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# Asbestos Removal Procedures for Home Owners

How to Properly Remove

## Asbestos from the Exterior of Convection and Forced-Air Furnace Systems

Single-Family, Owner-Occupied Residences Only

This publication details the steps necessary for the safe removal of asbestos containing materials from the exteriors of octopus furnaces and from the heating ducts, vents and registers used in connection with octopus and early oil furnaces. It is limited to single-family, owner-occupied homes. Be aware that no set of instructions can anticipate all possible situations and variables that a homeowner may encounter in an asbestos removal project.

It is essential that you read these instructions from start to finish, making sure you thoroughly understand them before any asbestos abatement is undertaken. **Failure to do so poses a severe health risk to you and your family.**

Northwest Clean Air Agency strongly recommends that you hire a state-certified asbestos abatement contractor. However, if after reading this instruction manual you still choose to do the work yourself, it is critical that you follow each step completely and carefully -- from site preparation to disposal -- so that your removal project is effective, safe, and legal.



*Note: This publication is limited to the removal of asbestos containing insulation from the exterior of octopus furnaces and ducts covered with asbestos insulation – one of the four most common asbestos abatement projects attempted by homeowners. Northwest Clean Air Agency also provides free removal procedure information for popcorn ceilings, sheet vinyl flooring with asbestos backing, and cement asbestos-board siding. To order, call 360.428-1617 or 800.622-4627 or visit [nwcleanair.org](http://nwcleanair.org).*

**Exposure to airborne asbestos may cause cancer or other lung diseases. Northwest Clean Air Agency assumes no liability or responsibility for house damage, injuries, illnesses or related health problems arising from your performing an asbestos removal project. You assume all risks involved.**

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## Before you begin

**Octopus furnaces** were commonly installed in homes in the first half of the century. They were designed to burn wood or coal and to distribute the heat they produced by convection through heating ducts (without the use of fans). Many of these systems were later up-graded to burn oil or natural gas. In some cases, forced-air fan systems were added to increase heating efficiency.

**Early oil forced-air furnaces** differ from octopus furnace systems in that they were designed to burn oil and to distribute heat with forced-air fan systems. Asbestos containing materials were often used inside these units, but rarely, if ever, on the outside. Asbestos containing materials commonly were used to insulate ducting installed with these furnaces.

**Home owners should not attempt to remove asbestos from the inside of old furnaces. This work should be performed by a certified asbestos abatement contractor only.**

Asbestos on the inside of furnaces may include asbestos mud packing gaskets and insulating panels. Such removals can be exceedingly difficult to perform without emitting significant quantities of asbestos fibers into the air. Often, disassembly of the furnace is required in order to eliminate these asbestos containing materials. Properly trained and certified asbestos abatement contractors have the necessary engineering controls to allow them to perform this work without contaminating your home.

Generally, a homeowner should consider undertaking an asbestos removal project in conjunction with convection or forced air heating systems only if:

- A furnace expert or asbestos abatement contractor has inspected your octopus or early oil forced-air furnace and determined it does not contain asbestos on its interior, or
- The removal is limited to removing asbestos-covered heating ducts and asbestos containing materials used to insulate vents and registers to which they are attached.

**One should never attempt to remove asbestos-containing insulation from vents and registers unless ducting also is being removed and replaced. Removals involving vents and registers alone will likely result in asbestos materials detaching and becoming trapped inside ducts. Should this occur, the flow of air through the duct will dislodge asbestos fibers from the trapped material and distribute them throughout the house.**

### **Hot water heating systems**

Insulating muds on hot water boilers and around hot water and steam pipes often contain very high concentrations of asbestos that may be almost impossible to thoroughly wet before disturbance. Remember – wetting and minimizing disturbance are your only means of controlling the release of asbestos fibers to the air during removal. Never attempt to remove these materials from pipes or boilers. Use a certified asbestos abatement contractor.

### **Assume its asbestos**

You can confidently assume that all exterior insulating materials used in the installation of octopus and early oil-forced air furnace systems contain asbestos. The asbestos usually is contained in insulating tape or paper wrapping materials. There is no need to have these materials laboratory tested for asbestos.

## Are you prepared to take on this project?

It is essential that you are aware of all the challenges and risks of tackling an asbestos removal project yourself. It can be time consuming, messy, expensive, and dangerous to your health if not performed correctly.

