



# Understanding the Asbestos NESHAP

Fact Sheet  
April 2010

The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (U.S. EPA) to develop and enforce regulations to protect the general public from exposure to airborne contaminants that are known to be hazardous to human health. The U.S. EPA established the National Emission Standards for Hazardous Air Pollutants (NESHAP) under the authority of Section 112 of the CAA, and asbestos was one of the first hazardous air pollutants regulated. The Asbestos NESHAP was promulgated on April 6, 1973, and it was revised in 1990.

Asbestos was widely used in buildings for fireproofing, thermal and acoustical insulation, condensation control, and decoration. It was sprayed on beams and ceilings, used to cover piping and boilers, and sprayed into ducts. Asbestos was used extensively until the 1970s when U.S. EPA banned certain applications.

The Asbestos NESHAP protects the public by minimizing the release of asbestos fibers during renovation and demolition activities. Accordingly, this regulation specifies work practices to be followed for demolitions and renovations of all structures, installations, and buildings. Privately owned residential dwellings or apartments that are demolished for urban renewal or as part of a public or commercial project would be covered under the NESHAP regulations. Residential dwellings containing four units or less under private control or ownership would not be subject to the NESHAP. In addition, the Asbestos NESHAP contains notification requirements for the owner of the building and/or the contractor. Both the owner and contractor(s) are liable for compliance with the Asbestos NESHAP requirements.

The purpose of this publication is to describe who is subject to the Asbestos NESHAP and to explain the requirements of this standard. A brief glossary is provided at the end of this document to assist in understanding some of the terms (appearing in **boldface** text) discussed in this fact sheet. This fact sheet is to be used only as a guide and is not a substitute for reading and understanding the final rule which is found in Title 40, Part 61, Subpart M of the Code of Federal Regulations (40 CFR Part 61). For a copy of the final rule, see the "Where To Get Additional Information" section on page 10.

## **WHAT AGENCIES REGULATE ASBESTOS?**

There are three state agencies in Michigan that regulate **asbestos**: the Michigan Department of Natural Resources and Environment (DNRE), the Michigan Department of Energy, Labor and Economic Growth (DELEG), and the Michigan Department of State Police (MSP). The DNRE is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DELEG focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

- **Michigan Department of Natural Resources and Environment (DNRE)**

The U.S. EPA has delegated the Air Quality Division (AQD) of the DNRE with the authority to enforce the Asbestos NESHAP in Michigan. In addition, the state of Michigan has adopted the federal regulations into the Michigan Administrative Code (MAC), 1995 AACRS R 336.1942 (Rule 942), which is in effect as of December 31, 2003. A violation of the federal asbestos regulations is also a violation of the MAC. AQD administers the Asbestos NESHAP for the entire state. The AQD reviews the notifications, inspects demolitions and asbestos removals, and initiates enforcement actions when violations occur. Approximately 3,500 notifications are received each year by the DNRE and DELEG and are reviewed for completeness and timeliness before being entered into a

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tracking database. Inspections are made based on contractor history, areas of the state, and type of project. Inspections are also performed in response to complaints. U.S. EPA can and does conduct independent inspections of NESHAP projects.

The DNRE also regulates the disposal of asbestos.

- **Michigan Department of Energy Labor and Economic Growth (DELEG)**

The Construction Safety and Health Division of the DELEG implements the Asbestos Abatement Contractors Licensing Act, the Michigan Occupational Safety and Health Act (MIOSHA), the Asbestos Workers Accreditation Act, the MIOSHA Asbestos General Industry Standard, and the MIOSHA Asbestos Construction Standard. Some of the requirements in these acts and standards include work practices, training, and project notification. DELEG also licenses asbestos abatement contractors, approves asbestos training courses, accredits workers, and conducts Asbestos Hazard Emergency Response Act (AHERA) management plan review. For more information about the DELEG Asbestos Program, see the "Where to Get Additional Information" section on page 10.

- **Michigan Department of State Police (MSP)**

The Hazardous Materials and Investigations Unit of the MSP is responsible for enforcing the U.S. Department of Transportation's (U.S.DOT) regulations regarding shipping and transporting of packaged materials by highway. Asbestos, transported for disposal as a hazardous material, is regulated under 49 CFR Parts 100-185. For more information, refer to the "Where to Get Additional Information" section on page 10.

## ASBESTOS NESHAP APPLICABILITY

To determine applicability to the Asbestos NESHAP, three questions must be answered:

- ☞ Is the facility regulated by the NESHAP?
- ☞ Is the activity a demolition or a renovation?
- ☞ Does the amount of **regulated asbestos-containing material (RACM)** meet or exceed the thresholds?

