Painting Repair, and for Renovation, Safety

LEAD

JOINT EPA - HUD CURRICULUM

Initial Training Course
Certified Renovator

EPA-740-R-09-00
Student Manual

Model
Certified Renovator
Initial Training Course

Module 1: Why Should I Be Concerned About Lead Paint?
Module 2: Regulations
Module 3: Before Beginning Work
Module 4: Contain Dust During Work
Module 5: During the Work
Module 6: Cleaning Activities and Checking Your Work
Module 7: Recordkeeping
Module 8: Training Non-Certified Renovation Workers

EPA-740-R-09-002
Introduction
**Lead Safety for Renovation, Repair, and Painting**

- Welcome and Introductions
  - Please tell the class:
    Your name, the company you work for, and what you do.

- Module Overview:
  - Course agenda
  - Course manual
  - You will learn...
  - This course...

---

**Why Are You Here?**

- The traditional renovation work you do now can create significant dust-lead hazards if lead-based paint is disturbed.

- The leaded dust generated by traditional renovation work can cause lead poisoning in children. It can also poison pregnant women, yourself and other workers and even pets. Practical changes in work practices can minimize and contain dust. The use of lead-safe work practices makes the job safer and reduces your liability exposure.

- EPA’s Renovation, Repair and Painting Final Rule (40 CFR 745) requires that renovations conducted for compensation, must be performed by Certified Firms using Certified Renovators. Renovation firms that wish to work in pre-1978 homes and child-occupied facilities must apply to EPA and pay a fee in order to become certified. Renovators seeking to become Certified Renovators must successfully complete an EPA-accredited renovator course or a course accredited by an EPA authorized State or Tribe. This course is the EPA model course for Certified Renovators and as such meets all requirements in 40 CFR 745.90.

- This course will teach you how to comply with the EPA Renovation, Repair and Painting Rule and the HUD Lead Safe Housing Rule, and how to perform lead-safe work practices safely and effectively.

- Once you have successfully completed a Certified Renovator Course, delivered by an EPA-accredited training provider, you are an EPA Certified Renovator. EPA Certified Renovator status will allow you to do lead safe renovation, repair, and painting work in pre-1978 housing and in child-occupied facilities where work will disturb lead-based paint. Your certification is valid for five years from the date of completion of the course. To renew certification after five years, you must successfully complete an EPA-accredited Certified Renovator Refresher Course before your initial certification expires. Refresher training must be taken every five years to maintain certification. If the certified renovator training is not refreshed within five years of the previous training, you must retake the initial course to become certified again.
Course Agenda

- Introduction and welcome
- Module 1: Why Should I Be Concerned About Lead Paint?
- Module 2: Regulations
- Break
- Module 3: Before Beginning Work
- Module 4: Contain Dust During Work
- Lunch
- Module 5: During the Work
- Break
- Module 6: Cleaning Activities and Checking Your Work
- Module 7: Recordkeeping
- Break
- Module 8: Training Non-Certified Renovation Workers
- Review
- Test
Training Manual Overview

• Eight modules
• Interactive and hands-on exercises, in 11 Skill Sets
• Key appendices
  • Appendix 1 - EPA’s Renovation, Repair, and Maintenance Program Final Rule (40 CFR Part 745)
  • Appendix 2 - U.S. Department of Housing and Urban Development (HUD) Requirements
  • Appendix 3 - Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools
  • Appendix 4 - Small Entity Compliance Guide to Renovate Right
  • Appendix 5 - Steps to LEAD SAFE Renovation, Repair, and Painting
  • Appendix 6 - Hands-on Exercises

Modules - In addition to this introduction, there are eight modules in this course:
• Module 1: Why Should I Be Concerned About Lead Paint?
• Module 2: Regulations
• Module 3: Before Beginning Work (includes Skill Set #1)
• Module 4: Contain Dust During Work (includes Skill Sets #2 - #5)
• Module 5: During the Work (includes Skill Set #6)
• Module 6: Cleaning Activities and Checking Your Work (includes Skill Sets #7 - #11)
• Module 7: Recordkeeping
• Module 8: Training Non-Certified Renovation Workers

Activities and Exercises - The course includes activities and exercises to help you identify methods for reducing the amount of dust you create, and containing and cleaning up the dust you do create. Many of the exercises and activities take place in small groups, so you will have an opportunity to share your experiences and ideas with others in the class.

Appendices - This manual has nine appendices that provide extra information that will help contractors.
• Appendix 1 - EPA’s Renovation, Repair, and Maintenance Program Final Rule (40 CFR Part 745)
• Appendix 2 - U.S. Department of Housing and Urban Development (HUD) Requirements
• Appendix 3 - Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools
• Appendix 4 - Small Entity Compliance Guide to Renovate Right
• Appendix 5 - Steps to LEAD SAFE Renovation, Repair, and Painting
• Appendix 6 - Hands-on Exercises
• Appendix 7 - State and Local Regulations
• Appendix 8 - Regulatory Status of Waste Generated by Contractors and Residents from Lead-Based Paint Activities Conducted in Households
• Appendix 9 - For More information

Test - Renovators must pass the test administered at the end of the course in order to earn certification. Failure to pass the test means you must retake the course.
You Will Learn...

- Why lead-based paint is a problem during renovations.
- What the EPA and HUD regulations require of Certified Firms and Certified Renovators.
- How to determine if lead-based paint affects work.
- How to begin the work.
- How to set up the work area to contain dust.
- How to work in a lead-safe manner.
- How to clean the work area and verify cleanliness.
- How to dispose of waste safely.
- How to document your work.

Module 1: Teaches the health problems related to lead, why lead is a problem you need to deal with, and who is put at risk if renovations are not handled correctly.

Module 2: Teaches what EPA and HUD rules require of Certified Firms and Certified Renovators.

Module 3: Teaches how to determine if lead-based paint affects your work, and how to educate owners and residents in target housing, or owners and adult representatives in child-occupied facilities about how the work will affect lead in their property. This module also discusses how to plan the work so that it is lead safe.

Module 4: Teaches how to properly set up the work area so that dust and debris created by your work do not contaminate the property and leave behind lead dust.

Module 5: Teaches how to work in a lead-safe manner and what practices are prohibited by the EPA and/or HUD rules; provides information on personal protective equipment.

Module 6: Teaches how to effectively clean up dust generated by the work performed in the home or child-occupied facility, and teaches Certified Renovators how to conduct a cleaning verification. This section also contains information about how to dispose of renovation waste.

Module 7: Teaches the requirements in the EPA and HUD Rules for creating and maintaining documentation of the work.

Module 8: Teaches the Certified Renovator how to train non-certified renovation workers in lead safe practices while on the job.
Lead Safety for Renovation, Repair, and Painting

This Course...

- Meets EPA and HUD requirements.
- Produces EPA Certified Renovators.
- Demonstrates your commitment to safety.

BUT,
- Is not an abatement course.
- Does not satisfy OSHA training requirements.
- May not satisfy state, local or tribal training requirements.

The Value of this Training
- This course meets EPA and HUD requirements for lead-safe work practices training under the RRP Rule.
- Renovators obtain EPA certification after successful completion of the course.
- Completing this training demonstrates your company’s competence to prospective clients and can be a marketing advantage that distinguishes your company from the competition.

Lead Abatement Training
- Lead abatement refers to work that is done for the specific purpose of permanently removing lead-based paint and lead-based paint hazards from a home. This course is not an abatement course designed to address the removal, encapsulation or enclosure of lead-based paint or lead-based paint hazards. This course is not an Operations and Maintenance course designed to manage lead-based paint in place using interim controls. To perform lead abatement work requires additional specialized training.

OSHA
- OSHA has training requirements for workers that employers should be aware of. For more information on OSHA requirements, visit www.osha.gov/Publications/osha3142.pdf.

State, Local, and Tribal Requirements
- Many states, localities and Indian tribes have their own lead-based paint requirements, including specific training and certification requirements. Check with your State, local or tribal housing and environmental agencies to obtain information about such requirements.
Module 1: Why Should I Be Concerned About Lead Paint?
Module 1: Why Should I be Concerned about Lead Paint?

Overview

• What is lead-based paint?
• What health risks and health effects are related to lead exposure?
• Why is lead-contaminated dust a problem?

Upon completion of this module, you will be able to explain:

• What lead-based paint is and why it is a problem for renovators.
• The health risks of lead to children and adults.
• Why we are concerned with lead-contaminated dust.
What Is Lead-Based Paint?

Federal standards define lead-based paint as:
- Any paint or surface coatings that contain lead equal to or in excess of 1.0 milligram per square centimeter or more than 0.5 percent by weight.
- Some states and localities regulate paint with lower concentrations of lead.
- It is the primary source of lead-contaminated dust in housing.

Why was lead used in paint?
- Lead was added for color and durability.
- Lead-based paint was banned in 1978.

Federal standards define lead-based paint.
- Lead-based paint is any paint or surface coatings that contain lead equal to or in excess of 1.0 milligram per square centimeter or more than 0.5 percent by weight.
- Paint with concentrations of lead lower than the definition above can still cause health problems. Even paint with a small amount of lead can account for a lot of lead in airborne or settled dust.
- Information on how to determine if a property contains lead-based paint is provided in Module 3.

Some states and localities regulate paint with lower concentrations of lead.
- You should check with your state and local health departments to see if they have requirements that are more stringent than the Federal requirements.

Why was lead added to paint?
- Lead was added for color and durability.
- Lead was also added to some other surface coatings, such as varnishes and stains.

Lead-based paint was banned from residential use in 1978
- In 1978, the Consumer Products Safety Commission banned the sale of lead-based paint for residential use. In practice, this means that homes built in 1978 could still have used lead-based paint, because existing supplies of paint containing lead would still have been available.
- This is why the year of construction is such an important consideration.
Health Risks of Lead

- Very hazardous to children.
  - Damages the brain and central nervous system; can cause decreased intelligence, reading and learning difficulties, behavioral problems, and hyperactivity.
  - Damage can be irreversible, affecting children throughout their lives.
- Hazardous to pregnant women.
  - Damage to the fetus.
- Also hazardous to workers and other adults.
  - High blood pressure.
  - Loss of sex drive and/or capability.
  - Physical fatigue.
- Lead exposure causes permanent damage.

Children under six are most at risk from small amounts of lead.
- Children are at a greater risk than adults because their bodies are developing. During normal and frequent playing or hand-to-mouth activity, children may swallow or inhale dust from their hands, toys, food or other objects.
- In children, lead can cause:
  - Nervous system and kidney damage.
  - Decreased intelligence, attention deficit disorder, and learning disabilities.
  - Speech, language, and behavior problems.

