

How to Remove Nonfriable Asbestos Cement Pipe

A Guide for General Contractors to Meet DEQ Rules



State of Oregon
Department of
Environmental
Quality

Asbestos Program
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www.oregon.gov/DEQ

DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

The Oregon Department of Environmental Quality regulates the removal, handling, and disposal of asbestos-containing materials during renovation and demolition projects. Asbestos-containing material means any material containing more than one percent asbestos. Nonfriable asbestos material is asbestos-containing material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure or by the forces expected to act on the material in the course of demolition, renovation, transportation or disposal. This document provides guidance for removing nonfriable asbestos cement pipe.

Disclaimer

Asbestos is a hazardous air pollutant that is known to cause cancer. There is no safe level of exposure. DEQ recommends hiring a [DEQ-licensed asbestos abatement contractor](#) to perform any asbestos removal projects, including nonfriable projects. If asbestos-containing material is not handled properly, it can become friable and release asbestos fibers into the air. Friable asbestos abatement projects must be performed by a DEQ-licensed asbestos abatement contractor, with a limited exception. Homeowners may perform an asbestos abatement project in the single unit private residence that they live in. They must handle and dispose of all asbestos-containing material in compliance with DEQ rules.

This guidance document provides information only and does not fully address, and must not be interpreted in any way as fully addressing, all products and/or [materials that may contain asbestos](#) or all procedures that may be used to safely remove asbestos-containing material. DEQ assumes no liability or responsibility for injuries, illnesses, health issues, or other related problems arising from any untrained person attempting to remove and dispose of asbestos without using a DEQ-licensed asbestos abatement contractor. If you undertake an asbestos removal project that is not performed by a DEQ-licensed asbestos abatement contractor, you assume all risks and liabilities that result from such a project.

Before you start

All applicable asbestos abatement rules found in [Oregon Administrative Rules 340, Division 248](#) must be followed. If you have questions, contact asbestos program staff (see contact information below).

If the project is taking place in a school (K-12), you must comply with the [Asbestos Hazard Emergency Response Act](#) regulations from the U.S. Environmental Protection Agency. Contact the [EPA's regional office](#) at 800-424-4372 for current regulations and policy information.

Oregon Occupational Safety and Health also has rules for working safely with asbestos-containing materials. Please be certain that you comply with Oregon OSHA regulations if you are performing any asbestos removal or the renovation and maintenance of buildings and structures that contain asbestos. Contact [Oregon OSHA](#) at 503-378-3272 or toll-free at 800-922-2689 for current rule and policy information.

How to determine if a material contains asbestos

The only way to determine if a material contains asbestos is to take a sample and have it analyzed by a [laboratory](#). Alternatively, you may presume the material contains asbestos and treat it accordingly.

Asbestos Program Guidance

What is asbestos cement pipe?

Asbestos cement pipe, or AC pipe, was used widely in the mid-1900's in potable water distribution systems and in sewer lines. Since the lifetime of AC pipe is approximately 70 years, many projects to update this infrastructure involve removal of this product. The cement acts as a binder that holds the asbestos fibers within a solid matrix. This prevents asbestos fibers from being released easily, unless mishandled, damaged, or in badly weathered condition. When kept intact, AC pipe is considered nonfriable.

Removing nonfriable AC pipe

The removal of nonfriable asbestos-containing materials in good condition is exempt from some DEQ rules. You **do not** need to be a DEQ-licensed asbestos abatement contractor or a DEQ-certified asbestos worker to perform nonfriable asbestos removal. When removing AC pipe, the pipe must remain intact.

Notification

File a DEQ [nonfriable notification form](#), known as an ASN-6 form, for removal of nonfriable asbestos materials and pay the appropriate fee. The DEQ Business Office must receive the notification form at least five days before the start date of the nonfriable asbestos abatement project. In emergency situations, DEQ may grant a waiver of the five-day waiting period. For more information contact [asbestos program staff](#).

