



# CHAPTER 8

## CLEANUP, DISPOSAL, AND CLEARANCE

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## Lead Abatement for Workers

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### Learning objectives

In this chapter you will learn

- the importance of good cleanup
- what cleanup materials to use
- how to do daily cleanup
- how to do final cleanup
- what the clearance levels are
- how to handle waste
- how to dispose of hazardous waste



### Skit: A home abatement job

It's 4:30 in the afternoon, and Paul and Pam are just finishing cleaning up for the day.

**Pam:** Hey, I can see a little bit of dust left on the floor. I'll bring in the shop vacuum and clean it up.

**Paul:** Don't do that. Use the HEPA vacuum.

**Pam:** Didn't you hear that the HEPA vacuum broke this morning? Besides, we already did a thorough vacuuming yesterday.

**Paul:** Why don't we spray it down and then sweep it up?

**Pam:** That will take too much time. I've got a date tonight and I want to get out of here before the next shift comes in and removes the poly. Don't worry about it. I'm gonna vacuum and when I'm done it'll look really good.

### Discussion questions

1. Is it okay to use a regular shop vacuum to clean up the lead dust as long as you're inside the contained area?
2. If you are inside of the enclosed area, do you need to worry about kicking up the lead dust?
3. What makes lead-paint dust and chips so hard to clean up?
4. If Pam uses the shop vacuum, how could it affect the people on the next shift? How could it affect the next person who uses the shop vacuum?





### Cleanup of lead dust

#### Cleanup is the most important step.

If you do not clean up, lead dust levels will increase! Careful cleaning prevents future exposures to lead. Careful cleaning protects the family who will move back into the homes you work on. Any lead dust that remains can poison them. Careful cleaning also protects you while you work.

#### Lead dust is difficult to remove because

- lead dust is very fine
- it may not be visible
- it sticks to surfaces
- it has to be rubbed off
- it collects and packs into cracks

Careful cleanup  
keeps lead dust  
down.



### Cleanup materials

- Protective suit and respirator
- Work gloves and eye protection
- Hand-pumped water sprayer
- Water
- Labelled heavy-duty plastic bags (6-mil poly)
- Plastic shovels and/or dust pans
- HEPA-vacuum cleaner (with special attachments)
- All-purpose cleaner or a cleaner just for lead cleanup
- Buckets (at least 3 mop buckets, one with a wringer)
- Sponges and rags
- String mops, sponge mops, and extra mop heads for both
- Clean step ladder
- Special containers for hazardous waste (if needed)

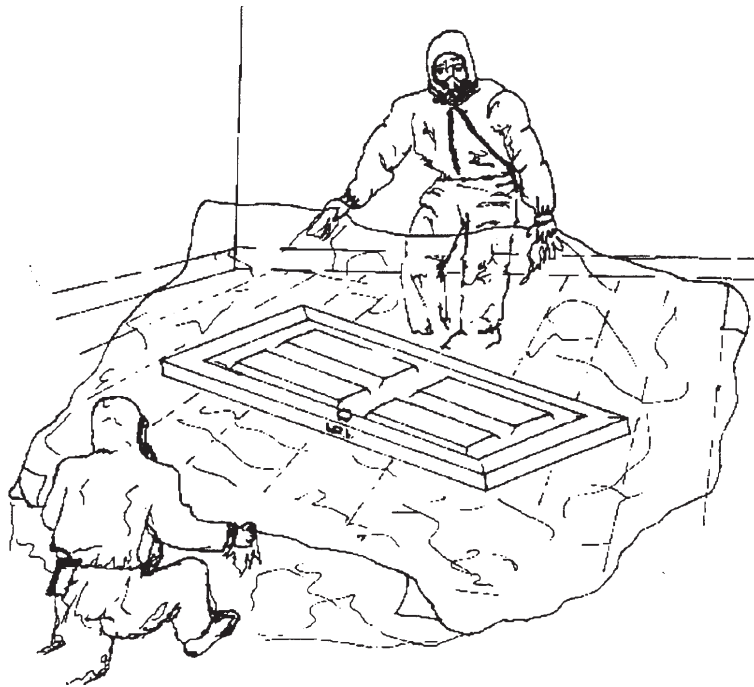


### Daily cleanup

Cleaning the work site every day helps to keep lead dust levels down. It keeps the work area as clean as possible. The OSHA Lead Standard says all surfaces must be kept as free from lead dust as is practical. This keeps lead out of the air. Cleaning the work site prevents you from spreading lead dust around. It also helps make final cleanup—and passing the final inspection—much easier. You may be exposed to high levels of lead in cleanup. You must wear a respirator and protective clothing during cleanup. Daily cleanup takes place at the end of each work day.

1. Wrap up and label large debris.

Wrap large debris (like doors and windows) in 6-mil poly. Seal the wrapped debris with duct tape. Put a label on it that says “LEAD CONTAMINATED.” Store waste in a secure area until it can be tested and disposed of properly.



Wrap large debris in 6-mil poly.

**Clean up the work site every day.**

**Wrap large debris in poly.**



2. Wet mop the floor. Bag and label small debris.

Mist dust and small debris with water. Wet mop or wet sweep it all up. **Do not dry sweep!** This stirs up lead dust. Put the debris into 6-mil plastic bags and seal the bags. Bag, tape, and throw away the mopheads with the debris. Put labels on the bags that say “LEAD CONTAMINATED.” Store waste in a secure area until it can be tested and disposed of properly.

Wet mop the floors.

Do not dry sweep!



3. HEPA vacuum all surfaces in the work area.

The OSHA Lead Standard says that you should not allow lead dust to build up. It says wherever possible use the HEPA vacuum. **Do not use a regular shop vacuum**—it cannot filter lead dust. Start at the far end of the work area and move towards the exit through the decontamination area.

HEPA vacuum all surfaces at the end of each day.