- ☞ **Is the Facility Regulated by the Asbestos NESHAP?**

A **facility** subject to the NESHAP can be any institutional, commercial, or industrial structure, **installation**, or building. Examples include, but are not limited to:

- ✓ Bridges;
- ✓ Tunnels;
- ✓ Docked ships;
- ✓ Military installations, including dependent housing;
- ✓ Chemical/power plant installations;
- ✓ Indoor shopping malls;
- ✓ School buildings in a school district;
- ✓ Post office buildings;
- ✓ Apartment buildings containing five or more dwelling units;
- ✓ Certain condominiums, cooperatives, and lofts;
- ✓ Dwellings which are part of an urban renewal project, highway construction, shopping mall, or other private development (which are not privately owned and held);

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- ✓ Groups of residential buildings under control of the same owner/operator and part of the same renovation/demolition project (even if the buildings are not proximate to each other);
- ✓ Amusement parks or state fairgrounds;
- ✓ Jails or prisons;
- ✓ Nursing homes or homes for disabled persons;
- ✓ Parking garages;
- ✓ Farms;
- ✓ Churches, monasteries, convents, or rectories; and
- ✓ Residential dwellings intentionally burned for fire training, etc.

Some examples of facilities not subject to the Asbestos NESHAP include:

- ✓ Privately owned homes, not demolished for urban renewal or as part of a public or commercial project;
- ✓ Privately-owned, multi-dwelling units with four or less dwelling units; and
- ✓ Mobile sources.

### ☞ **Is the Activity a Demolition or a Renovation?**

A **demolition** is the wrecking or taking out of any load-supporting **structural member** of a facility together with any related handling operations or the intentional burning of any facility. A **renovation** is altering a facility or one or more facility components in any way, including the **stripping or removal** of RACM from a facility component (excluding operations in which load-supporting structural members are wrecked or taken out). Table 1 lists some examples of demolition and renovation activities.

*Table 1. Examples of Demolition and Renovation Activities*

Demolition	Renovation
The wrecking or taking out of any load-supporting structural member or the intentional burning of any facility.	Altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component, but excluding operations in which load-supporting structural members are wrecked or taken out.
<ul style="list-style-type: none"> <li>• Wrecking or taking out building Beams or load-supporting walls;</li> <li>• Removing the structural steel Supports of outdoor pipe racks;</li> <li>• Intentional burning, including intentional burning for fire training (this includes privately-owned, single-family dwellings);</li> <li>• Wrecking or tearing down a portion of a structure that is load-supporting; or</li> <li>• Renovating or remodeling a facility that includes wrecking or removing a load-supporting wall or component, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Scraping asbestos insulation off a ceiling;</li> <li>• Removing a boiler covered with friable asbestos from a building;</li> <li>• Removing pipe covered with friable asbestos from a pipe rack;</li> <li>• Gross removal of boiler asbestos insulation;</li> <li>• Glove bag stripping of asbestos pipe wrap;</li> <li>• Drilling through asbestos ceiling plaster to build a dropped ceiling;</li> <li>• Removing soundproofing, ceiling tiles, or plaster containing asbestos;</li> <li>• Removing vinyl asbestos floor tile or any asbestos-containing material that is normally nonfriable that is <b>in poor condition</b> (cracking, peeling, or showing other signs of deterioration). For example, it can be crumbled or pulverized by hand pressure; or</li> <li>• Activities that will render nonfriable material friable, such as grinding, sanding, crumbling, pulverizing, sawing, or other abrasive action, etc.</li> </ul>

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### **When Must an Asbestos Inspection and Detection Survey Be Completed?**

The Asbestos NESHAP requires that a thorough inspection be conducted for all renovations and all demolitions. All inspections must be completed before the commencement of a subject renovation and/or demolition activity, and the contractor performing the inspection must be listed on the joint DNRE/DELEG "Notification of Intent to Renovate/Demolish" form. Inspections utilizing just visual examination are not acceptable unless the building is primarily steel and concrete materials or no materials in the building are likely to contain asbestos. Both contractors and their legal representatives, as well as owners and their legal representatives, are fully responsible for fulfilling the Asbestos NESHAP inspection requirements.

Although the Asbestos NESHAP does not specifically state that the person who does the inspection and conducts the site survey be trained in recognizing potential asbestos-containing material, the prerequisite of a trained survey inspector still may be a requirement under the Occupational Safety and Health Administration's (OSHA) Asbestos Standards. The federal OSHA Asbestos Standard for Construction (29 CFR 1926.1101) and the OSHA Asbestos Standard for General Industry (29 CFR 1910.1001) are administered by the DELEG's, MIOSHA program. Each standard requires that all **public and commercial buildings** constructed prior to 1981, where employees may enter, work, or contact building materials, must be inspected for **asbestos-containing materials (ACM)**. This includes any houses, garages, apartments, etc. where employees work and may disturb asbestos. Additionally, all such vacant buildings scheduled for renovation or demolition must have an asbestos building survey completed prior to the start of the work.