Among adults, pregnant women are especially at risk from exposure to lead.
- Lead is passed from the mother to the fetus and can cause:
  - Miscarriages
  - Premature births
  - Brain damage
  - Low birth weight

Health effects of lead in adults include:
- High blood pressure.
- Fertility problems in men and women.
- Digestive problems.
- Nerve disorders.
- Memory and concentration problems.
- Sexual disorders.
- Muscle or joint pain.
Symptoms Of Lead Poisoning are Not Always Obvious

- Symptoms are easily misinterpreted by medical personnel, thus delaying effective treatment and increasing the likelihood of permanent physical and mental damage.
- Only sure way to determine lead poisoning is to take a blood lead level (BLL) test.

Lead poisoning does not always have obvious symptoms.  
- The symptoms of lead poisoning are often non-specific, and are frequently attributed to other causes.
- Specific symptoms that people with lead exposure sometimes complain of include:
  - Headache
  - Stomach ache
  - Irritability
  - Fatigue
  - Loss of appetite
  - Joint and/or muscle pain
- Because many symptoms are non-specific or similar to flu symptoms, parents may not be alerted to get immediate medical attention for their children. This is critical for young children. The longer a young child stays untreated, the higher the risk of permanent brain damage.
- Workers with an occupational exposure to lead need to inform their doctors in order to give them all the background needed for an adequate evaluation of symptoms as possibly related to lead exposure.
- The best way to determine if lead is present in the body is by testing blood.
- The amount of lead in blood is measured in micrograms per deciliter (µg/dl) of the blood, a very small unit of measurement. A microgram is one millionth of a gram. That is like one penny out of $10,000. For reference, a standard size paper clip weighs about one gram, or one million times more than a microgram. A microgram is a very small amount of lead. Remember how small this amount of lead is as it applies to dust cleanup when we get to Module 4: Contain Dust During Work, Module 5: During the Work, and Module 6: Cleaning Activities and Checking Your Work.
Why are Dust and Debris a Problem?

• Renovation activities that disturb lead-based paint create dust and debris. Debris becomes dust.
• Lead-contaminated dust is poisonous.
• Very small amounts of lead-contaminated dust can poison children and adults.
  • Children swallow dust during ordinary play activities.
  • Adults swallow or breathe dust during work activities.
• Workers can bring lead-contaminated dust home and poison their families.

Dust and debris from renovation, repair, and painting jobs in pre-1978 housing and child-occupied facilities may contain lead.

• Pre-1978 paint may contain lead.
• Renovation, repair and painting jobs disturb paint that may contain lead. Any activity involving surface preparation, such as hand-scraping, power sanding, the use of heat guns above 1100°F Fahrenheit, and open flame burning, can generate lead dust. More complicated tasks such as removing building components and demolishing walls also can create a lot of dust.

Small amounts of lead-contaminated dust can poison children and adults.

• A tiny amount of lead can be extremely harmful.
• Lead-dust particles are often so small that you cannot see them, yet you can breathe or swallow them. These smaller, inhaled or swallowed dust particles are more easily absorbed by the body than larger particles, and can therefore more easily cause poisoning.
• Lead dust may be breathed or swallowed by children, residents and workers.
• Through normal hand-to-mouth activities, children may swallow or inhale dust on their hands, toys, food, or other objects. Children may also ingest paint chips.
• Adults can swallow or breathe dust during work activities.
  • When workers perform activities such as scraping and sanding by hand, or use a power sander or grinding tool, dust is created. The dust goes into the air that they breathe.
  • If workers eat, drink, smoke or put anything into their mouths without washing up first, they may swallow the leaded dust present.
A Little Dust Goes a Long Way

• You can’t see it.
• It’s hard to sweep up.
• And, it travels.

One gram of lead-based paint can contaminate a large area!

A little dust goes a long way.

• **You can’t see it.** Even a floor that looks clean can have leaded dust on it. Only a laboratory test can tell you for sure if an area is contaminated with lead.

• **It’s hard to sweep up.** Normal cleaning methods will not pick up all the dust in a work area. Sweeping is not enough. You need to use water, detergent and a HEPA vacuum to clean up dust effectively.

• **It travels.** Once dust is released, it is easily tracked around, inside and outside the work area. And, an exterior painting job can contaminate the inside of a home as the dust, chips and leaded soil are tracked inside.

Later in this course we will discuss in detail the EPA and HUD dust-lead hazard and clearance standards. The limits are included here to reinforce the idea that a very small amount of lead can cause health problems. These numbers represent the amount of lead measured in micrograms (1 millionth of a gram) that is allowed in an area one foot wide and one foot long (one square foot). More than this amount of lead in the specified areas is hazardous.

**EPA & HUD use these standards when clearance is performed:**

<table>
<thead>
<tr>
<th>Surface</th>
<th>Limit (µg/ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floors</td>
<td>40</td>
</tr>
<tr>
<td>Interior window sills</td>
<td>250</td>
</tr>
<tr>
<td>Window troughs</td>
<td>400</td>
</tr>
</tbody>
</table>

**NOTE:** States and localities may enforce lower standards.
Contractor discusses how lead safe work practices could have protected his kids from becoming lead poisoned.

The video shown at this point in the course is of Kevin Sheehan, a lead contractor, who discusses how he poisoned his family while working on older houses which contained lead-based paint. Kevin discusses the need for lead safety precautions during renovation work, shares the lessons he has learned, and reveals what can be done to keep people safe during work in older homes with lead-based paint.
Lead Safety for Renovation, Repair, and Painting

Video Clip of Parent of a Child Poisoned by Renovation

Parent Discusses Child Poisoned by Renovation Undergoing Treatment.
The video shown at this point in the course shows Maurci Jackson, a parent whose child became lead poisoned, discussing how hard it was to watch her daughter undergo “chelation” treatments to remove lead from her body. Maurci shares her fears about her child’s future health after being lead poisoned and her frustration that lead poisoning is completely preventable if those who disturb lead-based paint would just considered the consequences of working with lead improperly. She emphasizes the need for lead safety precautions and planning to prevent lead poisoning.

Note: Chelation treatment is a series of medical procedures that remove lead from the body.
Now You Know…

• What lead-based paint is and the adverse health effects of lead.
• Dust is the problem.
• Lead poisoning is hard to spot and the effects can be permanent.
• Kids are most at risk for lead poisoning.
• Lead poisoning is preventable.
Module 2: Regulations
Module 2: Regulations

U.S. Environmental Protection Agency (EPA):
• Established accredited training and certification programs for workers, supervisors, inspectors and risk assessors conducting evaluation or abatement of lead-based paint.
• Established requirements for pre-renovation education.
• Promulgated the Renovation, Repair, and Painting Program Final Rule (RRP Rule).

U.S. Department of Housing and Urban Development (HUD):
• Established actions in Federally-assisted target housing.
• Established Federal grant programs.
• Established guidelines for lead-based paint evaluation and control; established the Lead Safe Housing Rule.

U.S. Occupational Safety and Health Administration (OSHA):
• Established worker protection standards.

U.S. Environmental Protection Agency (EPA):
• EPA has established training requirements for people involved in lead abatement (the permanent removal of lead). Certified Renovators may not perform lead-based paint abatement unless they are Certified Lead Abatement Workers or Certified Lead Abatement Supervisors.
• Lead abatement is defined as any measure or set of measures designed to permanently remove or cover lead-based paint or lead-based paint hazards. Abatement includes, but is not limited to: (1) The removal of paint and dust, the permanent enclosure or encapsulation of lead-based paint, the replacement of painted surfaces or fixtures, or the removal or permanent covering of soil, when lead-based paint hazards are present in such paint, dust or soil; and (2) All preparation, cleanup, disposal, and post-abatement clearance testing activities associated with such measures. (40 CFR 745.223).
• Abatement does not include renovation, remodeling, landscaping or other activities, when such activities are not designed to permanently eliminate lead-based paint hazards, but are designed to repair, restore, or remodel a given structure or dwelling, even though these activities may incidentally result in a reduction or elimination of lead-based paint hazards. Furthermore, abatement does not include interim controls, operations and maintenance activities, or other measures and activities designed to temporarily, but not permanently, reduce lead-based paint hazards. (40 CFR 745.223).
• Module 3 has information on the pre-renovation education requirements.
• Details on the RRP Rule are in the slides following.

U. S. Dept. of Housing and Urban Development (HUD):
• If you work in Federally-assisted target housing, certain actions are required to address lead hazards. In these cases, the workers must have proper training. See Appendix 2 for more information on the HUD requirements for worker training and lead hazard reduction in Federally-assisted housing.
• HUD has a grant program to state and local governments for funding lead hazard reduction activities.
• Check with nearby states and localities to find out if there are any local programs (which may be state or Federally funded) that are designed to address lead hazards.

U. S. Occupational Safety and Health Administration (OSHA): OSHA has a Lead in Construction Standard which outlines worker protection requirements. Your employer should be aware of these. For more information, on the OSHA Lead in Construction Rule, see 29 CFR 1926.62 (http://www.osha.gov/Publications/osha3142).

State and Local Regulations: State and local regulations may also apply to the renovation work you do. Where applicable, these requirements will be covered at the end of this module.
Lead Safety for Renovation, Repair, and Painting

The RRP Rule

Addresses activities that disturb lead-based paint in target housing and child-occupied facilities. It requires:

- Renovators to be certified through training.
- Firms to be certified.
- Training providers to be accredited.
- Lead-safe work practices during renovations.
- Pre-renovation education in target housing and child-occupied facilities.
- On or after April 22, 2010, firms working in pre-1978 homes and child-occupied facilities must be certified and use lead-safe work practices during renovations.
- EPA may authorize states, territories and tribes to enforce the Rule.

EPA’s Renovation, Repair and Painting Final Rule:

- Published April 22, 2008, under the authority of the Toxic Substances Control Act (section 402(c)(3) of TSCA).
- After April 22, 2010, the final rule addresses lead-based paint hazards created by renovation, repair and painting activities that disturb lead-based paint in “target housing” and “child-occupied facilities.”
  
  **Target Housing** is a home or residential unit built on or before December 31, 1977, except:
  - Housing designated for the elderly or persons with disabilities (unless any child who is less than 6 years of age resides or is expected to reside in such housing).
  - Any zero-bedroom dwelling (e.g. studio apartments, hospitals, hotels, dormitories, etc).

  **A Child-Occupied Facility** is a pre-1978 building that meets all three of the criteria below:
  - Visited regularly by the same child, under 6 years of age.
  - The visits are on at least two different days within any week (Sunday through Saturday period), provided that each day’s visit lasts at least 3 hours.
  - Combined weekly visits last at least 6 hours, and the combined annual visits last at least 60 hours.

Child-occupied facilities may be located in a public or commercial building or in target housing. These facilities include schools, child care facilities, and daycare centers.

- **State Authorization**: EPA may authorize states, territories and tribes to enforce all aspects of the RRP Rule. Such states are called “Agreement states.” EPA enforces the Rule in non-Agreement states.

