

SUPPLEMENTARY INFORMATION

EXHIBIT B

Asbestos Cement Pipe Forms
(10 pages)

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
700 NE Multnomah St.
Suite 600
Portland, OR 97232
Phone: 503-229-5696
800-452-4011
Fax: 503-229-6124
Contact: Hillarie Sales

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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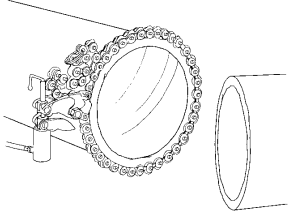
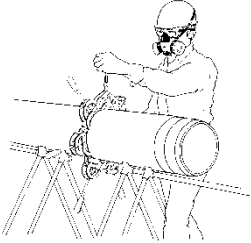
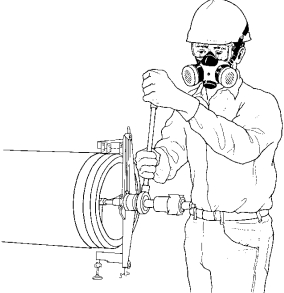

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Asbestos Program Guidance

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:

	<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>



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Asbestos Program Guidance

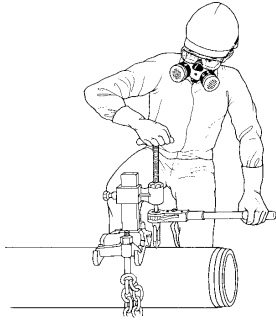


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5. Dry tapping AC pipe

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.



ASN 6

DEQ Notification Form

Nonfriable Asbestos Abatement

For DEQ use only	
Date Received:	_____
Amount Received:	_____
Check Number:	_____
Project Number:	_____

ATTENTION

CONTRACTORS/OPERATORS: This notification is not complete unless it is accompanied by the required \$100.00 fee and is submitted 5 days prior to the start date. To inquire about a waiver of the 5-day waiting period or for other information call 1-800-452-4011 for the phone number of your local regional DEQ office.

_____ **EMERGENCY (Emergency notifications require a 50% fee increase)**
Emergency Approved by (list DEQ staff): _____ **Date:** _____

List the Reason for the Emergency _____
(i.e. Fire or Water Damage, Dangerous Structure, etc.)

Is this a revision to a previous notification? Yes _____ Revision# _____ No _____

Start date of project: _____ End date of project: _____

Days of week and hours to be worked: _____

Project site name: _____ Building Owner: _____

Project address: _____
(Include Apt #, Floor #, Bldg #, school name or any other pertinent site location information)

City: _____ County: _____ State: _____ Zip: _____

Was a survey performed or samples collected: Yes: _____ No: _____ By whom? _____

Type of nonfriable material to be removed: _____

Amount of nonfriable asbestos material to be removed. Square or Linear footage: _____

Contractor/Operator name: _____ Phone: _____

Contractor/Operator address: _____

City: _____ County: _____ State: _____ Zip: _____

CCB registration number: _____ Competent Person: _____

Waste disposal site: _____

Site address: _____

City: _____ County: _____ State: _____ Zip: _____

Waste hauler: _____ Phone: _____

Sign below and send this form with the appropriate fee to the DEQ Business Office at 700 NE Multnomah Street Suite #600, Portland, OR 97232. Make checks payable to "DEQ"

Name of owner, operator or contractor: _____

Name: _____ Phone: _____
(PLEASE PRINT)

Signature: _____ Date: _____

I certify that the information contained in this notification are true and correct to the best of my knowledge and belief.

CAUTION! If the material being removed is handled in a manner that causes it to become friable (crumbled, pulverized, or reduced to dust), then only a DEQ licensed asbestos abatement contractor may perform the removal work. Submit nonfriable notifications and fees in accordance with OAR 340-248-0260. Revisions to notifications may be emailed or faxed to the appropriate DEQ regional office. Fax numbers: Portland at 503-229-6957, Bend at 541-388-8283, Pendleton 541-278-0168, Salem at 503-378-4196, Medford at 541-776-6262 or Coos Bay 541-269-7984.

