

IDENTIFICATION OF ASBESTOS CONTAINING MATERIALS IN BUILDINGS

Conducting the Survey

Begin by reviewing building records to see if ACM was specified at any stage. Although building records are often unreliable, they are a useful starting point. Check the original plans, shop drawings, remodeling records, and work change orders. Appendix A is a list of the most common uses and types of ACM in buildings since 1960. If any of these items appears in the records, assume that asbestos is in the building. Identify ACM mentioned in building records by type: (1) troweled- or sprayed- on surfacing material, (2) pipe and boiler insulation, or (3) other miscellaneous ACM.

Next, inspect the building for ACM identified in the building records. Determine if the materials are friable and records the findings. They may be sampled and analyzed to confirm the presence of asbestos. Thoroughly inspect all areas of the building for friable materials and sample them. The specific procedures for inspection and sampling vary depending on which of the three types of material are involved. The sampler of building materials should wear a respirator to prevent inhalation of fibers.

Procedures for Sprayed- or Troweled-on Surfacing Materials

Surfacing materials can be friable or nonfriable. Friable forms are either very fibrous and fluffy (sometimes like cotton candy) or granular and cementitious. (See Figure 1.) Since friable materials are more likely than nonfriable materials to release fibers when disturbed, the first priority is to identify those friable surfacing materials that contain asbestos. The first step is to locate ACM specified in building records and determine its friability. Then, identify all friable surfacing materials in the building and take samples to be analyzed for asbestos.

Surfacing Materials Identified as ACM in Building Records

Begin by locating any acoustical plaster or other surfacing materials that, according to building records, contain asbestos. Rub these materials to see if they crumble or produce a light powder. If so, consider them friable. (When disturbing material that may contain asbestos, the inspector should wear protective equipment.) Sample and analyze these materials as discussed below. Record the location and degree of friability.

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Other Surfacing Materials That May Contain Asbestos

Conduct a thorough building inspection for friable materials on walls, ceilings, beams, ducts, and any other surface. Rub the material to see if it is friable. Group any friable material into "homogeneous" areas for further study. A homogeneous area contains friable material that seem by texture and color to be uniform. If materials appearing uniform were installed at different times, designate the two materials as distinct homogeneous areas.

Once homogeneous areas of friable materials have been delineated and recorded on floor plans, collect samples of the materials and send them to Analytical Services for analysis.

Record the results of the sampling and analysis program and save the records indefinitely. If no asbestos is found in these materials, no further action is necessary.

Procedures for Pipe and Boiler Insulation

Asbestos-containing insulation is found on equipment containing hot air or liquid - pipes, boilers, tanks, and sometimes ducts. These insulation materials may be a chalky mixture of magnesia and asbestos, preformed fibrous asbestos wrapping, asbestos fiber felt, corrugated paper, or insulating cement. In most cases, the insulating material is covered with a protective jacket of cloth, tape, paper, metal or cement. (Insulation with pink or yellow wrap is usually a clear indication of fibrous glass rather than asbestos material. However, pipe elbows and joints will likely contain asbestos.)

Sample the insulation materials from the damaged or exposed ends or other parts. Procedures for sampling and analyzing insulation materials are similar to those for surfacing materials:

- * Identify homogeneous areas (i.e., sections of insulation that appear uniform in color and texture).
- * Take samples for each homogeneous area where the insulation is damaged or exposed. Remember, all persons taking samples should wear a respirator.
- * Submit samples to Analytical Services for analysis.

The presence or absence of asbestos should be documented in permanent records.

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Procedures for Other ACM

Most ACM in this category (e.g., wallboard, ceiling tile, floor tile) is hard and nonfriable, and sampling would damage it and release fibers needlessly. Information on asbestos in these materials comes mainly from building records or building personnel. Document the presence and location of these materials in permanent records. Although nonfriable asbestos is of less immediate concern, it should not be ignored. Fibers will be released if nonfriable material is cut, drilled, or broken during building repairs or renovation.

Potential Fiber Release

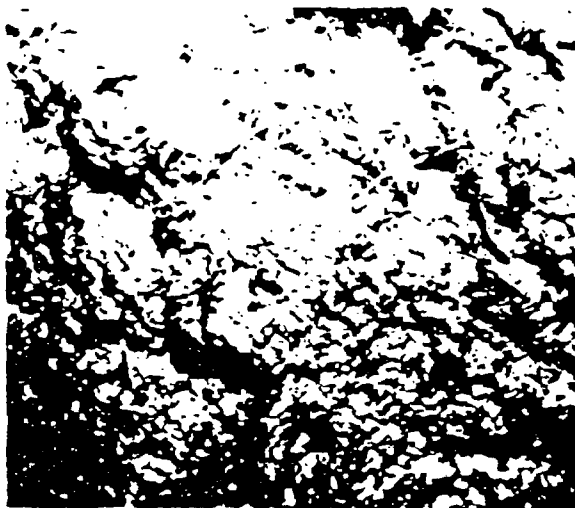
The need for asbestos monitoring depends on the likelihood of fiber release from the asbestos containing material. The possibility of fiber release should be assessed by evaluating the material's condition, physical characteristics and location.