The Rule is effective April 22, 2010:

- Training providers must be accredited.
- Renovation firms must be certified.
- Renovators and dust sampling technicians must be trained and certified.
- Non-certified workers must work under and be trained on-the-job by a Certified Renovator.
- Work practices must be followed for work covered by the rule.
- Renovators must educate owners/occupants (Module 3).
The RRP Rule: Exclusions

- Renovation activities where affected components do not contain lead-based paint.
- Emergency renovations (requires cleanup and cleaning verification).
- Minor repair and maintenance activities. Note: This exclusion does not apply to window replacement, demolition or activities involving prohibited practices.
- Renovations performed by homeowners in their own homes.

The Renovation, Repair, and Painting rule does not apply to renovation work that meets the following exclusions.
- If the renovation only affects components that do not contain lead-based paint, the rule does not apply to renovation of these components.
- EPA has established limits (see below) for minor repairs or maintenance. Work that does not exceed these limits is exempt from the work practice requirements in the Rule. The EPA limits for minor repairs and maintenance are larger than the HUD limits (see the HUD box below).

Minor repair and maintenance activities have been defined in the Rule.
- EPA has defined minor repair and maintenance activities as below.
  1. Interior work disturbing less than 6 square feet (6 ft²) per room of painted surface is exempt from the work practices requirements in the Rule. Cleanup and cleaning verification are not required after minor repair and maintenance activities, unless they involve window replacement, demolition, or prohibited practices.
  2. Exterior work disturbing less than 20 square feet (20 ft²) of painted surface is exempt from the work practices requirements in the Rule. Cleanup and cleaning verification are not required after minor repair and maintenance activities, unless they involve window replacement, demolition, or prohibited practices.
  3. Minor repair and maintenance activities do not include window replacement, demolition or activities involving prohibited practices.
  4. The entire surface area of a removed component is the amount of painted surface disturbed. Work, other than emergency renovations, performed within a 30-day period must be considered the same job when determining the amount of paint disturbed.

The HUD Lead Safe Housing Rule applies to every home built prior to 1978 that receives Federal housing assistance, typically provided through state and local governments, where greater than HUD’s de minimis amounts of painted surfaces will be disturbed. HUD’s de minimis amounts are: 2 square feet of interior lead-based paint, 20 square feet of exterior lead-based paint or 10% of the total surface area on an interior or exterior type of component with a small surface area that contains lead-based paint. Examples include window sills, baseboards, and trim.
The RRP Rule:  
"Opt-Out" Provision

- Homeowners may sign a statement to opt out of the work practice requirements in the Rule, if all of the following are true:
  - The owner resides in the house;
  - No child under 6 years old resides in the house and the house is not a child-occupied facility;
  - No pregnant woman resides in the house;
  - No child-occupied facility exists on the property; and,
  - The owner signs a written acknowledgement that the Certified Firm is not required to use work practices found in the Rule.

Certified Firms have the knowledge and training necessary to prevent lead contamination of the home through the use of safe work practices in the home where lead will be disturbed. EPA strongly encourages those homeowners who qualify to opt out of the work practice requirements to seriously consider the use of Certified Firms when performing renovations that disturb known or presumed lead-based paint.

Prior to the decision to opt out of the lead-safe work practices requirements, the homeowner must receive the Renovate Right pamphlet as required under the Pre-Renovation Education Rule. Once informed about the safety issues related to disturbing lead during renovation, the homeowner must meet all four qualifications to be eligible to opt out of the work practice requirements in the Rule.

1. The owner must live in the residence to be renovated; and,
2. There must not be children under 6 years of age residing in the home; and,
3. There must not be a pregnant woman residing in the home; and,
4. No child-occupied facility is present on the property; and,
5. The homeowner must sign a statement that the Certified Firm is not required to follow the work practices requirements found in the Rule.

HUD does not allow owners to opt out of lead-safe work practices in its assisted housing. The HUD Lead Safe Housing Rule applies to every home built prior to 1978 that receives Federal housing assistance where greater than 2 square feet of interior or 20 square feet of exterior lead-based paint will be disturbed during renovation, repair or painting.
The RRP Rule: Firm Certification

- On or after April 22, 2010, all covered renovations must be performed by Certified Firms, using Certified Renovators and other trained workers.
- To become certified, firms must submit an application, and pay a fee, to EPA. Firms may begin to apply for certification on October 22, 2009.
- Certifications will be good for 5 years.
- Certification allows the firm to perform renovations in any non-authorized state or Indian tribal area.

- On or after October 22, 2009, firms may apply to EPA to become certified.
- On or after April 22, 2010, no firm working in target housing or child-occupied facilities, where lead-based paint will be affected by the work, may perform, offer or claim to perform renovations without Firm Certification from EPA, or an EPA-authorized agreement state, territory, or Indian tribe.
- One EPA renovation firm certification is all that is needed for a renovation firm to work in any non-authorized state/territory/tribal area. Firm certification is not the same as the personal certification attained by each renovator’s successful completion of this course.
- States, territories and tribes may seek authorization from EPA to operate their own programs. Also, states, territories and tribes, whether authorized by EPA or not, can establish additional requirements for firms working within their jurisdictions. Be sure to determine if your state, territorial or tribal government has additional regulations that may affect renovation in your community.
The RRP Rule: Firm Responsibilities

• Ensure overall compliance with the RRP Rule.
• Ensure that all renovation personnel are Certified Renovators or have been trained on-the-job by Certified Renovators.
• Assign a Certified Renovator to all jobs.
• Meet pre-renovation education requirements.
• Meet recordkeeping requirements.

- The Certified firm must ensure that everyone on the renovation, repair or painting job is trained to perform lead-safe work practices during the work. EPA requires all persons on the job to be trained. The person responsible for lead-safe work practices must be a Certified Renovator. Other firm employees (non-certified renovation workers), working on the job, must be trained on-the-job by Certified Renovators, or must be Certified Renovators themselves. This could be accomplished by:
  - Having all employees trained as Certified Renovators; or,
  - Having at least one person trained as a Certified Renovator, who will then train the rest of the employees in lead-safe work practices. Note that this training must be performed by a Certified Renovator.
- The Certified Firm must designate a Certified Renovator: to conduct set-up activities; to insure that the renovation is performed in accordance with work practice standards; to verify work and cleanup activities using the cleaning verification procedure; and, to train non-certified renovation personnel on-the-job in lead-safe work practices.
- The Certified Firm must ensure that the renovation is performed in accordance with the work practice requirements in the Rule.
- The Certified Firm is responsible for complying with pre-renovation education requirements.
- The Certified Firm is also responsible for keeping all records including:
  - Pre-renovation education documentation (proof of receipt, proof of delivery, waivers, etc.);
  - Documentation of lead-based paint;
  - Training and certification records; and,
  - Cleaning verification records.

Note: Recordkeeping is covered in detail in Module 7.
The RRP Rule: Individual Certification

- To become a Certified Renovator, an individual must take an EPA-approved 8-hour training course from an EPA-accredited training provider.
- The course completion certificate serves to certify renovators (no application to EPA is required).
- Refresher training is required every 5 years.
- Workers do not need certification so long as on-the-job training is received from a Certified Renovator and the work is not HUD-regulated.

On or after April 22, 2010, all renovations must be directed by Certified Renovators. Individuals may become Certified Renovators by completing an EPA-approved 8-hour training course in lead-safe work practices taught by an EPA-accredited training provider. Successful completion of that course will result in a 5 year certification as a Certified Renovator. To maintain certification, Certified Renovators must take an EPA-approved 4-hour refresher course taught by an EPA-accredited training provider, before their certification expires.

No application or fee is required to become a Certified Renovator. Instead, the course completion certificate serves as the renovator certification. A “copy” of the initial and/or refresher course completion certificate must be available on-site during the work.

States, territories and tribes may establish requirements for individual renovators working within their jurisdictions. Be sure to determine if your state, territorial or tribal government has additional regulations that may affect what you must do and where you may work.

HUD requires instructor-led training for all workers unless they are supervised by a certified abatement supervisor (who, under the RRP Rule, must also be a Certified Renovator).
Lead Safety for Renovation, Repair, and Painting

The RRP Rule: Certified Renovator Responsibilities

- Perform work and direct lead-safe work practices.
- Provide on-the-job training to non-certified workers.
- Keep a copy of the initial and/or refresher training certificates onsite.
- Use EPA-recognized test kits to identify lead-based paint.
- Be physically present while posting signs, containing work areas, and cleaning work areas.
- Be available by telephone when off-site.
- Maintain the containment to keep dust and debris within the work area.
- Implement the cleaning verification procedure.
- Prepare and maintain required records.

The RRP Rule requires that an individual Certified Renovator be responsible for the renovation job regardless of the level of training and certification of the other persons working on the job. This individual Certified Renovator has the following responsibilities.

1. Perform work and direct the work of non-certified renovation workers.
2. Train all non-certified workers on-the-job in lead-safe work practices.
3. Maintain copies of initial and/or refresher training certifications onsite.
4. Conduct testing for lead-based paint using EPA-recognized test kits and report findings.
5. Remain onsite during the sign posting, work area setup, and cleanup phases of work.
6. When not on site, be available by telephone or pager.
7. Make sure that the containment is maintained in a way that prevents the escape of dust and debris. This responsibility implies a need to determine which work practices should be used to minimize dust.
8. Conduct the cleaning verification procedure to make sure that the work is complete and that the work area is ready to reoccupy.
9. Prepare a summary of the work, maintain training and certification records, and certify that all work was done in a lead safe manner.
The RRP Rule: Work Practice Standards

The Renovation, Repair, and Painting Final Rule covers setup of the work area, prohibited work practices, cleanup and the cleaning verification procedure.

- **Setup practices**, such as posting signs and containing the work area, will be covered in Module 4.
- **Prohibited practices** and dust reduction suggestions will be covered in Module 5.
- **Cleanup practices and cleaning verification procedures** will be covered in Module 6.
- **Recordkeeping** will be covered in Module 7.

HUD has additional work practice requirements. See Slide 2-13.
The RRP Rule: Enforcement

- EPA may suspend, revoke, or modify a firm’s certification if the Certified Firm or Certified Renovator is found to be in non-compliance.
- Those firms found to be non-compliant may be liable for civil penalties of up to $32,500 for each violation.
- Those firms who knowingly or willfully violate this regulation may be subject to fines of up to an additional $32,500 per violation, or imprisonment, or both.

Enforcement:
- EPA has the authority to seek civil fines of $32,500 per offense and an additional criminal fine of $32,500 plus jail time for knowing and willful violations of the Renovation, Repair, and Painting Rule requirements.
- EPA can also revoke certification for of a Certified Firm or a Certified Renovator who violates Renovation, Repair, and Painting Rule requirements.
- Note that violators may be both Certified Renovation Firms and non-certified contractors who are not aware of or have ignored the requirement to become a Certified Renovation Firm.
HUD’s Lead Safe Housing Rule

- Covers federally-owned or -assisted target housing and federally-owned target housing being sold. Renovators should ask if the housing receives financial assistance.
  - If yes, the renovator should ask the owner to find out if the assistance is federal assistance.
- HUD’s rule has evaluation and control requirements based on type of assistance:
  - Visual assessment, lead paint inspection;
  - Paint stabilization, interim control, abatement;
  - Ongoing lead-based paint maintenance.

