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Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Slide 3-1: Module 3 Safe Work Practices

- This is the module title slide.
- Announce the module and move quickly to the next slide.



Module 3

Safe Work Practices

9/30/2000

3-1

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Slide 3-2: Video Segment: Safe Work Practices

- Play the second segment of the video. When the segment is complete, turn off the VCR.
- **Optional discussion questions.** Ask participants to name the three most important safe work practices they saw. Ask participants what it would take to begin doing these practices on their jobs. Try to keep discussion limited to no more than about 5 minutes.
- Begin presenting the material on the next slide.



Video Segment: Safe Work Practices

– Think about the following points as you view the video

- What are the most important safe work practices you see?
- What would it take for you to begin doing these practices in your work?

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Slide 3-3: Module 3 Overview

- This module presents the second of the three major steps to lead safety. Set-up was the first and cleanup, the third, is covered in the next module.
- This module covers the bulleted list of topics on the slide. Review this list with the class participants.
- **Module objective:** The purpose of this module is to teach safe work practices and how to apply them on the job.
- Mention that you will first explain what safe work practices are and then have a discussion where the participants can think about how they can apply safe work practices on the job.



Module 3 Overview

- High risk practices to avoid
- Safe work practices and safe work practices toolkit
- Protect yourself and make a personal protection equipment toolkit
- Control the spread of dust
- Exercise
- Discussion

9/30/2000

3-3

Role of safe work practices

- In addition to proper set-up at the start of a job and cleanup at the end of the job, the third key strategy to minimize the spread of dust is using safe work practices.

Upon completion of this module, you will know

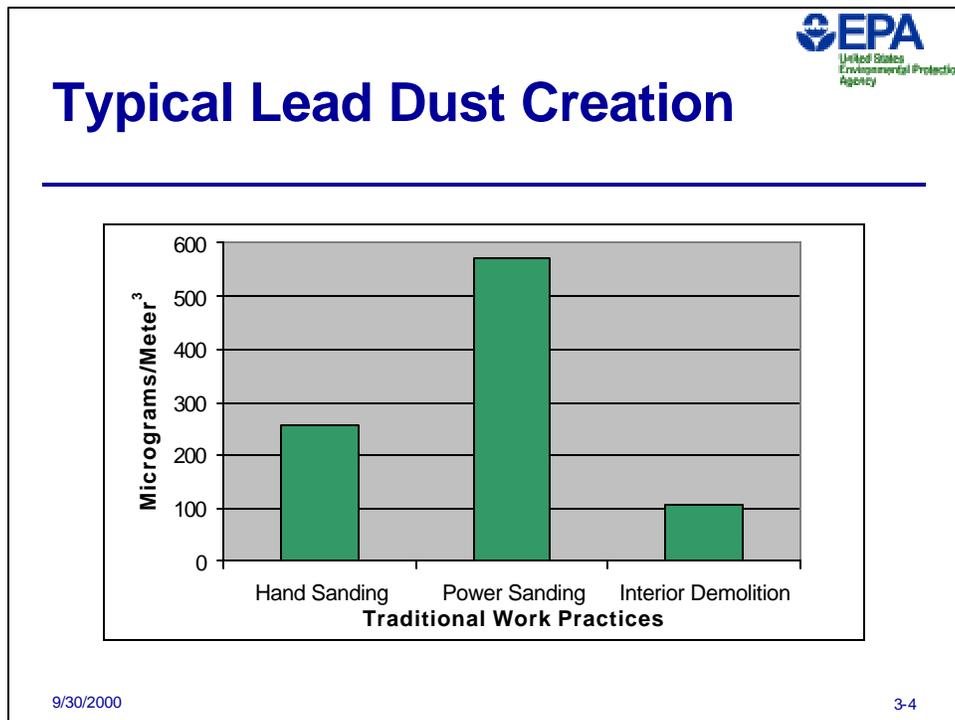
- What high risk work practices to avoid because they create dangerous amounts of dust and paint chips
- What safe work practices to use to reduce and control dust and paint chips
- What tools you will need
- How to apply safe work practices to common renovation, remodeling, and painting jobs

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Slide 3-4: Typical Lead Dust Creation

- This chart illustrates that traditional work practices create large amounts of dust. Point out that the chart shows amounts of dust in the air measured for three common work practices. This chart may suggest different dust levels from those in the exercise about levels of dust created by different practices in Module 1.
- The source of the data for this chart is a study that measured amounts of leaded dust in the air caused by each type of work. The dust was measured in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).
- Although the chart does not indicate this, the amount of dust created by power and hand sanding and demolition is much larger than the amount of airborne leaded dust that requires special worker protection measures (also known as permissible exposure limit or PEL) under OSHA regulations. The OSHA trigger level at which special worker protection measures are required is $50 \mu\text{g}/\text{m}^3$ (50 micrograms per cubic meter). This is a time weighted average over 8 hours.