Inspections under the OSHA standards must also adhere to the AHERA inspection protocol and be performed by a Michigan-accredited asbestos building inspector or a Certified Industrial Hygienist (CIH). The building survey must document the presence, location, and quantity of all "suspect" ACM. Laboratory analysis information should be a part of the building survey document and be kept by the building owner.

Once an asbestos building survey has confirmed or assumed the presence of ACM, all employees who work around, but do not disturb the ACM (i.e., persons conducting janitorial, building maintenance, and/or housekeeping activities) must receive, at a minimum, asbestos awareness training. Additionally, employees who may disturb ACM (i.e., persons working with any of the mechanical systems that have ACM) are required to have additional asbestos-related training. See the section entitled, "Where to Get Additional Information," for further assistance with the standard's inspection, licensing, and training requirements.

### **Does the Amount of RACM Meet or Exceed the Thresholds?**

Thoroughly inspect the facility for asbestos, including **Category I and Category II nonfriable asbestos-containing material (ACM)**. Determine if the combined amount of RACM is at or above the thresholds listed in Table 2. RACM includes:

- ✓ Friable asbestos material;
- ✓ Category I nonfriable ACM that has become friable;
- ✓ Category I nonfriable ACM that will be or has been subjected to sanding, **grinding**, **cutting**, or abrading; or
- ✓ Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during demolition or renovation.

To determine whether **planned renovation operations** involving individual **nonscheduled renovation operations** are subject, predict the combined additive amount of RACM to be removed during a calendar year of January 1 through December 31.

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Table 2. Applicability Thresholds

Location of Asbestos	Threshold Level of RACM
Pipes	80 linear meters (260 linear feet)
Other facility components	15 square meters (160 square feet)
Asbestos that is already off facility components where the length or area could not be measured previously.	1 cubic meter (35 cubic feet)

Any demolition or renovation activity that meets or exceeds the applicability thresholds in Table 2 is subject to all the renovation/demolition requirements of the NESHAP. Demolition activities below the thresholds (even for facilities with no asbestos) are subject to the notification requirement. Figure 1 summarizes the process for determining applicability to the Asbestos NESHAP.

