How to Handle Asbestos Containing Debris

Asbestos
Asbestos is a naturally occurring mineral fiber. Due to its unique properties, it was used in a number of different building materials into the 1970s and may still be found in some products currently being manufactured. It is estimated that manufacturers used asbestos in more than 3,000 different commercial applications. Examples of these materials include:

- Cementitious siding and wallboard (transite).
- Asphalt and vinyl floor tile and sheet flooring.
- Flooring mastics.
- Textured paints.
- Acoustical plaster.
- Ceiling tiles and panels.
- Fireproofing materials.
- Heater curtains.
- Blown-in insulation.
- Boiler insulation.
- HVAC duct insulation.
- Pipe insulation.
- Chalkboards.
- Roofing shingles and felts.
- Joint compound spackling compounds.
- Brake pads.

Potential Health Effects from Asbestos Exposure
There is no known safe level of asbestos exposure. Asbestos fibers are very small and can migrate through the body’s natural defense system into the lungs, where they can cause damage to the respiratory system.

There are three major health risks associated with asbestos exposure:
- Asbestosis, which is a scarring of the lungs.
- Mesothelioma, which is a cancer of the lining of the lungs and the abdominal cavity.
- Lung cancer.

There are three categories of asbestos containing materials:

- Friable asbestos containing materials.
- Category I non-friable asbestos containing materials.
- Category II non-friable asbestos containing materials.
Friable asbestos containing material is any material containing greater than one percent asbestos that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. These materials will more readily produce asbestos fibers if disturbed or removed. Examples of friable materials include sprayed or troweled materials such as acoustical ceiling spray, boiler insulation, paper pipe insulation and drop-in ceiling tile.

Category I non-friable asbestos containing material is asbestos containing packings, gaskets, resilient floor coverings and asphalt roofing products containing more than one percent asbestos. The asbestos in Category I materials is more tightly bound in the matrix of the material. These materials are less likely to generate asbestos fibers if they are in good condition and are not subject to sanding, grinding, cutting or abrading. Also, any vapor barrier on resilient floor coverings such as sheet vinyl or tile is considered friable asbestos if the flooring is removed in a manner that causes the vapor barrier to delaminate or separate from the covering.

Category II non-friable asbestos containing material is any non-friable material, other than category I materials, that contain more than one percent asbestos. The asbestos tends to be more tightly bound in the matrix of these materials. If not removed prior to demolition or renovation these materials have a higher probability of becoming crumbled, pulverized or reduced to powder, which may make it subject to regulation. If removed properly, these materials are not regulated by the department. Examples of category II materials include transite wall or roof shingles, wall board or cement pipe.

**Identifying Asbestos Containing Materials**

In the case of a natural disaster where buildings have been damaged, an inspection should be performed prior to beginning cleanup activities to ensure asbestos containing materials are not being disturbed. Prior to inspection, the debris should be kept wet to minimize the potential for any emissions of asbestos to occur. If you suspect damaged material might contain asbestos, you should not further disturb the material until it can be determined if it is asbestos containing or not. It is recommended any debris be kept wet until an adequate determination of the presence of asbestos can be made.

If the demolition or renovation to an institutional, commercial, public, industrial or residential structure, excluding residential structures that contain four or fewer dwelling units, will involve greater than 160 square feet, 260 linear feet, or 35 cubic feet of friable asbestos containing materials, then the removal of the asbestos is regulated. For projects that meet these thresholds, a State registered contractor and certified asbestos workers must be used to perform the abatement of the material. If buildings have been demolished or destroyed by a natural disaster prior to removing the asbestos, then any debris subsequently contaminated by asbestos must also be handled as asbestos containing waste.

The State must be notified about all abatement projects involving greater than a threshold amount of asbestos and for all demolition projects regardless of whether asbestos is present or not. Typical notification requirements would require a 10 working day notification. However, in the case of buildings that have been damaged as a result of a natural disaster, the notification requirement is waived.

There is no requirement to use a State registered contractor for asbestos removal for unregulated demolition or renovation projects that involve less than the threshold levels listed above for friable asbestos containing materials, non-friable asbestos containing materials or asbestos containing materials from exempt residential structures. However, using trained professionals for the removal of asbestos containing materials is recommended.
Precautions to Take to Minimize Asbestos Exposure

If damaged materials are suspected of containing asbestos, it is recommended the materials not be disturbed until it can be properly identified. If you remove or disturb asbestos containing materials from unregulated demolition or renovation projects, proper precautions should be taken to minimize any potential exposure.

1. Seal off work areas where asbestos containing materials may be present, and take care not to track asbestos dust into other areas.

2. Always wear a NIOSH approved respirator that you have been fit tested for and disposable personal protective clothing (PPE). At a minimum, this includes:
   - A half face or full face air purifying respirator (APR), fitted with p100 (HEPA) cartridges or a powered air purifying respirator (PAPR) with p100 cartridges.
   - Disposable coveralls such as Tyvek to prevent fibers from penetrating clothing
   - Disposable boot coverings
   - Disposable gloves
   - Safety glasses or goggles

3. Decontaminate yourself before going into uncontaminated areas. Remove disposable PPE and place in waste containers such as plastic bags. Double bag PPE waste and seal with tape.

4. When working with asbestos containing material, keep the material wet to keep emission of asbestos fibers to a minimum. A portable water spray system or hose is recommended.

5. Avoid breaking the asbestos containing material into smaller pieces. While smaller pieces may be easier to handle, this will increase the possibility of asbestos emissions.

6. Place any ACM you collect into appropriate leak tight disposal packaging or containers while the material is wet. Double bag and seal with tape if plastic bags are used.

7. Transport the asbestos waste material to an approved disposal facility in an enclosed dumpster or truck lined with plastic sheeting.

8. If transported to a Household Hazardous Waste Collection Area, stage the asbestos containing materials outside of the facility. Do not bring any ACM waste or debris into an HHW facility.

9. Wash hands and face thoroughly with soap and water upon return from the field.

**Waste Disposal Requirements for Asbestos Contaminated Debris**

All asbestos containing waste, whether from a regulated or unregulated demolition or renovation project is a waste material and must be disposed of at a permitted solid waste disposal facility that will accept the material. Asbestos containing materials should never be burned for disposal, as this will generate the emissions of asbestos fibers into the air, and is in violation of State open burning restrictions. For regulated projects, the State has stringent requirements for the packaging and labeling of asbestos containing waste materials. While the State has no requirements for packaging and labeling of asbestos containing waste materials from unregulated projects, you should still make arrangement with the disposal facility that you intend to use to determine what packaging and labeling requirements they may have for acceptance of the materials at their facility.