***Before you begin any asbestos removal project, you must be able to answer “yes” to all the following questions:***

### Are you sure you really want to remove it?

**Remember, asbestos is a problem only if fibers are released to the air.** Asbestos-containing materials in good repair and not being disturbed will not release asbestos fibers. Hence, the safest, easiest and least expensive option may be to leave it alone.

**If room is available in your furnace area,** you may want to disconnect and leave your old furnace in place if you add a new furnace. Similarly, if a new furnace is added, you may want to utilize your existing asbestos insulated ducting rather than replacing it.

**Sometimes, it is possible to work around asbestos without removing it.** However, if asbestos-containing materials are damaged, subject to being damaged, or must be disturbed as part of a remodeling project, then you should repair, encapsulate or remove it.

### Are you prepared to accept the serious health risks associated with asbestos removal?

**Airborne asbestos is a serious health hazard.**

**Breathing asbestos fibers can cause lung cancer and other diseases.**

When disturbed, asbestos breaks down into fibers up to 1,200 times thinner than a human hair. If released into the air, asbestos cannot be seen and quickly circulates through your home. When inhaled, these fibers become trapped in lung tissues. Medical research tells us that up to 30 years after inhalation, asbestos fibers can cause **lung cancer, mesothelioma**, a related terminal cancer of the tissue that lines the chest cavity, and **asbestosis**, a condition that can lead to breathing problems and heart failure.

There is no known safe level of asbestos exposure. That's why medical, environmental health, and regulatory organizations stress the need to protect health by minimizing exposure to airborne asbestos fibers, particularly at elevated levels – such as can occur during a remodeling project.

**Without proper ventilation, equipment and body coverage at all times when working with asbestos, you or anyone in the vicinity of the removal area may be at serious risk.**

The removal procedures described in this publication are intended to help homeowners minimize health risks associated with do-it-yourself asbestos removals. However, it should be understood that with any removal project some release of asbestos fibers into the air is unavoidable and there are no known safe levels of asbestos exposure.

## **Are you prepared to assume the challenge of do-it-yourself asbestos removal and disposal?**

### **The work will be difficult, requiring the purchase of safety equipment.**

Even under the best of circumstances, do-it-yourself asbestos projects can be physically demanding and potentially dangerous.

- Breathing through a respirator is more difficult than normal breathing and places additional stress on heart and lungs.
- Protective clothing can be hot and uncomfortable.
- Work spaces become very humid due to the water used in wetting the asbestos.
- Eye protection often results in reduced visibility.
- Caution must be taken with wiring and electrical power because of all the water being used to wet the asbestos.

As a homeowner, you do not have the specialized equipment, materials, and experience of an asbestos abatement contractor to perform this work. Unlike contractors, who have special machines with high-efficiency filters to remove fibers from the workplace air, you have few, if any, safety "back-ups" if something goes wrong.

## **Are you aware of the legal issues involved?**

### **During removal**

Your only legal options, in having asbestos removed from your home, are to hire a certified asbestos abatement contractor or to do the work yourself. The law prohibits you from hiring anyone other than a certified asbestos abatement contractor to perform -- or assist with -- asbestos removal work in your single-family residence. Homeowners may remove asbestos themselves. But as stated above, this option is difficult, time-consuming, and dangerous to your health if prescribed work procedures are not strictly followed.

### **During disposal**

If you choose to remove asbestos yourself, you take on the legal liability of ensuring proper bagging and identification of asbestos debris, correct transport (in a covered vehicle), and disposal **ONLY** at disposal sites or transfer stations licensed to receive such waste. These regulations are intended to protect your community from the harmful effects of asbestos.

The Washington State Department of Labor and Industries has regulations that may also apply. Call 800-4-BE-SAFE or visit [www.lni.wa.gov/wisha](http://www.lni.wa.gov/wisha) for more information.

***If you answered "No" to any of the above questions, and if you still wish to have asbestos removed from your home, YOU MUST CONTACT A STATE-CERTIFIED ASBESTOS REMOVAL CONTRACTOR. This is the quickest, safest, and most reliable way to remove asbestos from your home***

## Before You Begin Asbestos Removal

No set of instructions can address all possible situations and variables that a homeowner may encounter in an asbestos removal project. This publication is intended to address the common steps and most important issues involved in removing asbestos from the exteriors of convection and forced-air furnace systems.

