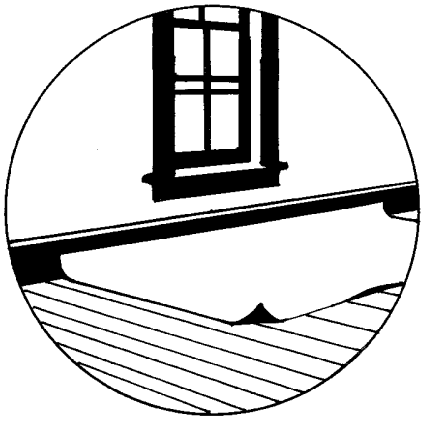
Lead-Based Paint Maintenance Training Program



Work Smart, Work Wet, and Work Clean to Work Lead Safe!

2003 Revised Edition

Student Manual

Originally Prepared by the
National Environmental Training Association
under a grant from the
U.S. Environmental Protection Agency and
U.S. Department of Housing and
Urban Development.

Table of Contents

Attachments:

1. Skills Assessment Checklist For Exercise

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Foreword

Foreword

Scope of Training Program

This training program presents the procedures for minimizing lead dust generation and soil contamination during maintenance activities, as defined by the United States Environmental Protection Agency (EPA) and the United States Department of Housing and Urban Development (HUD). If these procedures are correctly implemented, the risk of lead exposure to maintenance personnel, children, residents, and the families of maintenance personnel can be minimized.

This training program does not train maintenance workers to do lead abatement. In addition, it does not fully discuss the employer's responsibility for worker health and safety. For example, topics that are not covered are:

- Exposure Assessment
- Respiratory Protection
- Medical Surveillance
- Lead-Based Paint Inspection or Risk Assessment
- Any applicable training required by OSHA 29 CFR 1910 and 1926 General Industry Standard and Lead in Construction Standard.

Students receive a manual that includes copies of slides and explanatory text. Students also receive a copy of the planning tool.

Qualifications of the Instructor

The instructor delivering this training program should have first attended this program in its entirety through a separate training provider. The instructor should have previous training experience or attend a train-the instructor course and should have additional lead-related experience and training.

Qualifications of the Maintenance Manager

The person in charge of maintenance jobs involving lead-based paint should have extensive work experience in maintenance and/or construction in addition to this training course. This background is necessary to answer the questions posed in the Planning Tool discussed in Module IV, and to make informed decisions regarding the selection of the proper equipment and procedures for each type of maintenance job.

Acknowledgments

Acknowledgements

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In particular, HUD would like to thank the following people who reviewed this edition and provided valuable feedback.

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Ms. Betty Weiner, Chemical and Management Division, EPA Office of Prevention, Pesticides and Toxic Substances, served as the Project Officer. **Mr. David Jacobs** and **Ms. Carolyn Newton** served as HUD's technical representatives for the project.

Carol L. Kinias, NETA Director of Training, managed and coordinated the project. Oversight management was by NETA's Executive Director **Charles L. Richardson**. The Training Guide was written by **Joan Ryan**, CET, of The Aulson Company, Inc., Middleton, MA; **Carol Kefford Eschelman**, CET, Group CK, Baltimore, MD; and **Carol J. Kinias**. The video was produced by NETA's Director of Media Services, **Pam Chase** and written by **Grant Williams**. **John Zilka**, Applied Systems Inc., Aliquippa, PA, developed the Planning Tool and served as primary technical consultant for the project. Instructional specialist was **Doris Adler**, National Asbestos and Environmental Training Institute, Ocean, NJ. **Gerry Dombek** of Pro Design Graphics, Phoenix, AZ, created the graphics and desktop published the Planning Tool and the Training Guide.

Reviewers for the first edition included the following people:

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Alexander Shaw, National Institute for Building Sciences
Aaron Sussell, National Institute of Occupational Safety and Health
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Introduction

Introduction

About This Course

This course was developed for the U.S. Department of Housing and Urban Development (HUD) and the U.S. Environmental Protection Agency (EPA). It is designed for maintenance supervisors and staff at multifamily rental properties built before 1978 that contain or may contain lead-based paint. This course meets the lead safety training requirements specified in HUD's Lead Safe Housing Rule (24 CFR Part 35).

This course was initially developed based on the recommendations of The Task Force on Lead-Based Paint Hazard Reduction and Financing. This national Task Force included representatives of the real estate, rental housing management, lending, insurance, and contracting industries, as well as advocates for affordable housing and lead poisoning prevention and staff of federal, state and local agencies. The Task Force's goal was to address the causes of childhood lead poisoning in residential housing. As part of its final report, the Task Force specifically mentioned the need for training for maintenance personnel in multifamily housing.

In the Fall of 1995, the National Environmental Training Association (NETA) received a grant from HUD and EPA to prepare a one-day curriculum and training materials on lead-based paint hazards for maintenance personnel. The following resources were developed and released in 1997.

- A Training Guide for those conducting the training,
- An interdependent Lead-Based Paint Maintenance Training Video that presents and reinforces main concepts of the training, and
- A Lead-Based Paint Maintenance Planning Tool for use by maintenance personnel during the training and on the job.

Since that time, HUD has published the Lead Safe Housing Rule (24 CFR Part 35) that requires training for individuals performing maintenance, paint stabilization, interim controls, and standard treatments in Federally-assisted housing. HUD approved this curriculum as one of several that meets the training requirements for the Rule.

In 2002, this curriculum was revised to incorporate advances in our knowledge of and techniques for addressing lead-based paint hazards. This new course also includes new information

on HUD requirements and an optional "hands-on" module for practicing the work techniques discussed in the course.

This curriculum is designed to enable professional training providers, maintenance supervisors, and others who have appropriate skills and experience to train workers at their sites. It helps workers and supervisors understand their role in preventing lead exposure in children, themselves, their co-workers, and residents of the dwellings they maintain. The Training Guide contains factual information on lead-based paint hazards. It also contains suggested methods for course delivery.

Individuals who successfully complete this course may elect to be listed as Lead Safe Workers by the Leadlisting at www.leadlisting.org.

Agenda

Agenda

Lead-Based Paint Maintenance Training Program

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BREAK

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LUNCH

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BREAK

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BREAK

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Course Introduction

Course Introduction

Lead-Based Paint Maintenance Training Program

Work Smart, Work Wet, and Work Clean to Work Lead Safe

This course is about preventing childhood lead exposure from lead-based paint. Approximately 434,000 children under the age of six have levels of lead in their blood that is too high. These children are more likely to have trouble in school, have health problems, and encounter problems with the law later in their lives. Unless something is done to address the lead-based paint in people's homes, this problem is likely to grow.

While lead was banned from household paint in 1978, most homes built before then still have lead-based painted interior and exterior surfaces. The problem is complex, and the responsibility for fixing it is broad. It will be managed and corrected through a combination of efforts from government, business, housing owners and managers, insurance companies, parents, and you who maintain the painted properties.

This course only deals with your part. It teaches you proper procedures for reducing risk from lead during typical maintenance tasks. It assumes you already know how to do your job when you don't run into lead-based paint. It just teaches you what to do differently when you work on lead-based painted surfaces.

The course topics that will be covered are:

COURSE TOPICS

- Lead Exposure
- Lead-Based Paint Hazards
- Lead Safety
- Planning and Performing Lead-Based Paint Maintenance Jobs
- Your Lead Maintenance Program

- ❑ The effects of exposure to lead-based paint in children and adults and how to avoid exposure.
- ❑ Lead-based paint hazards: What they are and where they are commonly found in a dwelling unit.
- ❑ Lead safety.
- ❑ Planning lead-based paint maintenance jobs and using lead safe work practices that don't create and spread lead dust.
- ❑ Integrating what you learn here into your lead maintenance program.

Module I

Module I —Maintenance Work and the Health Effects of Lead Exposure

MODULE I - MAINTENANCE WORK AND THE HEALTH EFFECTS OF LEAD EXPOSURE

Learning Objectives

- Describe the effects of lead exposure in both children and adults.
- Identify two ways lead enters the body in children and adults.
- Describe and explain the importance of the two roles of maintenance personnel in preventing lead exposure.

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Lead Exposure and Maintenance Work

When we complete this module, you should be able to:

- ❑ Describe the effects of lead exposure in children and in adults.
- ❑ Identify two ways lead enters the body in children and in adults.
- ❑ Describe and explain the importance of the two roles of maintenance personnel in preventing lead exposure.

This course will give you information on how to perform these and other tasks to minimize lead exposure to residents and to protect workers and their families.

EFFECTS OF LEAD EXPOSURE

Children

- Learning Disabilities
- Behavior Problems
- Slowed Growth
- Hearing Problems
- Anemia

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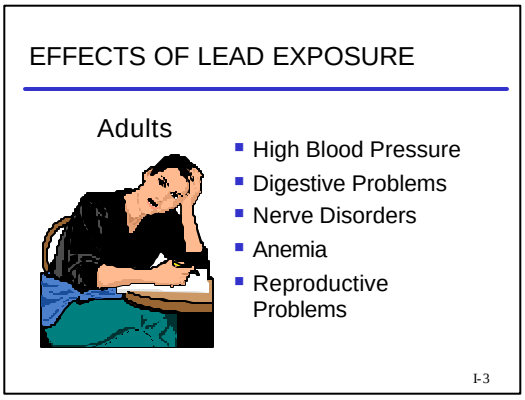
The Health Effects of Lead Exposure

The effects of lead exposure are varied and can be severe and permanent. They affect both children and adults.

Children. Children under the age of six are at the highest risk for lead exposure. This is because a child's body absorbs more lead and their developing brain and nervous system are more susceptible to permanent damage. At very high levels, lead can cause coma, convulsions and death.

The most common effects of lead exposure in children at lower levels are:

- ❑ Learning disabilities, reduced IQ and attention span
- ❑ Behavior problems, such as hyperactivity and delinquency
- ❑ Slowed growth
- ❑ Hearing problems
- ❑ Anemia



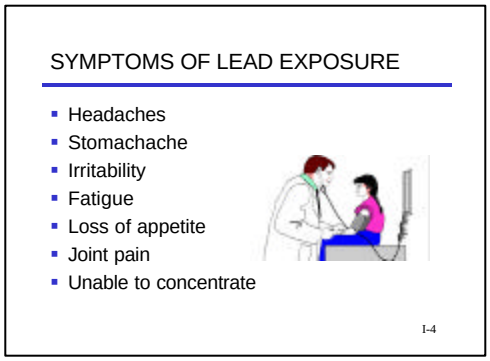
Adults. Lead exposure in adults can cause:

- ❑ High blood pressure
- ❑ Digestive problems
- ❑ Nerve disorders
- ❑ Anemia
- ❑ Reproductive problems

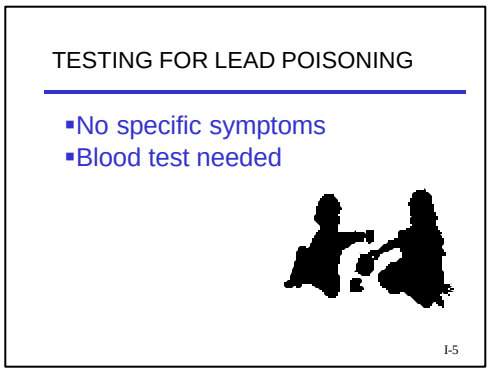
Adult males. Lead exposure can cause the following effects on the male reproductive system:

- ❑ Abnormal sperm
- ❑ Low sperm count
- ❑ Low sex drive
- ❑ Difficulty in having children
- ❑ Impotence

Women of Childbearing Age and Pregnant Women. Women of childbearing age and pregnant women are particularly at risk. When a pregnant woman is exposed to lead, her unborn child may suffer neurological damage, low birth weight, and some women experience miscarriage or stillbirth.



Symptoms. Unfortunately, there are usually no identifiable symptoms of lead exposure. Children with lead exposure may also show vague symptoms of being distractible, hyperactive, or belligerent. Because many of the symptoms of lead exposure are vague or similar to flu symptoms, parents may not get immediate medical attention. This is critical for young children because the longer lead remains in the body of a young child, the higher the risk of permanent damage. It is also possible for a child to have an elevated blood lead level and show no signs of lead exposure at all.



Although there are no specific symptoms that you can definitely say are from lead exposure, people with lead exposure sometimes complain of these common problems:

- ❑ Headache
- ❑ Stomachache
- ❑ Irritability
- ❑ Fatigue
- ❑ Loss of appetite
- ❑ Pain in joints

HOW LEAD ENTERS THE BODY: SOURCES OF LEAD

- Plumbing fixtures and solder
- Imported mini-blinds
- Gasoline
- **Lead-based paint**

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- Inability to concentrate

Remember: Blood testing is the only reliable way to confirm lead exposure.

How Lead Enters the Body

Sources of Lead

Lead is found naturally in the ground. It has also been used to make thousands of consumer products including the following:

- Lead plumbing fixtures and solder
- Imported plastic mini-blinds
- Gasoline

Largest Source

However, the largest single source of lead in our environment is lead-based paint in older homes. Lead-based paint is found on the walls, woodwork, windows and exterior surfaces of homes and apartments built before 1978. (The amount of lead that was permitted in paint for residential use was lowered to a safe level in 1978.) When this paint deteriorates or is damaged, it creates lead-contaminated dust and paint chips. This dust and chips are the primary causes of childhood lead poisoning.

Pathways

Because lead is in our living environment, we are all at some risk of lead exposure. Lead can enter the body by ingestion (swallowing) or inhalation (breathing). Lead exposure most commonly occurs from inhaling or unintentionally ingesting lead dust, not from eating lead paint chips. In most instances, hands won't look dirty or show signs of lead dust.

HOW LEAD GETS INTO THE BODY: PATHWAYS

- It is about the DUST
- Ingesting (Swallowing)
  - Hand-to-Mouth Activity
  - Eating paint chips
- Inhaling (Breathing)
  - Dust from routine maintenance activities
  - Fumes from burning lead-based paint

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Ingestion (Swallowing)

Children:

- Sucking, chewing or mouthing lead-contaminated objects, including thumbs and pacifiers.
- Ingesting lead-based paint chips.
- Putting dirty hands (from playing in contaminated soil or crawling on floors covered with lead dust) in their mouths.
- Playing with toys coated with lead paint or lead dust.
- Playing in lead-contaminated soil (from play areas).
- Using lead painted furniture and woodwork.

- ❑ Being exposed to dust from clothing (worker's family is particularly at risk).

Adults:

- ❑ Putting dirty hands (from working in areas that contain lead dust) in their mouths.
- ❑ Putting cigarettes, coffee cups, food, nails, and toothpicks contaminated from dirty hands in their mouths.
- ❑ Participating in hobbies such as those that use weights, ammunition, fishing weights (split shot), and stained glass solder.
- ❑ Having occupational exposure to lead.

Inhaling (Breathing)

Both children and adults are at risk of inhaling lead dust. The following increase the risk of inhaling lead dust:

- ❑ Routine maintenance activities such as scraping, sanding, and cleanup. (Lead dust generated by these activities can be inhaled, remain in the residence, and get on clothing.)
- ❑ Burning of lead-based paint.
- ❑ Dust created through industrial activity.

YOUR ROLE IN PREVENTION

- As maintenance workers, we can:
  - PROTECT by preventing or eliminating lead dust
  - INFORM by telling residents about your lead-safe work practices

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Roles of Maintenance Personnel

Roles Maintenance Personnel Play in Preventing Lead Exposure

As a maintenance worker, you play two roles in presenting lead exposure: protecting and informing.

Protecting

The most important ways maintenance workers can help to prevent or eliminate lead exposure is by repairing lead-based paint and by not creating lead hazards while doing repairs.

- ❑ By performing tasks according to the procedures in the **Lead-Based Paint Maintenance Planning Tool**, you are the first level of defense. By practicing proper procedures for managing lead-based paint, you can protect the residents of the dwelling unit, yourself, your co-workers, and your own family.
- ❑ By steering clear of activities that are not appropriate maintenance tasks — such as "abatement" activities, you will also help protect yourself and residents. We'll talk more about what constitutes an "abatement" activity later.

Informing

As maintenance workers, you also help to inform residents each time you answer residents' questions about the work you are doing. Residents are often curious about the maintenance job. Even more questions may arise as they see you using different equipment and procedures for work they have seen done differently before.

It is important for you to explain that you are using procedures that reduce exposure to lead to protect yourself and the residents. However, it is not your job to provide technical, medical, legal or any other advice.