4. Check poly and repair any tears or rips.

Check for tears in the poly throughout the day. Repair any rips as you find them. At the end of each day, inspect the whole containment for holes, rips, and tears in the poly. Make sure you check the poly covering the air vents and heat registers.





### Final cleanup

The cleanup done at the end of the abatement job is called **final cleanup**. Final cleanup must be done slowly and carefully. Final cleanup might even take longer than the abatement itself. **There are three stages of final cleanup.** Each stage is very important and must be done thoroughly.

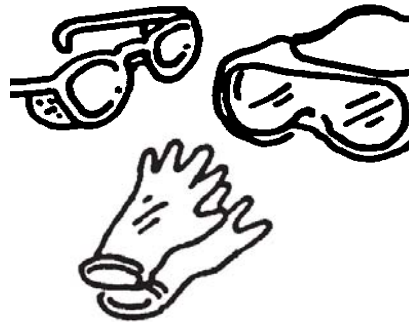
Many abatement jobs fail the final inspection because the final cleanup was not done properly. If an abatement job fails, you will have to do cleanup over again as many times as it takes for the job to pass. Redoing cleanup is expensive and takes a lot of work time. It is better to do it right the first time.

Wait at least one hour after you finish the abatement before you start final cleanup (even longer [e.g. overnight] if it's practical). (Check with your state and local laws.) This allows the lead dust that is in the air to settle. The time that it takes for the lead dust to settle depends on the type of work methods you used. Dust may settle onto surfaces within a few hours of encapsulation or enclosure. Smaller particles created with a needle gun or heat gun will take much longer to settle out of the air.

#### Stage 1: Special cleaning

1. Wear protective gear.

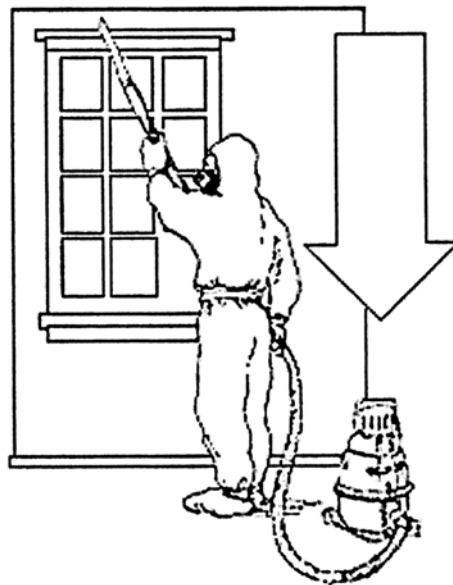
Put on plastic gloves to protect your hands from the lead cleaner. Wear protective goggles or other eye gear to shield your eyes. You will also wear your respirator, disposable suit, and booties or rubber boots.



2. HEPA vacuum all surfaces.

HEPA vacuum **all surfaces** in the work area, including areas that had been covered with plastic.

Start at the far end and then work towards the decontamination area. Begin with ceilings or the top of the walls and work down, cleaning the floors last. Do every inch of the windows, especially the troughs. Use the corner tool to clean where the floor meets the baseboard and all cracks in the floor boards. Use the brush tool for the walls. Move slowly and carefully to get all the dust.



**Every step in final cleanup is very important.**

**Final cleanup may take longer than the abatement.**

**For all surfaces in the work area:**

- HEPA vacuum;
- wash with cleaner;
- HEPA vacuum again.



**Don't remove the first layer of poly until all other poly has been removed.**

3. Collect waste in sealed plastic bags or wrap in poly.

Place any remaining disposable items in 6-mil plastic bags and tie the bags shut. If waste items are too large, wrap them in 6-mil poly. Seal them with duct tape. Put labels on them that say "LEAD CONTAMINATED."

4. Wet mop and bag dust.

Use the spray bottle to wet down all dust and debris with a fine mist of water. This will help control the dust during cleanup. Wet mop the entire work area. Bag and seal the debris. Label the waste "LEAD CONTAMINATED."

5. Take off first layer of poly.

If you did not do any demolition or replacement, you may have used only one layer. If so, do *not* remove that layer, and skip to step #6.

If you used two layers of poly, now is the time to remove only the first layer. Wet mist the poly before removing it. This contaminated plastic must be removed carefully. Remove the upper plastic that covers cabinets and counters first. Then carefully remove the poly on the floor. Do not remove floor poly until all other poly has been removed. Fold top layer of poly onto itself from the edges into the center in order to trap any remaining dust inside. Seal with duct tape and put into plastic bags for disposal.

6. Wash all surfaces with cleaner.

Wash *all surfaces* in the work area with an all-purpose cleaner or a cleaner made just for lead cleanup, including areas that had been covered with plastic. Some wallpaper should only be HEPA vacuumed and not washed.

Use the 4-Step System you learned about in Chapter 5.

**Start from the top and work down.** Start with the ceiling and work down to the floors.

**Mix up a new solution of lead cleaner often so it stays clean.** Change the rinse water, rags, and mop heads at least once every 500 square feet. The number of times you must change both the wash water and the rinse water will depend on how dirty the area is. After washing each room, go back over the surfaces with a clean water rinse.

**Dispose of washwater waste according to state and local laws.**



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## Cleanup, Disposal, & Clearance

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7. Remove the bottom layer of poly. Clean the floor.

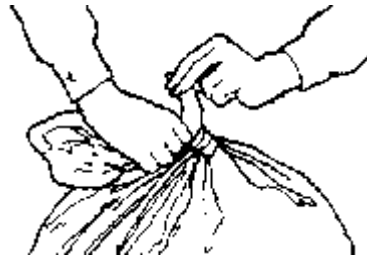
After all the work above the floor has been cleaned, carefully remove the bottom layer of poly from the floor. Fold the contaminated side of the poly into itself. This will contain the lead dust and moisture. Seal the bundle with duct tape and place it in a 6-mil bag or wrap it in 6-mil poly. Label it "LEAD CONTAMINATED." HEPA vacuum the floor. Use the lead cleaner to wash it. Rinse it with clean water.