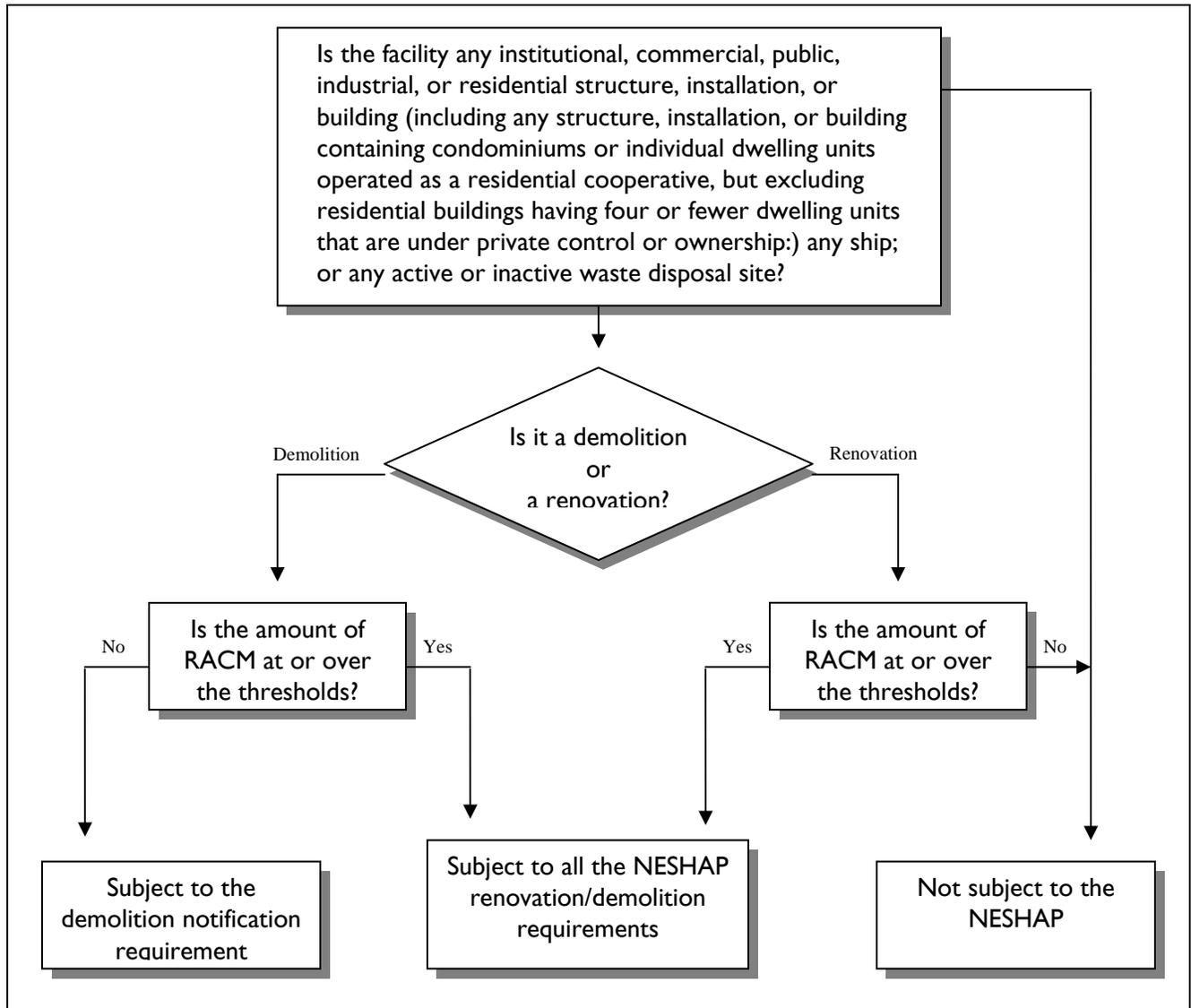


Figure 1. Flowchart for Determining Applicability to the Asbestos NESHAP

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Examples of operations that are neither demolitions nor subject renovations and, therefore, not subject to the Asbestos NESHAP include:

- ✓ Renovation below the threshold levels unless it is above the threshold levels cumulatively in a calendar year (notification may be required by DELEG);
- ✓ Removal of **nonfriable asbestos-containing material**, as long as the material is not in poor condition and it remains nonfriable during all phases of removal, handling, and waste disposal;
- ✓ Asbestos encapsulation (notification may be required by DELEG); and
- ✓ Removal of interior, non-load supporting walls that are not associated with any regulated asbestos-containing material.

### **ASBESTOS NESHAP NOTIFICATION REQUIREMENT**

An important aspect of the NESHAP is the advance notification requirement, which enables the AQD to ensure that all precautions are being taken to minimize asbestos emissions. Building **owners** or contractors must submit notifications for all subject demolitions and for subject renovations where the amount of RACM meets or exceeds the thresholds. Notifications must be postmarked or hand delivered at least ten **working days prior** to beginning demolition or renovation. For planned renovation operations involving individual, nonscheduled operations, the notification is required at least ten working days before the beginning of the calendar year for which notice is being given. Notifications must be delivered or postmarked as early as possible, but not later than the following work day for ordered demolitions and for emergency renovation operations. An **emergency renovation operation** means that the renovation operation was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden.

The notification must include the following information:

- ✓ Date of notification (or date of revision);
- ✓ Type of notification (original, revised, canceled, annual);
- ✓ Type of operation (demolition or renovation);
- ✓ Scheduled starting and completion dates of asbestos removal work;
- ✓ Scheduled starting and completion dates of demolition or renovation;
- ✓ Abatement contractor information;
- ✓ Demolition contractor information (if project is a demolition);
- ✓ Facility owner information;
- ✓ Facility description including location;
- ✓ Disposal site information;
- ✓ Waste transporter information;
- ✓ Ordered demolition information (if project is an ordered demolition);
- ✓ Estimate of amount of RACM to be removed and amount of Category I and Category II nonfriable ACM that will not be removed before demolition;

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- ✓ Project description, including surfaces asbestos will be removed from, removal method, and method of demolition;
- ✓ Engineering controls description;
- ✓ Procedure if unexpected asbestos is found;
- ✓ Procedure used to detect asbestos;
- ✓ Emergency renovation information (if project is an emergency renovation); and
- ✓ Certification that at least one trained person will supervise the asbestos stripping and removal.

Michigan's "Notification of Intent to Renovate/Demolish" form should be used to fulfill the notification requirement. For a copy of this form, along with guidelines on how to complete the form, see the "Where to Get Additional Information" section on page 12. Delivery of the notification must be made by the U.S. Postal Service, commercial delivery service, or hand delivery. Telefaxing notifications (or revisions to notifications) is not acceptable.

- **Where To Send Notifications**

Addresses for sending the notifications are listed on the notification form. Please note that in Michigan, a NESHAP notification must be sent to the Lansing DNRE. For mailing addresses, see the "Where to Get Additional Information" section on page 12. For all Michigan counties except Wayne County, send the notification to the Lansing DNRE. For those located in Wayne County, notifications should be sent to the Detroit Field Office of the DNRE. It is not necessary to send copies of NESHAP notifications to the U.S. EPA for renovation or demolition activities in Michigan.