Why Maintenance Personnel are Critical in Preventing Lead Exposure

You play a major role in protecting children from lead exposure in this country. Keep in mind that lead-based paint is usually a problem only when:

- ❑ The paint or the substrate (the wall surface underneath the paint) deteriorates, or
- ❑ When you break through or otherwise disturb the paint to do other jobs.

Maintenance personnel who perform their everyday tasks using lead safe work practices minimize the generation and dispersal of lead dust and debris. This decreases the chance of lead exposure to the children living in the units, their own children, themselves, and their co-workers.

The maintenance person plays two roles in preventing lead exposure:

- ❑ Protecting residents, yourself, and your family from lead exposure, and
- ❑ Informing residents at the time of the maintenance activity.

This is accomplished by:

- ❑ Fixing deteriorated paint safely,
- ❑ By not creating new lead hazards while performing other tasks, and
- ❑ By informing residents of the reasons for the safety precautions that are being followed.

Module II

Module II—Lead-Based Paint Hazards

MODULE II-LEAD-BASED PAINT HAZARDS

Learning Objectives

- Explain where lead-based paint may be found.
- Define "lead-based paint hazard."
- Locate and identify the various lead-based paint hazards commonly found in a dwelling unit.
- List the two approaches to addressing lead-based paint hazards.
- Describe ways to maintain lead-based paint so that it does not become a hazard.

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WHERE YOU FIND LEAD-BASED PAINT

- Most houses built before 1978
- Interior and exterior surfaces

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RECOGNIZING LEAD-BASED PAINT HAZARDS

- Lead contaminated dust
- Deteriorated (chipping and peeling) lead-based paint
- Friction surfaces
- Impact surfaces
- Chewable surfaces
- Lead contaminated soil

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When we complete this module, you should be able to:

- ❑ Explain where lead-based paint may be found.
- ❑ Define "lead-based paint hazard."
- ❑ Locate and identify the various lead-based paint hazards commonly found in a dwelling unit.
- ❑ List the two approaches to addressing lead-based paint hazards.
- ❑ Describe ways to maintain lead-based paint so that it does not become a hazard.

Where You Find Lead-Based Paint

Most homes built before 1978 are likely to contain some lead-based paint. **This is key. Remember this date.** Lead-based paint was used on the exterior of homes, especially on porches, windows and doors because it withstood weather changes. It was used in interiors on woodwork, walls, floors, windows, doors, and stairs because it stood up to wear and tear. The most likely interior places are trim areas and all surfaces in kitchens and bathrooms. The older the home, the more lead there is likely to be. **Remember that not all lead-based paint is a hazard. Let's look at what makes it a hazard.**

Recognizing Lead-Based Paint Hazards

A lead-based paint hazard is a condition in which exposure to lead from the following sources could have an adverse affect on human health:

- ❑ Lead-contaminated dust—the worst culprit
- ❑ Deteriorated (chipping and peeling) paint
- ❑ Friction surfaces like windows—the movement wears away the paint and grinds it to dust on sills and troughs
- ❑ Impact surfaces like doors, walls that get hit and banged, corners that stick out
- ❑ Surfaces children can chew, like window sills and railings
- ❑ Lead-contaminated bare soil—from past lead in gasoline and deteriorated exterior paint where children play

Lead-based paint becomes a health hazard when it chips or peels or when it turns into dust or contaminates soil through inadequate maintenance work practices. Unsafe work habits such as dry sanding or scraping create dust that can be tracked throughout a home. If left behind after the work is finished, this dust could be a hazard to residents. **If lead-based paint is maintained and monitored, and not disturbed, it is not a hazard.**

Where are Lead-Based Paint Hazards Most Likely to be Found and What do They Look Like?

Addressing Lead-Based Paint Hazards

When people think about addressing lead-based paint, they usually think about abatement. But abatement is a specialized set of treatments that permanently removes or encloses the lead-based paint and that must be done by a certified professional.

There are many other simpler measures that we can take to protect children and workers from lead-based paint. As maintenance personnel, you present the first line of defense against lead-poisoning. By maintaining painted surfaces and by working safely on surfaces that you know or presume have lead-based paint, you can minimize the amount of lead-contaminated dust that is created and left in a home. This course teaches you how to do that.

ADDRESSING LEAD-BASED PAINT HAZARDS: ABATEMENT

- Abatement is:
  - Highly controlled
  - Done by a certified contractor
  - Not maintenance work
- This course does not teach you abatement methods.

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Abatement of Lead-Based Paint Hazards

Abatement projects are specifically designed to remove lead-based paint using highly controlled procedures. The intent of abatement is to permanently remove or control lead-based paint and lead-based paint hazards. (Note that “permanent” is defined as lasting at least 20 years.) Only certified abatement personnel can perform abatement. This training does <u>not</u> train you to perform the abatement of lead-based paint hazards. Persons who do lead abatement need to attend a separate course, pass a test, and become certified.

ADDRESSING LBP HAZARDS: MAINTENANCE

- Maintenance avoids lead hazards
- Maintenance includes:
  - Repairing painted surfaces
  - Repairing rotted or defective plaster or wood
  - Revolving or controlling dust
  - Covering or isolating contaminated soil
  - Repairing damage to walls
  - Rehanging doors

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Maintaining Lead-Based Paint

In units where lead-based paint remains, we need to **maintain the paint to avoid lead hazards**.

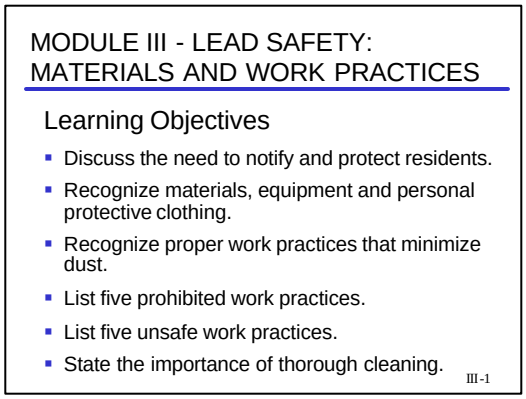
Maintaining lead-based paint may involve:

- ❑ Repairing painted surfaces (keeping the paint intact)
- ❑ Repairing rotted or defective plaster and wood that will cause the paint to blister, chip and peel
- ❑ Removing and controlling dust
- ❑ Covering bare soil with sod, grass, or other temporary ground cover or limiting access in such ways as planting bushes
- ❑ Repairing damage to walls from impacts by doorknobs and other moving building components
- ❑ Rehanging a door to eliminate friction points and dust generation

In this course, you will learn to work proactively to maintain lead-based paint intact and to use lead safe work practices when working on painted surfaces. You will learn to **"work smart, work wet, and work clean"** to minimize lead dust during your maintenance jobs that involve lead-based paint. These good work practices will control the risk of lead exposure to yourselves, your co-workers, your families, and to residents living in the units you maintain. In other words, you will learn to **work safe**.

Module III

Module III—Lead Safety—Materials and Work Practices

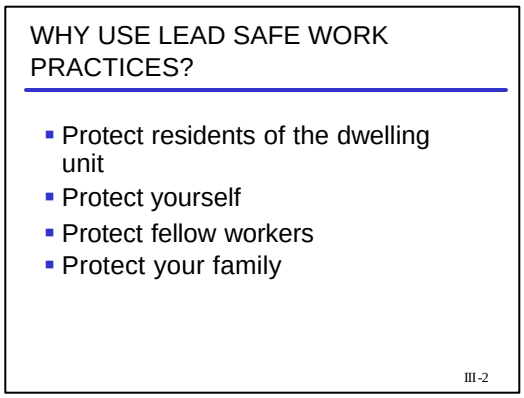


When we finish Module III, you will be able to:

- ❑ Discuss the need to notify and protect residents.
- ❑ Recognize materials, equipment, and personal protective clothing used on lead-based paint maintenance jobs.
- ❑ Recognize proper work practices that minimize dust.
- ❑ List five prohibited work practices.
- ❑ List five unsafe work practices.
- ❑ State the importance of thorough cleaning of the work area, proper personal hygiene, and personal decontamination.

Why Use Lead Safe Work Practices?

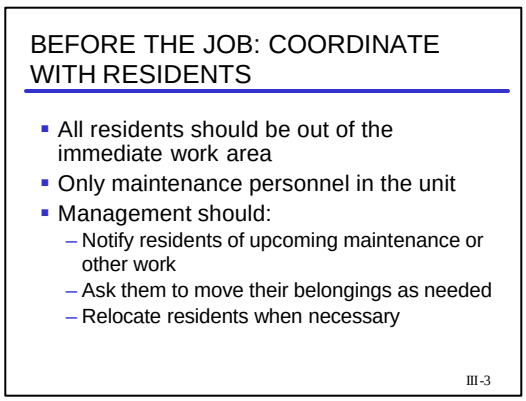
This module will introduce you to the additional protective clothing and specific equipment, materials, and work practices to be used when you do lead-based paint maintenance jobs.



These extra steps are needed to:

- ❑ Protect the residents of the dwelling unit.
- ❑ Protect yourself.
- ❑ Protect your fellow workers.
- ❑ Protect your family.

The five short videos that accompany this training highlight correct and incorrect work practices dealing with lead-based paint. First, we'll meet Drake. Look for practices that may expose him and the residents to lead-based paint hazards, especially dust.



Before the Job

There are a number of steps to take before the job to make it safe for residents and workers. There include coordinating with the residents, containing the area, and bringing proper materials, equipment, and clothing.

Coordinate with Residents

It is very important to have the residents out of the immediate work area. If allowed in the area, they can be exposed to lead

dust and can track lead dust from the work area to other parts of the dwelling unit.

Only you who are doing the maintenance should be in the work area. The work area is that part of the dwelling unit in which you cover the floor area with the heavy duty poly film. Residents' belongings should also be covered with poly film. Residents should not enter the work area until after the area has been properly cleaned.

For high risk work, residents, especially children and pregnant women, must be out of the dwelling unit until after the work area has been thoroughly cleaned.

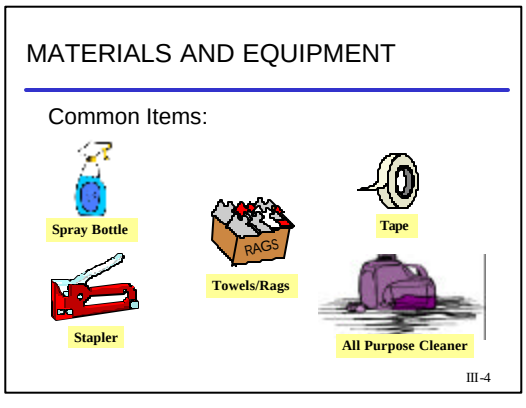
Management is responsible for coordinating with residents to protect them from lead exposure as a result of maintenance work. Management should notify residents when they must refrain from entering the unit and to move their belongings. Management is also responsible for relocating residents when necessary.

Preparation to Minimize Lead Dust

Now meet Tony and Freddie and look for clues on preparing for a lead-based paint maintenance job. Remember: preparation is the key to minimizing lead dust.

When preparing for a lead-based paint job, be sure to take the following steps:

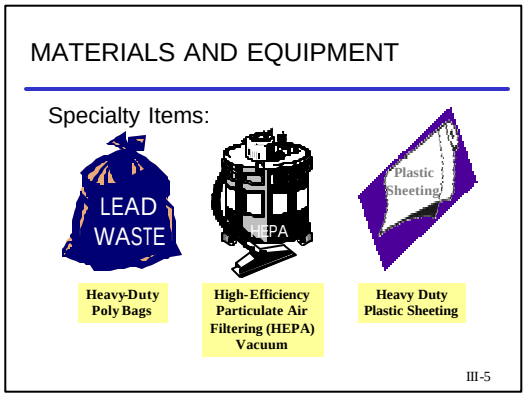
- ❑ Contain the area
- ❑ Cover area with poly film
- ❑ Move or cover residents' belongings
- ❑ Bring appropriate materials and equipment



Materials and Equipment That Help Keep Maintenance Jobs Safe

In addition to the typical tools and equipment used by maintenance personnel, some familiar items used to do lead-based paint maintenance jobs safely are:

- ❑ **Spray bottle** with water to mist down work area (water keeps the dust down),
- ❑ **Rags** for cleanup,
- ❑ **Cleaner** (all purpose or one made specifically for lead, which picks up lead dust better than plain water), and
- ❑ **Tape** and **staples** to fasten poly film.



These items can be found around the maintenance shop and even the home. There are special uses for all of those that we will discuss in detail later. Some items are specific and critical to lead-based paint maintenance. We will introduce them now, and you will learn all about them throughout the day.

Heavy duty poly film is polyethylene (or equivalent) thick plastic that is more resistant to tears and punctures than many ordinary plastic drop cloths. It is used to isolate the work area and contain the lead dust and debris. It is also better than a drop cloth because it is disposable and won't drag lead dust to the next dwelling.

Heavy duty poly bags are much thicker than household trash bags (which are usually only one mil) and more resistant to tears and punctures. They are used to dispose of contaminated materials and debris.

HEPA-filtered vacuum is a vacuum fitted with a special filter called a HEPA filter. HEPA stands for high efficiency particulate air. This filter is capable of trapping 99.96% of dust, including lead dust, that is not visible to the human eye. Most conventional household vacuums and shop vacuums do not have this filter. Thus, fine dust that is collected may escape through the exhaust of conventional vacuums. **Fine dust is more dangerous because it can more easily enter the body and be absorbed**. All manufacturers' instructions for the HEPA-filtered vacuum must be followed, including instructions for assembly, use, cleaning, maintenance, and bag replacement in order for the vacuum to work properly.

The HEPA-filtered vacuum is required for large, high risk jobs and is helpful for smaller jobs.

HEPA-filtered vacuums come in different sizes, and with dry or wet capabilities. A small one that is easy to carry from one job to the next is available for under $500 from maintenance supply stores.

What Protective Clothing Is Used During Maintenance Jobs?

The protective clothing and equipment needed during lead-based paint maintenance jobs depends upon the size and extent of the project and the amount of dust. You need to know what to use to protect yourself from lead exposure. You may use any or all of these:

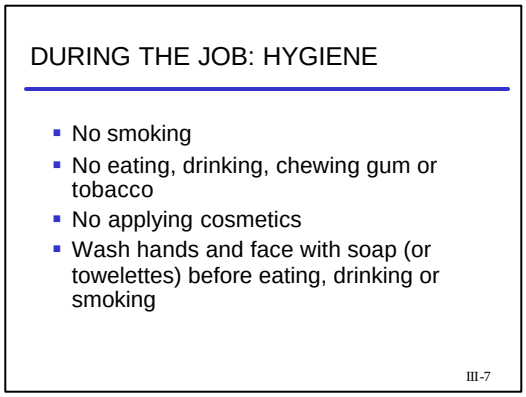
- ❑ Eye protection
- ❑ Coveralls (disposable or recyclable)
- ❑ Disposable cotton gloves
- ❑ Latex/rubber gloves (when using detergent)
- ❑ Respirator with HEPA filter (N-100 or higher)

Notice the arrow for ⇧ high risk in the planning tool. High risk work requires the use of disposable or recyclable coveralls, gloves, and respiratory protection. You may use as little as none, or as much as all of these, depending upon the risk involved in the particular maintenance or repair project.

The OSHA lead standard requires workers to wear respirators if lead in the air exceeds the permissible exposure limit (PEL). The PEL for lead in the air is 50 micrograms per cubic meter of air for an eight-hour time weighted average.

Protective clothing is designed to protect the person who is performing the work and is closest to the lead dust. However, protective clothing does not protect the residents. And while proper use and disposal of protective clothing will protect you during the job, not taking contaminated clothing home will keep you form bringing the lead home to your family.

Hygiene and Work Practices—During the Job



Here they are again (Tony and Freddie). How are they doing on protecting themselves and residents during the job? Also look for prohibited work practices.

Personal Hygiene

You can minimize your risk of lead exposure by following proper personal hygiene practices during and after performing the job. Personal hygiene during maintenance work involving lead-based paint includes the following:

- ❑ NO smoking
- ❑ NO eating or drinking, chewing gum, or tobacco
- ❑ NO applying cosmetics

Performing these activities with lead contaminated hands puts you at risk of lead exposure.

For all jobs, before eating, drinking, or smoking, and at the very end of the job, wash your face and hands thoroughly with soap and water or a towelette. This ensures that any lead dust that might be on your skin has been removed. For very small jobs, you may use a disposable baby wipe.