Traditional work practices create large amounts of dust

- This chart shows amounts of lead dust created by three common construction practices: hand sanding, power sanding, and interior demolition.
- The amount of lead dust for each practice is significantly higher than the level where worker protection, such as respirators and protective clothing, is required by OSHA. This airborne dust is hard to control.
- By using safe work practices, you can control and significantly reduce the amount of dust created on the job. Controlling lead dust at the source of generation is important because dust generated into the air will eventually become settled dust on the ground. Later in this chapter, you will learn safe work practices that can replace these restricted work practices.
- The data used in the chart above are from *Lead Exposure Associated with Renovation and Remodeling Activities: Summary Report*, Prepared by Battelle for the U.S. Environmental Protection Agency, May 1997, EPA 747-R-96-005.

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Slide 3-5: High Risk Practices

- This slide lists the practices that are known to create large amounts of dust and create exposure risks for occupants and workers. These practices are:
 - Open flame burning or torching
 - Heat gun paint removal above 1,100 degrees F
 - Power sanding, grinding, or abrasive blasting without HEPA vacuum attachment (abrasive blasting includes all media: sand, walnuts, etc.)
- Note that the next slide also lists these same practices along with safer alternatives. Do not attempt to discuss safe work practice alternatives to these high risk practices. Focus on identifying the high risk practices and then move on to the next slide.



High Risk Practices



- Open flame burning or torching
- Heat gun above 1,100 degrees Fahrenheit
- Power sanding, grinding, abrasive blasting without HEPA vacuum attachment
- Extensive dry scraping and dry sanding

9/30/2000 3-5

Avoid these traditional work practices

- A key to minimizing the spread of dust and paint chips is to not use certain traditional work practices known to create large amounts of dust and debris.
 - **Open flame burning or torching of paint and using a heat gun above 1,100° F** create fumes that are dangerous for workers to breathe. Small lead particles created by burning and heating also settle on surrounding surfaces and are very hard to clean up.
 - **Power sanding, grinding or abrasive blasting**, even on a small surface, creates a large amount of leaded dust that floats in the air and then settles on surfaces inside and outside the work area.
 - **Extensive dry hand sanding and hand scraping** can also create large amounts of dust and paint chips.

- See pages 9-10 in the *Lead Paint Safety Field Guide* for more information about these practices.

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Slide 3-6: Safe Work Practice Alternatives to High Risk Practices

- This overhead shows the safe work practices that can be used instead of traditional practices that are restricted. All of these practices are for removing paint, one of the most dust-intensive work activities in renovation and repainting.
- When presenting these practices, it is helpful to show the class examples of some of the tools used.
 - Chemical stripping. Chemical strippers can be dangerous-- for example, some caustic strippers cause burns. Methylene chloride is a suspected carcinogen. Citrus-based strippers are safer.
 - Wet sanding. Wet/dry sandpaper, sanding grit, and sanding blocks can be used with light misting.
 - Heat gun on low. Point out that the heat gun should be set to no more than 1,100/F. Note that newer heat guns don't go above 1,100/F.
 - Power tools with HEPA exhaust filter. These tools are attached to a HEPA vacuum by a hose. Later overheads in this module will cover using power tools with HEPA attachments.
- Note: HEPA stands for "high efficiency particulate air" filter. By definition, HEPA filters capture 99.97% of particles that are 0.3 microns or larger in diameter.
- In practice, contractors will want to choose the safe work practices that work best for a particular job.



Safe Work Practice Alternatives to High Risk Practices

| High Risk | Safe |
|--|--|
| <input checked="" type="checkbox"/> Open flame burning or torching | ✓ Wet scraping and sanding, chemical stripping, heat gun below 1,100 degrees F |
| <input checked="" type="checkbox"/> Heat gun on high (1,100+ degrees F) | ✓ Heat gun below 1,100 degrees F |
| <input checked="" type="checkbox"/> Dry scraping and sanding | ✓ Wet scraping and sanding |
| <input checked="" type="checkbox"/> Power sanding, grinding, abrasive blasting without attachment to HEPA vacuum | ✓ Use of power tools with attachment to HEPA vacuum |

9/30/2000 3-6

Alternative safe work practices for each high risk practice

- For both large and small paint removal jobs, there are safe work practice alternatives.
- Some possible alternatives are listed on the slide.
- With experience, you will determine which safe work practices work best for different tasks.

