

## **Guidelines for Handling Post-Consumer Roofing Shingles in the Manufacture of Asphalt**

Asbestos is the name given to a naturally occurring group of minerals composed of tiny, easily inhaled fibers. In the past, asbestos was added to a variety of building materials to provide strength, heat insulation, and fire resistance. Breathing airborne asbestos fibers can lead to an increased risk of serious diseases, including asbestosis, lung cancer and mesothelioma.

Recycling of asbestos-containing building materials may result in asbestos fibers becoming airborne. For this reason, building materials that may contain asbestos may not be recycled and must be disposed of in a landfill permitted to accept asbestos-containing materials. By prohibiting asbestos-containing materials from entering the asphalt manufacturing industry, exposure to facility employees, downstream recipients and the general public, can be prevented.

In an effort to ensure that asbestos-containing materials are not ground and used in the manufacture of asphalt products in North Carolina, the Health Hazards Control Unit (HHCU) is providing the following guidelines to assist you with writing an asbestos operations plan for your facility:

1. An asbestos operations plan will be submitted to the HHCU for review before grinding operations can begin at each facility. If your facility is located in Buncombe, Forsyth, or Mecklenburg County, contact the local air quality program for information regarding local requirements.
2. Provide the complete name of the company, as well as the mailing address, telephone number, point of contact and the county where each facility is located. Additionally, provide the days and hours of operation, and list the North Carolina Division of Air Quality and/or Division of Solid Waste Management permit number for each facility location.
3. If the facility is owned by someone other than the company submitting the asbestos operations plan, provide the name of the property owner, as well as their mailing address and telephone number.
4. The only roofing shingles addressed in this guidance are post-consumer roofing shingles.
5. Provide information as to the original source(s) of any post-consumer roofing shingles entering each facility. Include the supplier(s) name, mailing address and telephone number for each landfill, recycling center, individual, etc.
6. Regardless of the source(s) of roofing shingles, all post-consumer roofing shingles which will be ground must contain less than 1% asbestos.
7. No facility will grind flat built-up roofing, roof flashing, roofing felts, roofing shingles that have been coated with asbestos-containing paint or mastic, or asbestos cement shingles. These materials must be sent to a permitted solid waste facility approved to receive such materials.

8. Each facility will use a North Carolina accredited asbestos inspector or a NC accredited asbestos roofing supervisor to inspect suspect post-consumer roofing shingles for the presence of asbestos before grinding. The NC accredited asbestos inspector or accredited roofing supervisor will determine the number of samples collected based upon their experience and the color and texture of materials.
9. Each facility must sort and identify loads received and track each load from its original source to the facility and match the documentation for post-consumer roofing shingles from the appropriate supplier, transporter, and waste ticket used in exchange for the shingles. Attach a copy of an asbestos survey if one was conducted prior to transporting the post-consumer roofing shingles to the facility.
10. Provide a legible diagram of each facility property, documenting the physical layout of the operation.
11. Explain how each facility will provide water for dust suppression during grinding activities.
12. Any load of post-consumer roofing shingles identified as containing > 1 % asbestos must be rejected and disposed of in a permitted landfill. Provide the name of the landfill, point of contact, physical address and telephone number of the landfill to be used for this purpose.
13. Add the words “asbestos and/or asbestos-containing material as unacceptable material” to the sign at the entrance to each facility and/or place this information on other media used to educate suppliers.
14. If the facility operation accidentally grinds asbestos-containing shingles, all work must stop and the Health Hazards Control Unit (HHCU) must be contacted at (919) 707-5950.
15. If it becomes necessary for the facility to modify the asbestos operations plan, submit a revision to the HHCU for review.
16. At least one individual, who is on site during normal operations, will need to be asbestos trained in order to meet the OSHA requirements for competent person. This person will have the authority to address potential asbestos issues and stop work if necessary. Currently, the recommended training is the two-day asbestos roofing supervisor course.
17. Keep a current copy of the asbestos operations plan, asbestos sampling results, training records, revisions and other supporting documentation at each facility location. Each facility must also be able to maintain records for any post-consumer asphalt roofing shingles, ground or not, which were sold to an individual/company. All records must be kept on site where the grinding operation will take place.
18. Any deficiencies identified during an inspection by the North Carolina Division of Air Quality or the Division of Solid Waste Management will be addressed by the appropriate agency and a copy of the correspondence sent to the HHCU.

19. Describe the type of asbestos training and/or educational material that will be used to educate suppliers of post-consumer roofing shingles. Provide a copy of any asbestos educational materials for employees and contractors as part of the asbestos operations plan.
20. The HHCU recommends using the EPA Method 600/93/116 for determining the presence of asbestos in post-consumer roofing shingles instead of the polarized light microscopy method. The EPA Method 600/93/116 addresses the use of “Gravimetry” for preparing samples by reducing the bound matrix down to a smaller volume of material to analyze and provide more accurate results when determining the presence or absence of asbestos.

For additional information, please contact the Health Hazards Control Unit at 919-707-5950. You can also access information about our Program including listings of accredited asbestos professionals by visiting our web site at:  
[www.epi.state.nc.us/epi/asbestos/ahmp.html](http://www.epi.state.nc.us/epi/asbestos/ahmp.html)