LEAD SAFE WORK PRACTICES: AN INTRODUCTION

- ☑ **Work Smart**
- ☑ **Work Wet**
- ☑ **Work Clean**

} **Work Safe**

III-8

Lead Safe Work Practices—An Introduction

This course will teach you specific work practices to follow to protect yourself, residents, and your own family when performing jobs that involve lead-based paint hazards. By using these lead safe work practices, you will:

- ❑ Protect residents and their belongings,
- ❑ Minimize lead dust, and
- ❑ Do your best to protect your own, your fellow workers' and your family's safety.

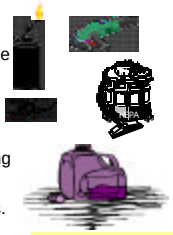
General Principles. After lunch we will get into specifics, but for now, remember this phrase: **Work smart**, **work wet**, and **work clean** to work safe. You will protect residents by keeping them away from lead dust during and after your job.

Prohibited Practices. In contrast to the work practices recommended in this course, there are certain activities that are **prohibited** when working in areas that might contain lead-based paint. They create dangerous levels of lead dust or fumes. **Never remove unknown, or suspected, lead-based paint by these methods**:

- ❑ Open flame burning or torching (including propane-fueled heat grids) and heat guns operating above 1,100ºF release toxic fumes,
- ❑ Machine sanding or grinding without HEPA local vacuum exhaust tool creates lead dust,
- ❑ Abrasive blasting, or sandblasting without HEPA local vacuum exhaust tool creates lead dust,
- ❑ Using methylene chloride paint removal products releases carcinogenic fumes, and
- ❑ Extensive dry sanding or scraping creates lead dust (dry scraping is permitted near electrical circuits).

DURING THE JOB: PROHIBITED PRACTICES

- No open flame burning, heat gun hotter than 1,100º f, or welding/flame cutting
- No mechanical grinding/sanding without HEPA attachments
- No abrasive blasting, or sandblasting
- No methylene chloride based strippers in poorly ventilated spaces.
- No extensive dry sanding or scraping above de minimus levels



Methylene Chloride Stripper

III-9

End of the Job—Cleanup at the Jobsite

Let's check in on Drake as he cleans up after installing the new thermostat.

CLEAN-UP: GOOD PRACTICES

DO'S	DON'T'S
▪ Use a HEPA-Filtered vacuum	▪ No vacuuming with household vacuum
▪ Wash in buckets	▪ No washing in resident's sink
▪ Dispose of waste water in toilet or offsite	▪ No disposal in resident's sink, bathtub, or yard
▪ Keep water away from electrical outlets/fixtures	▪ No water near electric outlets/fixtures
▪ Dispose of waste at appropriate facilities	▪ No disposal of waste in resident trash

III-10

Safe Cleanup

Cleaning is the last line of defense against lead contamination. Lead dust is very fine and may not be visible to the naked eye. Thorough cleaning is critical.

Safe Cleaning. Wet wiping the area with an all purpose cleaner or a cleaner made specifically for lead is a very important step in minimizing dust. At a very minimum, the area where you have been working must be wet wiped with a cleaner and then with rinse water. On a very small job, you may want to use two disposable baby wipes, one to wash and one to rinse. All of the cleaning materials (rags, sponges, or mops) must be put into a heavy duty poly bag for disposal or rinsed thoroughly so lead dust will not be spread to the next unit. They should not be reused. The areas should be vacuumed with a HEPA-filtered vacuum.

Unsafe Clean-Up Practices. When you are finished, close, seal, and label the poly bags. Remove all materials, tools, and bagged debris from the work area and residence. Properly dispose of all bagged debris. Wet wipe all tools.

An easy jingle to remember good cleanup practices is "wet, wipe, and toss." You will learn more about this later.

The following work practices are unsafe and can increase resident's risk of lead exposure long after the job is finished:

- ❑ Using a resident's shop vacuum or household vacuum
- ❑ Disposing water in resident's sink/bathtub or yard area
- ❑ Washing in the resident's sink or lavatory
- ❑ Using water near electrical outlets/fixtures
- ❑ Disposing waste in the residential dwelling or community dumpster

After the Job—Decontamination

AFTER THE JOB: DECONTAMINATION

- Wash hands and face with soap and water
- Remove dust from clothes with HEPA-filtered vacuum
- Shower immediately after leaving job, before leaving the facility, or upon arriving home

III-11

In the next video clip, Tony and Freddie create serious lead hazards as they leave their job.

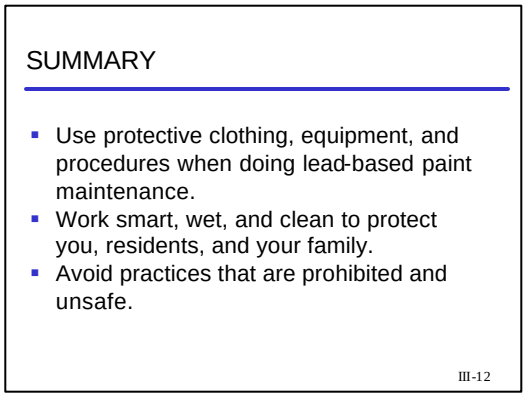
The extent of decontamination after the job depends upon the amount of dust generated during the job. At a minimum, you will ensure that you don't ingest dust or carry dust to the next job or home. So, wash off your face and hands with soap and water.

If you don't shower immediately after the job, then shower either before leaving the facility or immediately upon arriving home.

Any dust that has gotten on your clothes can be removed using a HEPA-filtered vacuum. If disposable or recyclable coveralls are not worn, change clothes prior to leaving the work site. You don't want to carry dust home or into your car.

Summary

Point #1: Lead-based paint maintenance jobs require specific protective clothing, equipment, and procedures to protect you, residents in your building, and your family from lead exposure.



Point #2: Procedures have been developed to protect you, residents in your building, and your family when you do lead-based paint maintenance jobs. There is an easy way to remember the work practices for performing the actual activity and the cleanup after the activity:

- **Work Smart**—Be alert; prepare for the job; and take precautions for yourself and residents. Pay attention to all activities occurring in and out of the work area. Do not use prohibited and unsafe work practices.
- **Work Wet**—To work wet means to keep the surface damp, so that sanding, scraping, planning, etc., do not generate and spread dust. Use a spray mister to lightly mist the surface just before you work on it.
- **Work Clean**—Minimize spreading lead dust and debris by containing the area and by cleaning as you go and at the end of the job.

Following these work practices will help minimize the amount of lead dust created, which in turn minimizes the risk of tracking the lead dust to other parts of the dwelling unit.

Cleaning the work area after the activity is completed is also important. If the cleanup is incomplete or inadequate, any remaining lead dust or debris puts the residents at risk of lead exposure long after the maintenance person has completed the activity and has moved on to the next assignment. On some jobs in Federally assisted housing, a clearance examination (a dust test) is required and must be passed for the job to be complete. You will learn more about this in "Module VII: Clearance: Making Sure the Job is Complete".

Point #3: Avoid practices that are prohibited or unsafe.

Please learn these 2 lists! If you only learn one thing today, be sure you **avoid these prohibited and unsafe work practices**.

Prohibited Work Practices

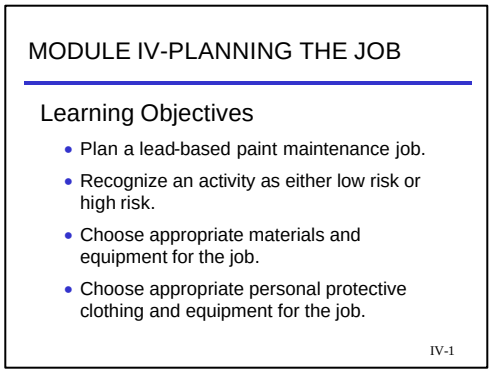
- ❑ Open flame burning or torching (including propane-fueled heat grids) and heat guns operating above 1,100ºF release toxic fumes
- ❑ Machine sanding or grinding without HEPA local vacuum exhaust tool creates lead dust
- ❑ Abrasive blasting, or sandblasting without HEPA local vacuum exhaust tool creates lead dust
- ❑ Using methylene chloride paint removal products releases cancer causing fumes, and
- ❑ Extensive dry sanding or scraping creates lead dust.

Unsafe Work Practices

- ❑ NO vacuuming with household vacuum
- ❑ NO misting of water near electric outlets/fixtures
- ❑ NO uncontained high-pressure washing
- ❑ NO washing in resident sink or lavatory
- ❑ NO disposing water in resident sinks/bathtubs or yard areas
- ❑ NO disposing waste in resident trash

Module IV

Module IV—Planning Lead-Based Paint Maintenance Jobs



We are now going to learn the game plan. Vince Lombardi is credited with creating the concept of the game plan, and we borrow the idea from him and apply it to how we deal with lead-based paint.

When we finish this module, you should be able to:

- ❑ Plan a lead-based paint maintenance job.
- ❑ Recognize an activity as either low risk or high risk.
- ❑ Choose appropriate materials and equipment for the job.
- ❑ Choose appropriate personal protective clothing and equipment for the job.

The Lead-Based Paint Maintenance Planning Tool

This **Planning Tool** is designed to help you learn the safe way to do jobs that involve lead-based paint. The **Planning Tool** is a set of instructions for minimizing the generation of lead dust and potential lead exposure when performing a variety of maintenance jobs. It is to be used in the field by all maintenance personnel.

When used properly, the **Planning Tool** can be as important as the other tools you carry in your toolbox. It will assist you in performing lead-based paint maintenance jobs effectively and safely. Its use can prevent loss of time decontaminating a dwelling unit due to improper procedures. Using it can also protect your health and help prevent lead poisoning of children residing in the dwelling unit or your own children.

The lead job checklist, the series of guide cards, and the quality assurance checklist take you through the job from start to finish. The cards are used prior to starting a job, during the evaluation and planning stages, and all the way through to the end of the job. The appropriate cards/checklists can then serve as a job record when they are filled out for each job as it is completed.

The **Planning Tool** contains the following ten cards, each of which is discussed below:

- **Lead Job Checklist**—Six questions to help identify lead activities, determine risk, and decide how the job should be done.
- **Materials Card**—disposables used for lead jobs.
- **Equipment Card**—list of tools and equipment needed for lead jobs.
- **Personal Protection Card**—clothing and equipment used for lead jobs.
- **Work Practices Card**—how to work smart, wet, and clean.
- **Prohibited and Unsafe Work Practices Cards**—what not to do.
- **Cleanup Cards**—step-by-step procedures for low risk and high risk jobs.
- **Carpet Removal Card**—steps for safe carpet removal.
- **Decontamination Card**—decontamination practices.
- **Quality Assurance**—questions to ensure the job has been done right.

This afternoon we will learn to use this **Planning Tool** and follow proper procedures—work safe, work wet, and work clean. To help us do that, we will watch and discuss a series of videos. The narrator in these films is great. He teaches serious material, but keeps it light.

Two guys, Ben and Scott, are doing a huge high risk job repairing peeling paint in a whole room. Kirby, in contrast, does a low risk job patching a hole in an alcove over a bookcase. In the video, watch for:

- The decisions made on whether the job involves lead-based paint,
- The decisions made on whether the job is high or low risk,
- The differences in personal protection used by Ben and Scott doing high risk work and Kirby doing low risk work, and
- The different materials and equipment used for high and low risk jobs.

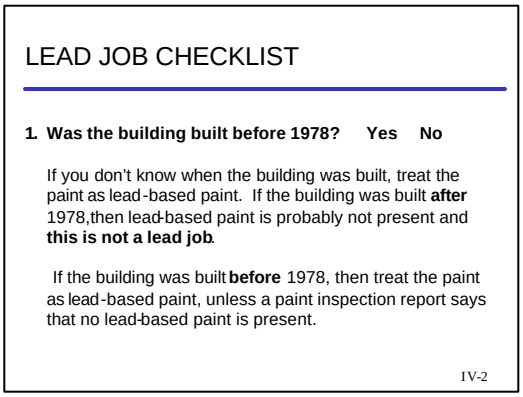
There are six questions to ask prior to starting any maintenance job. They are normally answered by the supervisor or a worker who has been through this training, and who has the authority to answer the questions and assign

personnel to do the task. Every worker should be familiar with the contents and the intent of the checklist.

Lead Job Checklist

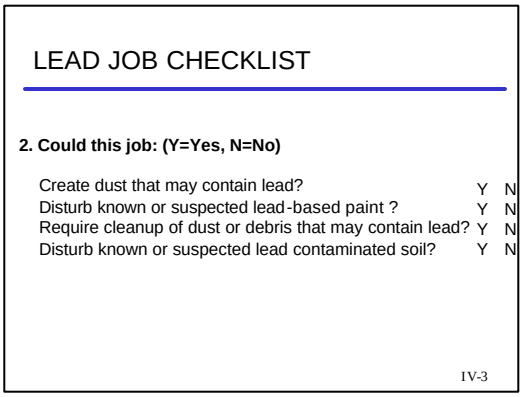
Start with the first page of your Maintenance Planning Tool. At the top of the page is a place to fill in the resident's name, phone number, address or apartment number, and the job number. This information will help you to inform the resident, and resident manager, and to coordinate this checklist with the general work order. In fact, the checklist should be attached to the work order. If it becomes separated, this identifying information will help you keep the record straight. Following completion of the work, the checklist becomes a permanent record of the lead safe precautions taken during the job.

Now, we are going to walk through each of the six questions in the checklist, in order.



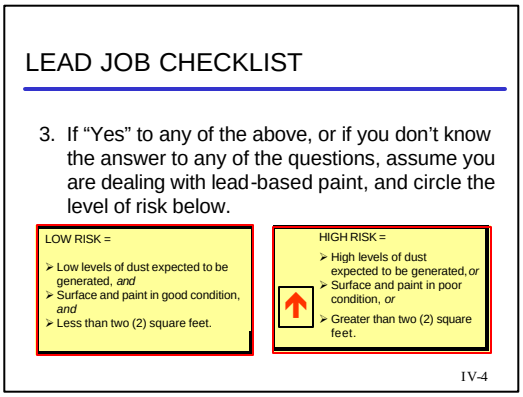
1. Was the building built before 1978?

If you don't know when the building was built, treat any paint as lead-based paint. If the building was built on or after 1978, then lead-based paint is probably not present, and this is not a lead job.



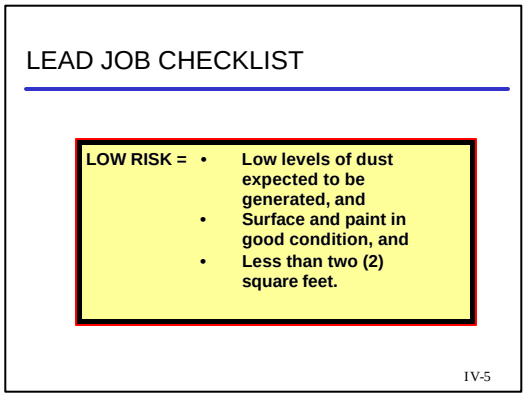
2. Could this job:

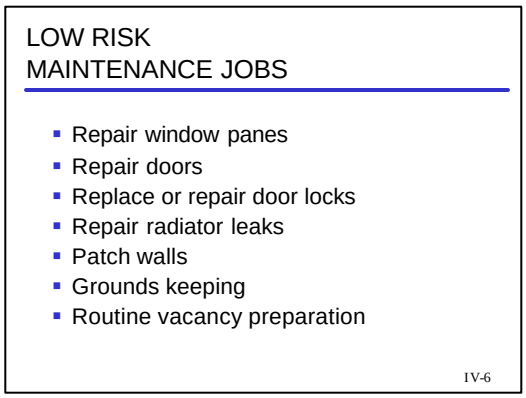
- ❑ Create dust that may contain lead?
- ❑ Disturb known or suspected lead-based paint?
- ❑ Require cleanup of dust or debris that may contain lead?
- ❑ Disturb known or suspected lead contaminated soil?

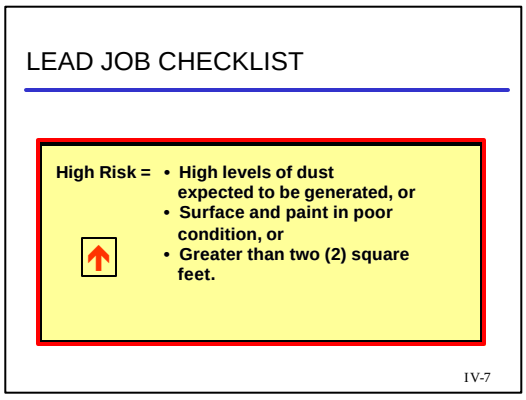


3. If "Yes" to any of the above, or if you don't know the answer to any of the questions, assume you are dealing with lead-based paint, and circle the level of risk below.