Note: HEPA (high efficiency particulate air) vacuums have HEPA-rated filters that stop 99.97% of particles of 0.3 microns or larger.

Also keep in mind

- Chemical strippers can be dangerous. Some can cause burns. Methylene chloride is suspected to cause cancer but may be appropriate for exterior work. Types of strippers range from citrus-based (safer) to more dangerous caustic strippers. Follow the manufacturer's directions when using any chemical stripper.
- If building components to be stripped can be removed, such as doors, consider having them stripped off-site at a paint stripping facility.
- Half-face negative respirators do not provide sufficient breathing protection when using methylene chloride strippers.
- See pages 9-10 in the *Lead Paint Safety Field Guide* for more information.

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

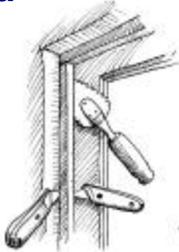
Slide 3-7: More Safe Work Practices

- Beyond using safe work practices for paint removal, there are several other practices that contractors can use to control the spread of dust.
- As you present each of the practices on the overhead, the following props illustrate the practice.
 - Score paint. Hold up utility knife.
 - Minimize pounding, hammering. Hold up pry bar. Vise grips may be useful for pulling out nails. Use large vise grips for large nails.
 - Mist surroundings with water. Hold up mist bottle. A light misting, not soaking, is effective.
 - Mist before drilling and cutting. Worker lightly misting piece of painted trim before cutting with a hand saw.
- Point out that using power tools on wet surfaces can be dangerous-- there is a risk of electric shock and blades can slip. Misting surfaces should be done only with hand tools. You also should not mist around electrical outlets.
- To facilitate electrical safety students should use ground fault circuit interrupters (GFCIs).



More Safe Work Practices

- Mist before drilling and cutting (hand tools only)
- Score paint
- Minimize pounding and hammering -- pry and pull instead
- Mist surroundings



9/30/2000 3-7

Additional safe work practices

- Mist before drilling and cutting to reduce dust creation and keep dust from becoming airborne and spreading beyond the work area.
- Scoring paint before separating components helps prevent paint from chipping when a paint seal is broken.
- Prying and pulling apart components and pulling nails instead of pounding create less dust and fewer paint chips. Vise grips may be useful when pulling nails.
- Frequent misting of surrounding surfaces with water helps keep dust and paint chips from becoming airborne when disturbed by work activity.

- Using power tools on heavily misted surfaces can be dangerous if they are wet. Tool blades can slip and water can cause electric shock. When misting, lightly mist the surface and use hand tools only. If power tools are to be used, they should be attached to a HEPA vacuum.
- EPA encourages contractors to use ground fault circuit interrupters (GFCI's) to help ensure safety while using electrical equipment.

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Slide 3-8: Benefits of Safe Work Practices

- This slide lists the advantages of safe work practices for workers and contractors.
- Review each of the reasons listed on the overhead.
- Emphasize that cleaning is easier if not much dust was generated in the first place.
- Because the EPA requires contractors to give their customers the lead information pamphlet, customers may have questions about how the work will be done. Contractors that rely on safe work practices will have an easier time explaining to their customers exactly how they will protect them from lead dust.
- Note that the pamphlet is in Appendix 2 and information about the regulations and requirements associated with the pamphlet is in Appendix 3. This information will be discussed in greater detail in Module 5: Talking to Clients and Planning Work.



Benefits of Safe Work Practices

- **Protect your family by not bringing dust home with you**
- **Enhance reputation for knowledge and professionalism**
- **Reduce resident exposure to lead**
- **Protect children**
- **Simplify daily and final cleanup**
- **Help protect workers from inhaling dust**

9/30/2000

3-8

Advantages for contractors

- In addition to being safer for residents, safe work practices have advantages for contractors and workers.

By effectively using safe work practices, you can

- Foster your reputation as an informed and professional contractor who recognizes the risks of lead-based paint and takes steps to help ensure resident and worker safety.
- Gain a reputation for leaving the job site cleaner than when you arrived.
- Help your customers feel safe and reduce their anxiety about the risks of remodeling and renovations.
- Have less dust and debris to clean up at the end of the job.
- Reduce risk of taking leaded dust home to your family.