8. HEPA vacuum all surfaces again.

After all surfaces have dried, HEPA vacuum a second time. Vacuum until no dust or residue can be seen. Move slowly and carefully.

9. Collect used cleaning items in sealed plastic bags.

Discard all items used for cleaning (towels, sponges, rags, mop heads) in 6-mil plastic bags. Seal the plastic bags, making sure to "gooseneck" the opening to the bags, and label them "LEAD CONTAMINATED."



**Seal all items  
used for cleaning  
in plastic bags.**



### Clearance Inspection

The final clearance inspection occurs in two main phases:

- visual examination
- environmental sampling

#### Visual examination

The work area should be visually inspected **before** you repaint or seal surfaces where the paint has been removed. The inspector will come in and look at the surfaces chosen for abatement to see if visible paint residue remains. The inspector will also look for signs of dust. This visual inspection should be done *no sooner* than one hour after cleanup is finished.

If all the abatement work is done and no dust can be seen, the job passes the visual inspection. If the job does not pass visual inspection, you will have to reclean the area until no dust can be seen.

In some states there is no requirement for visual inspection before repainting or sealing the abated surfaces, but it is often a part of the specifications. It is always a good idea to make sure you don't see any signs of lead dust before repainting an abated surface.

#### Stage 2: Painting and sealing

All abated surfaces should be primed with the correct type of primer for the surface. Repaint all abated surfaces. A final coat of gloss or semi-gloss is recommended. Enclosures or encapsulants may not need to be painted. Wooden floors should be sealed with clear polyurethane-based sealer or coating. Other floors such as tile or linoleum should be sealed with wax. Concrete floors need to be sealed with a concrete sealer.

#### Stage 3: Repeat special cleaning

Allow at least 24 hours between stage 2 and stage 3 for the paint and sealers to dry, or follow the manufacturer's specifications. Then HEPA vacuum all surfaces. Wash all surfaces with a lead cleaner (some latex paints can be damaged by cleaning solutions; use a warm water rinse instead). Then HEPA vacuum all surfaces again.



## Final inspection—Environmental sampling

Once the area has been cleaned and repainted, an inspector will take dust samples for the final inspection. These samples are called clearance dust samples. Clearance dust samples are taken no sooner than one hour after final cleanup is finished. (Review Chapter 4 for more information on collecting dust samples.) The job must pass final inspection before occupants can move back into the building.

The inspector will take samples from several rooms within the work area. The inspector will sample three surfaces: floors, window sills, and window troughs. The actual number of samples will depend on

- whether there was containment (at least an airlock between the abated rooms and the rest of the dwelling or building);
- whether the abatement was done on the inside or outside of the house;
- whether the inspector does single-surface or composite dust sampling.

Common areas (such as hallways and stairwells) are also sampled. The number of samples taken in common areas depends on the size (in square feet) of the common area. The purpose of the final inspection is to make sure that dust levels are as low as they can be.

### Clearance dust levels

The lead dust levels from these samples must be acceptable for clearance. Passing clearance means that the area has been cleaned adequately. Remember, lead in dust is measured in micrograms ( $\mu\text{g}$ ) of lead per square foot ( $\text{ft}^2$ ) of area tested.

EPA Clearance Levels

Surface	Level of lead in dust
Floors	40 $\mu\text{g}/\text{ft}^2$
Window sills	250 $\mu\text{g}/\text{ft}^2$
Window troughs	400 $\mu\text{g}/\text{ft}^2$

If the dust sample results are below these levels, then the job passes final inspection. If they are at or above these levels, you will have to redo cleanup. You will have to redo cleanup as many times as it takes for the job to pass the final clearance inspection.

**The job must pass final inspection.**

**The final inspection makes sure that dust levels are as low as they can be.**

**If lead dust levels are too high, you must redo cleanup.**

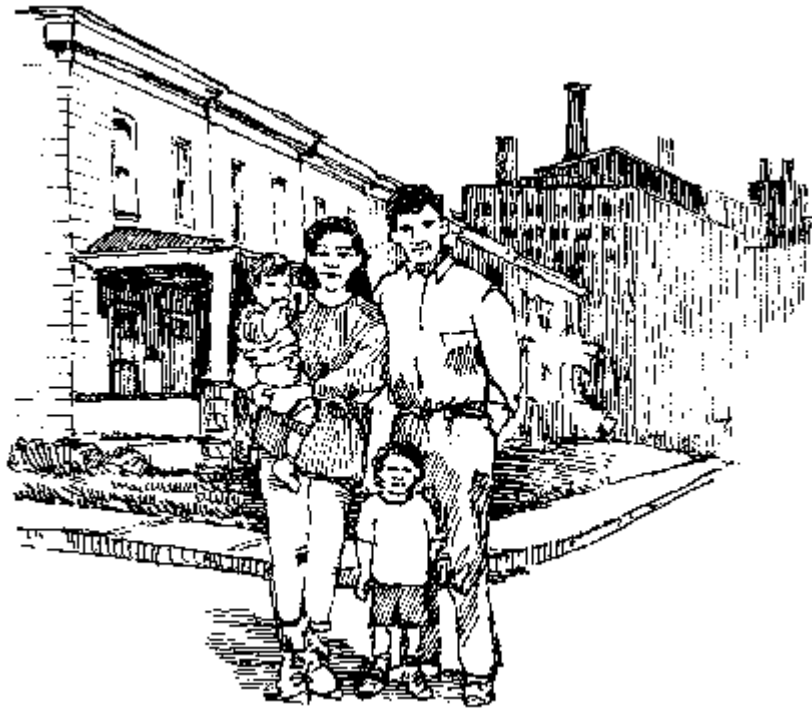
**Dust tests show if cleanup was adequate.**



**Children have been poisoned after abatement jobs because cleanup was not done well.**

### Why measure lead in house dust?

All abatement methods create lead dust. Dust tests show if dangerous levels of lead dust still exist in a home. Lead dust is a major source of lead exposure for young children. **Children have been poisoned after abatement jobs because cleanup was not done well.** If lead dust gets left behind, the families who return to their homes or children who return to the child-occupied facility (for example, a daycare center) can be poisoned. This is why cleanup is so important. This is why passing final inspection is so important.