Remember that earlier, in the first module, we discussed some of the hazards associated with lead exposure. It's now important to understand the levels of risk associated with various maintenance jobs that you may perform on lead-based painted surfaces. In general, the level of risk can vary greatly and is based upon how much lead dust is generated.







The risk associated with lead-based paint maintenance activities is generally referred to as low risk or high risk. The *HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*, 1995, give more detailed guidance for low risk and for high risk.

The red icons in the Planning Tool indicate practices and tools that should be followed for high risk jobs.

Low Risk and High Risk Lead-Based Paint Maintenance Jobs

To understand Question #3, we need to understand the conditions that make a low risk or a high risk job.

The key to determining risk is primarily the amount of dust and debris that will be created.

A "low risk" job is one in which:

- ❑ Minimal lead dust will be generated, and
- ❑ The coating (paint, varnish) and substrate (wood, plaster, drywall, metal, masonry) are in good condition, and
- ❑ Less than two square feet of surface area is involved.

Examples of typical low risk maintenance jobs include the following:

- ❑ Repairing window panes
- ❑ Repairing doors
- ❑ Replacing or repairing door locks
- ❑ Repairing radiator leaks
- ❑ Patching walls with small holes
- ❑ Grounds keeping
- ❑ Routine preparation for re-occupancy of vacant units if it doesn't involve major repairs

High risk maintenance jobs are jobs in which:

- ❑ Large amounts of lead dust will be generated, or
- ❑ The coating (paint, varnish) and substrate (wood, plaster, drywall, metal, masonry) are in poor condition, or
- ❑ The activity disturbs over 2 square feet of surface area.

Examples of potentially high risk rehabilitation jobs include:

- ❑ Stabilize large amounts of badly deteriorated paint
- ❑ Knock out walls

POTENTIALLY HIGH RISK REHABILITATION JOBS

- Stabilize large amounts of badly deteriorated paint
- Knock out walls
- Replace windows
- Replace old or worn carpet
- Kitchen/bath remodel
- Replace kitchen cabinets

IV-8

HIGH RISK MAINTENANCE JOBS BEYOND SCOPE OF TRAINING

The following high risk jobs are beyond the scope of this training:

- Replacing major building components
- Demolition
- Major Renovation
- Fire Restoration

IV-9

LEAD JOB CHECKLIST

4. Who will do the job? *Personnel must be properly trained and skilled, if they will have to wear a respirator, they must be medically qualified, fit-tested, and trained.*

Name _____ **Name** _____

IV-10

- ❑ Replace windows
- ❑ Replace old or worn carpet
- ❑ Kitchen/bath remodel
- ❑ Replace kitchen cabinetsThe following high risk maintenance jobs are beyond the scope of this training program:
- ❑ Replacing major building components
- ❑ Demolition
- ❑ Major renovation
- ❑ Fire restoration

Important: **You can have an effect on the risk level of the job**. For example, an area larger than two square feet can be handled with low risk if good work practices can control the dust. With this training, good judgment, and common sense, you can determine the risk and use appropriate practices and precautions to control the risk during low risk and many high risk activities.

Preparing for Re-Occupancy

A good example of reducing risk is to handle lead-based paint problems during vacancy preparation for re-occupancy. Vacancy presents a great opportunity. It is easier to do maintenance work and address lead-based paint problems in a vacant unit, because access is limited and there are no concerns about contaminating occupants' belongings or exposing occupants during the work. This is the optimal time to stabilize the paint.

In your usual preparation, you remove debris and repair damage to walls, woodwork, and fixtures. This is the time to do a careful visual assessment for paint deterioration. Then follow the work practices and cleanup procedures you will learn today to protect yourself and the next occupants from lead exposure.

4. Who will do the job?

Personnel must be trained, properly skilled for the activity, and medically qualified. If they have to wear a respirator, they must be fit-tested and properly trained.

What Additional Training is Required for These Jobs?

Large jobs where dust cannot be controlled and all other high risk maintenance jobs require additional training that includes:

- Personal exposure monitoring,
- Respiratory protection, and
- Medical surveillance.

These topics are not covered in this training program.

There are several resources available that provide information on these and other topics pertinent to high risk work.

U.S. Department of Housing and Urban Development (HUD)—*Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* is available from HUD USER at 800-245-2691.

U.S. Environmental Protection Agency (EPA)—EPA has the following courses:

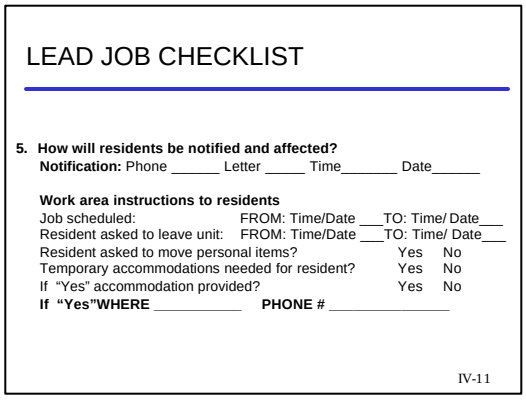
- Residential Lead-Based Paint Abatement Model Training Course (for workers)
- Lead Abatement Training for Supervisors and Contractors
- Lead Inspector Training: U.S. Environmental Protection Agency Model Training Course Curriculum
- Lead-Based Paint Risk Assessment Model Curriculum

The Occupational Safety and Health Administration (OSHA) —General Lead Industry Standard (29 CFR 1910.1025) applies to maintenance activities that involve making or keeping a structure, fixture, or foundation in proper condition in a routine, scheduled, or anticipated fashion.

OSHA also has a Lead Construction Standard (29 CFR 1926.62). These standards include employee health and safety information that is similar to that found in the HUD Guidelines.

National Institute of Building Sciences (NIBS)—*Operations & Maintenance Work Practices Manual for Homes and Buildings*, including specific procedures for high risk maintenance jobs and interim controls. This document is available by calling NIBS at 202-289-7800.

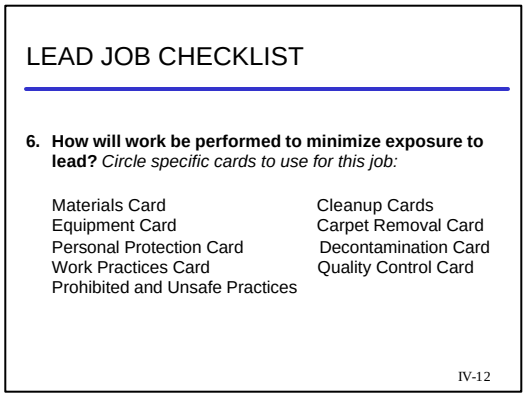
State or Local Departments of Public Health or Departments of Labor—Some states may require training for lead-based paint-related activities, including those activities performed by maintenance personnel. The state agency regulating training requirements, such as the Department of Public Health or Department of Labor should be contacted for state requirements.



5. *How will residents be notified and affected?*

It is the responsibility of the person who has had this training to properly notify the residents of the upcoming work. This notification procedure can be the same as the notification procedure of any maintenance-related activities already established by the facility. However, it should be modified to include the following information:

- ❑ Date the notification was delivered to the residents
- ❑ Date the work will take place and the time required to complete the work
- ❑ Instructions to the residents for moving personal items out of the work area
- ❑ Resident protection requirements (if any), including location of temporary accommodations (as determined by the trained individual).

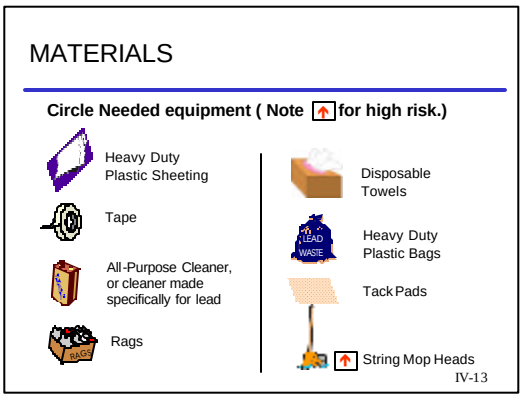


6. *How will work be performed to minimize exposure to lead?*

Actions that minimize exposure start with planning. The supervisor (or other worker trained in lead safe work practices) should go through the Lead Safe Maintenance Planning tool and mark off the items that apply to this job.

On each instruction card the supervisor will circle all items and work practices the worker will use to safely perform the work. The cards are then attached to the work order.

For the rest of today, as we talk about how maintenance jobs are done, we will refer to each of these cards and discuss how they relate to the job. Right now, we are going to discuss the first three—materials, equipment, and personal protection. (These are three items that must be addressed before you go to the job site to ensure that all appropriate materials and equipment are there when you need them.) Each of these instruction cards is discussed throughout the day. The other cards will come later, in other modules.

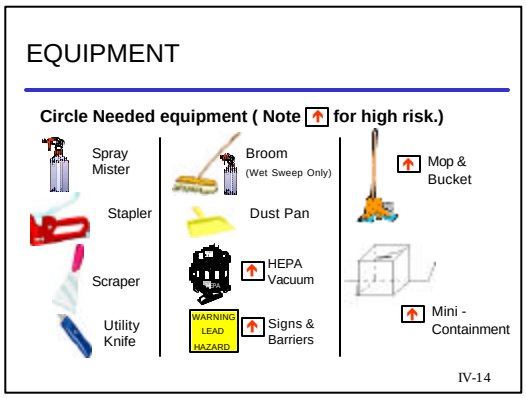


Materials

These are the disposable items that are used up and thrown away after the job.

- ❑ **Heavy Duty Poly Film**—To cover the floor immediately under the surface to be addressed. Area covered will range from an area 5 feet by 5 feet to the whole floor. Poly is also used to cover furniture, windows, vents, and any area that can collect or transmit dust.
- ❑ **Tape**—To secure poly film and to seal the disposal bags. Duct tape works well and special blue masking tape is also easy on paint.
- ❑ **All Purpose Cleaner or Cleaner Made Specifically for Lead**—To clean both the surface that is being repaired and the floor. Use according to the manufacturer's instructions.
- ❑ **Rags**—To cleanup dust and debris.
- ❑ **Heavy Duty Poly Bags**—To hold all waste.
- ❑ **Towelettes**—To wash hands and face upon completion of work. They can also be used to cleanup after very small jobs.
- ❑ **Tack Pads**—To collect dust in small or tight work areas. These are sticky sheets about 2 feet by 3 feet that catch dust and are disposed of following the job.
- ❑ ⇧**Mop Heads**—To clean large floor areas on high risk jobs.

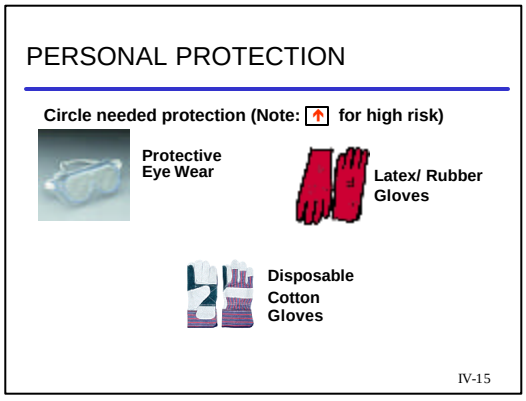
All materials listed on the Materials Card are disposable items that will be used and disposed of after the task is completed. Even if the material, like a mop head or rag, is still in good condition, it should be disposed of before leaving the job site to keep from contaminating the next residence. In a sequence of jobs with minimal cleanup, rags and mop heads may be thoroughly rinsed between jobs and disposed of at the end of the day.



Equipment

All of the items on the equipment card may be used again as long as they have been properly cleaned after each job.

- ❑ **Spray Mister**—To mist work area to keep the dust down.
- ❑ **Stapler and Staples**—To secure polyethylene sheeting and signs/barrier tape. Staple about every six inches.
- ❑ **Scrapers**—To remove loose paint while misting.
- ❑ **Utility Knife**—To score the edges of painted hardware.
- ❑ **Broom**—For sweeping up moistened dust and debris.
- ❑ **Dust Pan**—For collecting and disposing of moistened debris.
- ❑ ⇧**HEPA Filtered Vacuum**—To pick up large amounts of lead dust on work surface, floor, and workers' clothing. Required for high risk work.
- ❑ ⇧**Signs/Barrier Tape**—To mark off the work area. Required for high risk activities.
- ❑ ⇧**Mop Handles**—To attach to mop heads to wet mop and rinse large areas.
- ❑ ⇧**Buckets**—To hold water, cleaner, and wringer buckets for the three bucket system used on high risk jobs.
- ❑ ⇧**Mini Containment**—To minimize the size of the work area for high risk activities.



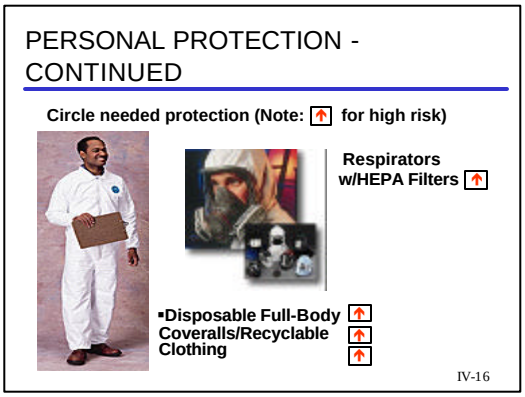
Personal Protection

The supervisor will decide what personal protection is needed for the job and will circle the pictures and words on the card. The decision is based on the size and location of the job, the amount of dust that may be generated, and the possible risk of lead exposure to the worker.

No personal protection may be needed on very small jobs if you use good work practices that minimize the dust. Then it is just common sense that the need for protection increases as the size and the extent of lead-based paint disturbance increases.

All personal protection icons that are circled on the personal protection card are needed for the maintenance job.

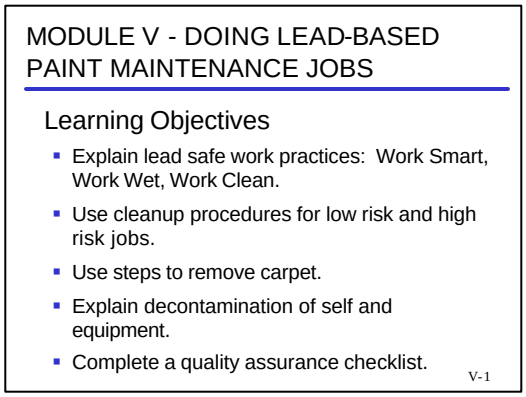
- ❑ **Protective Eye Wear**—To keep dust and debris out of your eyes.



- **Coveralls**—Disposable or recyclable protection for your clothes. Coveralls are generally recommended for low risk work, although some jobs are so small they are not needed. If you don't wear them, you should change into clean clothes before you go home.
- **Latex/Rubber Gloves**—Protect your hands from strong cleaners, which can dry out and irritate your hands if used repeatedly over a long period of time.
- **Disposable Cotton Gloves**—Keep gross amounts of lead debris off your hands. (Gloves must be worn while doing high risk activities.) If gloves are not worn, extra care should be taken when you wash your hands to remove all lead dust from beneath your fingernails.
- **Disposable Full-Body Coveralls/Recyclable Clothing**—Clothing required for high risk work when gross amounts of lead dust would adhere to your hair and street clothes, so that lead dust is not carried home.
- **Respirators with HEPA Filters (N100 or higher)**—Respirators are used to prevent inhaling airborne lead while doing high risk work that creates large amounts of dust based on the result of employer's assessment of worker exposures. Workers using respiratory protection during high risk work must be trained, fitted, and have medical clearance.

Module V

Module V—Doing Lead-Based Paint Maintenance Jobs

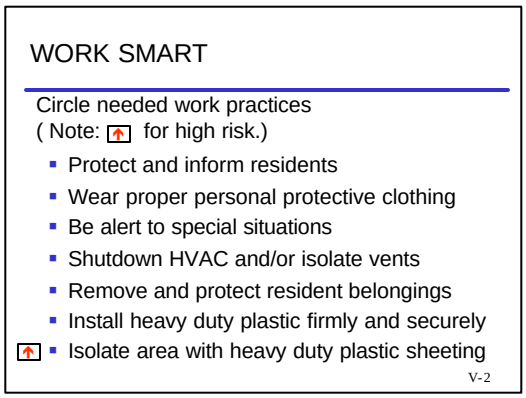


When we complete this training module, you should be able to:

- ❑ Explain lead safe work practices: Work Smart, Work Wet, Work Clean.
- ❑ Follow cleanup procedures for low risk and high risk jobs.
- ❑ Follow steps to remove carpet.
- ❑ Explain decontamination of self and equipment.
- ❑ Complete a quality assurance checklist.
- ❑ Plan low and high risk jobs using the Planning Tool.