- Because contractors are required to give customers the lead information pamphlet before starting work, those who use safe work practices can better respond to customer concerns raised by the pamphlet. A copy of the pamphlet is provided in Appendix 2. Information about the law requiring that contractors give customers the pamphlet is provided in Appendix 3. We will discuss this information in more detail in Module 5: Talking to Clients and Planning Work.

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Slide 3-9: Safe Work Practices Toolkit: Tools, Equipment, and Supplies

- These tools are necessary for most safe work practices. Later slides will explain how they are used, and give you a chance to show them to training participants.

 EPA
United States
Environmental Protection
Agency

Safe Work Practices Toolkit: Tools, Equipment, and Supplies

- Wet/dry sandpaper, sanding sponge
- Mist bottle, pump sprayer
- Tape (painter's, duct, masking)
- Heavy duty (4-6 mil) plastic sheeting
- Heavy duty garbage bags
- Chemical stripper
- Utility knife
- Heat gun
- Vacuum with HEPA filter



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Safe work practices toolkit tools, equipment, and supplies

- There are some basic low-cost tools that you will need for safe work practices. Most of these tools and supplies are widely available from suppliers and home improvement stores.
- These tools are used to help reduce dust and for cleaning while working to keep dust under control.
- You will need several basic supplies to protect floor and ground surfaces, and bag, wrap, and clean dust as work is performed. If dust and debris are contained in plastic right after they are created, there is less chance that they will be spread beyond the work site.

- More toolkit supplies are listed on the next three pages of this manual.

- HEPA (high efficiency particulate air) filters are able to filter very small particles--to be considered a HEPA filter, it must be able to filter 99.97% of particles of 0.3 microns or larger.

- See pages 75-76 Tool and Supply List in the *Lead Paint Safety Field Guide* for more information.

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Slide 3-10: Safe Work Practices Toolkit: Consider Investing in New Tools

- Because many contractors use power tools on the job, it is often not possible to mist surfaces with water. It is dangerous and can cause electric shock.
- Contractors should consider investing in power tools with HEPA exhaust filter attachments or buying attachments that fit their power tools.
- All of the tools listed here are used to remove paint from large surfaces.
 - Sanders, grinders, planers, and shavers are used on wooden surfaces.
 - A needle gun is used on brick, stone, and metal surfaces.
 - Power washing equipment can be used on many types of surfaces. The runoff from power washing needs to be collected and disposed of properly. (See the modules on set-up and disposal.)
- This investment will pay off in the long run because contractors can continue to work quickly and contain dust better with these attachments and HEPA exhaust filters. It may also be possible to rent these tools.
- Point out that these attachments do not entirely eliminate the dust created by the work, so the other precautions, especially during set-up, are still important.

 EPA
United States
Environmental Protection
Agency

Safe Work Practices Toolkit: Consider Investing in New Tools

– Large jobs may require special tools

- Power sanders, grinders, planers, shavers with HEPA filter vacuum attachment



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HEPA equipment for power tools

- Because wet methods are appropriate and practical only when using hand tools, adapters and HEPA vacuums are necessary for power tools.
- For contractors who frequently remove paint from large surfaces, an investment in attachments to control dust can make the job go quickly and safely.
- These tools use HEPA vacuums and adapters that help contain dust and debris as they are created. A shroud helps to contain the dust and paint chips as they are created. They are carried to a HEPA vacuum by a hose attached to the shroud.
- It may be possible to rent these tools, if you decide to not invest in them.

Power washing

- Power washing can be used if runoff is properly contained and disposed.

Set-up is still important

- Proper set-up and cleanup is still important because HEPA attachments do not eliminate the possibility that work will spread dust. Nonetheless, these attachments will reduce dust levels and thereby shorten cleaning time and lower costs.
- See pages 75-76 Tool and Supply List in the *Lead Paint Safety Field Guide* for more information.

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Slide 3-11: Protect Yourself

- Workers should take precautions to protect themselves from dust hazards on the job.
Note: These are minimal precautions. Employers must follow OSHA regulations which may require more extensive worker protection measures, especially for high dust jobs.
- As you talk about the specific worker protection precautions, refer to the following slide:
 - Worker protection. Personal protection equipment: painter's hat, coveralls, and N100 disposable respirator. N100 is a NIOSH rating for respirators that can be used around lead. N100 means that the respirator has HEPA filtering capability. The disposable N100 respirator is acceptable for small jobs but under some work conditions, OSHA may require another type of respirator.
 - Workers don't need to wear gloves but should wash their hands frequently, especially before eating, smoking, and leaving at the end of the day.
 - Supervisors can buy extra-large size disposable coveralls and re-size them with duct tape. Some coveralls also have hoods to keep dust out of hair. The coveralls can be used over again at the same job site but should be disposed of at the end of the job.
 - An OSHA course may specify that more involved worker protection measures be taken. Some work activities, by their nature, would trigger OSHA requirements.