ASN4

Asbestos Waste Shipment Reporting Form

Please Print or Type. If you have questions, contact your local DEQ Regional Office in Portland 503-229-5364, Salem 503-378-5086, Medford 541-776-6107, Coos Bay 541-269-2721 Ext. 222, Bend 541-633-2019, or Pendleton 541-278-4626.

Waste Generator: (Contractor, Facility, or Operator)

1. Asbestos removal site name and address: _____

Street _____ City/State _____ County _____ Zip _____

Contact person: _____ Phone: _____

2. Contractor/Operator's name and address: _____ Phone: _____

Street _____ City/State _____ County _____ Zip _____

3. Waste disposal site: _____ Phone: _____

Street _____ City/State _____ County _____ Zip _____

4. Describe asbestos materials: _____

5. Containers: _____ Number: _____ Type: _____

6. Total quantity (cubic yards): _____

7. **Operator's Certification:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled, and are in all respects in proper condition for transport according to all government regulations. All movement of this asbestos-containing material is recorded on this Waste Shipment Record Form.

Name: _____ Company: _____

Signature: _____ Date: _____

Address: _____ Phone: _____

Transporter(s):

8. Transporter #1: (Acknowledgment of receipt of materials)

Agent: _____ Company: _____

Address: _____ Phone: _____

Signature: _____ Date: _____

9. Transporter #2: (Acknowledgment of receipt of materials)

Agent: _____ Company: _____

Address: _____ Phone: _____

Signature: _____ Date: _____

Disposal: (Certification of receipt of asbestos materials covered by this manifest, except as noted in item 11 below.)

10. Waste Disposal Site: _____

Name and Title: _____ Date: _____

Signature: _____ Phone: _____

11. **Discrepancy Space:** (Add attachments as needed): _____

Instructions for using ASN 4 Asbestos Waste Shipment Reporting Form

This form is to be used as a permanent record for documenting asbestos-containing waste materials from removal site to final disposal. The Oregon Department of Environmental Quality (DEQ) regulation that applies to asbestos waste disposal is found in OAR 340-248-0280.

Waste Generator Section

(Numbers below correspond to numbers on the front of this Form)

1. Enter the name and address of the site where the asbestos waste was generated. Enter the name and phone number of the contact person for the contractor, facility, or operator of the asbestos waste generation site.
2. Enter the name, phone number and address of the person performing the asbestos abatement.
3. Enter the name, phone number and address of the disposal site that the waste is taken to.
4. Describe the materials being removed.
(i.e. pipe insulation, flooring, roofing, popcorn ceiling material, HVAC system insulation, Nonfriable asbestos.)
5. List the total number of containers and their type. Also enter one of the following container codes used in transporting each type of asbestos material. (Specify any other type of container used if not listed below):

DM	Metal drums, barrels
DP	Plastic drums, barrels
BA	6 mil. plastic bags or wrapping
NFC	Leak-tight containerization for Nonfriable asbestos waste material.
6. Give an estimate of the total quantity of cubic yards of material.
7. Print clearly the name of the company and their authorized signer. This section of the form must be signed and dated.

Note: The waste generator must retain a copy of the completed disposal form.

Waste Transporter Section

8. Transporter #1: Acknowledgment of receipt of asbestos waste materials. Print agent and company name, then sign and date.
9. Transporter #2: Acknowledgment of receipt of asbestos waste materials. Print agent and company name, then sign and date.

Note: If there are more than two transporters, attach a new waste shipment form.

Disposal Site Section

10. List the name of the waste disposal site, print the name, title and phone number, then sign and date form. This certifies that you have received the asbestos material covered by this manifest.
11. Discrepancy space. This space is used if there is a discrepancy between the amount of the material received by the landfill and the amount of material listed on the waste shipment report form.