- **Revising a Notification**

A revised notification should be sent any time there is a change in any of the required information previously submitted. The simplest way is to make a copy of both sides of the original notification (or last revision), mark it as a revision, indicate the date the revision is being sent, cross out the old information, and hand write or type in the new information. Additionally, it is helpful if the changed information is highlighted.

The NESHAP specifically requires a revision if the amount of asbestos reported changes by 20% (either a decreased amount or an increased amount). An increased amount refers to additional asbestos unexpectedly found while working on the specific project covered in the notification. If the scope of the project increases, a new notification is required. For example, removing asbestos from an area of the building not covered by the original notification would be considered a change in project scope.

- **Revising Project Dates**

If the project will begin on a date later than the date in the original notice (or latest revision), call before the previously scheduled start date to notify the Lansing DNRE or the DNRE's Detroit Field Office of the new start date and follow up with a written notification postmarked no later than the previously scheduled start date. For projects located in Wayne County call the Detroit Field Office Asbestos Coordinator at 313-456-4686. For all other projects in Michigan call the Lansing Office Asbestos Line at 517-373-7064. If the project will start earlier than the original start date (or latest revision), provide the new start date at least ten working days before beginning the project. **Under no circumstances shall a NESHAP project begin on a date other than the date in the notification (or the latest revised notification).**

If a project will be postponed indefinitely and a new start date cannot be predicted, call before the scheduled start date and immediately submit a revised notification canceling the project. For projects located in Wayne County call the Detroit Field Office Asbestos Coordinator at 313-456-4686. For all other projects in Michigan call the Lansing Office Asbestos Line at 517-373-7064. If the project is rescheduled, a new notification must be submitted at least ten working days prior to beginning the project. It is unacceptable to indefinitely postpone a project and then send a revised start date less than ten working days before the project is to begin.

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### WORK PRACTICE STANDARDS

For a demolition project, the RACM is not required to be removed or stripped if any of the following criteria are met:

- ✓ It is Category I nonfriable ACM that is not in poor condition, is not **friable**, and a licensed asbestos abatement contractor is made available at the demolition site.
- ✓ It is on a **facility component** that is encased in concrete or other similarly hard material and is adequately wet whenever exposed during demolition.
- ✓ It was not accessible for testing and, therefore, was not discovered until after the demolition began and as a result of the demolition cannot be safely removed.
- ✓ It is Category II nonfriable ACM with low probability of becoming crumbled, pulverized, or reduced to powder during demolition.
- ✓ For large facility components (reactor vessels, large tanks, steam generators, etc. but not beams): the component is removed, transported, stored, disposed of, or reused without disturbing or damaging the RACM; the component is encased in a **leak-tight** wrapping; and the leak-tight wrapping is properly labeled during loading, unloading, and storage.

If a facility is demolished by intentional burning (e.g., fire training), all ACM including Category I and Category II nonfriable ACM is regulated and must be removed before burning.

Remove all RACM from a facility being demolished or renovated before any activity begins that would break up, dislodge, or similarly disturb the material. When stripping asbestos from a facility component while it remains in place in the facility, **adequately wet** the asbestos. After a facility component that is covered with asbestos is taken out of a facility, it shall be stripped or contained in leak-tight wrapping. When stripping, adequately wet the component or use a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material.

The following requirements must be followed for RACM, including material that has been removed or stripped:

- ✓ Adequately wet the material and ensure that it remains adequately wet until collected and contained or treated in preparation for disposal;
- ✓ Carefully lower the material to the ground and floor, not dropping, throwing, sliding, or otherwise damaging or disturbing the material; and
- ✓ Transport the material to the ground via leak-tight chutes or containers if it has been removed or stripped more than 50 feet above ground level and was not removed as units or in sections.

There are two situations for which the requirement for adequately wetting the material does not apply. The first case is when the temperature at the point of wetting is below 32° F. The temperature must be recorded at the beginning, middle, and end of each work day; and these records must be kept for two years. The second situation involves renovation operations where wetting would unavoidably damage equipment or present a safety hazard. For these operations, written approval must be obtained from DNRE (submit a request for a waiver for not wetting in writing to DNRE [address listed in "Where to Get Additional Information" section on page 10]), and the following emission control methods must be used:

- (1) A local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material;
- (2) A glove-bag system designed and operated to contain the particulate asbestos material; and
- (3) Leak-tight wrapping to contain all RACM prior to dismantlement.