Protect Yourself

- **Workers should wear**
 - Painter's hat -- helps keep dust out of hair
 - Disposable coveralls
 - Can be reused if not ripped
 - Repair tears with duct tape
 - Store in plastic bag
 - Disposable N100-rated respirator
- **Wash face and hands frequently**
 - Helps to reduce hand-to-mouth ingestion of lead dust
- **OSHA may require more protection**



9/30/2000 3-11

Workers should protect themselves

- **Minimum steps** that workers can take to protect themselves include:
 - **Painter's hats** are an inexpensive way to keep dust and paint chips out of workers' hair. Painter's hats can be easily disposed of at the end of the day or job.
 - **Disposable coveralls** are a good way to keep dust off of workers clothes and reduce the chances for carrying dust to other areas of the residence as workers come and go. The coveralls can be removed when workers leave the work site and stored in a plastic bag overnight. To keep costs down, consider buying extra large size coveralls in bulk and sizing to fit workers with duct tape. Some coveralls have a hood to keep dust out of hair.
 - **Respiratory protection.** Workers should wear respiratory protection, such as an N100 disposable respirator, to prevent them from breathing leaded dust.
 - **Workers should wash** their hands and faces periodically to avoid ingesting leaded dust. It is especially important to wash well before eating, drinking or smoking and to not do any of these in the work site. Some of the dust that settles on the face around the mouth invariably finds its way into the mouth. Workers should also wash at the end of the day before getting in their car or going home. They can take leaded dust home to their families.

- OSHA rules may require employers to take further steps to protect the health of workers on the job.

- See page 17 in the *Lead Paint Safety Field Guide* for more information on worker protection.

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Slide 3-12: Personal Protection Equipment (PPE) Toolkit

- These basic supplies for personal protection are necessary for most safe work practices. Later slides will explain how to use them.
- Disposable towels have many uses on the job-- to clean up small messes and dust, and for workers to use to wipe off dust before leaving the work site, and for washing before eating, drinking, or smoking while at work. (However, eating, drinking, smoking should not be done in the work site.)
- N100 disposable respirators provide an inexpensive protection. These masks are designed for lead work. (Masks rated as N95 are not sufficient.) These masks are made with HEPA-rated material and look somewhat like a dust mask, are inexpensive, and easy to find in home improvement stores. Employers are responsible for following OSHA's regulations for worker safety, especially during high dusty jobs which may require a more protective type of respirator. Like all respirators, the N100 must be used according to OSHA requirements.
- The illustration on the left is of an N100 disposable respirator.


U.S. Environmental Protection Agency

Personal Protection Equipment (PPE) Toolkit

- Disposable hand towels
- Pre-moistened disposable wipes
- Painter's hats
- Gloves
- Coveralls
- Disposable shoe covers
- N100-rated disposable respirators



9/30/2000 3-12

Personal protection equipment

- Disposable hand towels (such as paper towels) and pre-moistened wipes have multiple uses on the job. They can be used to quickly clean surfaces and by workers to wipe dust before leaving the work site and washing before eating, smoking, or drinking.
- “N100” is a NIOSH rating for respirators. Respirators with an N100 (or HEPA) rating are approved for use when working on lead-based paint surfaces. OSHA may require a different type of respirator rated for use around lead, depending on work conditions.
- All of the items on this list are readily available at hardware and home improvement stores. N100 disposable respirators cost approximately \$6-7.
- See pages 75-76 Tool and Supply List in the *Lead Paint Safety Field Guide* for more information.

Additional equipment you should consider

- First Aid kit
- Safety glasses
- Ear protection for when using power tools

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Slide 3-13: Control the Spread of Dust

- This overhead presents some other steps that workers should take to control the spread of dust from the work site.
- Dust can be spread when workers leave the work site to get tools, carry away debris, take a break, leave at the end of the day, etc. The boundaries of the work site depend on the containment area. For example, it may be the area covered by protective sheeting or an entire room.
- Workers can carry dust outside the work area on their shoes and clothes. They should always wipe the tops and bottoms of their shoes and vacuum their clothes before stepping off of the protective sheeting.
- Workers should take extra precautions when cleaning before leaving for home because they can carry dust home to their families on their clothes, in their hair, on their bodies, and in their car. Studies have been conducted that measure the blood lead levels of worker families. These studies confirm that the children of workers do get poisoned by leaded dust carried home from work sites.