**Protect the families whose homes you work on.**

**Do cleanup right!!**



### Waste from a lead abatement job

There are many waste materials from lead abatement jobs:

- lead-based paint chips
- lead-based paint dust
- large components that were removed (windows, doors, etc.)
- poly and duct tape
- sludge from paint removers
- solvents from paint stripping
- liquid waste (from cleanup, neutralizing surfaces, water blasting)
- used cleaning supplies
- disposable work clothes and respirator filters

Before the project begins, your employer must find out the federal, state, and local rules on how to dispose of each type of waste likely to be created. The building owner will need to know that all of the waste was disposed of legally.

In July 2000, EPA issued a memorandum clarifying how waste generated as a result of lead-based paint activities should be handled (*Regulatory Status of Waste Generated by Contractors and Residents from Lead-Based Paint Activities Conducted in Households*). A copy of the memo is included as Addendum A of this chapter.

#### What is the purpose of this interpretation?

This memorandum clarifies the regulatory status of waste generated as a result of lead-based paint activities (including abatement, renovation, and remodeling) in homes and other residences.

Since 1980, EPA has excluded “household waste” from the universe of RCRA hazardous wastes under 40 CFR 261.4(b)(1). In the 1998 temporary toxicity characteristic (TC) suspension proposal, EPA explained that the household waste exclusion applies to all lead-based paint waste generated as a result of actions by residents of households to renovate, remodel or abate their homes on their own. In the 2000 memorandum, EPA stated that they believe lead paint debris generated by contractors in households is also “household waste” and thus excluded from the RCRA Subtitle C hazardous waste regulations. Thus, the household exclusion applies to waste generated by either residents or contractors conducting lead-based paint activities in residences.

Residents and contractors managing lead-based paint waste from households, although excluded from the hazardous waste regulations, should take common sense measures to

- minimize the generation of lead dust,
- limit access to stored lead-based paint wastes including debris, and
- maintain the integrity of waste packaging material when moving or transporting the lead-based paint waste.

**Separate each type of waste on the job.**

**Your employer must check with the state, locality, or tribe to see how they regulate LBP abatement waste.**



**Follow best management practices when handling and disposing of LBP waste.**

In particular, EPA endorses the basic steps outlined in the 1998 proposals for the proper handling and disposal of lead-based paint waste as the best management practices (BMPs). These include:

- Collect paint chips, dust, and dirt and rubble in plastic trash bags for disposal.
- Store larger lead-based paint architectural debris pieces in containers until ready for disposal (wrap in poly before storing).
- Consider using a covered mobile dumpster (such as a roll-off container) to store lead-based paint debris until the job is done.
- Contact local municipalities or county solid waste offices to determine where and how lead-based paint debris can be disposed.

In addition, contractors working in residential dwellings are subject to either one or both of the following:

- The HUD guidance for contractors doing publicly-funded rehabilitation/renovation projects in public housing.
- EPA (or state or tribal) training and certification requirements and the proposed EPA onsite management standards.

These best management practices for households are similar to those included in the HUD *Guidelines* for individuals controlling lead-based paint hazards in housing. HUD requires that contractors using HUD funding follow the lead-based paint hazard control guidelines. Not following these guidelines can potentially result in the loss of funding.

Contractors should contact their state, local and/or tribal government to determine whether any restrictions apply to the disposal of residential lead-based paint waste. **This verification is necessary since, under RCRA, States, local and tribal governments can enforce regulations that are more stringent or broader in scope than the federal EPA requirements.** In those cases, lead-based paint waste from households may still be regulated as a hazardous waste as matter of State regulations. In states or tribes that do not have an exemption for residential lead abatement waste and for commercial (nonresidential) structures, the following information applies.

**State, localities, and Indian Tribes may *not* have an exemption for residential LBP waste.**





### Handling waste on the job

Your employer is responsible for determining what types of waste and how much waste is generated on an abatement project.

If the state, tribe, or city in which you are working treats lead abatement waste as possibly hazardous and if your job is creating more than 220 pounds of waste per month, your employer will need to take a small sample from each type of waste and have it tested. If your employer is creating less than 220 pounds of waste per month, you may be able to dispose of the waste as nonhazardous waste **after** checking with the state and solid waste disposal facility. Dispose of the waste according to state and local laws.

**Separate each type of waste on a job.** Your employer or supervisor will take a sample from each type of waste to see if it is hazardous. Hazardous waste is waste that can poison people and the environment if it is not handled carefully. Your supervisor or employer is responsible for telling you what waste is hazardous and what is nonhazardous. **All waste should be kept within the contained area on the job until it is tested to determine if it is hazardous.** Even if the waste you create is nonhazardous, it may still pose an exposure hazard to you and to the occupants.

**Warning!** Sometimes regulations call all waste “solid waste” until it is tested. Sometimes the regulations call all nonhazardous waste “solid waste,” including nonhazardous liquid waste. **In this manual, “solid waste” means solid material and “liquid waste” means liquid material.**

**Your employer is responsible for determining what types of waste are generated on the project.**



**Do not pour liquid waste down a drain or onto the ground.**

### Liquid waste

The contract specifications for larger jobs will often tell your supervisor how to handle liquid waste. On small jobs you may not have any specifications. Liquid waste includes wash water from cleanup, the neutralizing solution used for paint strippers, and waste from water blasting. Liquid waste should be filtered before disposal to remove as much of the lead and other particles as possible. Store liquid waste in noncorrosive containers.