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### **WASTE DISPOSAL**

The Asbestos NESHAP specifies that no **visible emissions** can be discharged to the outside air from the collection, processing, transport, and disposal of **asbestos-containing waste materials**. After wetting, seal all asbestos-containing waste material in leak-tight containers. If the waste will not fit into containers, it must be placed in leak-tight wrapping. Label the containers or wrapped materials being taken away from the facility using warning labels specified by the Occupational Safety and Health Administration (OSHA) and the U.S. DOT. The label should include the name of the **waste generator** and the location at which the waste was generated. Asbestos-containing waste materials must be deposited as soon as practical to an appropriate waste disposal site. Vehicles used to transport asbestos-containing waste materials must be marked during the loading and unloading of waste. U.S. DOT regulations require the proper identification number of "NA2212" be placed on shipping papers and package marking.

Waste shipment records must be maintained by the owner or operator of a demolition/renovation operation. The following information is required on waste shipment records:

- ✓ Generator name, address, and telephone;
- ✓ Asbestos NESHAP program agency name and address;
- ✓ Quantity of asbestos-containing waste materials (cubic meters or cubic yards);
- ✓ A monitored emergency response telephone number for a person who is knowledgeable of the hazardous material being shipped and has comprehensive emergency response and incident mitigation information, or who has immediate access to a person with such knowledge;
- ✓ Waste disposal site operator name and telephone;
- ✓ Disposal site name and physical location;
- ✓ Transport date;
- ✓ Transporter name, address, and telephone; and
- ✓ Certification.

Provide a copy of the waste shipment record to the disposal site owner or operator at the time of delivery. If a copy of the waste shipment record signed by the owner or operator of the waste disposal site is not received by the waste generator within 35 days, contact the transporter and disposal site to determine the status of the waste shipment. Notify the AQD in writing if a signed waste shipment record is not received from the waste disposal site within 45 days. Keep a copy of all waste shipment records, including the signed copy, for at least two years.

Under Part 115 of Michigan Public Act 451 of 1994, as amended, administered by DNRE, all asbestos-containing material regulated by any state or federal regulations must be disposed of at a Type II (municipal solid waste) landfill. Asbestos-containing material that is nonfriable AND is not in poor condition or will not become friable at any time can be disposed of in a Type III (construction and demolition) landfill. Contact your local DNRE District Office or the Environmental Assistance Center (800-662-9278) if you have waste disposal questions.

### **TRAINING**

Training is required by three different federal and state agencies when it comes to the handling of asbestos, its removal, and the transportation of the material as a hazardous waste. The Asbestos NESHAP requires at least one trained supervisor to be present when asbestos-containing material is stripped, removed, disturbed, or otherwise handled. Training includes, at a minimum: applicability, notification, material identification, control procedures, waste disposal, reporting and recordkeeping, asbestos hazards, and worker protection. Refresher training is required every two years. Evidence of this training must be posted and made available for inspection at the demolition or renovation site. In addition to training supervisors, the DELEG requires that asbestos workers

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receive training. For a list of certified trainers and/or for more information about DELEG training requirements, contact the DELEG Asbestos Program at 517-322-1320. Finally, Hazmat employers are required to certify and document that Hazmat employees (as defined in 49 CFR 171.8) receive training in accordance with 49 CFR Part 172, Subpart H and Part 177. The training requirements would apply to any employee that transports asbestos, offers asbestos for transportation, prepares asbestos for transportation, or certifies a shipping paper or manifest for transportation. U.S. DOT training requirements cover such topics as general awareness/familiarization with 49 CFR Chapter I, Subchapter C; function-specific training for employees; safety methods and emergency response procedures; and security awareness training for risks associated with the transport of hazardous materials.

### **WHY COMPLY WITH THE ASBESTOS NESHAP**

Compliance with the Asbestos NESHAP will reduce the public's and workers' exposure to asbestos and will keep facility owners and contractors operating within the law. Non-compliance with the NESHAP is a significant violation. The AQD attempts to reach a settlement with the owner and operator when violations of the Asbestos NESHAP occur. If a settlement acceptable to the U.S. EPA is not reached in a timely manner, the U.S. EPA may pursue enforcement action at the federal level. The U.S. EPA may decide to pursue an escalated enforcement action on its own. Violations of the NESHAP notification and work practice requirements may result in written warnings, administrative orders, civil penalties up to \$27,500 per day per violation, and/or criminal charges. Typically, violations are resolved with a consent order requiring the facility to pay a \$35,000 - \$50,000 penalty and to comply with the regulations for all future demolitions or renovations. Some owners and operators who have knowingly violated the Asbestos NESHAP have been sentenced to prison terms.