If water or physical damage, deterioration, or delamination of the material is evident, then fiber release has occurred, is occurring, or is likely to occur. The appearance of the material and the presence of broken or crumbled material on horizontal surfaces indicate fiber release.

Visible, highly accessible materials in areas frequently used or needing periodic maintenance are most vulnerable to physical damage. Also in this category are materials subject to vibration from mechanical equipment. ACM in an air plenum or near a forced airstream (e.g., air from a heating vent) is likely to suffer surface erosion. In addition, fibers released into an airstream may be transported to other parts of the building, possibly exposing more people. Any planned changes in building use should also be considered when assessing potential fiber release.

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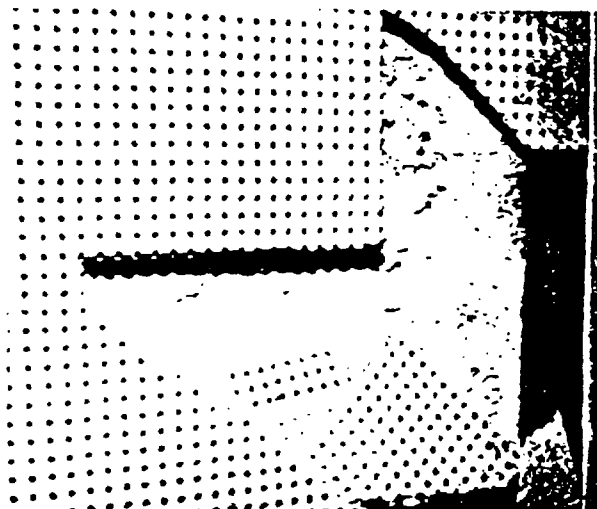
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Friable, fluffy sprayed-on material



Friable, cementitious sprayed-on or troweled material (acoustical plaster)



Nonfriable wallboard with friable sprayed-on material behind



Pipe lagging

Figure 1. Examples of asbestos-containing materials found in buildings.

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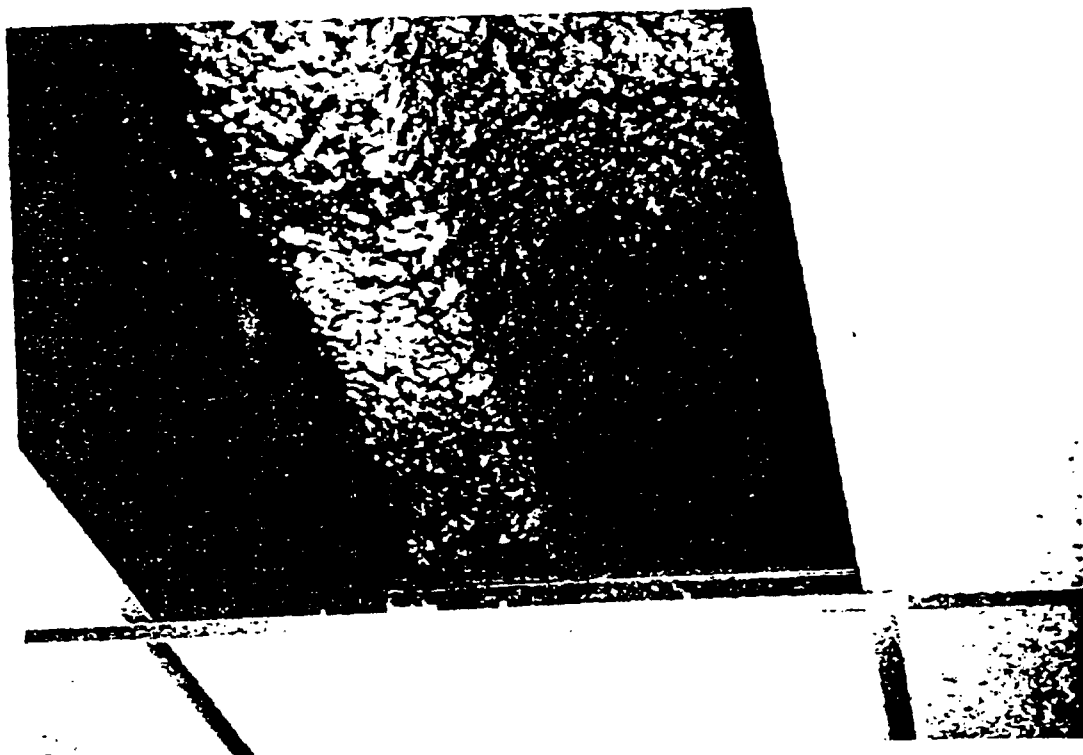


Figure 2. Asbestos-containing material located above
a suspended ceiling.