Contact the local sewage treatment center and the state department of the environment for directions on how to dispose of liquid waste properly. Never pour it down toilets, drains, storm sewers, or onto the ground. (Note: In some cases, liquid debris from dust abatement or renovation/remodeling **may** be disposed of down the toilet. You should check with the state or local waste water agencies to check before doing so.)

Liquid waste from lead abatement is often hazardous waste. It must be treated by a liquid waste treatment facility before disposal. If you are generating lots of liquid waste, store the waste in 55-gallon steel or plastic drums until it is tested.



## Testing and disposing of waste

If you are working in a state/area where local regulations require that lead abatement wastes be treated as hazardous, all waste from lead abatement jobs must be tested to see if it is hazardous waste. Hazardous waste is liquid or solid waste that could poison people if it is not disposed of correctly.

Your employer will test different types of waste to see if they are hazardous. This is done with a special test called a “Toxicity Characteristic Leachate Procedure” test. This test is often called a “TCLP” test. The TCLP test looks at how the waste material will break down. It checks to see if the waste material will leak or release a hazard.

Lead waste—including paint chips, sludge from chemical strippers, and water from water blasting—are some of the types of waste that must be tested. Once your employer has tested the waste, you will be responsible for keeping the hazardous and nonhazardous wastes separated.

**Your employer may have to take a sample of each type of waste to see if it is hazardous.**



Use a secure space to store wastes.

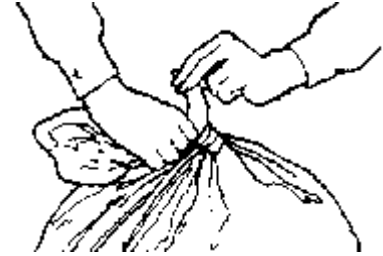
Never burn lead waste!

### Nonhazardous waste disposal

These steps are appropriate for all waste if you are working in a state which follows EPA guidance stating that lead abatement waste from residential structures is exempt from hazardous waste requirements.

1. Bag or wrap solid waste in 6-mil poly.

Seal with duct tape. Do this as part of cleanup every day and at the end of the job. Do not use a bag labelled "asbestos" when you are bagging lead. Label the bag "LEAD CONTAMINATED."

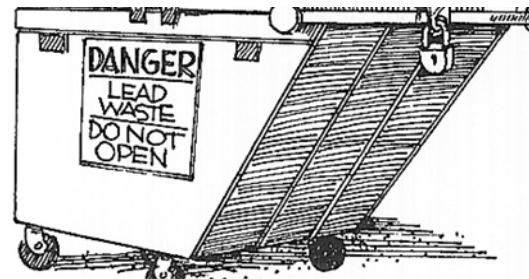


2. Store waste in a secure space.

Store waste in an area closed off to people other than workers. Protect waste from children, animals, the weather, and anything else that can disturb it. Sometimes you can use a locked dumpster. Put signs that say "DANGER! CONTAINS LEAD WASTE" on the storage space.

3. Take waste to a landfill in a covered vehicle.

Transport solid waste to a municipal or lined landfill (your employer should check to determine what your state or local laws require). Always transport waste from a lead-abatement job in a covered truck. This keeps lead dust from getting into the environment.



**WARNING:** Do not take waste from a lead-abatement job to an incinerator. Burning lead waste creates lead fumes that get into the air. Lead fumes are very easy to inhale and are very dangerous to health.



## Hazardous waste disposal

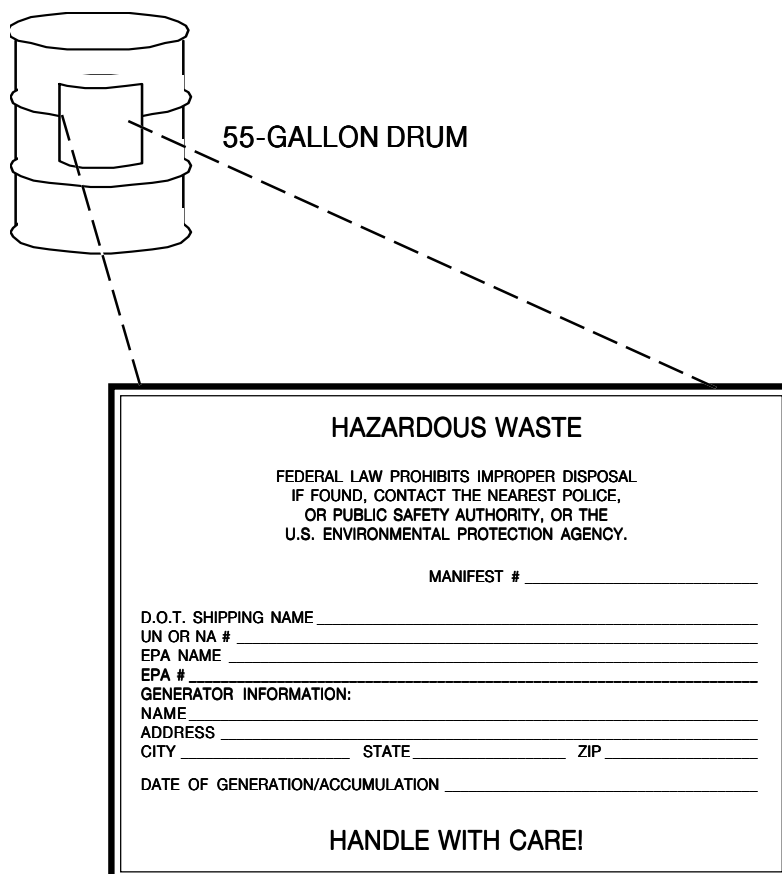
If the state, tribe, or city in which you are working treats lead abatement waste as possibly hazardous, avoid abatement methods which generate hazardous waste, such as chemical stripping. If you use such methods, your employer must plan how to contain, transport, and dispose of the hazardous waste before the project begins. Hazardous waste is much more expensive to dispose of than nonhazardous waste.