Control the Spread of Dust

– When you leave the work site

- Remove shoe coverings
- HEPA vacuum or wipe shoes
- Remove coveralls or HEPA vacuum clothes

– At the end of the day don't take lead home to your family on your clothes or in your car

- HEPA vacuum clothes, shoes
- Change your clothes and dispose or place in plastic bag to wash separately from household laundry
- Wash hands, face
- Shower as soon as you get home

9/30/2000

3-13

Precautions to take when leaving the work site

- When you leave the work site (the area covered by protective sheeting or the room), take precautions to prevent spreading dust and paint chips to other parts of the residence on your clothes and shoes.
- Every time you leave the work site, wipe or vacuum your shoes before you step off of the plastic sheeting. A large tack pad on the floor can help to clean the soles of your shoes. Remove shoe coverings if you are using them.
- At the end of the day, change your clothes and wash yourself to reduce the risk of contaminating your car and taking leaded dust home to your family.
 - Before leaving the worksite-- remove any protective clothing, HEPA vacuum dust from non-protective clothing, and thoroughly wash your hands and face. Throw away disposable clothing or place clothing in a plastic bag to stop dust from getting on other clothes at home..
 - At home-- as soon as you arrive at home, take a shower and be sure to thoroughly wash your hair, especially before playing with children. Wash work clothes separately from regular household laundry to stop lead particles from getting on your other clothes.

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Slide 3-14: Cleaning During the Job

- By nature, remodeling, renovation, and paint jobs create debris which can pile up in the work site. Debris should be removed periodically to keep it from being a source of dust that can be easily spread by work activity and coming and going from the work site. Show the following slides to illustrate examples of debris that generates dust:
 - Paint chips. Paint chips are easily tracked to other parts of the residence. It is important to wipe off shoes before stepping off of protective sheeting.
- Cleaning to keep debris and dust under control can be done in stages but should be done at least daily.



Cleaning During the Job

- **A clean work site reduces the spread of dust and paint chips**
- **Clean as you work**
 - HEPA vacuum horizontal surfaces
 - Remove debris frequently
 - Remove paint chips as they are created
 - As building components are removed, wrap and dispose of them immediately
- **Clean frequently (in stages, at least daily)**

9/30/2000

3-14

Clean the work site frequently

- Cleaning the work site frequently as the job progresses will reduce the spread of dust and paint chips. The cleaning need not be as thorough as the final cleanup. It should, however, keep debris, dust, and paint chips from piling up and spreading beyond the immediate work site.

Cleanup during the job includes

- **Removing debris frequently.** During demolition jobs, seal and dispose of construction debris as it is created.
- **Vacuuming horizontal surfaces frequently.** HEPA vacuum dust and paint chips that settle on surfaces, including protective sheeting. As workers come and go during the work day, this debris is easily spread. Periodic cleaning throughout the work day will help to minimize workers tracking dust.
- **Collect paint chips as they are created.** When removing paint, piles of paint chips can also spread outside the immediate work area as workers come and go from the work site. To keep paint chips from spreading beyond the work site, make sure that they are collected as they are created. Also, periodically vacuum (with HEPA filtered vacuum) or wet sweep and dispose of paint chips.
- **Wrapping and disposing of removed components.** When removing painted components such as windows, trim, and cabinets, wrap them in plastic sheeting and dispose of them in stages. This will prevent the spread of debris and keep residents, especially children, from coming into contact with leaded dust created by work.
- **How often should cleaning during the job take place?** The goal is to keep dust and debris under control, not to maintain a completely spotless site at all times. Every job is different, so clean when it makes sense to without hindering progress. Remove large amounts of dust, paint chips, and debris frequently, at least daily.

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

Exercise

- This exercise is a structured class discussion.
- The exercise materials on the next several pages include instructor notes, suggested answers, and a student version of the exercise.

Minimizing Lead-Based Paint Hazards During Renovation, Remodeling, and Painting

Module 3 Instructor Notes

MODULE 3 EXERCISE

Instructor Notes

This exercise is an instructor-lead discussion where participants determine approaches to work tasks using safe work practices. The discussion should lead to an exchange of ideas among the participants on safe approaches to typical jobs.