HUD requirements for federally assisted housing are similar to those in the EPA rules with some exceptions. In this curriculum the differences between the HUD rules and the RRP Rules will be highlighted when they occur by special text boxes containing the HUD logo. These boxes are located at the bottom of pages on which an EPA requirement and a HUD requirement differ. Appendix 2, contains an overview of the HUD requirements, and a table detailing differences between the rules.

The HUD "Lead Safe Housing Rule" covers pre-1978 Federally-owned or assisted housing and Federally-owned housing which is being sold. Housing owned and operated by a Federal agency other than HUD may be covered by this regulation.

HUD’s rule does not cover “Child-Occupied Facilities” unless they are part of a residential property covered by the rule. This differs from the EPA Renovation, Repair and Painting Rule, which covers housing and child occupied facilities, whether or not they are federally-assisted. Wherever the EPA regulations and HUD regulations differ, the more protective standard must be followed.

HUD has many programs that provide financial assistance, for example: rehabilitation, community development, acquisition assistance, etc. HUD requires addressing lead-based paint hazards (such as peeling paint, friction and impact surfaces, and high lead dust levels) by linking those activities to the HUD financial assistance. When asking clients if the housing is receiving federal assistance, renovators should recognize that the assistance may come through a state or local government, community development corporation or other local entity, so they may have to ask the client to check into the ultimate source of the assistance funds.

HUD does not recognize on-the-job worker training alone, and generally requires all individuals performing interim controls (see Slide 2-12) of lead hazards in Federally-owned and Federally-assisted housing to complete a HUD-approved training course. HUD’s training requirements for work other than abatement are satisfied by successful completion of this EPA/HUD jointly approved Certified Renovator Course.
HUD’s Lead Safe Housing Rule: Safe Work Practices

- HUD’s rule requires lead safe work practices for:
  - Paint stabilization
  - Interim control of identified lead-based paint hazards
  - Rehabilitation (renovation)
  - Standard treatments
  - Ongoing lead-based paint maintenance
  - HUD’s de minimis level is smaller than the RRP Rule’s minor repair and maintenance level

The HUD Lead Safe Housing Rule requires lead safe work for the activities listed on the slide. It specifies prohibited practices, requirements for protecting occupants, and preparing the work site. Special cleaning techniques must be used and clearance achieved.

Lead safe work practices are required during:
- Paint Stabilization – Renovation to repair non-intact painted surfaces (flaking, peeling, or otherwise damaged) by performing substrate repair (if needed), surface preparation and repainting. The result is an intact painted surface.
- Interim Controls - Interim controls are defined by HUD to include repairs, painting, temporary containment, specialized cleaning, clearance, ongoing lead-based paint maintenance activities, and the establishment and operation of management and occupant education programs.
- Rehabilitation – This is HUD’s term for the renovation of properties.
- Standard Treatments - a set of measures that reduce all potential lead-based paint hazards in a dwelling unit when lead-based paint is presumed to be present (no lead-based paint evaluation is performed); all deteriorated paint is treated as a lead-based paint hazard.
- Ongoing Maintenance – Normal maintenance activities.

In Federally-owned/assisted target housing, all areas of deteriorated paint in the work area must be repaired. Work affecting less than the small – "de minimis" – amounts listed below is not required to follow the lead safe work practices and clearance requirements in the HUD Rule. HUD’s "de minimis" limits are smaller than the limits for minor repair and maintenance activities in the EPA’s Renovation, Repair, and Painting Rule. HUD’s "de minimis" amounts are:
- 2 square feet in any one interior room or space.
- 20 square feet on exterior surfaces.
- 10% of the total surface area of small interior or exterior component type.

HUD’s clearance requirements are covered in Module 6. In general, clearance is required after all work above HUD’s de minimis amounts, and is performed by a certified professional, such as a Lead Inspector, Lead Risk Assessor, or Dust Sampling Technician, who is independent of the Certified Renovation Firm. State and local jurisdictions may have different clearance requirements than HUD’s and EPA’s; the most stringent requirements must be used.
The HUD Lead Safe Housing Rule (LSHR) covers renovation work in Federally-assisted or owned target housing, and specifically addresses the following lead safe activities.

**Training:** EPA requires that Certified Renovators be responsible for renovation projects. Because of this requirement, there are now two major training options for renovation work under the LSHR:

- All renovation workers on the job are trained as Certified Renovators; or,
- The designated Certified Renovator is also a Certified Lead Abatement Supervisor, and all workers who are not certified renovators have on-the-job training in lead-safe work practices (see Module 8).

**Occupant Protection and Worksite Preparation:** Occupants have to be kept out of the work area during the renovation work, and must be relocated from the unit during longer renovation projects. EPA-recognized test kits may not be used to test for lead-based paint (LBP); only a Certified Lead Inspector or Risk Assessor may determine whether LBP is present.

**Prohibited Practices:** HUD prohibits the same practices as the EPA RRP Rule, plus three more:

- Heat guns that char paint;
- Dry scraping or sanding except within 1 ft. of electrical outlets; and,
- Use of a volatile stripper in poorly ventilated space.

**De minimis levels:** HUD has a smaller *de minimis* threshold for interior work than EPA’s limit for minor repair and maintenance activities. See the notes on the previous slide for details.

**Clearance Testing:** HUD requires a clearance examination after renovation work above the *de minimis level*, in homes regulated by the LSHR. HUD requires a clearance examination by a party independent of the renovator, and, therefore, does not allow acceptance of the Certified Renovator’s visual inspection or use of the cleaning verification procedure. When the HUD LSHR applies to your work (see Appendix 2), a clearance examination must be performed by a certified professional such as Lead Inspector, Lead Risk Assessor, or Dust Sampling Technician. Some state and local authorities have different clearance requirements and standards.

**Occupant Notification:** HUD requires notices to be distributed to occupants within 15 days after LBP or LBP hazards in their unit (and common areas, if applicable) are identified, and within 15 days after completion of the hazard control work in their unit or common areas.
Know the EPA and HUD Rules!

To obtain a copy of the regulations contact the National Lead Information Center at 1-800-424-LEAD.

You may also download the rules and other information from the following websites:

- www.epa.gov/lead
- www.hud.gov/offices/lead

Individuals and firms performing renovation, repair, and painting in pre-1978 dwellings and child-occupied facilities should understand the EPA Renovation, Repair, and Painting Final Rule. The EPA Renovation, Repair, and Painting Final Rule can be found in Appendix 1.

Individuals performing renovation, remodeling, and rehabilitation in pre-1978 housing that is Federally-assisted, need to understand the HUD Lead Safe Housing Rule. Appendix 2 contains more information on the HUD Lead Safe Housing Rule.
State and Local Regulations

- States and localities may have different regulations than EPA and HUD for renovations in target housing.
- Check with your state and local housing and environmental agencies to obtain information about such requirements.
- Appendix 7 is reserved for copies or summaries of state and local regulations.

Reserved for student notes on state and local regulations for renovation that differ from the EPA and HUD regulations.
Now You Know…

- That the EPA Renovation, Repair, and Painting Program Final Rule (RRP Rule) applies to renovation in housing and child-occupied facilities built before 1978 that contain lead-based paint.
- To always take into account the requirements and responsibilities of certification for Certified Firms and Certified Renovators, and to re-certify every 5 years.
- To comply with setup of the work area, prohibited work practices, cleanup and the cleaning verification procedure requirements in the Rule.
- To determine whether your renovation job is regulated by EPA, HUD, both, or neither.
Module 3: Before Beginning Work
Module 3: Before Beginning Work

Overview

This module teaches you:

• To educate owners and residents.
• That the use of lead-based paint was widespread.
• To determine if lead-based paint is present.
• To use EPA-recognized test kits to check for lead-based paint.
• How to decide which rule(s) apply.

Module Overview

• The module also considers the important questions that must be asked at the beginning of a job to establish whether a job is covered by the RRP Rule and/or the HUD Rules, and what requirements apply.
Lead Safety for Renovation, Repair, and Painting

**Educate Owners and Residents**

**The Pre-Renovation Education Rule:**
- Requires Renovation Firms to provide the *Renovate Right* pamphlet to owners/residents prior to renovation activities in pre-1978 housing and child-occupied facilities.
- Specifies requirements for educating residents/occupants and delivering the *Renovate Right* pamphlet that vary by type of property and the area being renovated.

**Under the RRP Rule, Certified Firms MUST:**
- Give homeowners/residents and child-occupied facility owners/adult representatives copies of the *Renovate Right* pamphlet.
- Let parents/guardians of children using a child-occupied facility know about the renovation and how to get a copy of the *Renovate Right* pamphlet.
- Get confirmation of receipt of the *Renovate Right* pamphlet from owners, or evidence that the pamphlet was delivered to tenants/residents.
- Keep all records for at least 3 years.

**Exclusions:** The Pre-Renovation Education Rule covers the same renovation activities that are covered by the Renovation, Repair, and Painting Rule. The same exclusions apply, except that the owner/occupant cannot opt out of pamphlet delivery. (Refer to Module 2 for more information on exclusions.)

**Work in Homes:** No more than 60 days before beginning a renovation, Certified Renovation Firms must distribute the *Renovate Right* pamphlet to the owners and residents of the pre-1978 housing to be renovated.
- Firms must either obtain the owner’s written acknowledgment or proof that the pamphlet was sent by certified mail, return receipt requested, at least 7 days before the renovation began.
- For tenants, Certified Firms must either obtain a written acknowledgment of receipt, or document that the firm delivered the pamphlet and was unable to obtain a written acknowledgment.
- All proof of receipt/mailing/delivery records must be kept for 3 years after completion of the renovation.
- Sample forms to document confirmation of receipt are included in the *Renovate Right* pamphlet.

**Work in Common Areas:** No more than 60 days before beginning a renovation, Certified Renovation Firms must provide the *Renovate Right* pamphlet to the owner of pre-1978 housing being renovated. Firms must provide written notification to all residents in the affected units of the property being renovated, must notify affected residents about where information is posted if work in nearby common areas will affect them. The following information should be posted about work in common areas:
- Describing the nature and location of the work;
- Listing the work start and end dates; and,
- Providing the *Renovate Right* pamphlet or information on how to obtain a free copy of the pamphlet. This information may be provided to tenants by mail, hand-delivery, or by posting signs containing this information where they are likely to be seen by the residents of all affected units.

**Work in Child-Occupied Facilities:** No more than 60 days before beginning a renovation, Certified Renovation Firms must distribute the *Renovate Right* pamphlet to the owner of the building and to an adult representative of the child-occupied facility, following the same documentation requirements as for homes. Firms must also provide notification to parents and guardians of children using the child-occupied facility, following the same requirements as for tenants affected by renovations in common areas.