The federal law that covers hazardous waste is the **Resource Conservation and Recovery Act**. It is called **RCRA** for short.

If your employer or supervisor has determined that some or all of the waste you are handling is hazardous, then he or she must have you do the following:

1. Store all hazardous waste in special containers.

Store hazardous waste in 55-gallon drums, tanks, or other containers that match the type of waste. The Department of Transportation or state waste management agency will give you the information you need to choose the right container. All containers must be marked "HAZARDOUS WASTE" in bright red and yellow colors. All containers must have a label that lists their contents.



**Hazardous waste is dangerous to human health and the environment.**

**Store hazardous waste in special containers.**

**Label the containers.**



**Hazardous waste must go to a licensed disposal site.**

2. Store hazardous waste in a secure area.

Store waste in an area closed off to people other than workers. Protect waste from anything else that can disturb it. Regularly inspect containers for leaks or corrosion. Hazardous waste can be stored at the company's facility for up to 90 days.

3. Use a licensed transporter.

The person or company that transports hazardous waste must be approved by the EPA. Be careful when you move hazardous waste containers. Use hand trucks, dollies, pull carts, and ramps whenever you can. This will help prevent containers from breaking and help protect everyone from exposure to hazardous waste.

4. The hazardous waste must be brought to a licensed disposal site.

The transporter must take the hazardous waste to a disposal facility that is licensed to accept this type of hazardous waste. The site must be approved by EPA. All hazardous waste must be disposed of within 90-180 days of the start of collection.

5. Use a Hazardous Waste Manifest.

An EPA form called a "**Hazardous Waste Manifest**" must be with every shipment. Your employer or supervisor, the transporter, and the receiver at the disposal site must all sign the manifest.

Other requirements:

Some contractors have to follow even more requirements for hazardous waste. They include contractors who

- generate more than 2,200 pounds of hazardous waste per month;
- abate more than one housing unit at a time;
- abate commercial, public, and industrial buildings.



## EPA studies of paint abatement waste

EPA sponsored two studies of lead abatement waste. They used jobs from the HUD demonstration project in 1991.

After the first study, EPA found that certain types of waste generally were hazardous or not hazardous. For some kinds of waste they did not have enough data to draw conclusions. So, they did a second study.

The results from the second study are in the following chart. These results only give you an idea of what might happen on your project. You can separate the waste into these two groups before the TCLP tests are done. The following results from the second study are not conclusive.

Current federal EPA guidance does not require TCLP testing of lead abatement wastes. However, some states, tribes, or localities may require that any contractor generating more than 220 pounds of waste per month sort and test waste from each project or use knowledge from prior similar projects. Local and state or tribal regulations may require that even waste from small jobs be tested.

### ABATEMENT WASTE

Hazardous	Usually not hazardous
<ul style="list-style-type: none"><li>• Paint chips</li><li>• Paint dust (from HEPA vacuums and air filters)</li><li>• Rags, sponges, mops, HEPA filters, other cleaning materials</li><li>• Air monitoring cartridges</li><li>• Scrapers</li><li>• Unfiltered wash water</li><li>• Solid waste with lead level higher than 4 mg/cm<sup>2</sup></li><li>• Poly and tape from jobs where heat guns used</li></ul>	<ul style="list-style-type: none"><li>• Filtered wash water</li><li>• Disposable work clothes and respirator filters (HEPA vacuumed before disposal)</li><li>• Solid waste, such as window frames, with lead level less than 4 mg/cm<sup>2</sup> (measured at lab)</li><li>• Poly and tape from encapsulation and enclosure jobs (HEPA vacuumed before disposal)</li></ul>

**Tests results from previous similar jobs may be used to determine if waste is hazardous or not.**



## Key facts for Chapter 8


 Cleanup is the most important part of the abatement job.


Cleanup must be done slowly and thoroughly.


It may take longer than doing the abatement.

 **Daily cleanup**

1. Wrap large debris in poly.
2. Wet mop or wet sweep small debris and bag it.
3. Check the poly and repair any tears or rips.
4. HEPA vacuum all surfaces.

 **Wait one hour after finishing abatement before you begin final clean up.**  
(Check your state and local laws)


 **Final cleanup must be done slowly and thoroughly**

 **Final cleanup—Stage 1**


Every step of final cleanup is important:

1. Wear protective clothing, including a respirator and goggles.
2. Wet mop the entire area and bag all dust.
3. Take up the first layer of poly.
4. HEPA vacuum all surfaces.
5. Wash all surfaces with a cleaning solution and then rinse. Follow state and local laws about disposal of wash water.
6. HEPA vacuum all surfaces again.
7. Dispose of all cleaning items in sealed 6-mil plastic bags.

**Some states require a visual inspection of the abatement job after the first stage of final cleanup. Wait one hour after finishing final cleanup before letting the inspector go in.**

 **Final cleanup—Stage 2**

Paint and seal all the abated surfaces.

 **Final cleanup—Stage 3**

HEPA vacuum all surfaces. Wash all surfaces with a cleaning solution and rinse well. HEPA vacuum all surfaces again.





### Clearance inspection

Two phases: visual inspection and environmental sampling.

Do this no sooner than one hour after final cleanup is done.

Every lead abatement job must pass a final inspection.


Dust wipe tests measure the amount of lead in the house.

If lead dust levels are too high, you must redo cleanup.

### EPA allows states and tribes to treat lead-based paint abatement waste as nonhazardous waste.

Your employer must check with the state or tribe in which the job is being done to determine whether any restrictions apply to the disposal of residential lead-based paint waste.