Video Segment 4 discusses the preparation steps before starting a lead hazards task. It shows how to work smart.

All work practices that are circled must be done for each maintenance job, beginning with the first item circled and reading down to the last circled item.



Work Smart

Working smart means keeping your eyes open, using all the required materials and equipment correctly, and following the lead safe work practices in the **Planning Tool**.

- ❑ Protect and Inform Residents
- ❑ Keep residents out of the work area
- ❑ Minimize dust
- ❑ Cleanup thoroughly

Q: Why should you wear Protective Clothing?

Q: Has anyone ever suited up for a high risk job like the one shown in the video?

Q: Who at your workplace is qualified to wear a respirator?

Q: What are the requirements for being qualified to wear a respirator?

A: Training on use and care of the respirator and medical approval and fit-testing to wear a respirator.

- ❑ Be Alert to Special Situations—Be on the lookout for problems that could contribute to potential lead exposure.

Q: What are some—examples of special situations?

A: **1**. Start a small job, and find that the substrate is in poor condition and more dust will be involved.

2. Fix a fixture and find deterioration of the wall behind it.

3. Children appear while you are working.

Q: Why isolate the work area for an exterior job?

A: It is important to isolate an exterior work area so lead hazards are not absorbed into the soil and not tracked into the unit.

- ❑ HVAC Shutdown and/or Isolate Vents with heavy-duty plastic where vents can be contaminated—Shut off the forced air HVAC system and/or seal the vents within the work area with heavy duty poly film and tape. On a very small job, where you can control the dust with lead safe work practices, you may not need to worry about the HVAC. Where some dust will be created, shut down the HVAC. On large jobs, shut it down and seal the vents.

Q: Why is it important to shut off the forced air HVAC?

A: To keep from spreading the dust to other rooms where it will settle and will need to be cleaned up to protect children in the residence.

Q: What are your reactions to the amount of dust it takes to create a lead hazard (refer to the packet of sweetener in video)?

Q: Are there any other tips that you have on securing the poly film?

Q: Has anyone in the class ever installed a poly barrier?

- ❑ Remove/Protect Resident Belongings—For low risk work, move all furniture, toys, and other items out of the immediate work area. For high risk work, furniture, toys, and other objects should be either moved to another room or covered with heavy duty poly film.

Q: How do you handle situations when the residents haven't removed their belongings?

- ❑ Securely Install Poly Film "Drop Cloth"—For low risk work, lay a piece of poly film on the floor, immediately under the area to be addressed. The poly film should be at least 5 feet by 5 feet and extend beyond the work area. If the low risk work is to be done on the ceiling, then the entire floor must be covered with the poly film.

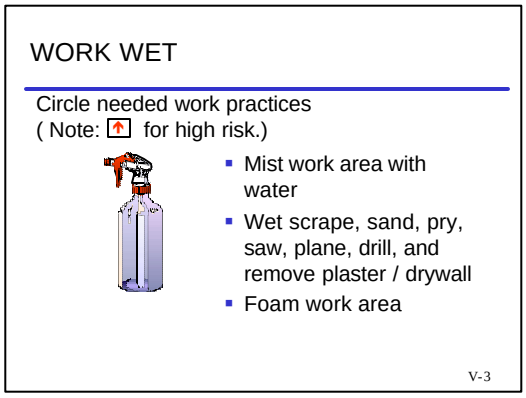
Secure poly film with tape or staples to the floor so they will not damage the surfaces. If the work area will create dust across the room, secure poly over the entire floor.

For very dusty high risk work, the poly film should cover the entire floor of the room. The entryway should be covered with poly film. You may make a Z-fold partition to keep dust from going through the opening. Hang one sheet of poly over the entrance way. Secure the top and one side with tape or staples. On the other side of the entrance, seal the top and the opposite side. If you wipe your feet on the tack pad before exiting the area, you can then walk through without tracking or letting dust out of the room.

Work Practices While Performing the Task

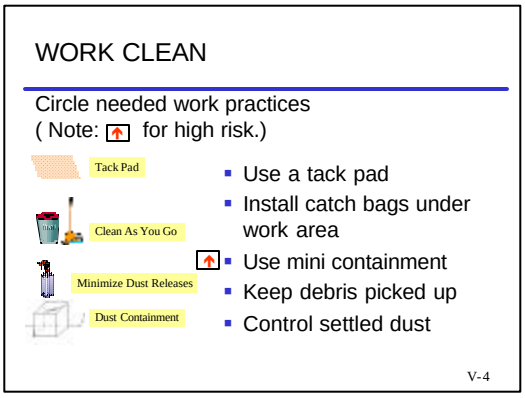
This video discusses ways to perform the task safely. The video will cover the second Work Practices Card—Work Wet and Work Clean.

Work Wet



To work wet means to constantly keep the surface damp by lightly misting the area with water. Misting is used for both low risk and high risk work. Keeping the area wet minimizes airborne lead dust that can be inhaled, could settle on skin or clothing, or could get tracked to other areas of a dwelling. Working wet is important for containing dust for both interior and exterior jobs.

- ❑ Mist Work Area with Water—Mist the area to be addressed with a spray mister containing water. The size and kind of sprayer depends on the size of the area to be repaired. This is not to be done on any surface in proximity to electrical outlets and switches. Instead, you can lightly dampen a sponge or rag and carefully apply it to the surface. Don't use too much water so that the sponge drips. It should only be damp enough to hold the dust, and water should not run onto the floor.
- ❑ Wet Scrape, Sand, Pry, Saw, Plane, Drill, and Remove Plaster/Drywall—Mist the area prior to and during these activities to keep down dust.
- ❑ Foam Work Area—Spray a small amount of shaving cream on the area to be drilled. The dust will stick to the shaving cream so you can wipe it off the surface and drill.



Work Clean

To work clean means to perform the work in such a manner as to generate as little dust and debris as possible, and to keep all dust and debris inside the work area on both interior and exterior jobs. To accomplish this the following are done:

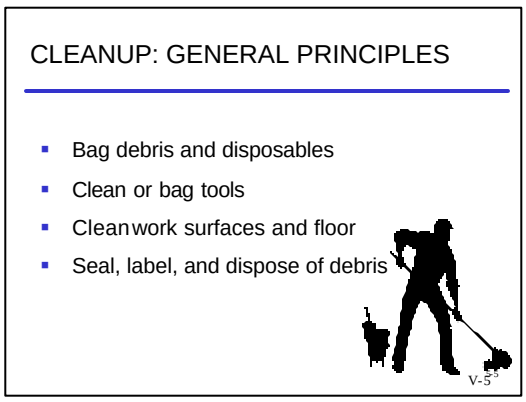
- ❑ Use Tack Pad—Tack pads are especially useful to collect dust in very small areas. The dust adheres to the pad, so cleanup is easier. It does not work well if it gets wet.
- ❑ Install Catch Bag Under Work Area—A neat trick is to secure a heavy duty poly disposal bag directly underneath the area to be repaired, especially under a window. The bag will catch debris that is generated by drilling or cutting, as well as paint chips generated during paint stabilization.
- ❑ ⇧Use Mini Containment (high risk)—For a dusty high risk job, a mini containment system may help to contain dust while work is done. It is especially useful in high traffic areas, and to eliminate laying poly over a large clean area.
- ❑ Keep Debris Picked Up—It keeps you from tracking and spreading the lead dust and makes cleanup easier.
- ❑ Control Settled Lead Dust—For low risk jobs, you may mist the debris to control the dust and sweep it up with a broom and dust pan. For high risk work, pick up lead dust with the HEPA filtered vacuum. You may prefer to use a HEPA filtered vacuum on all jobs, if one is available.

Cleanup

The next video discusses procedures for cleanup and decontaminating yourself and equipment after a lead-based paint maintenance task. The video will cover the following cards from the Planning Tool: Cleanup, Decontamination, and Quality Assurance. Look for differences in cleanup for low risk and high risk jobs.

The cleanup cards outline the steps to properly cleanup after performing a lead task. The steps are numbered to follow in sequence, starting from the top and continuing downward to the last item.

While there is some concern of lead exposure to yourself during the cleanup of the work area, the main concern is for the residents. If the cleanup is incomplete or inadequate, any remaining lead dust or debris puts the residents at risk of lead exposure long after the job is completed.



Cleanup—General Principles

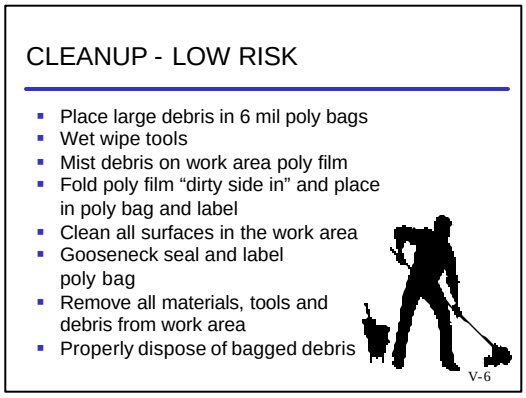
Although there are many steps to the cleanup process, you can remember them by grouping them into a four part system:

1. Bag all the debris and disposables you used.
2. Take care of your tools (clean or bag to clean later).
3. Clean the work surfaces and floor in the work area (interior).
4. Seal, label, and dispose of all debris.

Overall, the process is the same, whether the job is low risk or high risk. The larger and higher risk the job, the more cleanup and precautions you will use.

The **Planning Tool** has two separate cleanup cards:

- ❑ One for small low risk jobs, and
- ❑ One for larger high risk jobs that require additional steps and equipment.



Cleanup—Low Risk

1. Place large debris heavy duty poly bags. Do not fill more than 1/2 to 2/3 full.
2. Wet wipe tools.
3. Mist debris on work area poly film.
4. Fold poly film "dirty side in." Place in poly bag and label.
5. Clean all surfaces in the work area. Work from the top, down, cleaning the floor last. Include all vertical and horizontal surfaces.
   - ❑ Scrub all surfaces with detergent. Scrubbing (not simply wiping) is necessary to remove dust.
   - ❑ Rinse all surfaces with clean water—this is to remove any cleaner residue that holds the lead dust.
6. Gooseneck seal and label the heavy duty poly bag.
7. Remove all materials, tools, and bagged debris from work area and residents.
8. Properly dispose of bagged debris.

You may have questions about disposal of lead waste. Your state environmental agency can answer specific questions on lead waste disposal. Call the National Lead Information Center (1-800-424-LEAD) for the telephone number for your state

agency. Regardless of whether lead waste is considered hazardous, you don't want children, pets, and scavengers to get into it. It is best to bag, label, and secure it until the lead containing materials are removed from the property.

Cleanup—High Risk

CLEANUP-HIGH RISK

- Place large debris in heavy duty poly bags
- Place contaminated tools/equipment in poly bag and seal
- Fold poly film "dirty side in". Place in poly bag and label
- Clean all surfaces in the work area
  - HEPA vacuum
  - Mist and scrub
  - Rinse the rag / mop
  - HEPA vacuum a second time

V-7

1. Place large debris in heavy duty poly bags. Do not fill more than 1/2 to 2/3 full.
2. Place contaminated tools/equipment in poly bag and seal.
3. Fold poly film "dirty side in." Place in poly bag and label.
4. Clean all surfaces in the work area. Work from the top, down, cleaning the floor last. Include all vertical and horizontal surfaces.

❑ Vacuum all horizontal surfaces slowly with a HEPA-filtered vacuum. Vacuum all ledges, sills, stools, etc. Vacuum the floor of the work area. Use corner tools in corners, cracks of trim and between floor boards. Vacuum floors with a floor brush and carpets with a carpet tool.

❑ Mist and scrub. Wet a rag or mop with detergent then wring out. Mist surface or rag as you clean. Scrub the surfaces (wiping is not sufficient to remove lead dust).

❑ Rinse the rag/mop. Squeeze rag/mop into an empty bucket. Rinse out in a water bucket. Squeeze into the empty bucket. Repeat as needed. Change rinse water often. Use paper towels first if surfaces are very dirty. Replace the rag/mop when it looks dirty.

CLEANUP-HIGH RISK - CONTINUED

- Gooseneck seal and label poly bag
- Remove all materials, tools and debris from work area
- Properly dispose of bagged debris

V-8

❑ Make a second pass over all surfaces with a HEPA-filtered vacuum.

5. Gooseneck seal and label heavy duty poly bag. Be sure it is not more than 1/2 to 2/3 full, to leave room for gooseneck and seal.
6. Remove all materials, tools, and bagged debris from work area and residence.
7. Properly dispose of bagged debris.

You may have questions about disposal of lead waste. Your state environmental agency can answer specific questions on lead waste disposal. Call the National Lead Information Center (1-800-424-LEAD) for the telephone number for your state agency. Regardless of whether lead waste is considered hazardous, you don't want children, pets, and scavengers to get into it. It is best to bag, label, and secure it until the lead containing materials are removed from the property.

Removing Carpeting

Vacancy preparation for occupancy turnover often requires removal of old carpet. The next video segment shows Ben and Scott removing carpet. Carpet removal presents some special problems, which can create extreme hazards if not handled properly. Because carpets collect and hold lead dust carpet removal should be treated as a high risk job.

Note, this video sequence also shows a dust test. Dust testing is not required before removing carpet or before doing any other maintenance activity. However, it can be a useful tool in determining if a hazard exists before or after maintenance activities. It is shown here to demonstrate the steps involved in dust testing.

CARPET REMOVAL

CARPET
- Mist carpet
- Loosen wall-to-wall carpet from tack strips or glued areas
- Cut carpet into manageable portions with utility knife
- Roll carpet "pile side in" poly, seal with tap, and remove while misting carpet backing from area

PAD
- Cut padding into manageable portions with utility knife
- Roll pad while misting
- Wrap carpet & padding in 6 mil plastic sheeting, gooseneck seal with tape, and remove from the area

V-9

Carpet

1. Mist carpet.
2. Loosen wall to wall carpet from strips or glued areas.
3. Cut carpet into manageable portions with utility knife (about every 6 feet).
4. Roll carpet "pile side in" while misting carpet backing. Wrap carpet in heavy duty poly sheeting, or place in a heavy duty poly bag, gooseneck seal with tape, and remove from the area.

Pad

1. Cut pad to manageable portions with utility knife.
2. Roll pad while misting.
3. Wrap padding in heavy duty poly sheeting, or place in a heavy duty poly bag, gooseneck seal with tape, and remove from the area.

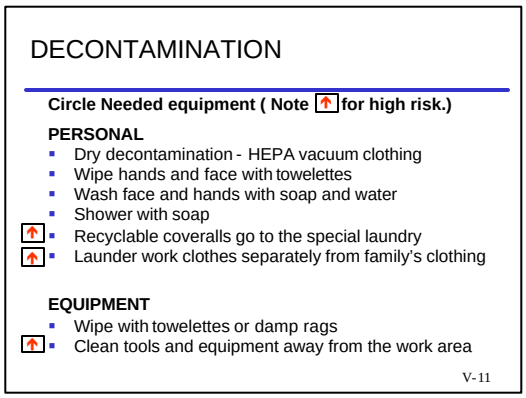
CARPET REMOVAL – CONTINUED

FLOOR
- HEPA vacuum floor area
- Rinse/mop floor area and baseboards with cleaner
- Wet mop floor area and baseboards
- HEPA vacuum floor again

V-10

Floor

1. HEPA vacuum the floor area.
2. Wet mop the floor area and with all purpose cleaner or a cleaner made specifically for lead.
3. Rinse mop the floor area and baseboards.
4. HEPA vacuum floor area again.



Decontamination

Decontamination is performed after all the cleanup activities are completed.

Personal decontamination ensures that any lead dust on the face, body, and clothes is removed. This minimizes the risk of inadvertently ingesting lead while eating, drinking, or smoking; carrying lead dust to other parts of the dwelling unit; or taking the lead into your car or home.

Equipment decontamination ensures that any lead dust on equipment is thoroughly removed. This prevents contamination of other areas the next time you use the equipment.