To obtain copies of the *Renovate Right* pamphlet visit the EPA website at [www.epa.gov/lead](http://www.epa.gov/lead), or contact the National Lead Information Center at 1-800-424-LEAD (5323). The pamphlet may be copied for distribution as needed to comply with pre-renovation education requirements.
How Widespread is Lead-Based Paint in Housing?

<table>
<thead>
<tr>
<th>Year House Was Built</th>
<th>Percent of Houses with Lead Based Paint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 1940</td>
<td>86 percent</td>
</tr>
<tr>
<td>1940-1959</td>
<td>66 percent</td>
</tr>
<tr>
<td>1960-1978</td>
<td>25 percent</td>
</tr>
<tr>
<td>All Housing</td>
<td>35 percent</td>
</tr>
</tbody>
</table>


Homes built in 1978 and earlier
Approximately 34 million pre-1978 housing units contain paint that meets the Federal definition of “lead-based paint” (Source: American Healthy Homes Survey: Draft Final Report for Peer Review: Lead and Arsenic Findings, October 7, 2008).

- EPA’s RRP Rule assumes that any house built before 1978 contains lead-based paint, unless the house has been tested for lead-based paint and the results indicate that the house does not contain lead-based paint.
- Components most likely to be coated with lead-based paint include windows and doors (interior and exterior), as well as exterior walls and porches.

Homes built before 1960
Homes built before 1960 are more likely than homes built after 1960 to contain lead-based paint and are also more likely to have deteriorated paint surfaces due to age. In addition, concentrations of lead in paint were higher prior to the 1950’s when paint companies began to use less lead in paint they manufactured.

Consider:
- 86% of pre-1940 homes contain lead-based paint on at least one surface.
- 66% of homes built from 1940 to 1959 contain lead-based paint on at least one surface.

Note: Determining the age of the property may require some investigation. If the owner does not know or have access to records, property information in many localities can be accessed from review of court registration or tax records held by the office of the tax assessor in the community or county where the property is located. If you don’t know the age of the building, assume it was built before 1978.
# How to Determine if Lead-Based Paint is Present

- **Paint testing must be performed prior to renovation on all surfaces to be affected by the work, or you must presume the paint is lead-based. Any testing must be performed by the appropriate qualified professional.**

<table>
<thead>
<tr>
<th>Type of Paint Testing for Renovations</th>
<th>Who can do the testing?</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA-recognized test kits</td>
<td>Certified Renovators</td>
</tr>
<tr>
<td>X-Ray Fluorescence instruments</td>
<td>Certified lead-based paint inspectors or risk assessors</td>
</tr>
<tr>
<td>(surface-by-surface)</td>
<td></td>
</tr>
<tr>
<td>Paint chip sampling and laboratory testing</td>
<td>Certified lead-based paint inspectors or risk assessors</td>
</tr>
</tbody>
</table>

**Surface-by-Surface or Limited Testing:** Lead-based paint can only be identified by testing paint. A surface-by-surface evaluation of painted surfaces (a lead inspection) and all paint-chip sampling must be conducted by a Certified Lead Inspector or Certified Lead Risk Assessor. Whether paint testing is accomplished by an inspection or by limited testing, the results of testing only apply to the work if the surfaces covered by the renovation are covered by the testing report. A property owner may provide a report from a Certified Lead Inspector/Risk Assessor that proves no lead-based paint is present, in lieu of testing affected surfaces. If no testing result is available, test the paint or presume lead-based paint is present.

**EPA-Recognized Test Kits:** Check the EPA website at [www.epa.gov/lead](http://www.epa.gov/lead) for information on EPA-recognized test kits and how to use them. EPA is currently reviewing more sensitive test kits which may come on the market. All test kits currently on the market are colorimetric tests for lead; that is, they change color when lead is present. Different test kit chemicals produce different colors when lead is present. All paint layers must be tested when using test kits. Make sure to follow the manufacturer’s instructions when using this testing method. If there is no color change on the paint film tested, lead-based paint is not present and lead-safe work practices are not required on that surface. Test kit sampling is intrusive and damages each surface tested. Common kit types include:

- Rhodizonate-based test kits that produce a pink to red color when lead is present. This test cannot be used on paint colors such as reds, oranges and pinks which make seeing any color change difficult. Rhodizonate test kits should not be used to test paint on drywall and plaster surfaces; and,
- Sulfide-based test kits that produce a dark grey to black color when lead is present. Dark colored paints, like dark greens blues and, especially, black make seeing any color change difficult. Sulfide test kits should not be used to test paint on metal surfaces.

**X-Ray Fluorescence Testing:** Requires a special instrument and a specially-trained Certified Lead Inspector or Certified Lead Risk Assessor. The instrument tests by bombarding the paint film with gamma radiation that causes the lead in the paint to emit x-rays that can be read by a sensor in the instrument. The amount of lead in the paint is directly related to the x-rays read by the sensor. A computer program in the instrument calculates how much lead is in the paint film. This testing method is non-intrusive and is the most used.

**Paint-Chip Collection for Laboratory Analysis:** Paint-chip testing requires intrusive sampling. All paint layers are removed from the surface being tested. The resulting sample is sent to an EPA-recognized laboratory where it is analyzed to determine how much lead is present. Paint chips may only be collected by Certified Lead Inspectors or Certified Lead Risk Assessors. Laboratory charges are based on turnaround time, and it usually requires a day or two to get results. Intrusive sampling makes repair of tested surfaces necessary.
Using EPA-Recognized Test Kits to Check for Lead-Based Paint

- **EPA-recognized test kits:**
  - Until 9/01/10, EPA will only require the use of test kits that verify the absence of lead-based paint.
  - After 9/01/10, test kits must be able to determine whether or not lead-based paint is present.
- Submit a testing report of results from use of an EPA-recognized test kit to the client as soon as possible, but no later than 30 days after completing the renovation.

If test kits are used, you must use an EPA-recognized test kit.
- Until September 1, 2010, EPA is only requiring the use of test kits that determine that lead-based paint is not present on the surfaces tested. If a color change does not occur, lead-safe work practices are not required. If a color change occurs, the change does not with certainty mean that lead-based paint is present. However, the surface must still be presumed to be coated with lead-based paint.
- To be EPA-recognized after September 1, 2010, a test kit must be able to identify lead-based paint. At that time, a test kit positive test result will mean that lead-based paint is present in the coating and that lead-safe work practices must be followed when that surface is disturbed. A negative test result will mean that lead safe-work practices are not required.
- If the test kit gives a positive result on any of the tested surfaces, lead-safe work practices must be used. Alternatively, sampling may be performed by a Certified Lead Inspector or Risk Assessor to determine whether or not lead-based paint is present.
- If test kits are used, Certified Renovators must use an EPA-recognized test kit in order to test affected surfaces. EPA-recognized test kits will be listed on the EPA website at www.epa.gov/lead.

What should be tested?
- Each building component to be renovated or disturbed by renovation must be tested, unless the component is a part of a larger component system and is representative of the whole system. In this case, a single component may represent the larger system. For instance, a stair tread may represent the whole stair system if the painting history of both is similar. If the painting histories are similar and the tested tread shows a negative test for lead-based paint, then the RRP Rule does not apply to the stair system.

Reporting
- When EPA-recognized test kits are used, the Certified Firm must provide a report to the client within 30 days after completion of the renovation. The date of testing, identification of and contact information for the Certified Firm and Certified Renovator performing the testing, test kit manufacturer’s name and kit identification, locations of surfaces tested, descriptions of the surfaces tested, and the results of testing must be included in the report to the owner.
Test Kit Hands-on

**Purpose:** The purpose of this hands-on exercise is to teach Certified Renovators how to correctly use EPA-recognized test kits to determine if lead-based paint is present on components and surfaces affected by renovation work.
Skill Set #1: Using EPA-Recognized Test Kits

Time: 15 minutes

Feb 09

Supplies needed:
- EPA-recognized test kit(s) w/ manufacturer's instructions
- Kit-specific supplies as required in the manufacturer’s instructions
- Disposable plastic drop cloth 2' by 2'
- Tape (duct, painters, and masking)
- Disposable, non-latex gloves
- Disposable shoe covers
- Manufacturer provided test verification card with lead-based paint layer
- Disposable wet cleaning wipes
- Heavy duty garbage bags
- Painted wood surface with no lead-based paint layer
- Test Kit Documentation Form
- Participant Progress Log
- Pen or pencil
- Digital camera (Optional)
- Numbered index cards (Optional)
- EPA vacuum with attachments (for cleanup after sampling)

Note to Instructor: It is strongly suggested that instructors prepare plastic bags containing all materials needed for the hands-on exercises, prior to the exercise, in order to meet the time limits allocated to Skill Set #1.

Purpose: The purpose of this hands-on exercise is to teach students how to correctly use EPA-recognized test kits to determine if lead-based paint is present on components and surfaces affected by renovation work.

Note to Instructor: Read the purpose of this activity to students and remind them to document all areas where the paint color or substrate reactions may cause an incorrect result. These surfaces should not be tested with a test kit, but should either be tested by Certified Inspectors or Certified Risk Assessors; or must be assumed to contain lead-based paint.

Demonstration: The course instructor must show and explain all of the steps involved in the use of EPA-recognized test kits. The demonstration should not take longer than 5 minutes including the time needed to hand out materials.

Evaluating the Students: Allow students to practice the eight steps on the following page. Watch each student follow the steps. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. This should take no longer than 10 minutes. Students must complete all required steps to be "Proficient". Evaluate the work of each student and once the student can use a test kit correctly, the instructor should write the word "Proficient" in the field on the Participant Progress Log that corresponds to Skills Set #1 and that particular student’s name.
Skill Set #1: Using EPA-Recognized Test Kits - Continued

Purpose: The purpose of this hands-on exercise is to teach Certified Renovators how to correctly use EPA-recognized test kits to determine if lead-based paint is present on components and surfaces affected by renovation work.

Skills Practice:

Step 1: Read the manufacturer’s instructions

Step 2: Write required information and observations about the test location on the Test Kit Documentation Form.*

Step 3: (Optional) Secure a small disposable plastic drop cloth (2ft x 2 ft) on the floor beneath the test location with masking tape.

Step 4: Put on disposable non-latex gloves and shoe covers.

Step 5: Follow the manufacturer’s instructions for use of the test kit to conduct the test.* Perform one test on the test card provided by the manufacturer, to observe a positive test result; conduct one test of a painted wood surface with no lead-based paint layer, to observe a negative test result.*

Step 6: Use one wet cleaning wipe to remove residual chemicals left on the surface tested. Use a second cleaning wipe to remove any visible debris or dust on the floor beneath the sample collection area and place the used cleaning wipe in the trash bag.*

Step 7: Check documentation for completeness and note the result of the testing on the Test Kit Documentation Form.*

Step 8: (Optional) Number the test location in sequence on the Test Kit Documentation Form, then select the corresponding numbered index card and tape it next to the test location with masking tape and take a picture of the numbered test location to photo-document conduct and possibly the result of the test.