### Waste from a lead abatement job

-  1. Store waste in a locked place until it can be disposed of.
2. Waste should not be removed from the contained area on the job site until your employer knows if it is hazardous or not.
3. Liquid waste should be filtered before disposal.
4. Hazardous waste can be stored for a limited time (depending on your employer's generator status) at the company's facility.

### Handling nonhazardous waste

Wrap or bag solid waste in 6-mil poly.

Label waste "Lead-Contaminated."

Transport solid waste to a lined dump in a covered truck.

Never burn lead waste.

Do not pour liquid waste down a drain, storm sewer, or onto the ground.

### Handling hazardous waste

Store hazardous waste in special, labelled containers.

Use a licensed transporter to take the hazardous waste away.

Hazardous waste must go to a licensed disposal site.

A manifest must go with every shipment of hazardous waste.



### For more information

These publications have more information on the topics covered in this chapter. Your instructor has a copy of the publications marked with a star (\*). You can order your own copies by calling 1-800-424-LEAD.

\*EPA, *Lead: Identification of Dangerous Levels of Lead; Final Rule*; 40 CFR Part 745 (January 2001).

\*EPA, *Regulatory Status of Waste Generated by Contractors and Residents from Lead-Based Paint Activities Conducted in Households*, Interpretive Memorandum (July 2000).

EPA, *Temporary Suspension of Toxicity Characteristic Rule for Specified Lead-Based Paint Debris*; 40 CFR Part 745, Subpart P (December 1998).

\*HUD, *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* (June 1995).

RCRA Hotline for information on waste disposal: 1-800-424-9346.



Addendum A

EPA Memorandum:  
Regulatory Status of Waste Generated by Contractors and  
Residents from Lead-Based Paint Activities Conducted in  
Households

**MEMORANDUM**

**From:** Elizabeth A. Cotsworth, Director  
Office of Solid Waste

**To:** RCRA Senior Policy Advisors  
EPA Regions 1 - 10

**Subject:** Regulatory Status of Waste Generated by Contractors and Residents from Lead-Based Paint Activities Conducted in Households

**What is the purpose of this interpretation?**

This memorandum clarifies the regulatory status of waste generated as a result of lead-based paint (LBP) activities (including abatement, renovation and remodeling) in homes and other residences. Since 1980, EPA has excluded "household waste" from the universe of RCRA hazardous wastes under 40 CFR 261.4(b)(1). In the 1998 temporary toxicity characteristic (TC) suspension proposal, we clarified that the household waste exclusion applies to all LBP waste generated as a result of actions by residents of households (hereinafter referred to as "residents") to renovate, remodel or abate their homes on their own. (At 63 FR 70233, 70241, Dec. 18, 1998). In this memorandum, EPA is explaining that we believe lead paint debris generated by contractors in households is also "household waste" and thus excluded from the RCRA Subtitle C hazardous waste regulations. Thus, the household exclusion applies to waste generated by either residents or contractors conducting LBP activities in residences.

**What is the practical significance of classifying LBP waste as a household waste?**

As a result of this clarification, contractors may dispose of hazardous-LBP wastes from residential lead paint abatements as household garbage subject to applicable State regulations. This practice will simplify many lead abatement activities and reduce their costs. In this way, the clarification in today's memorandum will facilitate additional residential abatement, renovation and remodeling, and rehabilitation activities, thus protecting children from continued exposure to lead paint in homes and making residential dwellings lead safe for children and adults.

LBP debris (such as architectural building components — doors, window frames, painted wood work) that do not exhibit the TC for lead need not be managed as hazardous waste. However, LBP waste such as debris, paint chips, dust, and sludges generated from abatement and deleading activities that exhibit the TC for lead (that is, exceed the TC regulatory limit of 5 mg/L lead in the waste leachate), are hazardous wastes and must be managed and disposed of in accordance with the applicable RCRA subtitle C requirements (including land disposal restrictions) except when it is "household waste." Under 40 CFR 261.4(b)(1), household wastes are excluded from



the hazardous waste management requirements. Today, EPA is clarifying that waste generated as part of LBP activities conducted at residences (which include single family homes, apartment buildings, public housing, and military barracks) is also household waste, that such wastes are no longer hazardous wastes and that such wastes thus are excluded from RCRA's hazardous waste management and disposal regulations. Generators of residential LBP waste do not have to make a RCRA hazardous waste determination. This interpretation holds regardless of whether the waste exhibits the toxicity characteristic or whether the LBP activities were performed by the residents themselves or by a contractor.

### **Where can I dispose of my household LBP waste?**

LBP waste from residences can be discarded in a municipal solid waste landfill (MSWLF) or a municipal solid waste combustor. Dumping and open burning of residential LBP waste is not allowed. Certain LBP waste (such as large quantities of concentrated lead paint waste—paint chips, dust, or sludges) from residential deleading activities may be subject to more stringent requirements of State, local, and/or tribal authorities.

### **What is the basis for this interpretation?**

The household waste exclusion implements Congress's intent that the hazardous waste regulations are "not to be used either to control the disposal of substances used in households or to extend control over general municipal wastes based on the presence of such substances." S. Rep. No. 94-988, 94th Cong., 2nd Sess., at 16. EPA regulations define "household waste" to include "any waste material (including garbage, trash, and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day-use recreation areas)." 40 CFR 261.4(b)(1). The Agency has applied two criteria to define the scope of the exclusion: (1) the waste must be generated by individuals on the premises of a household, and (2) the waste must be composed primarily of materials found in the wastes generated by consumers in their homes (49 FR 44978 and 63 FR 70241).

In 1998, EPA concluded that LBP waste resulting from renovation and remodeling efforts by residents of households met these criteria. (63 FR 70241-42, Dec. 18, 1998). In short, the Agency found that more and more residents are engaged in these activities and thus the waste can be considered to be generated by individuals in a household and of the type that consumers generate routinely in their homes. Wastes from LBP abatements performed by residents were also considered household wastes.