***Common sense dictates that unique and particularly challenging projects should not be undertaken by the homeowner. In such cases, avoid the possibility of asbestos contamination by abandoning the "do-it-yourself" approach and hiring a state-certified asbestos abatement contractor.***

**These first three steps should be taken care of well before you start any area preparation.**

### **1. Complete an application.**

Prior to removing asbestos, you are required to file an application (plus fee) with the Northwest Clean Air Agency. To obtain an application form call 360-428-1617 or 800-622-4627 or visit our office at 1600 South Second Street, Mount Vernon, WA 98273 between 8:00 a.m. and 4:30 p.m., Monday through Friday. The application is also available online at [www.nwcleanair.org](http://www.nwcleanair.org). After reviewing your application for completeness, Northwest Clean Air Agency will sign the form and return it to you. **YOU MUST SHOW THIS FORM WHEN YOU DISPOSE OF ASBESTOS DEBRIS.**

### **2. Determine what you are going to remove.**

Survey the entire heating system for asbestos-containing materials to determine how much asbestos you'll be removing. Here's where to look:

#### **Furnace.**

The exterior of the furnace may be covered with an asbestos wrap or the seams may be covered with asbestos tape.

**Octopus furnaces converted to oil typically have an asbestos mud packing around the burner unit where it enters the firebox. Those converted to natural gas may have a similar mud packing or an asbestos gasket. Due to the potential danger involved in disturbing these materials, it is illegal for home owners to remove them. As with the removal of asbestos-containing materials inside old furnaces, this work should be performed by a certified asbestos abatement contractor only.**

#### **Hot air ducts.**

Seams may be covered with an asbestos tape, or the ducts themselves may be covered entirely with tape wrap, a thin paper wrap, or corrugated paper ("air cell") wrap.

#### **Cold air returns.**

Typically, cold air returns are not covered with asbestos-containing materials. However, sheet metal seams are sometimes sealed with an asbestos tape. Sometimes, cold air returns were constructed from the overhead floor joists by nailing sheet metal across two joists and sealing the wood-to-metal seams with an asbestos tape.

#### **Vents and grates.**

Asbestos tape was sometimes used as a gasket material on living area heat vents/grates and cold air returns. Shine a flashlight into the vent, grate or return and look inside for protruding asbestos gasket materials. If no suspect materials are visible, check again with a flashlight from the basement after the duct work is removed.

**The cast iron or plate steel body of the furnace will have one or more doors on the front, any or all of which may have asbestos gaskets. Do not open them now because if asbestos gaskets are present, fibers may be released into the air. Later, when plastic sheets are in place, wetting bottles are available and you're dressed in protective clothing and equipment, you may open these doors and use the procedures described later in this manual to remove any asbestos gaskets you find.**

## Before you begin asbestos removal (continued)

### 3. Gather essential personnel and supplies

**WORKERS - It is illegal to hire anyone other than a state-certified asbestos abatement contractor to perform, or assist in, this removal process.**

Three people are needed for an asbestos removal job: two homeowners should perform the removal work and a third person should be "standing by" outside the work area to provide water, tools, and other supplies as needed while work is in progress. This will minimize the need for people inside the containment area to remove their disposable clothing and put on new clothing for each exit and entrance to the work area.

### PROTECTIVE EQUIPMENT AND CLOTHING

**During removal, all workers must be protected from breathing or spreading asbestos fibers. Each person must wear an appropriate respirator, disposable coveralls, goggles, disposable gloves and rubber boots.**

Before beginning your project, you'll need to obtain the following items.

\*Note which items must be purchased at special stores (i.e. safety equipment store), which carry approved health and safety equipment used for asbestos removal, and which may be widely available.

**Check your phone book yellow pages under "Safety Equipment and Clothing" for a list of safety equipment vendors.**

- Respirators** -- Half-face, dual-cartridge respirators, each equipped with a pair of HEPA filters (color coded purple) are required. One respirator is required for each person working within the containment area. Respirators provide little protection if they do not fit properly, so request a fit test from the vendor.