The steps for decontamination are fairly simple. Again, follow items that are circled by your supervisor on your Decontamination Card.

Personal

- ❑ Dry Decontamination—HEPA vacuum clothing to remove dust before leaving the site if you do not wear protective clothing. You may also dry decontaminate between jobs if you wear protective clothing from one job to another.
- ❑ Wipe Hands and Face with Towelettes—Do a quick wash-up before leaving the job. Place the used towelettes/hand wipes in the disposal bag. Seal the disposal bag with tape.
- ❑ Wash Hands and Face with Soap and Water—Wash before eating, smoking, drinking or applying cosmetics, and at the finish of the job. If gloves are not worn, be sure to clean well under your fingernails.
- ❑ Shower—Shower on the job if feasible. It is necessary to shower after high risk jobs and recommended following low risk work. IF a shower is not available at work, a portable shower may be set up and used.
- ❑ Launder Personal Clothes/Coveralls Separately—Changing before leaving the work site is highly recommended. If the employer supplies recyclable coveralls, they are sent by the employer to a special laundry facility. The laundry must be informed that the clothes have been exposed to lead**.**

Equipment

- ❑ Clean All Tools

- ❑ For low risk jobs, clean tools by wiping them off with towelettes/hand wipes or damp rags at the site.
- ❑ For high risk jobs, tools may need to be sealed in plastic until they are cleaned at the shop after the job.

QUALITY ASSURANCE

- Work properly completed
- Work area cleaned properly
- Contaminated debris bagged sealed and labeled
- Contaminated debris, tools, materials, and equipment removed from residence
- Residents belonging returned to original place
- resident notified of job completion
- Other "lead problems" noted and reported

V-12

Quality Assurance

What is Quality Assurance?

Quality assurance is the last step of the maintenance job. It is a final check performed by the maintenance person or supervisor to see that the job was performed correctly and that the work area has been sufficiently cleaned. This check is done using the Quality Assurance Card.

The Quality Assurance Card is a checklist for inspection of the work and work area. It includes:

- ❑ Work properly completed as requested.
- ❑ Work areas cleaned properly.
- ❑ Contaminated debris properly bagged, sealed and labeled.
- ❑ Contaminated debris, tools, materials, and equipment removed from residence.
- ❑ Resident's belongings returned to original place.
- ❑ Resident notified of job completion.
- ❑ Other "lead problems" noted.
- ❑ If yes, other lead problems reported.

You may choose to do an optional dust wipe test. This is one way of determining proper cleanup and that the amount of remaining lead dust is acceptable. We will talk more about this in Module VII. Note that a dust wipe is a part of the clearance examination that is <u>required</u> in HUD-assisted housing.

If the quality assurance check shows visible dust or debris in the area (or if a dust test shows lead contamination), this condition must be corrected. It is important to do the job right the first time. Correcting a condition may require you or another maintenance person to prepare the work area again, wear protective clothing, and/or repeat all cleanup and decontamination procedures.

When the condition is found to be satisfactory, the maintenance person or supervisor checks off the space next to the statement on the card. This procedure is repeated for each statement. A copy of the checklist may be kept with the work

order as a permanent record of the precautions taken on the job.

Module VI

Module VI—Optional Hands-On Exercises: Practicing What You've Learned

MOD VI - EXERCISES: PRACTICING WHAT YOU'VE LEARNED

- Use the planning tool to plan a job.
- Set up the worksite for a lead-safe job.
- Use lead safe work practices.
- Clean-up the worksite.

VI-1

SCENARIO

You work in a 1950s apartment building. A leak in Unit #13 has caused serious damage to Unit #3 below. The leak has been fixed in Unit #13 but now you need to fix the wall in Unit #3. The wall is 10 x 8 feet and all the paint is damaged and peeling.

VI-2

LARGE GROUP QUESTIONS

- Is this a lead job?
- Is this a high risk or low risk activity?
- How many persons are needed for this job? Who can do the work?

VI-3

When we complete this training module, you should be able to:

- ❑ Use the planning tool to plan a job
- ❑ Set up the worksite for a lead-safe job.
- ❑ Use lead safe work practices.
- ❑ Cleanup the worksite.

Scenario

You work in a 1950s apartment building. A leak in Unit #13 has caused serious damage to Unit #3 below. The leak has been fixed in Unit #13 but now you need to fix the wall in Unit #3. The wall is 10 x 8 feet and all the paint is damaged and peeling.

You have your planning tool as well as some helpful checklists (Attachment 1: Skills Assessment Checklist for Exercise). Your supervisor (trainer) will be coming around to assess your work.

Large Group Questions

As a large group, answer the following questions:

- ❑ Is this a lead job?
- ❑ Is this a high risk or low risk activity?
- ❑ How many persons are needed for this job? Who can do the work?

Small Group Exercises

Break into small groups to complete the following four exercises.

1 **Fill out the planning tool**. In your small group, fill out the planning tool for this job. You have 10 minutes.

2 **Prepare the work area**. Collect the materials necessary and prepare the work area. The attached checklist gives you some guidance (See Attachment 1: Skills Assessment Checklist-Paint Stabilization). You have 10 minutes.

SMALL GROUP EXERCISES

- **Fill out the planning tool.** In your small group, fill out the planning tool for this job. You have 10 minutes.
- **Prepare the work area.** Collect the materials necessary and prepare the work area. The attached checklist gives you some guidance. You have 10 minutes.
- **Stabilize the paint.** Protect yourselves and work safely. The attached checklist gives you some guidance. You have 20 minutes.
- **Clean the area.** Clean the area so that it is ready for reoccupancy. The attached checklist gives you some guidance. You have 10 minutes.

VI-4

3 **Stabilize the paint**. Protect yourselves and work safely. The checklist (Attachment 1) gives you some guidance. You have 20 minutes.

4 **Clean the area**. Clean the area so that it is ready for reoccupancy. The checklist (Attachment 1) gives you some guidance. You have 10 minutes.

Exercise 1: Planning Tool

Fill out your planning tool for this job. As you do so, think about the questions below.

1. What materials (consumables) will you need? (Circle the proper icons on the Materials Card.)
2. What equipment will you need? (Circle the proper icons on the Equipment Card.)
3. What personal protection will you need? (Circle the proper icons on the Personal Protection cards.)
4. What work practices should you use to do this job? (Circle the proper icons on the Work Practices cards.)
5. Which procedures should you follow for the cleanup? (Circle the proper icons on the Cleanup Card.)
6. Who is responsible for completing the Quality Assurance Card?

Exercise 2: Set Up

❑ **Setting up the work area**. Work in your small group to set up the work area. Use your checklist (Attachment 1: Skills Assessment Checklist-Paint Stabilization)

Exercise 3: Work Safe

❑ **Working safely**. In your small group, perform the paint stabilization. Refer to the skills assessment checklist (Attachment 1: Skills Assessment Checklist-Paint Stabilization) for guidance.

Exercise 4: Clean-up

❑ **Cleaning up**. In your small group, clean your work area. Refer them to the skills assessment checklist (Attachment 1) for guidance.

Summary

- ❑ What did you learn from this exercise?
- ❑ What was the most difficult part?
- ❑ What was easiest?

Module VII

Module VII — Clearance: Making Sure the Job is Complete

MODULE VII - CLEARANCE

Learning Objectives

- Explain the basic steps involved in clearance testing.
- Explain how clearance testing affects their job performance.

VII-1

WHAT IS CLEARANCE?

- Clearance ensures that a unit is safe for re-occupancy after work is done.
- Clearance testing has two parts:
  - Visual assessment
  - Dust sampling

VII-2

WHAT IS CLEARANCE?

- Clearance is required after certain renovation, remodeling or maintenance work, in HUD-assisted housing built before 1978.
- Clearance must be done by a person who did not perform the work.
- Clearance must be done by a qualified person.
- Clearance is performed in the work area.

VII-3

When we complete this training module, you should be able to:

- ❑ Explain the basic steps involved in clearance testing
- ❑ Explain how your job performance affects the outcome of the clearance test

What is Clearance?

Performing **"Clearance"** means checking that the work area is not contaminated with lead dust after work is completed. Here are some important facts about clearance:

1. **Clearance ensures that a unit is safe for re-occupancy after work is done.**
2. **Clearance testing has two parts:**

- ❑ Visual Assessment.
- ❑ Dust sampling. This involves using a wipe (similar to a baby wipe) to wipe an area. The wipe is then sent to a laboratory for analysis. The analysis tells us if any of the dust picked up by the wipe contains lead.

3. **Clearance is required after certain renovation, remodeling or maintenance work, in HUD-assisted housing built before 1978.**

- ❑ We will talk more about this in the module on regulations.

4. **Clearance must be done by a person who did not perform the work.**

- ❑ To ensure that the work is properly inspected, the person who conducts clearance should not be someone who performed the work.
- ❑ For HUD-assisted properties, this is a requirement.

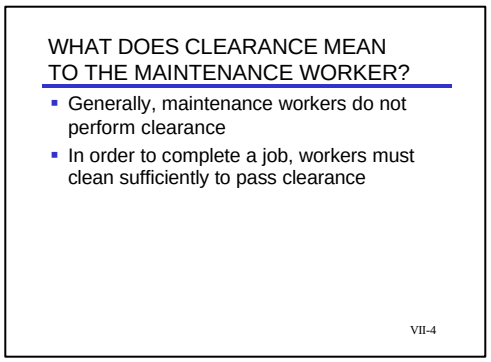
5. **Clearance must be done by a qualified person.**

- ❑ HUD requires that clearance be performed by a certified risk assessor, certified lead-based paint inspector, or a certified lead sampling technician.
- ❑ Alternatively, HUD allows a trained lead sampling technician under the supervision of a certified risk assessor or lead-based paint inspector.

- ❑ In properties that are not HUD-assisted, training and certification is recommended but not required.

6. Clearance is performed in the work site.

- ❑ Clearance is performed to ensure that the work site is properly cleaned.
- ❑ Clearance ensures that no lead dust is left behind.



What Does Clearance Mean to the Maintenance Worker?

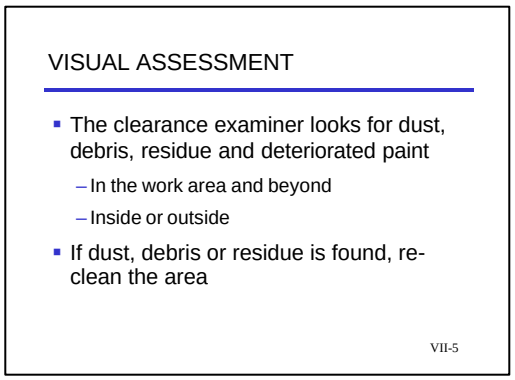
Generally, maintenance workers do not perform clearance. However, clearance is important to workers because in order to complete a job, they must clean the work area sufficiently to pass clearance.

To know how and where to clean, it helps to know about the procedures in a clearance test. Remember, clearance involves:

- ❑ A visual assessment to identify any visible dust or debris, and
- ❑ Dust sampling.

You can imagine that in order to reach a level of cleanliness required to pass this rigorous test, you must continue to scrub and clean surfaces even after they appear visibly clean. This specialized cleaning and clearance process is the key to ensuring that areas are safe from lead hazards after a maintenance activity, and why the cleanup procedures outlined in Module V are so important.

The rest of this module goes into more detail about clearance procedures.



Visual Assessment

The first part of the clearance test is a visual assessment. The clearance examiner will look for dust, debris, residue or deteriorated paint in the work area and beyond.

To check exterior maintenance work, the clearance examiner will look for any visible paint chips, or debris.

If any remaining deteriorated paint, dust, chips, debris or other residue is found, the clearance examiner will require that the area be cleaned again before proceeding with dust testing. The cleaning procedure is the same: HEPA-vacuuming and wet mopping. The clearance examiner checks how well you cleaned up. Any remaining deteriorated paint, dust, chips,

debris or other residue should be identified as a problem because the area is unlikely to pass a dust test.

Dust Sampling

DUST SAMPLING

- The clearance examiner takes samples from several surfaces in the work area
- Sampling done at least one hour after work has been completed, but no longer than 24 hours
- Samples sent to lab for analysis
- Wait for results

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Dust sampling is done to check the effectiveness of cleanup. For jobs that only include exterior work, no dust sampling is necessary, only a visual assessment needs to be performed.

- ❑ The clearance examiner will take samples from several surfaces in the area where work has been completed.
- ❑ This process should be done at least one hour after work has been completed to allow any remaining dust to settle before the test, but no longer than 24 hours later.

The results of the laboratory analysis will show the amount of lead found in the dust from the area sampled.

- ❑ Results are measured in micrograms of lead per square foot ($\mu g/ft^2$). A microgram is a millionth of a gram.
- ❑ The clearance examiner compares the results to acceptable levels established by EPA to determine if the area has passed, and then provides a written report with the results. You should also know that some states have different clearance standards.
- ❑ If the lab results show lead levels above the acceptable levels, the work area should be recleaned and retested until it passes.

Note: Cleanup should always be performed as if a dust wipe test were going to be done after job completion!

Module VIII

Module VIII—Regulatory Overview for Workers in Federally-Assisted Housing

MOD VIII - REGULATORY OVERVIEW FOR WORKERS IN FEDERALLY-ASSISTED HOUSING

Learning Objectives

- List the major Federal agencies responsible for regulating lead-based paint and associated activities.
- Recognize that the Lead Safe Housing Rule requires lead safe work practices and clearance in HUD-assisted housing.
- Explain interim controls — their purpose and how they relate to maintenance.

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MOD VIII - REGULATORY OVERVIEW FOR WORKERS IN FEDERALLY-ASSISTED HOUSING

Learning Objectives, Continued

- Explain the key points of EPA's Pre-Renovation Education Rule.
- Explain the key points of OSHA rules that protect workers from exposure to lead.

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TITLE X

- The Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X)
- Set course for regulations developed by:
  - Department of Housing and Urban Development (HUD)
  - Environmental Protection Agency (EPA)
  - Occupational Safety and Health Administration (OSHA)

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When we complete this training module, you should be able to:

- ❑ List the major Federal agencies responsible for regulating lead-based paint and associated activities.
- ❑ Recognize that the Lead Safe Housing Rule requires lead safe work practices and clearance in HUD-assisted housing.
- ❑ Explain interim controls — their purpose and how they relate to maintenance.
- ❑ Explain the key points of EPA's Pre-Renovation Education Rule
- ❑ Explain the key points of OSHA rules that protect workers from exposure to lead.

Title X ("Ten")

The Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X) was established by Congress to reduce the risk of lead poisoning in Federal housing stock. Some of the general purposes of this law were to prevent lead poisoning, ensure that federal policies incorporate lead hazard reduction measures, educate the public and develop an infrastructure capable of dealing with lead in housing (e.g., trained and certified professionals such as lead abatement contractors.) All lead regulations from Federal agencies, such as the Department of Housing and Urban Development (HUD), the Environmental Protection Agency (EPA), and the Occupational Safety and Health Administration (OSHA), were developed based on direction found in Title X. This document is the cornerstone of the national lead program.

The rest of this module walks through some of the key actions taken by HUD, EPA and OSHA in this area.

HUD's Lead Safe Housing Rule

The Lead Safe Housing Rule, also sometimes called "1012/1013" (Sections of Title X) covers Federally-owned and assisted housing built prior to 1978. This regulation is located at 24 CFR Part 35.

Some of the types of Federally-assisted housing covered by this regulation include public housing, privately-owned units

occupied by families receiving tenant-based rental assistance (Housing Choice Voucher), units receiving project-based rental assistance, and housing receiving Federal rehabilitation assistance.

The requirements of this regulation depend on the activity and the type and amount of assistance received. The regulation became effective September 15, 2000.

Provisions of the rule that are interesting to the audience for this course are:

HUD'S LEAD SAFE HOUSING RULE

- Lead Safe Work Practices
  - "De Minimis" Standard
- Clearance
- Interim Controls

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- **Lead Safe Work Practices**. Any maintenance, renovation, or lead hazard reduction work performed in HUD-assisted housing, on a surface known or presumed to have lead-based paint must be done using lead safe work practices. There is one exception to this rule — the "de minimis" (very small) amounts of paint— explained below.
- **Clearance**. After any maintenance, renovation, or lead hazard reduction work performed on a surface known or presumed to have lead-based paint, clearance is required. Like lead safe work practices, there is an exception for work on amounts of paint below the "de minimis," as discussed below.
- **Interim Controls**. The Lead Safe Housing Rule recognizes a category of lead hazard reduction work called interim controls. They are described in detail below.