Regulated Area

The regulated area must be established by the person performing the asbestos abatement project. It includes the work area and any adjoining area where asbestos-containing waste material generated from the project site is securely packaged and stored. The regulated area must restrict access to authorized personnel only, and be demarcated with prominent warning signs along the perimeter that state, in bold, all-capital letters and separated as shown here:

DANGER

ASBESTOS

MAY CAUSE CANCER

ASBESTOS CAUSES DAMAGE TO LUNGS

AUTHORIZED PERSONNEL ONLY

Safety Tips

Even under the best conditions, these projects are physically demanding and potentially dangerous. Oregon OSHA provides [guidance for required safety equipment](#) (Personal Protective Equipment or PPE) to perform asbestos removal. The following are some of the challenges to consider:

- Breathing through a respirator is difficult and places extra stress on the heart and lungs.
- Coveralls can be hot and hard to move around in.
- Work may involve ladders since some materials are located in high areas.
- Goggles and safety glasses reduce visibility and field of vision.
- Care must be taken around electric wires because water will be used to keep asbestos materials wet.
- The work area will be slick from wetting and may be a slipping or tripping hazard.

Options for removing nonfriable AC pipe

AC pipe must be removed, handled and disposed of in a manner that keeps the material intact to be



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considered nonfriable. The method of removal cannot crumble, pulverize or reduce the material to dust. Sanding, sawing, grinding, chipping or use of power tools is not allowed. The pipe must be kept adequately wet during removal, packaging and disposal. Wetting minimizes asbestos fibers from being released.

Here are some examples of proper methods to remove AC pipe:

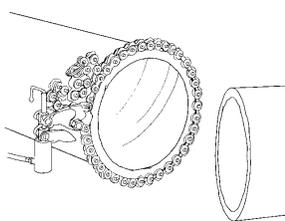
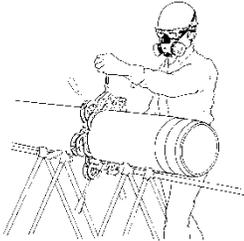
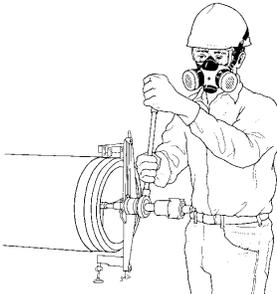


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|---|--|
|  | <p>1. Snap cutters Snap cutters, also called “squeeze-and-pop” equipment, use cutting wheels mounted in a chain wrapper around the pipe barrel. Hydraulic pressure, applied by means of a remote, pneumatically or manually operated pump, squeezes the cutting wheels into the pipe wall until the cut is made.</p> |
|  | <p>2. Carbide-tipped blade cutters Blade cutters are frame adjustable to the circumference of the pipe and have a number of self-tracking rollers that align one or more carbide-tipped cutting blades. Due to the relatively low mechanical input and clean cutting action, hand operated blade cutters do not produce significant amounts of airborne asbestos dust.</p> |
|  | <p>3. Manual field lathes Manual field lathes are designed to end-trim and re-machine rough pipe barrels to factory-machined end profiles. The lathe consists of an adjustable, self-aligning arbor inserted into the pipe bore (which acts as a mandrel upon which the turning handle operates), a screw-fed turning frame, carbide machining blades and manual (hand or ratchet) turning handles.</p> |
|  | <p>4. Wet tapping AC pipe Pressure or “wet” tapping for service connections is performed in the trench while the pipe is under pressure. The equipment (manual driven) is affixed to the pipe by means of a chain yoke. A combination boring-and-inserting bar drills and taps the pipe wall and inserts a corporation stop or pipe plug. The pressure chamber, which protects against water leakage, also catches the asbestos-cement chips, so this is essentially a dust-free operation.</p> |

Asbestos Program Guidance

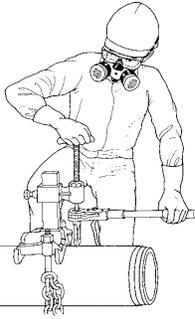


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5. Dry tapping AC pipe

Non-pressure or “dry” tapping for service connections may be performed in or out of the trench. The equipment is affixed to the pipe by means of a chain yoke. Separate drills and taps or a combination tool is used to drill and tap the pipe wall.