### **WHERE TO GET ADDITIONAL INFORMATION**

Additional information about asbestos is available on the Internet through the U.S. EPA's homepage ([www.epa.gov/asbestos](http://www.epa.gov/asbestos)). In addition, the Asbestos NESHAP notification form, guidelines for completing the form, and regulations are located at [www.michigan.gov/air](http://www.michigan.gov/air). Select "Clean Air Assistance" and then "Asbestos" under "Federal Regulations." Questions about the federal OSHA standards or the state's asbestos compliance and training requirements can be obtained by visiting the DELEG Asbestos Program's web site at [www.michigan.gov/asbestos](http://www.michigan.gov/asbestos). Questions related to the transportation of asbestos can be addressed by the U.S. Department of Transportation's (U.S. DOT) Hazmat Information Center at 202-467-4922. You can also visit the U.S. DOT, Pipeline and Hazardous Materials Safety Administration's web site at <http://hazmat.dot.gov>.

- **Government Agency Contacts:**

Lansing NESHAP Asbestos Coordinator  
Air Quality Division  
Michigan Department of Natural Resources and Environment  
PO Box 30260  
Lansing, Michigan 48909  
517-335-4639 or 517-241-7463.

Detroit NESHAP Asbestos Coordinator  
Air Quality Division  
Michigan Department of Natural Resources and Environment  
Cadillac Place, Suite 2-300  
Detroit, Michigan 48202  
313-456-4686 or 313-456-4700

Department of Energy, Labor and Economic Growth  
Construction Safety and Health Division  
Asbestos Program  
PO Box 30671  
Lansing, Michigan 48909-8171  
517-322-1320

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Sgt. Susan M. Fries  
Michigan State Police  
Traffic Safety Division  
Hazardous Materials & Investigations Unit  
333 S. Grand Ave.  
PO Box 30634  
Lansing, Michigan 48913  
517-241-0583

US Environmental Protection Agency  
Asbestos Coordinator AT-18J  
77 W. Jackson Boulevard  
Chicago, Illinois 60604  
Hotline: 1-800-621-8431 or 312-886-2395

### **ACRONYMS**

ACM..... Asbestos-Containing Material  
AQD ..... Air Quality Division  
CAA ..... Clean Air Act  
C&E ..... Compliance and Enforcement  
DNRE..... Michigan Department of Natural Resources and Environment  
DELEG..... Michigan Department of Energy, Labor and Economic Growth  
NESHAP ..... National Emission Standards for Hazardous Air Pollutants  
OSHA..... Occupational Safety and Health Administration  
PLM ..... Polarized Light Microscopy  
RACM ..... Regulated Asbestos-Containing Material  
U.S. DOT.....U.S. Department of Transportation  
U.S. EPA..... U.S. Environmental Protection Agency

### **DEFINITIONS**

This section contains a list of definitions from the Asbestos NESHAP. Not all of these terms are used in this fact sheet.

**Active waste disposal site:** Any disposal site other than an inactive site.

**Adequately wet:** Sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

**Asbestos:** The asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite.

**Asbestos-containing materials:** Any materials containing more than 1% asbestos.

**Asbestos-containing waste materials:** Mill tailings or any waste that contains commercial asbestos and is generated by a source subject to the Asbestos NESHAP. This includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovation operations, this term also includes regulated asbestos-containing material waste and materials contaminated with asbestos including disposable equipment and clothing.

**Asbestos mill:** Any facility engaged in converting, or in any intermediate step in converting, asbestos ore into commercial asbestos. Outside storage of asbestos material is not considered a part of the asbestos mill.

**Asbestos tailings:** Any solid waste that contains asbestos and is a product of asbestos mining or milling operations.

**Asbestos waste from control devices:** Any waste material that contains asbestos and is collected by a pollution control device.

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**Category I nonfriable asbestos-containing material (ACM):** Asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos as determined using Polarized Light Microscopy.

**Category II nonfriable ACM:** Any material, excluding Category I nonfriable ACM, containing more than 1% asbestos as determined using Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

**Commercial asbestos:** Any material containing asbestos that is extracted from ore and has value because of its asbestos content.

**Cutting:** To penetrate with a sharp-edged instrument and includes sawing, but does not include shearing, slicing, or punching.

**Demolition:** The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

**Emergency renovation operation:** A renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by nonroutine failures of equipment.

**Fabricating:** Any processing (e.g., cutting, sawing, drilling) of a manufactured product that contains commercial asbestos, with the exception of processing at temporary sites (field fabricating) for the construction or restoration of facilities. In the case of friction products, fabricating includes bonding, debonding, grinding, sawing, drilling, or other similar operations performed as part of fabricating.

**Facility:** Any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative but excluding residential buildings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site. For purposes of this definition, any building, structure, or installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building. Any structure, installation, or building that was previously subject to the Asbestos NESHAP is not excluded, regardless of its current use or function.

**Facility component:** Any part of a facility including equipment.

**Friable asbestos material:** Any material containing more than 1% asbestos as determined using Polarized Light Microscopy, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

**Fugitive source:** Any source of emissions not controlled by an air pollution control device.

**Glove bag:** A sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used, glove bags provide a small work area enclosure typically used for small-scale asbestos stripping operations.