*Indicates required skills that must be accomplished for a “Proficient” rating.

Interpreting the Results of Test Kit Sampling:

The manufacturer’s instructions will indicate the targeted indicator color change for lead in paint. Once the test is conducted, note the result and refer to the manufacturer’s guidelines for interpreting the result. All painted surfaces that show the manufacturer’s listed color change for lead in paint (a positive test result) must be treated as lead-based paint until additional testing performed by a Certified Lead Inspector or Risk Assessor proves it is not.

Documenting Test Kit Results:

A report of the findings from use of the test kit must be submitted to the person contracting the work within 30 days following the completion of the renovation work. The completed Test Kit Documentation Form should be kept by the Certified Firm for 3 years after the work is completed.
Owner Information

Name of Owner/Occupant: _____________________________________________________________
Address: __________________________________________________________________________
City: ________________ State: _____ _ Zip code: ___________ _  Contact #: (____)  ____- _____
Email: ______________________________________

Renovation Information

Fill out all of the following information that is available about the Renovation Site, Firm, and
Certified Renovator.

Renovation Address: ____________________________________________________      Unit# ______
City: ________________ State: ______ Zip code:  ____________

Certified Firm Name: __________________________________________________________________
Address: ___________________________________________________________________________
City: ________________ State: _____ _ Zip code: ___________ _  Contact #: (____)  ____- _____
Email: ______________________________________
Certified Renovator Name:    Date Certified: / /

Test Kit Information

Use the following blanks to identify the test kit or test kits used in testing components.

Test Kit #1
Manufacturer: _______________________________________  Manufacture Date: _____/_____/_____
Model: _____________________________________ Serial #: _______________________________
Expiration Date: _______________________________

Test Kit #2
Manufacturer: _______________________________________  Manufacture Date: _____/_____/_____
Model: _____________________________________ Serial #: _______________________________
Expiration Date: _______________________________

Test Kit #3
Manufacturer: _______________________________________  Manufacture Date: _____/_____/_____
Model: _____________________________________ Serial #: _______________________________
Expiration Date: _______________________________
<table>
<thead>
<tr>
<th>Test Location #</th>
<th>Renovation Address</th>
<th>City</th>
<th>State</th>
<th>Zip code</th>
<th>Test Kit Used</th>
<th>Test Kit # 1</th>
<th>Test Kit # 2</th>
<th>Test Kit # 3</th>
<th>Description of test location</th>
<th>Result: Is lead present?</th>
<th>YES</th>
<th>NO</th>
<th>Presumed</th>
</tr>
</thead>
<tbody>
<tr>
<td># 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Circle only one)</td>
<td>YES</td>
<td>NO</td>
<td>Presumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Circle only one)</td>
<td>YES</td>
<td>NO</td>
<td>Presumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Circle only one)</td>
<td>YES</td>
<td>NO</td>
<td>Presumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Circle only one)</td>
<td>YES</td>
<td>NO</td>
<td>Presumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Skill Set #1: Using EPA-Recognized Test Kits
4 of 4
Using Decision Logic Charts

- Using the following pages, you will practice use of the decision logic charts found in the *Small Entity Compliance Guide to Renovate Right*.
- The decision logic charts will assist you in making decisions regarding how the EPA RRP Rule applies to your work.
- Determine if the property is Federally-assisted and if it is, then determine what to do next.

The information presented in the *Small Entity Compliance Guide to Renovate Right* flow charts is intended to assist you in understanding what RRP Rule requirements apply to the renovation you are about to perform and whether the HUD Rule also applies to the project. You will find the *Small Entity Compliance Guide to Renovate Right* flow charts on the following pages in this module. For a complete copy of the *Small Entity Compliance Guide to Renovate Right* see Appendix 4.

Appendix 2 provides a summary of HUD requirements that apply to work done in homes that receive Federal assistance. Information found in Appendix 2 provides assistance in determining whether the property receives Federal housing assistance and what requirements apply if it does. If the property is pre-1978 and does receive Federal housing assistance, both the HUD Lead Safe Housing Rule and the EPA RRP Rule apply to your renovation work.
EPA’s Lead Program Rule At-A-Glance

FLOW CHART 1: Do the Requirements Apply to the Renovation?
If you will be getting paid to do work that disturbs painted surfaces in a pre-1978 home, apartment building, or child-occupied facility, answer the questions below to determine if the EPA lead program requires you to distribute the lead pamphlet and/or if you will need to comply with training, certification, and work practice requirements when conducting the work.

Does the property receive Federal housing assistance?

YES

Additional HUD requirements apply. See Appendix 2.

NO

Does the job involve activities that disturb painted surfaces in a home or child-occupied facility built before 1978?

YES

Are ANY of the following conditions present?
- The work is a lead abatement project.
- Work consists of only minor repairs or maintenance that disturbs less than 6 square feet of painted surfaces per room for interior activities or less than 20 square feet of painted surface for exterior activities. **Note:** this does not include window replacement, demolition, and projects involving prohibited practices.
- Housing has been determined to be free of lead-based paint either by a certified inspector or risk assessor, or the components being renovated have been determined to be free of lead-based paint by a certified renovator using an EPA recognized test kit.
- Housing is a zero-bedroom dwelling (studio apartments, dormitories, etc.).
- Housing is for the elderly or disabled and no children under six reside or are expected to reside there.

NO

Is the project an emergency renovation?
Emergency renovations are:
1. Activities that were not planned and if not immediately attended to present a safety hazard or threaten equipment and/or property with significant damage.

**OR**

2. Interim controls performed in response to an elevated blood lead level in a resident child.

NO

You will need to provide the lead pamphlet. See Flow Chart 2 for specific requirements.

YES

EPA lead-based paint renovation, repair, and painting program requirements do not apply.

Pre-renovation education requirements of the program do not apply.

See Flow Chart 3 to determine which specific renovation training and work practice requirements apply to the job.
FLOW CHART 2: How Do I Comply with the Pre-Renovation Education Requirements?
Requirements to distribute pre-renovation educational materials vary based on the location of the renovation. Select the location below that best describes the location of your project, and follow the applicable procedure on the right.

**Renovations in Owner-Occupied Dwelling Units**

1. Deliver lead pamphlet to owner before renovation begins and obtain confirmation of receipt.
   OR
   Mail lead pamphlet to owner 7 days before renovation begins and document with certificate of mailing.

**Renovations in Tenant-Occupied Dwelling Units**

1. Provide lead pamphlet to tenant by either method below:
   (a) Deliver pamphlet to dwelling unit before renovation begins and document delivery with either a confirmation of receipt of lead pamphlet or a self-certification of delivery.
   OR
   (b) Mail lead pamphlet to tenant at least 7 days prior to renovation and document with a certificate of mailing.

**Renovations in Common Areas of Multi-Family Housing Units**

1. Provide owner with lead pamphlet using either procedure described in the box at the top of this page.
2. Notify tenants and make pamphlet available, or post signs describing the renovation. The signs must include the pamphlet or information on how to review a copy.
3. Maintain written documentation describing notification procedures.
4. Provide supplemental renovation notice if changes occur in location, timing, or scope of renovation occurring.

**Renovations in Child Occupied Facilities (COFs)**

1. Provide the owner of the building with the lead pamphlet using either:
   (a) The procedure described in the box at the top of this page.
   OR
   (b) If the child-occupied facility is not the building owner, provide the lead pamphlet by either method below:
       (i) Obtain a written acknowledgment that an adult representative received the pamphlet; or certify in writing that a pamphlet was delivered.
       OR
       (ii) Obtain a certificate of mailing at least 7 days before the renovation.
2. Provide the parents or guardians of children using the child-occupied facility with information by either of these methods:
   (a) Mail or hand-deliver the lead pamphlet and renovation information to each parent or guardian.
   OR
   (b) Post signs describing the renovation. The signs must include the pamphlet or information on how to review a copy.

See Flow Chart 3 for information about specific training and work practice requirements for the job.
FLOW CHART 3: Do the Renovation Training and Work Practices Apply?

Has the firm obtained a signed statement from the owner that:
1. The renovation will occur in the owner’s residence;
2. No child under age 6 resides there;
3. No woman who is pregnant resides there;
4. The housing is not a child-occupied facility; AND
5. Owner acknowledges that the renovation firm will not be required to use the work practices contained in the rule.

**YES**
Training and work practice requirements do not apply.

**NO**

Is the project an emergency renovation?

**NO**

**YES**

Does the project include interim controls performed in response to an elevated blood lead level of a resident child?

**NO**

**YES**

Emergency projects are exempt from the warning sign, containment, waste handling, training, and certification requirements to the extent necessary to respond to the emergency. Emergency renovations are NOT exempt from the cleaning and cleaning verification requirements. See Flow Chart 5 for interior cleaning and cleaning verification requirements, and Flow Chart 8 for exterior cleaning and verification requirements.

Continue to Flow Chart 4 for work practice requirements.
FLOW CHART 4: Work Practice Requirements

General
(A) Renovations must be performed by certified firms using certified renovators.
(B) Firms must post signs clearly defining the work area and warning occupants and other persons not involved in renovation activities to remain outside of the work area. These signs should be in the language of the occupants.
(C) Prior to the renovation, the firm must contain the work area so that no dust or debris leaves the work area while the renovation is being performed.
(D) Work practices listed below are prohibited during a renovation:
   1. Open-flame burning or torching of lead-based paint;
   2. Use of machines that remove lead-based paint through high speed operation such as sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting, unless such machines are used with HEPA exhaust control; and
   3. Operating a heat gun on lead-based paint at temperatures of 1100 degrees Fahrenheit or higher.
(E) Waste from renovations:
   1. Waste from renovation activities must be contained to prevent releases of dust and debris before the waste is removed from the work area for storage or disposal.
   2. At the conclusion of each work day and at the conclusion of the renovation, waste that has been collected from renovation activities must be stored to prevent access to and the release of dust and debris.
   3. Waste transported from renovation activities must be contained to prevent release of dust and debris.

Interior Renovation Projects. See Flow Chart 5.
FLOW CHART 5: Work Practice Requirements Specific to Interior Renovations

The firm must:

(A) Remove all objects from the work area or cover them with plastic sheeting with all seams and edges sealed.

(B) Close and cover all ducts opening in the work area with taped-down plastic sheeting.

(C) Close windows and doors in the work area. Doors must be covered with plastic sheeting.

(D) Cover the floor surface with taped-down plastic sheeting in the work area a minimum of six feet beyond the perimeter of surfaces undergoing renovation or a sufficient distance to contain the dust, whichever is greater.

(E) Use precautions to ensure that all personnel, tools, and other items, including the exteriors of containers of waste, are free of dust and debris when leaving the work area.