EPA clarifies that this interpretation also applies to contractor-generated LBP waste from renovations, remodeling and abatements in residences. Both the definition of household waste in section 261.4(b)(1) and the Agency's criteria for determining the scope of the exclusion focus on the type of waste generated and the place of generation



rather than who generated the waste (e.g., a resident or a contractor). This approach is consistent with prior Agency policy.<sup>1</sup> Since contractor-generated LBP waste from residential renovations, remodeling, rehabilitation, and abatements are of the type generated by consumers in their homes, it is appropriate to conclude that such waste, whether generated by a resident or contractor, falls within the household waste exclusion. This clarification will facilitate lead abatements and deleading activities in target housing by reducing the costs of managing and disposing of LBP waste from residences.

### **What is the relationship of this interpretation to the on-going LBP debris rulemaking?**

On December 18, 1998, EPA proposed new TSCA standards for management and disposal of LBP debris (63 FR 70190) and simultaneously proposed to suspend temporarily the applicability of the RCRA hazardous waste regulations that currently apply to LBP debris (63 FR 70233). This memorandum responds to stakeholders requests that EPA clarify whether the existing household waste exclusion applies to both homeowners and contractors conducting LBP activities in residences. While the Agency still intends to finalize aspects of the two proposals, we are making this clarification in advance of the final rule to facilitate LBP abatement in residences without unnecessary delay.

### **How does this interpretation affect EPA's enforcement authorities?**

Under this clarification, LBP wastes generated by residents or contractors from the renovation, remodeling, rehabilitation, and/or abatement of residences are household wastes that are excluded from EPA's hazardous waste requirements in 40 CFR Parts 124, and 262 through 271. The household waste provision of 40 CFR 261.4(b)(1) only excludes such wastes from the RCRA regulatory requirements. However, it does not affect EPA's ability to reach those wastes under its statutory authorities, such as RCRA §3007 (inspection) and §7003 (imminent hazard). See 40 CFR §261.1(b).

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<sup>1</sup> In the final rule establishing standards for the tracking and management of medical waste, EPA concluded that waste generated by health care providers (e.g., contractors) in private homes would be covered by the household waste exclusion (54 FR 12326, 12339, March 24, 1989). In the specific context of LBP, the Agency stated in a March 1990 "EPA Hotline Report" (RCRA Question 6) that lead paint chips and dust resulting from stripping and re-painting of residential walls by homeowner or contractors (as part of routine household maintenance) would be part of the household waste stream and not subject to RCRA Subtitle C regulations. Similarly, in a March 1995 memorandum on the "Applicability of the Household Waste Exclusion to Lead-Contaminated Soils," we found that if the source of the lead contamination was as a result of either routine residential maintenance or the weathering or chalking of lead-based paint from the residence, the hazardous waste regulations do not apply so long as the lead-contaminated soil is managed onsite or disposed offsite according to applicable solid waste regulations and/or state law mandated by RCRA.



### What are the "best management practices" for handling residential LBP waste?

Although excluded from the hazardous waste regulations, EPA encourages residents and contractors managing LBP waste from households to take common sense measures to minimize the generation of lead dust, limit access to stored LBP wastes including debris, and maintain the integrity of waste packaging material during transfer of LBP waste. In particular, we continue to endorse the basic steps outlined in the 1998 proposals for the proper handling and disposal of LBP waste (63 FR 70242) as the best management practices (BMPs) including:

- Collect paint chips and dust, and dirt and rubble in plastic trash bags for disposal.
- Store larger LBP architectural debris pieces in containers until ready for disposal.
- Consider using a covered mobile dumpster (such as a roll-off container) for storage of LBP debris until the job is done.
- Contact local municipalities or county solid waste offices to determine where and how LBP debris can be disposed.

In addition, contractors working in residential dwellings are subject to either one or both of the following:

- The HUD Guidance for contractors doing publicly-funded rehabilitation/ renovation projects in public housing. (See *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*. U.S. Department of Housing and Urban Development, June 1995.) The HUD *Guidelines* can be accessed via the Internet at: <http://www.hud.gov/office/lead>
- TSCA 402/404 training and certification requirements. (See 40 CFR Part 745; 61 FR 45778, August 29, 1996) and the proposed TSCA onsite management standards (See 40 CFR Part 745, Subpart P; 63 FR 70227 - 70230, Dec. 18, 1998). [EPA expects to issue the final rule next year.]

The above-mentioned BMPs for households are similar to those included in the HUD Guidelines for individuals controlling LBP hazards in housing. HUD requires that contractors using HUD funding adhere to LBP hazard control guidelines. Non-adherence to these guidelines can potentially result in the loss of funding.

### Does this interpretation apply in my State and/or locality?

We encourage contractors and residents to contact their state, local and/or tribal government to determine whether any restrictions apply to the disposal of residential LBP waste. This verification is necessary since, under RCRA, States, local and tribal governments can enforce regulations that are more stringent or broader in scope than the federal requirements. Thus, under such circumstances, LBP waste from households may still be regulated as a hazardous waste as a matter of State regulations.



We are distributing this memorandum to all 56 States and Territories, and Tribal Programs and various trade associations. We encourage States to arrange for implementation of the interpretation discussed in this memo in their States to facilitate residential LBP abatements making residential dwellings lead-safe. We encourage trade associations to inform their memberships about this memo and instruct them about ways to manage residential LBP waste.

**Whom should I contact for more information?**

If you have additional questions concerning the regulatory status of waste generated from lead-based paint activities in residences, please contact Ms. Rajani D. Joglekar of my staff at 703/308-8806 or Mr. Malcolm Woolf of the EPA General Counsel's Office at 202/564-5526.

cc: Key RCRA Contacts, Regions 1 - 10

RCRA Regional Council Contacts, Regions 1 - 10

RCRA Enforcement Council Contacts, Regions 1 - 10

Association of State and Territorial Solid Waste Management Officials  
(ASTSWMO)