Instructor's Notes

This exercise is a class discussion. The instructor's job is to present the directions, encourage discussion, manage the responses, write down the participants' ideas, and contribute to the discussion.

Step 1. Explain the instructions to the class: Give them 5 minutes to read the scenario and the jobs described after.

Step 2. The remaining 20 minutes allotted for the exercise is devoted to the participants' suggestion for safe approaches to each job. Starting with the first job, ask the participants for their ideas on how to do the job. Ask them for specific steps, the tools they will need, and what the job should look like when done.

Step 3. As the participants make their suggestions, jot them down on a clear overhead sheet or flip chart for everyone to see and keep track of what has been covered.

Step 4. After getting a complete description, move onto the next job. You should spend about 5 minutes on each before moving onto the next.

Minimizing Lead-Based Paint Hazards During Renovation and Remodeling

Module 3 Instructor Notes

MODULE 3 EXERCISE

Instructor Notes

Objective: Identify safe work practices for typical renovation and remodeling tasks.

Length: Total time: 25 minutes

Directions: Take 5 minutes to read the background and the jobs below. When you are finished, the instructor will ask you and the other students to contribute approaches to each of the jobs listed below. You may take notes on approaches under each description.

Background

You own a small contracting firm which has been hired by a couple to renovate the interior and exterior of their large Victorian-style home built around 1910. This is a prominent home in the neighborhood (it sits on the corner) and you are looking forward to doing a quality job and getting a good reference. You also like that your truck parked in the driveway with your name on it will make good advertising to the neighbors who drive by. Furthermore, it will keep you and your workers busy for at least three solid weeks.

As the law requires, you give the couple the lead pamphlet *Protect Your Family from Lead in Your Home*. The day before you are to start working, they call and ask you if they have lead-based paint in their home and whether they should be worried about it. (They have a four-year old daughter and plan to remain in the house during the two-week work period). You inform them that, short of having the place tested, you have no way of knowing for sure. To be safe, you tell them that you assume that some layers of paint in the home are lead-based paint.

You get the feeling that they are having second thoughts and might cancel the job. You inform them that there are steps that can be taken to reduce the risk of creating a lead hazard. You also point out that you and two of your steady workers have taken an EPA course on how to do work safely. This seems to reassure them and they tell you to go ahead as planned.

On the Job: Day One

In addition to yourself and your two experienced employees, you have hired a full-time worker to help with the demolition and prep work. You have several specific jobs in mind for this worker which are listed below. Keeping in mind that your clients are concerned about lead-based paint, and that the jobs will create a lot of debris and dust, you want to be sure that the jobs are done right and use safe work practices. You decide that the best course of action is to take the time to explain to the worker, step-by-step, how to do each.

The instructor will ask you and the others in the class to give instructions the new worker. Be clear about what safe work practices you want used, in what order, and the tools that the worker will need. Also tell the worker how you want the work site prepared and what you want it to look like before the next stage of work starts.

Minimizing Lead-Based Paint Hazards During Renovation and Remodeling

Module 3 Instructor Notes

The Jobs

How will you tell the new worker to do each of the following jobs?

1. Remove worn green carpet from vestibule, first floor hallway, and staircase. The carpet is tacked to the floor and its edges are covered with quarter round at all of the walls. The carpet is being removed to expose hardwood flooring which is to be refinished.

Mist and pry loose baseboard covering edges of carpet; dispose of by immediately wrapping in protective sheeting and carry out of the work site. Lightly mist carpet with pump sprayer to keep dust down but not to add weight to the carpet. Pull up edges of the carpet and roll to one side, carpet side up. Wrap in protective sheeting, seal with duct tape, and carry away from the work site for disposal. HEPA vacuum dust on the bare floor before beginning refinishing of the floor. Tools used include pry bars, vice grips, misting bottles and pump sprayer, and HEPA vacuum.

2. Enlarge the door size opening in the wall between the living and dining rooms to make way for an enlarged passageway. There is trim at the base of the walls and trim at the top and sides of the opening. As much of the trim as possible should be saved to be reused on the enlarged opening. The new opening will be as tall as before but wider.

Set up the work area as described in the module on set up: put down protective sheeting, seal doorways, etc. Lightly mist trim surfaces and pry loose with pry bar and hammer. Remove nails by pulling with the hammer claws or vice grips. Remove trim from the work area for paint removal at the exterior of the residence.