**Persons with beards often cannot be adequately fitted with this type of respirator and should not work within contaminant areas.**

- Coveralls** -- Several pairs of disposable coveralls with built in booties should be purchased for each person who will be in the work area. Oversized coveralls make it easier for workers to move around. **NEW COVERALLS WILL BE NEEDED FOR EACH ENTRY INTO THE CONTAINMENT AREA.** Every time a worker leaves a containment area, coveralls should be wetted and disposed of in a properly sealed asbestos disposal bag.
- Rubber boots** -- Laceless, pull-on rubber boots without fasteners will protect coverall booties so they do not wear through. Rubber boots can be washed off later or disposed of as contaminated debris.
- Eye protection** -- Each worker performing asbestos removal work should be equipped with non-fogging goggles or other safety-approved eyewear protection.
- Rubber gloves** -- *Several* pairs of durable, disposable rubber gloves should be purchased for each worker. Rubber gloves must be worn by each person working within the containment area.

**NEW GLOVES ARE REQUIRED WITH EACH RE-ENTRY INTO THE CONTAINMENT AREA.** Every time a worker leaves a containment area during a removal project, these gloves should be wetted and disposed of in an asbestos disposal bag.

## TOOLS AND SUPPLIES

- Tank sprayer (2-3 gallons)** -- This will be your means of wetting exposed asbestos-containing materials.
- Garden hose with automatic shut-off spray nozzle (Optional)** -- If there is no water supply located within or just outside the work area, you may need to run a hose to the containment area for refilling spray bottles or the tank sprayer.
- Liquid dishwashing detergent** -- Mixed at 1 cup per 5 gallons of water for best results in wetting.
- 6-mil polyethylene plastic sheeting** – For covering the floor beneath duct work and around the furnace, up walls near ducts, and on top of shelves, work benches and other horizontal surfaces so that all debris is contained on plastic.
- Spray glue** – To ensure good duct tape adhesion when installing plastic around the furnace.
- Asbestos waste disposal bags** -- These special bags will be used to contain asbestos contaminated debris and materials. The bags should be sized 33 inches by 50 inches and be made of 6-mil polyethylene. Each should be pre-printed with required asbestos warnings.
- Asbestos waste disposal stickers** – These special stickers can be used to tag larger items of debris that do not fit in the bags, but are double wrapped and taped in plastic.
- Permanent marker pen** -- You must write your last name, address, and removal date on each waste disposal bag or sticker.
- Sturdy containers** – Burlap bags, cardboard boxes, grocery sacks, or newspapers for wrapping duct pieces with sharp edges.
- Duct tape** -- Two rolls will be needed for taping plastic and sealing waste disposal bags.
- Clean, disposable rags** -- A large supply should be on hand for assorted removal and clean-up purposes.
- Spray encapsulants** – These could be latex primer paint or an approved latex asbestos sealing product. They will be used for encapsulating areas that may have a residue of asbestos material attached to them.
- Removal tools** -- Depending on the specific installation and the quantity, type and location of asbestos, you may need any or all of the following:
  - ✓ Putty knife (2"-3")
  - ✓ Paint scraper
  - ✓ Screw drivers
  - ✓ Wire cutters
  - ✓ Sheet metal cutters
  - ✓ Razor blade utility knife w/ extra blades
  - ✓ Drop light and / or flashlight
  - ✓ Coarse nylon scrub pad
- Bucket** -- You will need a bucket for washing tools at the end of the project.

# Asbestos Removal

## 4. Prepare the house

**Post signs** warning friends, family, and other visitors who might visit to stay well away from the work area. Make sure pets cannot come near the work site.

Once signs are in place, your project should be divided into two phases:

### Phase 1 Vents and grates

### Phase 2 Ducts and furnace exteriors

#### Phase 1: Vents and grates

**First, shut off all electrical power to the furnace.**

**Next, remove any visible felt asbestos tape gasket material found in vents and grates in the following manner:**

- Lay a sheet of plastic approximately 3' X 6' in size on the floor right next to the grate or vent and tape it in place. Perform all work from this plastic sheet.
- Mix about one teaspoon of liquid detergent with water in a spray bottle.
- **Put on your disposable coveralls, a respirator with HEPA filters, eye protection and gloves.**
- Remove any screws from vent or grate frame. Slowly lift the cover from one edge, spraying the gasket material as it is being exposed. Then remove the cover and place it on the plastic, thoroughly wetting all gasket material that may be attached to the cover, sheet metal ducting behind the cover, wall or floor.
- Remove all wetted gasket material by manually peeling where possible, scraping with a putty knife and/or paint scraper, and wet scrubbing with a nylon scrub pad as necessary to remove all visible gasket material.
- Double bag wetted debris in 6-mil plastic asbestos disposal bags as it is generated. Wipe cleaned surfaces with clean wet rags. Deposit the rags in the waste disposal bags.
- Spray encapsulant on all cleaned surfaces before reassembly.
- Before leaving the plastic, spray yourself (or each other) with water to wet down any asbestos debris/fibers on the outside of your respirator and disposable coveralls. Remove your disposable gloves and coveralls by peeling them off and turning them inside out as you remove them. Step off the last plastic sheet.
- With your respirator still on, carefully roll or fold the sheet of plastic to enclose any remaining wet debris, along with your coveralls and gloves. Make sure debris stays on the plastic. Double bag the plastic, debris and disposable items in 6-mil waste disposal bags and seal with duct tape.
- Repeat this process for each vent and grate with visible gaskets. If a path of sheet plastic can be laid connecting grate removal areas, coveralls and gloves may stay on from one site to the next, with disposal taking place after the last vent or grate removal is completed.



## Phase 2: Ducts and furnace exteriors

- Cover all upstairs vents/grates with sheet plastic, taping it in place with duct tape.
- Clear out the basement in the area of the furnace and all duct work.
- Open windows and outside doors in the basement for ventilation. However, there must be no visible emissions to the outside air during the asbestos removal project.
- Install a single layer of 6-mil plastic in the following areas to contain debris:
  - ✓ Around the furnace. If possible, use duct tape to secure the plastic tightly around the base of the furnace. Spray glue may be particularly helpful for adhering tape at this point.
  - ✓ On all walls located around the furnace or near asbestos covered ducting earmarked for removal.
  - ✓ On top of shelves, structures, equipment and other items in areas that are near the furnace or under or near heating ducts you intend to remove.
  - ✓ On the floor. Tape down enough plastic to ensure that any loose debris from the removal operation will end up on plastic. You want to have enough plastic on the floor so that once the removal begins you will be able to work without ever having to step off the plastic until the project is complete.

Using sheet plastic, create a path from the work area through a basement exit door to a garage, a back porch or the yard where the project will terminate. Make this your point of entry and exit. At this point, lay down about six square feet of sheet plastic. Have a clean spray bottle and a supply of disposal bags at this site.

**If you must leave the plastic during the project, wet down and remove protective equipment/clothing at the edge and step off the plastic. Place coveralls and gloves in a waste disposal bag. Upon return, put on new coveralls and gloves.**

### **Wet your asbestos before removing it.**

Before you begin removing any asbestos, you must first thoroughly wet all asbestos-containing materials on the ducts and furnace. Follow these procedures:

- Fill your liquid sprayers with detergent-water solution. Use about one cup of detergent to five gallons of water or, for small hand sprayers, one teaspoon of detergent per pint of water.
- Spray all duct and furnace shell insulation repeatedly. Thoroughly wet the asbestos-containing materials, allowing 15-20 minutes for the solution to soak in. If the asbestos-containing materials have never been painted, repaired or encapsulated, this wetting procedure should be successful.

**If the asbestos containing-materials have been painted, repaired or encapsulated, applying water as described above may not be sufficient to thoroughly wet the asbestos-containing materials. In these cases, wetting will be deferred to the removal step described below.**

## Remove the duct work.

- Put on protective equipment – respirator with HEPA filters, disposable coveralls, rubber gloves, boots and protective eye wear.
- If the ducts are totally covered with unpainted asbestos insulation, you may wrap each section with a piece of sheet plastic, taping with duct tape so that you do not have to wrap your arms around wet asbestos when taking the duct work apart.
- If the duct work insulation has been painted and you were unable to thoroughly wet it using the wetting procedures described above, you will need to wet as you cut through the paint and insulation. At each junction between pieces of duct work, slowly cut through the painted insulation around the circumference of the duct, wetting as you proceed. While one person cuts with a razor/utility knife, the other continuously wets as the cut is being made. Repeatedly spray the cut area to thoroughly wet the asbestos containing materials at the exposed edge. Re-spray as the duct work is pulled apart for disassembly.
- Select any duct run to begin your removal. Begin at the furnace end of the duct run.
- Cut any nearby wires or straps that are supporting the duct work. Some duct installations used metal bands, tightened with one or more screws, at duct junctions to hold the pieces of duct work together. If you have this type of installation, unscrew the bands before disassembly.
- Carefully pull and pry the duct off the sheet metal unit on top of the furnace. Thoroughly re-wet at the break point during this process.
- Remove the duct, one section at a time, following this process.
- Re-wet each section as it is removed and then double wrap it in plastic or double bag it in pre-marked asbestos waste disposal bags.