(F) After the renovation has been completed, the firm must clean the work area until no dust, debris or residue remains. The firm must:
   1. Collect all paint chips and debris, and seal it in a heavy-duty bag.
   2. Remove and dispose of protective sheeting as waste.
   3. Clean all objects and surfaces in the work area and within two feet of the work area in the following manner:
      a. Clean walls starting at the ceiling and working down to the floor by either vacuuming with a HEPA vacuum or wiping with a damp cloth.
      b. Thoroughly vacuum all remaining surfaces and objects in the work area, including furniture and fixtures, with a HEPA vacuum.
      c. Wipe all remaining surfaces and objects in the work area, except for carpeted or upholstered surfaces, with a damp cloth. Mop uncarpeted floors thoroughly using a mopping method that keeps the wash water separate from the rinse water, or using a wet mopping system.

Cleaning verification is required to ensure the work area is adequately cleaned and ready for re-occupancy.
See Flow Chart 6 for instructions on performing cleaning verification for interior projects.
FLOW CHART 6: Interior Cleaning Verification: Visual Inspection and Optional Clearance Testing

Certified renovator must perform a visual inspection. Is dust, debris or residue present? NO

Does the contract, or another federal, state, territorial, tribal, or local regulation, require clearance testing at the conclusion of the renovation? NO

Are the dust clearance samples required to be collected by a certified inspector, risk assessor or dust sampling technician, and is the renovation firm required to re-clean the work area until the dust clearance sample results are below applicable clearance standards? NO

When you meet the applicable clearance standards, you’re finished!

YES

The area must be re-cleaned and another visual inspection must be performed.

YES

Continue to cleaning verification procedure.

See Flow Chart 7.
FLOW CHART 7: Interior Cleaning Verification: Floors, Countertops, and Window Sills

Note: For areas greater than 40 square feet, separate the area into sections and use a new disposable cleaning cloth for each section.

Certified renovator must wipe all uncarpeted floors, countertops, and windowsills within the work area with a wet disposable cleaning cloth. Is the cloth used for any area darker than the cleaning verification card?

Re-clean the areas that failed using the procedures from Flow Chart 5, then use a new wet disposable cleaning cloth to wipe those areas again. Is the cloth used for any area darker than the cleaning verification card?

Wait until either the area has dried completely or 1 hour has passed, whichever is longer. Once dry, wipe that area with an electrostatically charged, white, disposable cloth designed to be used for cleaning hard surfaces.

The work area has been adequately cleaned and warning signs may be removed.

You’re finished!
The firm must:

(A) Close all doors and windows within 20 feet of the renovation.

(B) Ensure that doors within the work area that will be used while the job is being performed are covered with plastic sheeting in a manner that allows workers to pass through while confining dust and debris.

(C) Cover the ground with plastic sheeting or other disposable impermeable material extending a minimum of 10 feet beyond the perimeter or a sufficient distance to collect falling paint debris, whichever is greater.

(D) In situations such as where work areas are in close proximity to other buildings, windy conditions, etc., the renovation firm must take extra precautions in containing the work area, like vertical containment.

(E) After the renovation has been completed, the firm must clean the work area until no dust, debris or residue remains. The firm must:
   1. Collect all paint chips and debris, and seal it in a heavy-duty bag.
   2. Remove and dispose of protective sheeting as waste.
   3. Waste transported from renovation activities must be contained to prevent release of dust and debris.

A certified renovator must perform a visual inspection.

Is dust, debris or residue present?

YES

These conditions must be eliminated and another visual inspection must be performed.

NO

The area has been adequately cleaned; remove the warning signs.

You're finished!
Now You Know…

To properly plan a renovation, you must:
• Educate owners and residents.
• Determine if lead-based paint is present.
• Determine what requirements from the EPA and HUD Rules apply to your renovation activities.
Module 4: Contain Dust During Work
Module 4: Contain Dust During Work

Overview

• What is containment?
• Containing dust for interior activities.
• Containing dust for exterior activities.

Upon completion of this module you will be able to:

• Establish containment systems that will keep dust inside of the work area to allow you to clean more efficiently at the end of the day and at completion of the job;
• Identify containment requirements for interior renovations; and,
• Identify containment requirements for exterior renovations.
What Is Containment?

- “Containment” is a system of temporary barriers used to isolate a work area so that no dust or debris escapes while the renovation is being performed.
- Benefits of containment.
  - Protects residents and workers.
  - Prevents spread of dust to rest of house/building or neighboring properties.
  - Easier cleaning at the end of the job.
- Containment is required.

What is containment?
- In general, there are many degrees of containment, ranging from simple plastic sheeting on the floor surrounding a small work area to a fully enclosed space. Some types of containment are more effective than other types.
- For purposes of this training, “containment” is what is required under the RRP Rule to prevent dust and debris from spreading beyond the work area to non-work areas.

Containing the work area includes:
- Removing objects and furniture from the work area, or covering them with plastic sheeting.
- Covering floors (or the ground) with plastic sheeting a minimum of 6 feet (10 feet for exterior work) beyond surfaces being renovated, repaired or painted.
- Closing, and using plastic sheeting to seal, all windows, doors and air ducts in the work area.
- Covering doors used to enter the work area with plastic sheeting in a manner that allows workers to pass through but contains dust and debris within the work area.

Containment is required by the RRP Rule because it:
- Reduces the risk to you and residents. Following the work area setup requirements of this module will protect you, your co-workers and residents by confining lead-contaminated dust and debris to a defined and demarcated area. Confining the lead is an important consideration in avoiding exposure. Reducing the risk to you and co-workers is also dependent upon use of personal protective equipment.
- Facilitates efficient cleaning of the work area. The pre-work setup process is essential to keeping lead-contaminated dust confined to the work area where it can be easily cleaned. Proper containment of the work area helps to limit the area you need to clean after the job is complete. Knowing exactly where to clean is an important factor in saving time (and money) spent on cleanup.
Keep Dust Within the Containment

- Consider how much dust the renovation will generate.
- Containment design is a function of the work practices to be used and the expected amount of dust to be generated during the renovation.
- Plan the size and configuration of containment to keep the generated dust within containment.
- You are responsible for making sure dust does not migrate out of containment.

If you do not plan and contain the work area correctly, the dust and debris created by renovation can spread beyond the minimum contained area required by the RRP Rule. This means that:
- For interior locations, dust may migrate more than 6 feet from the surface being renovated; or,
- For exterior locations dust may migrate more than 10 feet from the surface being renovated.

Controlling dust and debris may require more extensive containment than is specified in the rule if the job is particularly dusty. Plan accordingly.

In general, renovations that involve only a small amount of paint disturbance create less dust than jobs that involve larger areas of paint disturbance. However, in addition to the size of the area of paint disturbed, the work practices (e.g., sanding) and equipment used will also affect how much dust is created and how the dust migrates. The location of the work activity also has a bearing on the amount of dust that is distributed. For example, small areas of ceiling work can spread dust over the entire room and are very difficult to control.

Required containment is similar for all jobs, but jobs that generate more dust and debris may require protection of larger areas. While the Rule does not require vertical containment, such systems may be helpful in limiting the size of the area affected by the work and may reduce the area that must be cleaned at the end of the job. Pre-engineered containment systems (purchased and home-made) are very helpful in cutting time spent on the job erecting containment and are easier to install than hanging plastic sheeting with tape. These systems also allow the contractor to create a sealed room within a room where the dust can be completely contained to a limited and controlled area.

Examples of dusty jobs include:
- Hand scraping large areas.
- Removing paint with a low temperature heat gun and scraper.
- Removing dry residue and paint after using chemical strippers.
- Demolishing painted surfaces.
- Removing building components with painted surfaces that are in poor condition.

Remember, you are responsible for making sure that dust and debris remain inside of the contained work area. When planning containment, keep in mind how, how much, and where the work practices to be used will create dust, and plan accordingly.
Interior Containment: Limit Access and Post Signs

- Notify residents to stay away from the work area.
- Do not allow residents or pets near the work area.
- Do not allow eating, drinking, or smoking in the work area.
- Post warning signs.

Restrict access to the work area and notify residents to stay away while work is underway.
- Restricting access to the work area will protect residents, especially children and pregnant women, from unnecessary exposures to leaded dust and will minimize the spread of dust to non-work areas.
- Before the job starts, notify the residents not to enter the work area and to stay away from the vicinity of the entrance to the work area as much as possible. Residents and pets coming and going can easily track lead-contaminated dust into non-work areas throughout the home. Non-work areas will likely not be cleaned up promptly or properly.
- Restricting exposure is especially important for small children under 6 years old and for pregnant women. Be sure to explain to residents that restricting access is for their own protection, and that small children and pregnant women are most at risk of health problems from exposure to lead.
- You must provide an indication of how long you will be working in a particular area so that residents can plan ahead to obtain items that they may need from the work area before you begin working.

Do not allow eating, drinking, or smoking in the work area.
- This is primarily for worker protection, but is also important if residents are living near the work area. Post signs that prohibit eating, drinking and smoking in the work area. Dust in the air can land on food or be inhaled when smoking. If food is set on a dust-contaminated surface, it can easily pick up the lead-contaminated dust, which is then ingested when the food is consumed.

Post warning signs.
- Before beginning the renovation, post a sign in the residents’ native language to warn them and other persons not involved in renovation activities to remain outside of the work area. Signs must remain in place and be readable through completion of the renovation and the post-renovation cleaning verification.
- A warning sign must be posted: at each entry to a work area; or, at each main and secondary entryway to a building from which occupants have been relocated; or, for exterior work, where it is easily read 20 feet (6 meters) from the edge of the worksite.
Interior Containment: Remove or Cover Belongings

- **Remove** belongings.
- **Cover immovable objects** in protective sheeting, including:
  - Furniture;
  - Carpet; and,
  - Lamps and other fixtures.
- **Seal edges and seams.**

Where Practicable Remove Belongings and Furniture from the Work Area.

- It is desirable to remove all objects from the work area including furniture, rugs and window coverings. Removal is the best option for protecting occupant items from contamination and for reducing post-renovation cleanup time (and cost).

If It Can't Be Moved Out of the Work Area, Cover It.

- Cover all objects that were not removed from the work area in protective sheeting. Seal the seams and edges with tape. Completely cover all immovable fixtures, furniture, carpets and other personal items with protective sheeting.
- Secure protective sheeting to the floor with tape so that no dust can get onto the covered items.
- Protective sheeting such as disposable heavy-duty plastic sheeting is commonly used in many remodeling jobs. Protective sheeting can be bought at most hardware stores.
Lead Safety for Renovation, Repair, and Painting

Interior Containment: Cover Floors

**Required:**
- Cover all work area floors with plastic sheeting.
- Cover floors a minimum of 6 feet in all directions around the paint being disturbed.

**Recommended:**
- Lay plastic sheeting in high traffic areas.
- Take special precautions for carpets.
- Use a disposable tack pad at the edge of protective sheeting.
- If using chemical stripper, add 2nd plastic layer.

