, pulverized, or reduced to a powder by hand pressure.

Non-friable asbestos includes solid asbestos containing construction materials that are in good condition. Examples are intact floor tiles, transite boards, cement products, and encased pipe insulation.

e) NESHAP

National Emission Standard for Hazardous Air Pollutants. Regulations set forth by the U.S. Environmental Protection Agency to control asbestos emissions from renovation and demolition activities.

f) AHERA

Asbestos Hazard Emergency Response Act. Federal regulations covering identification and abatement procedures, training, and other elements of asbestos hazard control.

g) Regulated Asbestos Containing Materials (RACM)

Neshap: All friable materials containing greater than 1% asbestos by weight; Category 1 non-friable material that has become friable; Category 1 non-friable material that will be subject to grinding, cutting, sanding, or abrading; and Category 2 non-friable material that will have a high probability of being crumbled, pulverized or reduced to a powder by the demolition/renovation activity.

h) Category 1 Non-Friable

Asbestos containing packings, gaskets, resilient floor covering and asphalt roofing products.

i) Category 2 Non-Friable

Non-friable asbestos containing products that are not category 1 (e.g. transite)

4) Procedure

a) Inspections

- 1) Inspections shall be conducted by AHERA certified building inspectors.
- 2) Prior to performing the inspection, existing inspection records and prior sampling results should be reviewed in order to prevent unnecessary laboratory analysis. Existing information may only be utilized if the minimum numbers of sampling results are available per AHERA sampling protocols.

b) Conducting Inspection

All inspections are to include a review of original blueprints and specifications of the facility when available and visual inspections of all areas of the facility which a person involved in the demolition or renovation operation may come into contact, or which may contain asbestos and could be affected directly or indirectly by the operation.

- 1) Inspector should visually inspect the area to identify the location of all suspected RACM.
- 2) Test all suspected RACM to determine if it is friable.
- 3) Identify all friable suspected RACM and all non-friable suspect RACM.
- 4) Collect bulk samples of suspect material.

c) Bulk Sampling

- Sampling of suspect building materials shall be performed by certified Asbestos Inspector and coordinated with Environmental Health & Safety department.
- The personnel performing sampling shall wear personal protective equipment appropriate to the hazard presented. At a minimum, the following safety guidelines shall be followed:
 - a) When disturbing friable material, in an area that is contaminated with friable asbestos, or in a sampling situation that will generate significant quantities of dust, gloves and HEPA respiratory protection should be worn.
 - b) Sampling of non-friable materials does not require PPE provided that dust is not generated in the process.

- Asbestos bulk samples will be collected in a random manner using the grid system described in the EPA publication "Asbestos in Buildings - Simplified Sampling Scheme for Friable Surfacing Materials.
- Core samples will be taken wherever feasible. If suspect RACM is believed to be present within or underneath a surface that is impenetrable by hand held coring device, then a drill or other physical means will be utilized to obtain a representative sample.
- If the area of the homogeneous suspect RACM is less than 1,000 linear or 1,000 square feet, at least three bulk samples shall be collected from each area.
- If the area of homogeneous suspect RACM is at least 1,000 linear or 1,000 square feet but less than 5,000 square feet, at least five bulk samples shall be collected from each area.
- If the area of homogeneous suspect RACM is at least 5,000 linear or 5,000 square feet, at least seven bulk samples must be collected from each area.

a) Laboratory Analysis

- Laboratory selected for analysis of bulk samples shall possess current certificate of Accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP)
- If the asbestos content is less than 1 percent as determined by polarized light microscopy (PLM) and the material is being treated as non-asbestos, verify the asbestos content by using the PLM point counting method.
- If one sample from a homogeneous area shows more than 1% asbestos, the other sample need not be analyzed; treat the area as asbestos.
- If all samples required to be collected are found not to contain more than 1% asbestos, then the homogeneous area may be treated as non-RACM under the Consent Decree.

b) Sample Results

- If the asbestos content is less than 1% as determined by PLM and the material is being treated as non-asbestos, verify the asbestos containing by using the PLM point counting method.
- An area of homogeneous material may be considered RACM without analyzing any remaining samples if one bulk sample analysis shows more than 1% asbestos.

- If all samples required to be collected are found by an EPA accredited laboratory not to contain more than 1% asbestos, then the area of homogeneous material may be treated as non-RACM.

c) Sample Documentation

- Each sample collected shall be immediately placed in a sealed leak tight container, numbered both sequentially and with an identification number unique to the sampling area and the facility, dated, and identified by the initials of the asbestos inspector taking the sample.
- The location from which each sample is taken shall be concurrently noted by sample number on a graphic depiction of the facility containing the information specified in below: If more than one person is inspecting the facility, each asbestos inspector shall use a separate graphic depiction, and date and initial the same.
- The following sample records shall be made available by the contractor to University Environmental Health & Safety Department.
 - (a) An inspection report with the date of the inspection, signed by the person making the inspection
 - (b) An inventory and graphic depiction of the demolition or renovation operation, showing the locations of the area of homogenous material where sample are collected, the exact location where each bulk sample is collected, the dates when samples are collected, the areas of homogeneous materials where friable suspect RACM is assumed to be RACM and has therefore not been sampled, and the areas where samples taken were determined by an accredited laboratory to be RACM
 - (c) A description of the manner used to determine sampling location, the name and signature of each asbestos inspector who collected the samples, and evidence of his/her qualifications
 - (d) A list of the type of materials that make up each area of homogenous material (e.g. surfacing, thermal system insulation, etc.)
 - (e) Chain of custody forms identifying each sample taken
 - (f) Laboratory reports for each asbestos bulk sample of RACM and suspect RACM taken at the demolition or renovation operation.

d) Asbestos Waste Disposal

- Friable Asbestos Waste. Waste material containing friable asbestos shall be wetted and double bagged in six millimeter (six mil) polyethylene disposal bags. Bagged asbestos waste material must be labeled with OSHA warning labels and EH & S hazardous waste labels (if left at the abatement site over night). Wetted and bagged material will be placed in 55 gallon D.O.T. approved open head drums for disposal.
- Non-Friable Asbestos Waste. Non-friable asbestos containing materials must be managed so as to minimize damage to these materials. Non-friable asbestos materials must be collected separately from other solid waste to facilitate proper disposal. Non-friable asbestos waste (non-hazardous waste) must be taken to disposal facilities that are permitted to handle such wastes.

e) Regulatory Agency Notification

- University staff will make appropriate notification to relevant state and federal agencies as necessary for KSU renovation and demolition projects.