**Grinding:** To reduce to powder or small fragments and includes mechanical chipping or drilling.

**Hazmat employee:** means a person who is employed by a hazmat employer and who, in the course of employment, directly affects hazardous materials transportation safety. This term includes an owner-operator of a motor vehicle which transports hazardous materials in commerce. This term includes an individual, including a self-employed individual, employed by a hazmat employer who, during the course of employment:

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1. Loads, unloads, or handles hazardous materials;
2. Manufactures, tests, reconditions, repairs, modifies, marks, or otherwise represents containers, drums, or packagings as qualified for use in the transportation of hazardous materials;
3. Prepares hazardous materials for transportation;
4. Is responsible for safety of transporting hazardous materials; or
5. Operates a vehicle used to transport hazardous materials.

**Hazmat employer:** means a person who uses one or more employees in connection with: transporting hazardous materials in commerce; causing hazardous materials to be transported or shipped in commerce; or representing, marking, certifying, selling, offering, manufacturing, reconditioning, testing, repairing, or modifying containers, drums, or packagings as qualified for use in the transportation of hazardous materials. This term includes an owner-operator of a motor vehicle which transports hazardous materials in commerce. This term also includes any department, agency, or instrumentality of the United States, a state, a political subdivision of a state, or an Indian tribe engaged in an activity described in the first sentence of this definition.

**In poor condition:** The binding or the material is losing its integrity as indicated by peeling, cracking, or crumbling of the material.

**Inactive waste disposal site:** Any disposal site or portion of it where additional asbestos-containing waste material has not been deposited within the past year.

**Installation:** Any building or structure or any group of buildings or structures at a single demolition or renovation site that is under the control of the same owner or operator (or owner or operator under common control).

**Leak-tight:** Solids or liquids cannot escape or spill out. It also means dust-tight.

**Malfunction:** Any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner so that emissions of asbestos are increased. Failures of equipment shall not be considered malfunctions if they are caused in any way by poor maintenance, careless operation, or any other preventable upset conditions, equipment breakdown, or process failure.

**Manufacturing:** The combining of commercial asbestos—or, in the case of woven friction products, the combining of textiles containing commercial asbestos—with any other material(s), including commercial asbestos, and the processing of this combination into a product. Chlorine production is considered a part of manufacturing.

**Natural barrier:** A natural object that effectively precludes or deters access. Natural barriers include physical objects such as cliffs, lakes or other large bodies of water, deep and wide ravines, and mountains. Remoteness by itself is not a natural barrier.

**Nonfriable asbestos-containing material:** Any material containing more than 1% asbestos as determined using Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

**Nonscheduled renovation operation:** A renovation operation necessitated by the routine failure of equipment, which is expected to occur within a given period based on past operating experience but for which an exact date cannot be predicted.

**Outside air:** The air outside buildings and structures, including, but not limited to, the air under a bridge or in an open air ferry dock.

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**Owner or operator of a demolition or renovation activity:** Any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operation, or both.

**Particulate asbestos material:** Finely divided particles of asbestos or material containing asbestos.

**Planned renovation operations:** A renovation operation, or a number of such operations, in which some RACM will be removed or stripped within a given period of time and that can be predicted. Individual, nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operating experience.

**Public and Commercial Building:** The interior space of a building that is not a school building, a residential apartment building of fewer than ten units, or a detached single-family home. Public and commercial buildings include, but are not limited to, all of the following: industrial and office buildings, residential apartment buildings and condominiums of ten or more dwelling units, government-owned buildings, colleges and universities, museums, airports, hospitals, churches, preschools, stores, warehouses, and factories.

**Regulated asbestos-containing material (RACM):** Any all of following: (a) friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

**Remove:** To take out RACM or facility components that contain or are covered with RACM from any facility.

**Renovation:** Altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting structural members are wrecked or taken out are demolitions.

**Resilient floor covering:** Asbestos-containing floor tile, including asphalt and vinyl floor tile and sheet vinyl floor covering containing more than 1% asbestos as determined using Polarized Light Microscopy.

**Roadways:** Surfaces on which vehicles travel. This term includes public and private highways, roads, streets, parking areas, and driveways.

**Strip:** To take off RACM from any part of a facility or facility components.

**Structural member:** Any load-supporting member of a facility, such as beams and load supporting walls, or any nonload-supporting member, such as ceilings and nonload-supporting walls.

**Visible emissions:** Any emissions, which are visually detectable without the aid of instruments, coming from RACM or asbestos-containing waste material, or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

**Waste generator:** Any owner or operator of a source covered by the Asbestos NESHAP whose act or process produces asbestos-containing waste material.

**Waste shipment record:** The shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

**Working day:** Monday through Friday including holidays that fall on any of the days Monday through Friday.