Lead Safe Work Practices

The Lead Safe Housing Rule requires lead safe work practices, as described in this course, for any maintenance, renovation, or lead hazard reduction involving surfaces known or presumed to have lead. It specifies prohibited practices, requirements for protecting occupants, and preparing the work site. Special cleaning techniques must be used and clearance must be achieved.

The exception to this rule applies to disturbing very small amounts of paint, i.e., below the "de minimis." HUD recommends, however, that lead safe work practices always be used.

The **de minimis** amounts are defined as less than:

- 20 square feet on exterior surfaces;
- 2 square feet in any one interior room or space; or
- for types of interior or exterior building components that are small, 10% of the area of the type of component.

Clearance

Clearance, as described in Module 5, is required by HUD after maintenance, renovation, and lead hazard reduction that are triggered by The Lead Safe Housing Rule. Some reminders about clearance:

- ❑ It consists of a visual assessment and dust testing.
- ❑ It is not required if work is below the de minimis, discussed above.
- ❑ It must be done by a certified risk assessor, lead-based paint inspector, lead sampling technician or by a trained lead sampling technician under the supervision of a certified risk assessor or lead-based paint inspector.
- ❑ Clearance must be done by a person who is independent from the people performing the work. Note that if an in-house maintenance team performs maintenance, the person who does the maintenance activity cannot also perform clearance on that activity.

Interim Controls

When people think about controlling lead-based paint, they tend to think about abatement. However, the Lead Safe Housing Rule recognizes less costly and complex measures that can be used to control certain less severe lead hazards. Interim controls are defined by HUD as "a set of measures designed to reduce temporarily human exposure or likely exposure to lead-based paint hazards."

Interim controls include but are not limited to:

- ❑ Treating friction or impact surfaces by covering them or creating barriers to them.
- ❑ Treating chewable surfaces by covering them or creating barriers.
- ❑ Controlling dust-lead hazards, by creating smooth, cleanable surfaces, and maintaining the surfaces clean.
- ❑ Controlling soil-lead hazards, by using ground cover or fencing.
- ❑ Paint stabilization**.** This includes repairing the substrate and the cause of any damage before repainting.

A complete set of actions for addressing all presumed lead-based paint hazards in a unit is called standard treatments. Under the Lead Safe Housing rule, there is an option for owners to skip the testing step, presume that lead-based paint is present and then

treat all potential hazards with this standard set of treatments. For example, all painted surfaces that may be subject to friction or impact are treated, all dust is cleaned up, surfaces are made smooth and cleanable, etc. See 24 CFR Part 35 for more information on standard treatments.

People who take this course are qualified to perform interim controls and standard treatments in HUD-assisted housing. Anyone who does not take this or another HUD-approved course must be supervised by a certified abatement supervisor and trained in accordance with OSHA's Hazard Communication Standards.

More on HUD's Lead Programs

If these rules apply to you, it is useful to keep a copy of the HUD Lead Rule. A copy of the Rule may be obtained from the National Lead Information Center by calling 1-800-424-LEAD or by downloading from the HUD Office of Healthy Homes and Lead Hazard Control Web site at www.hud.gov/offices/lead.

The HUD **Lead Hazard Control Grant Program** has completed lead hazard reduction in over 30,000 homes. Most of the work done in these homes consisted of lead interim controls. More information on this program may be found by visiting the HUD Office of Healthy Homes and Lead Hazard Control Web site at www.hud.gov/offices/lead.

HUD/EPA DISCLOSURE RULE

- Owners of pre-1978 properties must disclose information about lead to potential buyers or renters
- Homebuyers have 10 days to obtain an inspection or risk assessment
- Distribution of the HUD/EPA/CPSC pamphlet "Protect Your Family from Lead in Your Home" to all new buyers and renters

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HUD/EPA Disclosure Rule

The Lead-Based Paint Disclosure Rule (also known as Section 1018 of Title X) requires that owners of pre-1978 properties disclose any known information about lead to potential buyers or renters. The Rule also allows a homebuyer 10 days to obtain an inspection or risk assessment. Finally, the Rule requires the distribution of the HUD/EPA/CPSC pamphlet "Protect Your Family from Lead in Your Home" to all new buyers and renters.

This requirement makes it easier for renovation and remodeling contractors to determine, by interviewing the homeowner, whether lead is present or should be assumed to be present based on historical information on the home. It is important to assume lead-based paint is present if conditions are unknown and the house was built prior to 1978.

The pamphlet "Protect Your Family from Lead in Your Home" may be obtained from the National Lead Information Center by calling 1-800-424-LEAD or by download from www.epa.gov/lead or www.hud.gov/offices/lead.

EPA'S ACTIONS ON RENOVATION AND REMODELING

- EPA Pre-Renovation Education Rule
  - The Lead Hazard Notification Pamphlet ("Protect Your Family") must be provided no more than 60 days before starting remodeling or renovation work. (Note: This requirement does not apply to maintenance activities.)
  - Repairs of areas less than or equal to 2 square feet are exempt from this requirement.
  - Emergency actions are exempt.
- EPA Training

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EPA's Actions on Renovation and Remodeling

Title X required EPA to study and provide guidelines for conducting renovation and remodeling activities around lead-based paint. EPA was required to develop guidelines for the conduct of renovation and remodeling activities that may create a risk of exposure to dangerous levels of lead. EPA studied the extent to which people engaged in renovation and remodeling activities are exposed to lead, or disturb lead and create lead-based paint hazards. EPA also created a model lead safety curriculum for renovators and remodelers. HUD adapted this course and re-titled it: "Addressing Lead-Based Paint Hazards During Renovation, Remodeling and Rehabilitation in Federally-Owned and Assisted Housing." This adaptation is available for download from the HUD Office of Healthy Homes and Lead Hazard Control Web site at www.hud.gov/offices/lead/lbptraining.cfm.

There may be regulations in the future for individuals performing this type of work around lead.

EPA Pre-Renovation Education Rule

EPA's Pre-Renovation Education Rule (also known as PRE or Section 406(b)) is an important part of Title X for companies performing renovation or remodeling work because it requires communication with the owner about lead before work begins. Specifically, it states that:

- ❑ The Lead Hazard Notification Pamphlet ("Protect Your Family") must be provided no more than 60 days before starting remodeling or renovation work. (Note: This requirement does not apply to maintenance activities.)
- ❑ Repairs of areas less than or equal to 2 square feet are exempt from this requirement.
- ❑ Emergency actions are exempt. Emergencies are defined as "unplanned renovations or activities done in response to a sudden, unexpected event which if not immediately attended to presents a safety or public health hazard or threatens property with significant damage." They provide two examples of emergency renovations: Renovations to repair damage from a tree that fell on a house and renovations to repair a pipe break in an apartment complex.

EPA Training

Sections 402 and 404 of Title X directs EPA to develop training and certification requirements for lead professionals. In response to this, EPA has published 40 CFR Part 745 (also known as the 402/404 Rule.) This rule establishes specific training course content, model curricula, certification requirements, and work practice standards for the following lead disciplines:

- ❑ Inspector
- ❑ Risk Assessor
- ❑ Project Designer
- ❑ Abatement Worker
- ❑ Abatement Supervisor

Standardized training one way to ensure that certified lead professionals are competent in performing their jobs. The Environmental Protection Agency (EPA) has established training requirements and model curricula that constitute the basis of training in most states. Some states have their own training requirements that expand on EPA's requirements.

Your state may have specific requirements about certification or licensing of lead professionals. For more information, ask your supervisor to contact your State lead certification program regulator.

OSHA REGULATIONS

- OSHA Hazard Communication Standards
- OSHA Lead in Construction Standard - Key Concepts
  - Exposure assessment
  - Competent person
  - Action level
  - Permissible exposure limit
  - Trigger tasks

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OSHA Regulations

This section discusses two key OSHA rules:

- ❑ OSHA Hazard Communication Standards
- ❑ OSHA Lead in Construction Standard

Remember, you may be covered by one or more of these regulations if lead in your workplace is disturbed. If you use lead safe work practices, in many cases the requirements of the Lead in Construction Standard will be minimal.

Your employer is responsible for performing an assessment of potential for exposure, and complying with all applicable safety regulations.

OSHA Hazard Communication Standards [29 CFR 1926.59 for Construction and 29 CFR 1910.1200 for General Industry]

The OSHA Hazard Communication regulations require employers to give employees information about lead if they are performing construction and maintenance work that involves lead hazards. Activities such as ongoing LBP maintenance, renovation, remodeling, rehabilitation, paint stabilization or standard treatments performed under the Lead Safe Housing Rule are considered this type of work, so the Hazard Communication Standards apply.

The OSHA Hazard Communication Standards cover all individuals that work with or around hazardous chemicals. It allows employees to gain access to information about the hazards of substances they work around, lead safe work practices, and how to protect themselves. They require employees receive training about the specific chemicals in a workplace, labeling and Material Safety Data Sheets.

OSHA hazard communication training is the minimum training specified by HUD's Lead Safe Housing Rule for individuals performing ongoing lead-based paint maintenance, interim controls, paint stabilization or standard treatments in Federally-assisted housing. If hazard communication is all the training the employee receives, that employee must be supervised by a certified abatement supervisor.

The OSHA Lead in Construction Standard (29 CFR 1926.62)

The OSHA Lead in Construction Standard went into effect June 3, 1993. It applies to all workers doing construction work who may be exposed to lead on the job. This includes (but is not limited to) the following activities:

- ❑ Maintenance operations,
- ❑ Construction and rehabilitation activities,
- ❑ Repair and renovation work,
- ❑ Demolition and salvage,
- ❑ Removal or encapsulation of components, and
- ❑ Installation of building components that contain lead.

This regulation, therefore, is not just targeted to heavy construction activities. It includes what many individuals refer to as "repair or renovation." Activities such as simply preparing

walls for repainting or applying wallpaper, or a complex application of encapsulants during a lead abatement project are both covered by this far-reaching regulation.

Important: The Lead in Construction Standard Rule does not apply only to lead-based paint. It includes lead in other things as well.

Key Concepts

To understand the Lead in Construction Standard, it helps to know a few terms first.

Exposure assessment. Since OSHA requirements depend on a worker's exposure to lead on the job, employers are required to perform an "exposure assessment," that is, assess the job and take breathing zone air samples of employees performing tasks when airborne lead exposures may occur. Workers must be protected during the exposure assessment as if they are being exposed to lead. The employer must give employees the results of the air sampling within five working days of receiving the results.

Competent person. The employer is also required to have a "competent person" be responsible for ensuring worker safety and health on the job. OSHA defines competent person as "one who is capable of identifying existing and predictable hazards in the surroundings or working conditions and who has authorization to take prompt corrective measures to eliminate them."

Action level. "Action level" for lead in the air means employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air calculated as an 8-hour time-weighted average."

- ❑ The employer must provide medical surveillance and training when employees are exposed at or above the action level.
- ❑ Respirators, protective clothing, and other more restrictive procedures are NOT required AT THE ACTION LEVEL.
- ❑ Using lead safe work practices, worker exposure may remain below this level. Using lead safe work practices minimizes the risk of elevated exposure.

Permissible exposure limit. The "permissible exposure limit" (PEL) for lead is a level of lead in the air that an employer is not permitted to let an employee exceed without an appropriate respirator. Specifically, the PEL for lead is 50 micrograms per cubic meter of air averaged over an 8-hour period, also a time-weighted average. The employer must provide a level of

protection sufficient to keep an employee's exposure below the permissible exposure limit when the worker is performing a lead-related task until the exposure assessment shows that exposure is below the PEL.

- Employers may use objective or historical data to determine appropriate levels of personal protection. This means using exposure data collected from your industry or from previous jobs.
- OSHA's available data has identified high lead exposures related to "trigger" tasks. Employers must provide a higher level of protection when employees perform lead-related trigger tasks until the exposure assessment shows that your exposure is below the PEL.
- The three groups of trigger tasks have a particular potential for exposure, with Group 1 trigger tasks having the lowest, and Group 3 having the highest potential.
- **Group 1**: Manual demolition of structures, dry manual scraping or sanding, using a heat gun, power tool cleaning with dust collection systems, spray-painting with lead-based paint.

  Note: Group 1 activities, prior to initial assessments, require employee protection as if lead exposure is greater than the PEL, but not above 10 times the PEL (50 to 500 $\mu g/m^3$).

- **Group 2**: Using lead-based mortar, burning lead, rivet busting, power tool cleaning without dust collection systems, movement or removal of abrasive blasting containment, cleanup activities where dry expendable abrasives are used.

  Note: Group 2 activities, prior to initial assessments, require employee protection as if lead exposure is greater than 10 times the PEL (above 500 $\mu g/m^3$).

- **Group 3**: Abrasive blasting, welding, torch cutting, torch burning.

  Note: Group 3 activities, prior to initial assessments, require employee protection as if lead exposure is greater than 50 times the PEL (above 2500 $\mu g/m^3$).

  Note: Many of the work practices covered in this training course are also required by OSHA, such as working clean, good housekeeping practices, and using good hygiene.

OSHA REGULATIONS, CONTINUED

- OSHA Lead in Construction Standard - Requirements
  - Annual lead training program
  - Lead compliance plan
  - Written compliance plan for jobs exposing employees to lead in excess of the PEL without respiratory protection
  - Signs in the work area
  - Records of all employees and their exposure to lead
  - Employee rights to information and observation

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Requirements

An employer must provide a level of protection sufficient to keep employees exposure below the PEL. In keeping with this requirement, the following apply:

- ❑ If an employee has the potential for exposure at or above the action level on any day, a lead training program must be provided annually and meet specific OSHA requirements.
- ❑ OSHA requires employers to develop a lead compliance plan stating how they plan to comply with the lead requirements. A sample lead compliance plan can be found in Chapter 9 of the "HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing."
- ❑ OSHA requires the development and implementation of a written compliance plan prior to the commencement of a job where employee exposure to lead without the use of respiratory protection will be in excess of the PEL.
- ❑ The regulation also requires signs in the work area where employees are exposed at or above the PEL. Signs must be kept clean and illuminated. Signs must say:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

- ❑ The employer must keep records of all employees and their exposure to lead. Refer to 29 CFR 1926.62(n) for specific information on what records must be kept.
- ❑ Employers must offer employees or their designated representative the opportunity to observe any monitoring of employee exposure to lead. Employees are entitled to an explanation of the measurement procedure and the right to record results or receive copies of results when returned from the lab.

OSHA REGULATIONS, CONTINUED

- OSHA Lead in Construction Standard - Requirements for Exposure Above PEL
  - Housekeeping
  - Proper respirator
  - Hygiene facilities
  - Lead safe area for eating and drinking
  - Medical surveillance
  - Medical removal

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Requirements for Exposure Above the PEL

If employees are: (1) exposed above the PEL, or (2) perform "trigger tasks" and the employer has not performed an initial exposure assessment, OSHA becomes more stringent with more protective requirements. These include engineering controls and work practice controls to reduce exposures below the PEL, some of which require you to have additional specialized training. This protection includes:

- Good **housekeeping** including maintaining all workplace surfaces free of lead dust accumulations, cleaning floors and other surfaces with HEPA-filtered vacuums wherever possible. (Housekeeping prohibits the use of compressed air to remove lead from surfaces, unless the compressed air is used with a ventilation system designed to capture the airborne dust. NOTE: Housekeeping is required for all lead jobs.
- Emphasize the importance of minimizing and controlling dust.
- The **proper respirator for the job**, respirator fitting, and respiratory protection training. OSHA requires protective clothing such as coveralls, gloves, hats, shoes or disposable booties for the shoes, face shields or other appropriate equipment; no blowing or shaking of contaminated clothing, and a closed container for used protective clothing.
- **Hygiene facilities** for hand and face washing, including showering if feasible. Food and beverages are not allowed in the work area. Tobacco products may not be present or consumed. Cosmetics may not be applied (such as lip balm.)
- A **lead safe area for eating and drinking** must be available and as free from contamination as practical.
- **Medical Surveillance**: Initial blood tests reviewed by a physician must be provided if you do any Group 1, 2 or 3 trigger tasks or are exposed at or above the action level on any one day. Ongoing medical surveillance, with additional blood tests, is required if you are exposed to lead at or above the action level for more than 30 days in a 12-month period. Medical surveillance is provided at no cost to the employee.
- **Medical Removal**: Removal from the lead work area if your blood level is too high without loss of pay or benefits. Some employees may have a blood-lead level above the medical removal level if they have been performing work involving lead exposure in the past, signs and symptoms are not apparent.