**If the ducting was unpainted, each thoroughly wetted piece may be crushed inside its disposal bag by gently stepping on it. This will reduce the bulk of the debris you generate. However, if the ducting was painted, do not crush the duct work. Crushing dry asbestos insulation will cause it to shatter and release fibers to the air.**

**Take precautions so that the sharp edges of duct work don't perforate the plastic. Disposal sites will not accept torn bags. Use burlap bags, cardboard, grocery sacks, newspaper or other materials to shield the ends of ducting inserted into bags.**

- Re-wet asbestos insulation as you proceed with each duct run. If any of the old registers are to be retained, be careful not to damage the sheet metal flange/boot connecting the duct to the register or vent. With a flashlight, see if any asbestos tape or gasket material is visible in the register area that may not have been visible when surveyed earlier. If so, remove it using the techniques described above in the section addressing vents and registers.
- Repeat the duct removal steps described above for each hot and cold air duct run. If cold air return ducts are fabricated out of overhead ceiling joists joined with sheet metal, the wood-to-metal seams are most likely sealed with asbestos tape. If you encounter this:
  - ✓ Re-spray the tape to ensure it is thoroughly wet. Then peel it off and place in a disposal bag.
  - ✓ Remove the sheet metal (usually nailed to the joists) and bag it with the duct work.

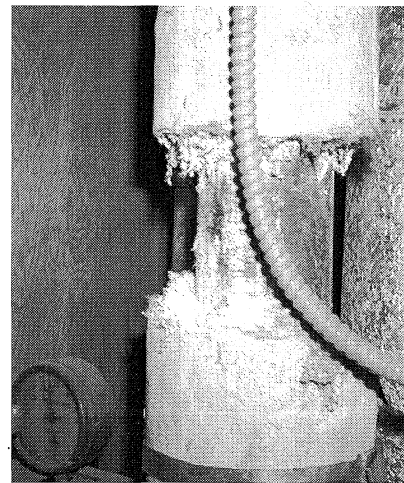
### Remove the duct work (continued)

- ✓ Using a putty knife or paint scraper and/or wet nylon scrub pad, remove visible asbestos residue on the wood joists. Place debris in a disposal bag.
- ✓ Wipe down wood joists with clean rags. Dispose of rags as asbestos-contaminated debris.
- ✓ Spray the joists with commercial penetrating encapsulant or latex paint product.

### Remove asbestos insulation from the furnace exterior

Furnace shell insulation usually consists of a tape material on seams. It sometime covers most of the cast iron or plate steel shell, as well as the sheet metal heat exchange area on top. To remove it:

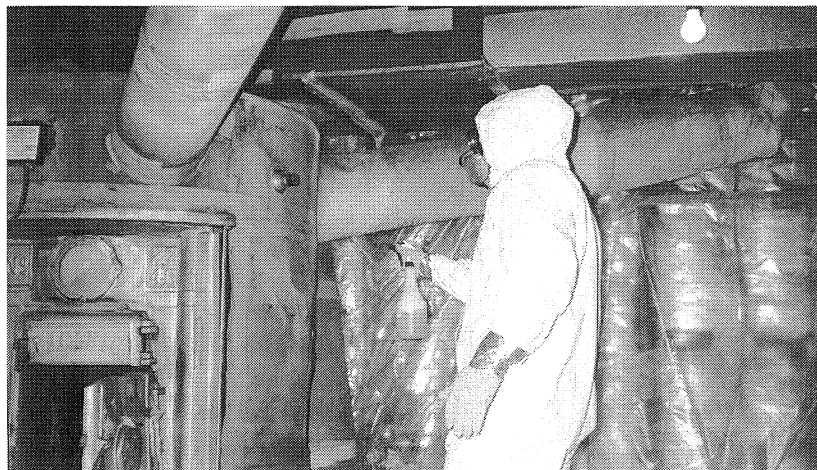
- Re-spray to ensure the material is thoroughly wet, then manually peel it off.
- Scrape off remaining material with putty knives and/or paint scrapers.
- Remove any remaining residue by scrubbing with a nylon pad, re-wetting as you proceed.
- Wipe down all scraped and scrubbed surfaces with clean, wet rags. Dispose of them as asbestos waste.