When all of the trim has been removed. Lightly mist sections of wall if demolishing with a sledge hammer. Do not mist if using a saw to cut through the wall. Dispose of debris as it is created by wrapping in protective sheeting, sealing with duct tape, and carrying away from the work site.

After demolition, HEPA vacuum the work site, remove protective sheeting, and HEPA vacuum the surfaces covered by protective sheeting.

Minimizing Lead-Based Paint Hazards During Renovation and Remodeling

Module 3 Instructor Notes

3. Remove the old painted wooden cabinets in the kitchen. These built-in cabinets line two walls in the kitchen. The walls will be repainted and new cabinets installed.

Set up the work area as described in the module on set up: put down protective sheeting, seal doorways, etc. Remove cabinet doors and wrap in protective sheeting and carry away from the work area. Mist cabinets and pry loose from walls. Wrap in protective sheeting and carry away from the work site.

After the cabinets are removed, wet scrape and sand any rough areas on the wall in preparation for installation of new cabinets and repainting.

When work is done, HEPA vacuum area, remove protective sheeting, and HEPA vacuum all surfaces.

4. Remove sections of deteriorated siding and peeling paint from the east exterior wall of the house. Water has leaked behind the siding causing large sections to deteriorate. There are two large patches of peeling paint where the siding is still solid. New clapboard siding will be installed later and the entire exterior repainted by a painting contractor.

Set up exterior work area according to set up procedures in module on set up. Remove deteriorated siding by lightly misting and prying loose siding from the structure. Immediately wrap removed siding in protective sheeting and carry away from the work site. Lightly mist, scrape, and sand areas of deteriorated paint. When done, remove protective sheeting and dispose of . NOTE: Safe work practices should also be used when installing new sections of siding.

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Minimizing Lead-Based Paint Hazards During Renovation and Remodeling

Module 3 Instructor Notes

MODULE 3 EXERCISE

Objective: Identify safe work practices for typical renovation and remodeling tasks.

Length: Total time: 25 minutes

Directions: Take 5 minutes to read the background and the jobs below. When you are finished, the instructor will ask you and the other students to contribute approaches to each of the jobs listed below. You may take notes on approaches under each description.

Background

You own a small contracting firm which has been hired by a couple to renovate the interior and exterior of their large Victorian-style home built around 1910. This is a prominent home in the neighborhood (it sits on the corner) and you are looking forward to doing a quality job and getting a good reference. You also like that your truck parked in the driveway with your name on it will make good advertising to the neighbors who drive by. Furthermore, it will keep you and your workers busy for at least three solid weeks.

As the law requires, you give the couple the lead pamphlet *Protect Your Family from Lead in Your Home*. The day before you are to start working, they call and ask you if they have lead-based paint in their home and whether they should be worried about it. (They have a four-year old daughter and plan to remain in the house during the two-week work period). You inform them that, short of having the place tested, you have no way of knowing for sure. To be safe, you tell them that you assume that some layers of paint in the home are lead-based paint.

You get the feeling that they are having second thoughts and might cancel the job. You inform them that there are steps that can be taken to reduce the risk of creating a lead hazard. You also point out that you and two of your steady workers have taken an EPA course on how to do work safely. This seems to reassure them and they tell you to go ahead as planned.

On the Job: Day One

In addition to yourself and your two experienced employees, you have hired a full-time worker to help with the demolition and prep work. You have several specific jobs in mind for this worker which are listed below. Keeping in mind that your clients are concerned about lead-based paint, and that the jobs will create a lot of debris and dust, you want to be sure that the jobs are done right and use safe work practices. You decide that the best course of action is to take the time to explain to the worker, step-by-step, how to do each.

The instructor will ask you and the others in the class to give instructions the new worker. Be clear about what safe work practices you want used, in what order, and the tools that the worker will need. Also tell the worker how you want the work site prepared and what you want it to look like before the next stage of work starts.

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Minimizing Lead-Based Paint Hazards During Renovation and Remodeling

Module 3 Instructor Notes

Slide 3-15: Discussion

- Ask the participants to tell you what the safe work practices are. As you hear them, list them on the blank overhead.
- Possible responses are:
 - Using power tools with HEPA attachments
 - Wet sanding and scraping
 - Cleaning up frequently while the work is in progress
 - Using chemical stripper (without methylene chloride)
 - Scoring before prying
 - Off-site stripping
 - Heat gun on low setting
 - Minimizing pounding



Discussion

- What are the key safe work practices and equipment?