You should also know that the OSHA construction standard prohibits employers from giving employees chelation drugs to prevent lead poisoning (chelation means administering a chemical to remove lead from the body.)

For More on OSHA Regulations

It is important to know the requirements of other OSHA construction regulations (such as for scaffolding safety, ladder safety, electrical safety, etc.) Employers or company owners are

responsible for compliance, and their having the regulations or summaries can help them comply. The OSHA Web site, www.osha.gov, is a good source of information, guidance and training materials.

Regulatory compliance will help protect workers from the hazards of lead. It will produce cleaner and safer places for employees to work.

For information on the OSHA Respiratory Protection Standard and other regulations, go to www.osha.gov.

Many OSHA regulations have similar requirements:

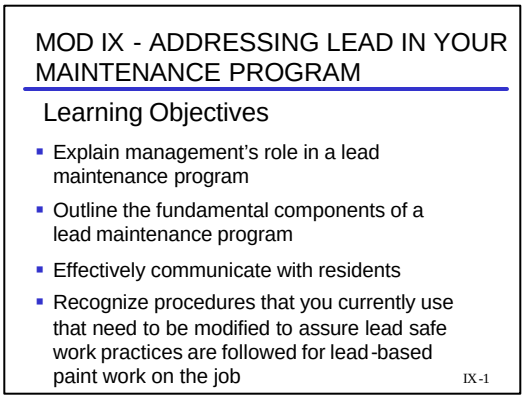
- ❑ Keep work area clean and free of hazards,
- ❑ Assess the job and protect employees,
- ❑ Use lead safe work practices,
- ❑ Provide hygiene facilities for washing hands and face, showering if feasible,
- ❑ Train employees about workplace hazards,
- ❑ Do the job right and keep good records, and
- ❑ Provide employees access to medical and exposure records.

State Regulations

Your instructor will cover regulations specific to your state.

Module IX

Module IX—Addressing Lead in Your Maintenance Program

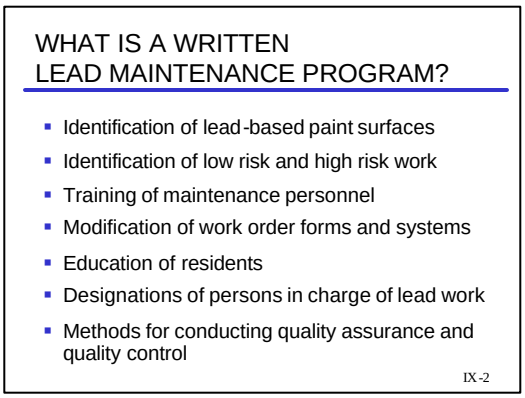


Upon completion of this module, you should be able to:

- ❑ Explain management's role in a lead maintenance program.
- ❑ Outline the fundamental components of a lead maintenance program.
- ❑ Effectively communicate with residents.
- ❑ Recognize procedures that you currently use that need to be modified to assure lead safe work practices are followed for lead-based paint on the job.

Why is a Lead Maintenance Program Important for Safe Housing?

Maintenance is critical to the control of lead-based paint hazards. The purpose of maintenance work is different from lead hazard control efforts — maintenance work is designed to simply keep buildings in good repair, while lead hazard control efforts are designed to prevent lead poisoning. However, while these two goals are different, they complement each other. For example, lead hazard control work often results in the creation of smooth, cleanable surfaces that are also easier to maintain. Similarly, good maintenance practices (such as repainting on a regular basis) can help maintain surfaces and thus prevent lead poisoning.



What Is A Written Lead Maintenance Program?

Your company should have a written lead maintenance program. It documents all steps necessary to minimize the risk of lead exposure when work is performed on lead-based painted surfaces, from purchasing the appropriate equipment to documenting the procedures to be used for each lead-based paint hazard activity.

The written lead maintenance program consists of the following seven elements:

- ❑ Identification of lead-based paint surfaces
- ❑ Identification of low risk and high risk work

- ❑ Training of maintenance personnel
- ❑ Modification of work order forms and systems
- ❑ Education of residents
- ❑ Designations of persons in charge of lead work
- ❑ Methods for conducting quality assurance and quality control. (Dust testing is optional after high risk jobs; except for work performed in HUD-assisted housing when it is required.)

However, a plan is only as good as the people implementing it. You, the maintenance staff, directly influence potential lead exposure because you work directly with lead-based painted surfaces on both the interior and exterior of the dwelling unit. When working on lead-based painted surfaces, you must follow the work practices described in this training in order to decrease the risk of lead exposure to the residents of the dwelling unit, yourself, and your family.

HOW IS THE WRITTEN MAINTENANCE PLAN IMPLEMENTED?

- Who do you contact if equipment is needed?
- What changes are needed (if any) in your work orders?
- Who informs contractors about lead-based paint hazards?
- How is information passed to residents and other workers?

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How Is the Written Lead Maintenance Plan Implemented?

The plan is implemented by everyone who is involved in working with lead-based paint. Looking at the elements of a written lead maintenance plan and who is responsible for implementing them is a good way to summarize this training.

- ❑ Who do you contact if equipment is needed?
- ❑ What changes are needed (if any) in your work orders?
- ❑ Who informs contractors about lead-based paint hazards?
- ❑ How is information passed to residents and other workers?

ELEMENTS OF A WRITTEN PLAN

- Identification of Lead-Based Paint Surfaces
- Identification of Low and High Risk Work
- Worker Training

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Identification of Lead-Based Paint Surfaces

It makes your job easier to know where the lead-based paint is located. So, testing painted surfaces is the best approach, but may not be the most feasible. If testing cannot be done due to time or financial constraints, or if previous testing was found to be deficient, an alternative approach is to simply assume any painted surface constructed prior to 1978 contains lead-based paint.

Identification of Low and High Risk Work

Prior to assigning tasks, management must determine if a task will be low or high risk. The Planning Tool Lead Job Checklist or other similar form will indicate the level of risk, who should

perform the task, what equipment and materials are needed, how residents have been notified, and the work practices to be followed.

Remember, the factors that are used to determine the level of risk are the amount of dust that could be generated, the size of the job, and the condition of the surface or paint. If these conditions change at any time during a job, like a small hole in a ceiling becomes larger, you must notify management.

Worker Training

The written lead maintenance program should describe the steps followed when doing lead-based paint work, who will do the work, and how they will be trained.

The Planning Tool can be used to list lead-based paint tasks and the steps to be followed. This training program provides what the worker needs to know for most paint maintenance activities. Depending upon the task, workers may need to have additional training on hazard communication, respiratory protection, exposure monitoring, medical surveillance, and other pertinent topics.

Additional training may be required for lead-based paint maintenance jobs. This training program has focused on how to safely work in areas where there may be lead dust hazards. In the course of doing lead-based paint maintenance jobs, workers may need to use chemicals (cleaning materials) and respirators. Additional training programs are required by the Occupational Health and Safety Administration (OSHA) covering these areas. Chemical safety is covered by the Hazard Communication Standard or Right-to-Know (29 CFR 1910.1200 or 1926.59). Respirator safety is covered by the Respiratory Protection Program (29 CFR 1910.134).

Training opportunities that allow students to spend a half day in the field gives them a better opportunity to practice the processes and techniques learned in the classroom. It also gives the supervisor/instructor the opportunity to confirm that students have learned how to apply the learning on the job and to reinforce the importance of following the safety precautions.

Contractors also need lead safety training. All contractors bidding on jobs in housing constructed before 1978 should be informed of areas with lead-based paint before any job begins.

ELEMENTS OF A WRITTEN PLAN, CONTINUED

- Modification of Work Order Forms and System
- Education of Residents

IX-5

Modification of Work Order Forms and System

This course and the Lead-Based Paint Maintenance Planning Tool provide a system to address lead-based paint hazards to assign and document lead safe work practices as part of usual work orders.

Education of Residents

The resident's first introduction to lead-based paint maintenance jobs will most likely be the resident notification form. The resident notification should be written so that the resident can understand it.

Keep the form to one page and consider the reading level and language spoken and read by the residents.

The form should tell the resident:

- ❑ The nature of work,
- ❑ Length of work,
- ❑ Date and time work is to take place,
- ❑ Precautions to protect residents and their belongings,
- ❑ Temporary relocation requirements (if any),
- ❑ Brief description of work, and
- ❑ Methods for keeping children and pets out of the work area.

The Lead Job Checklist in the Planning Tool provides this information. Because you have completed this course, you can tell residents about the protective clothing, equipment, and procedures you use. If residents have questions regarding medical, legal, or other information, refer them to the appropriate facility representative. Such ongoing communication is very important to give residents a greater understanding about minimizing lead exposure and to ensure that they are less likely to overreact.

Increasingly, residents will become more familiar with the "Protect Your Family From Lead in Your Home" brochure, as new residents will receive the brochure when they rent the apartment.

ELEMENTS OF A WRITTEN PLAN, CONTINUED

- Designation of Persons in Charge of Lead Work
- Quality Assurance and Quality Control
- Documentation

IX-6

Designation of Persons in Charge of Lead Work

The Lead-Based Paint Maintenance Planning Tool Lead Job Checklist guides the supervisor to assign properly trained personnel to perform maintenance that may disturb lead-based paint.

Quality Assurance and Quality Control

The Planning Tool provides a checklist to follow and file with the work order to document that the job was performed properly. Dust wipe testing is recommended following the cleanup.

Documentation

Documentation should be maintained on the methods used to decide on the level of risk and the notification of residents.

Documentation for training should also be maintained and should include:

- ❑ Completed sign-in sheet,
- ❑ Copy of the training agenda,
- ❑ Copy of training certificates (if any),
- ❑ Examination grade for each attendee (if any), and
- ❑ Copy of the examination (if any).

Module X

Module X—Taking this Message Home: Working Lead Safe Everyday

MOD X - TAKING THIS MESSAGE HOME

Learning Objective

- Answer correctly questions posed after four standard scenarios on working safely with lead.

X-1

FOUR SCENARIOS

- **Scenario 1:** Lunch Break
- **Scenario 2:** Managing Multiple Demands
- **Scenario 3:** Reporting a Potential Lead-Based Paint Hazard
- **Scenario 4:** Responding to Resident Requests to Do Additional Work

X-2

Upon completion of this module, you should be able to:

- ❑ Answer correctly questions posed after four standard scenarios on working safely with lead.

A Course Review

Now back to our friends that we caught creating hazards earlier today. Now they have learned how to work safe but they are still learning how to apply what they've learned on the job. See what you think.

Scenario 1: Lunch Break

Q: Will you need extra equipment to ensure that these tasks are handled safely?

Q: Do you have access to all the equipment you will need?

Scenario 2: Managing Multiple Demands

The following issues are raised in the scenario:

- ❑ Isolating residents from the work area
- ❑ Managing the conflict when asked to leave a work site in the middle of a job
- ❑ Taking safety precautions if you have to leave a task uncompleted
- ❑ Telling a resident of the importance of not disturbing a work area

Q: What precautions must be taken to isolate residents from the work area?

Q: How do you manage a conflict when asked to leave a work site in the middle of the job? Should there be a discussion, prior to starting a lead-based paint job, on the procedures to be followed if there is a need to stop work before a task is completed?

Q: Who should be a part of this discussion?

Q: What safety precautions must you take if you have to leave a job before it is completed?

Scenario 3: Reporting A Potential Lead-Based Paint Hazard

The following issues are raised in this scenario:

- ❑ Managing lead-based paint to protect residents.
- ❑ Reporting lead-based paint conditions that are not listed on the work order.
- ❑ Telling the resident of a potential problem.
- ❑ Managing jobs that involve more risk than the work order describes.

Q: What is the best way to report a potential problem or conditions that are not listed on the work order?

Q: Is this your responsibility?

Q: How do you tell the resident of potential problems?

Scenario 4: Responding to Resident Requests to Do Additional Work

The following issues are raised in this scenario:

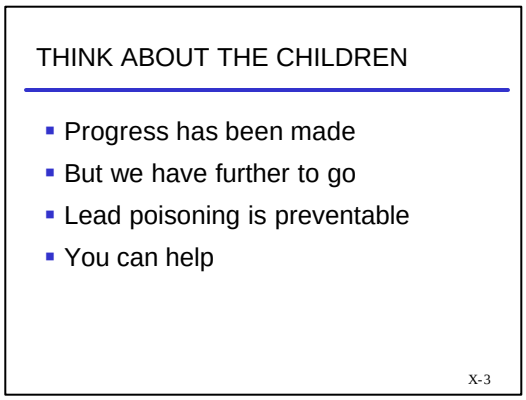
- ❑ Being asked to do work for which you are not qualified.
- ❑ Knowing the importance of using the proper equipment to perform a job safely.
- ❑ Explaining to a resident the importance of following lead safe work practices.

Q: What do you do if a resident (or management) asks you to do work that is not on your work order?

Q: Do you respond differently based upon your qualifications to do the work or on the size of the task?

Q: How do you tell a resident that you'd like to do that task, but it may involve lead-based paint and you're not prepared to do that type of job?

Q: Should this be your responsibility?



Think About the Children

We have a big problem with lead exposure to our nation's children. But we have come a long way. In 1978 we had 4.5 million kids with excessive lead exposure, today the number is down to approximately 434,000 due to changes in gasoline, food packaging, and paint. Lead poisoning is preventable, and your work can continue to reduce that number.

Skills Assessment

ATTACHMENT 1
SKILLS ASSESSMENT CHECKLIST – FOR EXERCISE

PREPARE THE WORK AREA	**Pass/Fail**	**Criteria/Comments** (to be added by trainer)
1. Before you begin, ask… • Will a clearance test be required? • Have the residents been notified? • Are there any special situations in the unit?		
2. Determine the work area. Make sure it is of the appropriate size and shape for the task.		
3. Select appropriate supplies and equipment. Place them in work area.		
4. Post warning signs in proper locations.		
5. Place warning tape around the perimeter, if needed. Secure it to non-movable objects.		
6. Put on respirator, protective clothing or shoe covers, if needed.		
7. Pre-clean if contamination and debris are extensive – pick up debris and HEPA vacuum.		
8. Move all movable furniture and belongings.		
9. Cut plastic sheeting to proper size.		
10. Cover floor/ground appropriately. Tape plastic securely to floor. Cover furniture if unmovable.		
11. Close and cover windows and doors as appropriate.		
12. Turn off ventilation system and seal vents if necessary.		

WORK SAFELY	**Pass/Fail**	**Comments**
13. Stabilize the paint correctly • Check for sources of paint deterioration (e.g. leaks, rotted substrate) and repair them. • Wet scrape or wet sand the deteriorated paint. • Clean the scraped surface. • Repaint the surface – prime and topcoat.		
14. Work Wet • Use wet sanding, wet scraping. • Control dust by misting.		
15. Work Clean • Pick up debris as it is generated. • Stay in the work area. HEPA vacuum off shoes or remove shoe covers if you must leave.		
16. Work Smart • Avoid dangerous practices – e.g. power tools. • Do not eat or smoke in the work area. • Decontaminate yourself before you leave the work area. • HEPA vacuum clothes; place disposable suit in heavy duty poly bag.		
CLEANUP THE WORK AREA	**Pass/Fail**	**Comments**
17. Select the equipment needed to perform cleanup.		
18. Pick up large debris and sheeting • Mist and sweep debris from plastic sheeting; place in heavy duty poly bag. • Fold plastic sheeting on itself and remove. • Put plastic sheeting in a heavy duty poly bag and label.		

CLEANUP CONTINUED	Pass/Fail	Comments
19. Do final cleanup in proper order: HEPA vacuum, wash, HEPA vacuum. • Use HEPA vacuum correctly. • Vacuum all surfaces using proper attachments for each type of surface. • Start at ceiling and work down. • Clean floor last. • Start at the farthest point from the entry way and move toward the entryway door.		
20. Wash surfaces correctly • Use detergent with proper dilution (per manufacturer's instructions). • Scrub surfaces completely. • Washing from ceiling down. • Wring out rag/sponge/mop into empty bucket before placing back in soapy water. • Rinse all surfaces using clean rag/sponge/mop and water. • Dispose of dirty water in toilet; not in sink or yard and rags/sponges/mop heads in heavy duty poly bags. • (Reminder: Do final HEPA vacuuming).		
21. Package and label waste.		
22. Decontaminate self, supplies, equipment.		