Corporation stops or other connections may then be affixed to the pipe.

Waste Disposal

AC pipe waste must be kept adequately wet and packaged in leak-tight containers such as two six-mil plastic bags with the asbestos hazard label, or within similar leak-tight packaging with the asbestos hazard label that states the following in bold, all-capital letters and separated as shown here:

DANGER

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

CANCER AND LUNG DISEASE HAZARD

AVOID BREATHING AIRBORNE

ASBESTOS FIBERS

Prior to transport, each of the asbestos-containing waste packages must have a label attached with the name of the generator (person doing the removal) and the address from where the AC pipe was removed. The waste packages must be labeled prior to removal from the regulated area.

The AC pipe waste must be disposed of at a [landfill permitted to accept asbestos waste](#) and must be accompanied by a completed [waste shipment report](#), known as an ASN-4, at the time of disposal. Contact the landfill prior to delivering the AC pipe waste. Landfills can be more stringent and may only accept asbestos waste by appointment.

If the material becomes friable

If the AC pipe becomes damaged or is badly weathered, it is considered friable and may release asbestos fibers. If the AC pipe becomes friable, stop work immediately, adequately wet the material and cover with six-mil plastic or equivalent, and promptly contact a DEQ-licensed asbestos abatement contractor. ***Friable asbestos materials must be removed by a DEQ-licensed asbestos contractor using certified workers.***

A [DEQ friable notification form](#), known as an ASN-1 form, for the abatement of friable asbestos and the appropriate fee must be filed with DEQ. The DEQ Business Office must receive notification at least 10 days before the start date of the asbestos abatement project. In emergency situations, DEQ may grant a waiver of the 10-day waiting period. For more information [contact asbestos program staff](#).

Additional information

Visit the DEQ Asbestos Program website here: <https://go.usa.gov/xdG4K>

Asbestos Program Guidance

Find all DEQ's asbestos requirements in [Oregon Administrative Rules 340, Division 248](#). People handling asbestos must also follow other state and local government requirements, including requirements of Oregon OSHA.

If you have questions about the rules, contact the regional asbestos program office listed below.

If asbestos-containing material is disturbed or mishandled, it may expose workers or the public to asbestos fibers. Violations of asbestos rules and statutes may result in civil penalties.

Asbestos Program Contacts

| Office | Address | Phone | Counties |
|--|--|---------------------------------|--|
| Portland | 700 NE Multnomah St. Suite 600 Portland, OR 97232 | 503-229-5982 or 800-452-4011 | Clackamas, Clatsop, Columbia, Multnomah, Tillamook, Washington |
| Salem | 4026 Fairview Industrial Dr. Salem, OR 97801 | 503-378-5086 or 800-349-7677 | Benton, Lincoln, Linn, Marion, Polk, Yamhill |
| Medford | 221 Steward Ave. Ste. 201 Medford, OR 97501 | 541-776-6107 or 877-823-3216 | Jackson, Josephine, Eastern Douglas County |
| Coos Bay | 381 N Second St. Coos Bay, OR 97420 | 541-269-2721, Ext. 222 | Coos, Curry, Western Douglas County |
| Bend | 475 NE Bellevue Dr. Suite 110 Bend, OR 97701 | 541-633-2019 or 866-863-6668 | Crook, Deschutes, Harney, Hood River, Jefferson, Klamath, Lake, Sherman, Wasco |
| Pendleton | 800 SE Emigrant Ave. Suite 330 Pendleton, OR 97801 | 541-278-4626 or 800-304-3513 | Baker, Gilliam, Grant, Malheur, Morrow, Umatilla, Union, Wallowa, Wheeler |
| Lane Regional Air Protection Agency | 1010 Main St. Springfield, OR 97477 | 541-736-1056 | Lane |



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Alternative formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.