### Door Gaskets

- Slowly, carefully open doors on the front of the furnace. These originally were used for putting wood or coal into the furnace and for removing ashes. As the door is being opened, spray both the door and door frame exposed surfaces to ensure any gasket material is being wetted upon exposure.
- Check each door and door frame for gaskets or remaining debris from a previously removed gasket.
- Thoroughly wet any observed asbestos-containing materials and then peel, scrape and scrub to remove them.
- Wipe all surfaces with a clean rag. Dispose of debris and rags as asbestos waste.

***Once removed, asbestos debris should be kept wet until packaged and sealed for disposal.***



## CLEANING UP

**Collect all tools**, wipe them clean with a wet rag, and place in bucket for washing later. Dispose of rags as asbestos waste.

**Wet down all plastic**, especially sheets containing visible asbestos debris.

**Remaining on the plastic and at a point most remote from your entrance/exit**, begin rolling and folding the plastic toward you, being careful not to drop any debris off the plastic. Take down, roll and fold plastic on walls and surfaces as you retreat. Double bag the collected plastic in asbestos waste disposal bags as it is collected. Seal with duct tape. Stay on plastic as you move.

## DECONTAMINATE

**Never attempt to vacuum or sweep up asbestos debris. This will cause any fibers present to become airborne in your house.**

**Stand on the last piece of plastic sheeting outside the designated exit door.**

**Spray yourself (or each other) with water** to wet down any asbestos debris/fibers on the outside of your respirator and disposable coveralls.

**Remove boots, gloves and coveralls.** Remove your disposable gloves and coveralls by peeling them off and turning them inside out as you remove them. Double bag them in asbestos waste disposal bags. Step off the last plastic sheet.

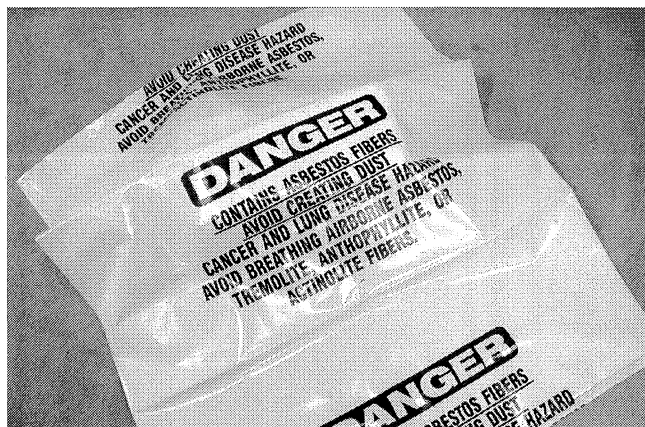
**Remove respirators and take out their filters.** Discard the filters with other asbestos waste.

**Clean safety gear.** Using clean wet rags wash off and wipe down your respirator, goggles, boots, and tools used in the removal. Move each item off the plastic as it is cleaned.

**Double bag all remaining debris**, including all cleaning rags, disposable items, and the last plastic sheet in asbestos waste disposal bags.

**Tightly seal each bag with duct tape.**

**Take a shower.**



**Asbestos waste disposal bag.**

## DISPOSAL

### Prepare and check all waste disposal bags

All debris must be properly packaged for disposal: double bagged inside pre-labeled 6-mil bags designed specifically for asbestos waste disposal. Tops should be twisted and securely taped down. If you haven't already done so, use a permanent marker pen to write your last name, address, and date of removal on each bag.

### Transfer bags to an approved disposal site

***Don't forget. A copy of your Northwest Clean Air Agency application, signed by the agency, must be presented at the disposal facility.***

***All double-bagged or wrapped debris must be hauled to the disposal site or transfer station in a covered vehicle within 10 calendar days of being generated.***

Asbestos debris from an asbestos project must be disposed of only at disposal sites or transfer stations licensed to receive such waste. A list of such sites may be obtained by calling 360-428-1617 or 800-622-4627 or by visiting [www.nwcleanair.org](http://www.nwcleanair.org). Call individual sites for disposal fees and any additional requirements they may have for disposal.

Debris must be legally disposed of within 10 calendar days of being generated. If you must store the packaged debris prior to disposal, store it in a secured area, such as a locked basement or garage.

*Special thanks to the Puget Sound Clean Air Agency*



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