Note: The waste disposal site operator must retain a copy of this form.

In addition, asbestos waste disposal regulations require that the Waste Disposal Site operators take the following actions:

- Send a copy of the completed and signed Waste Shipment Report Form to the Waste Generator as soon as possible, but no later than 30 days after the waste has been received at the disposal site.
- Notify DEQ immediately by telephone of improperly enclosed or uncovered waste. Submit a written report to DEQ the following working day, along with a copy of the Waste Shipment Report Form.
- If you discover a discrepancy between the quantity of waste designated on the Waste Shipment Report Form and the quantity of waste actually received, attempt to reconcile the discrepancy with the Waste Generator. You must report, in writing, to DEQ within 15 days after receiving the waste any discrepancies that cannot be reconciled. Submit a copy of the Waste Shipment Report Form with this report.



State of Oregon Department of Environmental Quality
**Oregon Landfills and Transfer Stations
 Accepting Asbestos Waste**

The following landfills and transfer stations are permitted by the Oregon Department of Environmental Quality to accept asbestos waste. Oregon Administrative Rule 340-248-0280(6) requires that you notify the landfill prior to disposal. DEQ suggests you contact the landfill at least 24 hours prior to disposal.

Landfills Accepting Asbestos Waste		
Landfill Name	County	Address/Phone
Northwest Region		
Hillsboro Landfill	Washington	3205 SE Minter Bridge Road Hillsboro, OR 97123 503-640-9427
Tillamook Transfer Station	Tillamook	1315 Ekloff Rd. Tillamook, OR 97141 503-842-2431
Western Region		
Brookings Transfer Station	Curry	17498 Carpenterville Rd Brookings, OR 97415 541-469-2425
Brown's Island Demolition Landfill	Marion	2895 Faragate Street South Salem, OR 97306 503-588-5169
Coffin Butte Landfill	Benton	28972 Coffin Butte Road Corvallis, OR 97330 541-745-5792
Dry Creek Landfill	Jackson	5500 Highway 140 White City, OR 97503 541-779-4161
Roseburg Landfill	Douglas	384 McClain West Avenue Roseburg, OR 97471 541-440-4487
Schooner Creek Public Transfer Station	Lincoln	367 S. Anderson Creek Rd. Lincoln City, OR 97367 541-994-5555
Short Mountain Landfill	Lane	84777 Dillard Access Road Eugene, OR 97405 541-682-4120

Eastern Region		
Ant Flat Landfill	Wallowa	Ant Flat Rd. Enterprise, OR 97828 541-426-3332
Baker Sanitary Landfill	Baker	39144 West Sutton Creek Rd Baker City, OR 97814 541-523-2626
Burns-Hines Disposal Site	Harney	1550 W Monroe Burns, OR 97720 541-573-6441
Chemical Waste Management of the Northwest Landfill	Gilliam	17629 Cedar Springs Lane Arlington, OR 97812 541-454-2030
Columbia Ridge Landfill	Gilliam	18177 Cedar Springs Lane Arlington, OR 97812 541-454-2030
Crook County Landfill	Crook	5601 SW Houston Lake Rd Prineville, OR 97754 541-447-2398
Finley Buttes Landfill	Morrow	73221 Bombing Range Rd Boardman, OR 97818 541-481-2233
Humbert Refuse Landfill	Umatilla	79378 Gerking Flat Rd Athena, OR 97813 541-938-4188
Klamath Falls Landfill	Klamath	801 Old Fort Rd Klamath Falls, OR 97601 541-883-5121 (Option 7)
Knott Landfill	Deschutes	61050 SE 27 th Street Bend, OR 97702 541-317-3163
Thomas Creek Road Landfill aka Lake County Landfill	Lake	Thomas Creek Rd. Lake View, OR 97630 541-947-6043
Wasco County Land fill	Wasco	2550 Steele Road The Dalles, OR 97058 541-296-4082

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