---

**Cover Floors**

- Use protective sheeting to cover all work area floors including installed carpet. The protective sheeting must extend a minimum of 6 feet to the left, right and front – and in some cases to the back – of the area where work will be performed. It should be tightly secured to baseboard or flooring using duct tape (where appropriate), painters tape or masking tape. The corner edge of the protective sheeting should be reinforced using duct tape or a staple.

- Take special precautions with carpets in the work area. Carpets are a major dust collection medium and it is very difficult to clean the dust out of them once contaminated. When the work area includes carpets, you must cover all carpeted areas that are in the work area with at least one layer of sealed plastic sheeting.

- Consider covering shoes with removable shoe covers, wiping off the tops and soles of shoes with a damp paper towel each time you step off the sheeting, and/or using a disposable tack pad that removes dust from the soles of shoes. Immediately place used paper towels in a covered garbage bin. Disposable tack pads can be found at many hardware stores or bought through a supply catalog. A tack pad is a sticky pad that you walk on to remove dust from the soles of your shoes. The disposable tack pad can be taped to an outer corner of the sheeting. Replace disposable tack pads at least daily.

- You may find that using a HEPA vacuum to clean off shoes and clothing is necessary in controlling carry-away dust when personnel leave the work area. This is called a “dry decon” and works well.

- A second smaller layer of protective sheeting should be used with chemical strippers. This second layer should be taped to the top of the first layer. Place the second layer immediately below the work area. This layer will capture splashes and waste, and allows the mess made by chemical strippers to be cleaned up immediately after use.

- Use precautions to ensure that all personnel, tools and other items, including the exteriors of waste containers, are free of dust and debris before removing them from the work area. A container of cheap hand or baby wipes is quite useful for such cleaning.
Lead Safety for Renovation, Repair, and Painting

**Interior Containment: Close Windows, Doors, HVAC**

Depending on what work is to be done:
- Close all windows in the work area.
- Close and seal all doors in the work area.
- Close and seal all HVAC vents in the work area.
- Turn off the HVAC unit (recommended).

**Close Windows**
- Close all windows within the work area.
- When conducting window replacements from the inside, consider attaching plastic sheeting to the exterior of the window to prevent spread of dust and debris to the ground and other surfaces under the window. If window replacement affects both interior and exterior surfaces, then setup containment for both the interior and exterior work areas.
- For dusty jobs, it is strongly recommended that you seal work area windows with protective sheeting to prevent dust from getting into the trough or on the sill, making it harder to clean.
- When sealing windows, cut plastic sheeting layer slightly larger than the window that you are covering.
- Attach the plastic sheeting with tape over the window to completely seal it.
- Make sure that the tape or the sheeting does not cover part of the area on which you are working.

**Close and Seal Doors**
- Close all doors including closet and cabinet doors in the work area, and cover with plastic sheeting.
- Doors used as an entrance to the work area must be covered with plastic sheeting or other impermeable material in a manner that allows workers to pass through while confining dust and debris to the work area.
- As an alternative to putting up plastic, doors may be shut and then sealed closed with painter’s tape.

**Close and Seal HVAC Vents**
- Heating ventilating and air conditioning (HVAC) systems distribute air throughout the building and thus can also carry dust to other rooms. If possible, turn off the HVAC system for the work area. Close the HVAC supply and return vents in the work area and then cover them tightly with plastic sheeting to prevent air from blowing the dust out of the contained work area and to prevent dust from getting into the HVAC system.
Interior Containment: Work Area Entry Doorway

• Cover work area entry doors with two layers of protective sheeting.

- A physical barrier, such as a cone or warning tape, can be placed outside the entry to remind residents to stay away from the work area, especially in buildings where more than one family lives. The double layers of plastic on the entry door and other barriers serve as a reminder to residents that people and pets should not enter the work area, and also signals that the area has not yet been cleaned up.

When the work area boundary includes a door used to access the work area, cover the door with two layers of protective sheeting as described below.

- Set up a two-layer entry barrier with closable flaps at the entry to the work area so that workers can pass through but dust and debris stay in the work area. Covering the door with this two-layer system will help contain the dust within the work area. Follow the steps below.
  1) Cut the first plastic sheeting layer slightly wider and longer (three inches) than the door frame.
  2) Make a small “S” fold at the top of the sheeting and tape it to the top of the door frame. Make a similar “S” fold at the bottom of the sheeting and tape it to the floor. This will ensure that the plastic is not taut.
  3) Secure the top corners to the door frame for reinforcement.
  4) For exiting and entering the room, tape a vertical line about the size of a man from floor to header on both sides of the plastic. Cut a long vertical slit through the tape, in the middle of the protective sheeting. Leave about 6 inches at the top and bottom uncut. Reinforce the top and bottom of the slit with tape to prevent the plastic from tearing.
  5) Tape a second layer of protective sheeting to the top of the door frame. This layer is cut slightly shorter than the door frame so that it will hang down flat against the first sheet of plastic.
  6) Tape and secure the top corners of the second layer to the door frame and the first layer. Leave it to hang over the first layer. Weight the bottom of the flap with a dowel to keep it in place. If needed, another weighted flap can be added to the other side of the door to provide a third layer of plastic sheeting.

- See Appendix 5 Steps to LEAD SAFE Renovation, Repair and Painting for more information on how to put the two layer system in place.
Overview of Interior Containment Steps

The goal of these interior containment practices is to prevent dust and debris from escaping the work area.

- Limit access and post signs.
- Remove (preferred) or cover belongings.
- Cover floors.
- Close and seal windows, doors and HVAC system.
- Construct a work area entry doorway.

RRP Rule: Interior Containment General Requirements:

- Posted signs: These must be posted on all sides of the work area to define the work area, must be in the primary language of occupants, must be posted before the beginning of the renovation, and must remain until cleaning verification is achieved.
- Contain the work area: Before renovation, isolate the work area to prevent the escape of dust. During work, maintain the containment integrity and ensure that containment does not interfere with occupant and worker egress from the home or work area.
- Remove or cover furniture/objects: Remove (preferred) objects like furniture, rugs, window coverings; or cover them with plastic sheeting with all seams and edges taped.
- Cover floors: Cover floors including carpets in the work area with taped down plastic sheeting or other impermeable material to 6 feet beyond the perimeter of surfaces undergoing renovation or to a distance sufficient to contain dust, whichever is greater.
- Close and seal doorways and close windows: Close and seal doorways and close windows in the work area with plastic sheeting or other impermeable material. Doors used as entrances to the work area must be covered with plastic sheeting that allows workers to pass through while confining dust to the work area.
- Cover duct opening: Close and cover all HVAC vents in the work area with taped down plastic sheeting or other impermeable materials (e.g., magnetic covers).
- Remove dust and debris from everything leaving the work area: Use precautions to ensure that all personnel, tools and all other items are free from dust and debris before being removed from the work area.
Exterior Containment: Establish the Work Area

- Cover the ground with protective sheeting.
  - If space permits, extend a minimum of 10 feet from the work area.
  - Play special attention and cover nearby vegetable gardens and children’s play areas.
- Limit access, place signs.
  - Establish a 20 foot perimeter around the work area if space permits.

Cover the ground with protective sheeting

- If space permits, lay protective sheeting on the ground below the work area to at least 10 feet from the house. This creates a visible work area and helps remind residents and passers-by that they should not enter the work area unless they have a compelling need. Extend the work area farther if needed to collect dust and debris; for example, when paint on the second story of a building is being disturbed. Note: Black and clear disposable plastic sheeting can kill plants by making them too hot. Consider using white plastic sheeting instead.
- Remember children often play in the dirt and may put their hands in their mouths while playing. Dirt, dust or debris on their hands will go into their mouths and may be swallowed.
- Remove toys and other items from the work area and cover all play areas including sandboxes. Protect items that cannot be moved with plastic sheeting.
- Staple or tape the protective sheeting to the wall of the building, or use a 2x4 wrapped in protective sheeting to hold the material next to the wall. Use heavy objects (e.g., rocks) to weight the other edges of the protective sheeting to the ground so that it won’t blow in the wind.
- When using ladders on plastic sheeting consider placing a sturdy piece of plywood on the plastic and then set the ladder on the plywood. This will prevent the ladder from puncturing the plastic and will provide a stable surface for the ladder. If plywood is used, take special care to secure it to the ground so that it does not move. This could be done by staking the plywood and later sealing the holes in the plastic with duct tape.

Limit work area access

- Limit access to the work area by placing orange cones or saw horses and warning tape around a 20 foot perimeter of the work area. Ropes with signs at regular intervals could also be used instead of barrier tape. This will help to discourage residents and passersby from entering the work area. Keep pets out of the work area.

Exterior work area daily cleaning

- Cleaning the exterior work area is crucial to prevent the spread of dust and debris. Picking up all debris throughout the day and the use of temporary, plastic-sheeting drop cloths can facilitate easy cleanup. Note that the plastic drop cloths do not take the place of protective sheeting on the ground.
Close and cover all nearby windows and doors.

- All windows and doors within 20 feet of the work area should be closed to prevent dust from entering the home. Renovators have an obligation to keep the dust and debris from the renovation contained within the work area and contained within the boundaries of the property on which they are working. If the windows and doors of apartments or condominiums are within 20 feet of the work area, consider requesting that the owners or residents of those affected units close the affected windows and doors in order to comply with the RRP Rule. If this is an unavailable option, other methods of restricting dust and debris to the work area and the work-site property must be considered. These other methods include construction of a vertical containment wall at the property line.

- On multi-story buildings, close all doors and windows within 20 feet of the renovation on the same floor as the renovation, and close all doors and windows on all floors directly below the area designated as the work area.

Establish two layers of plastic sheeting on the doors in work areas being used during the job.

- In the exterior work area, there will be times when a door into the house needs to be used to access interior work areas. When this occurs, cover this door with disposable plastic sheeting or other impermeable material in a manner that allows workers to pass through while confining dust and debris to the work area. The steps for placing two layers of plastic sheeting in a doorway are covered in the student notes on page 4-8.
Exterior Containment: Extra Precautions

- Extra precautions taken to prevent the spread of dust.
- Extending work area.
- Vertical containment.
- Avoid working in windy conditions, where possible.

Situations Requiring Extra Precautions
Some situations may require extra precautions to avoid the spread of dust to the rest of a property or to adjacent properties. These situations might include work in high winds that can carry dust out of the work area and work conducted on upper levels of a building during which even light winds can spread dust beyond the containment as it falls.

Extend the Work Area
The simplest solution may be to extend the area of ground covered by plastic sheeting.

Vertical Containment
If conditions are windy, if space is limited or if adjacent properties are relatively close to the work area, vertical containment systems may need to be constructed. Examples of vertical containment systems include plastic sheeting attached to scaffolding and plastic sheeting attached to vertical wood boards.

Avoid High Winds Where Possible
Be wary of windy conditions. On days with high winds, it is not advisable to perform dust creating activities. The HUD Rule restricts exterior work in winds in excess of 20 miles per hour. The EPA RRP Rule does not specifically address wind speed, but when the wind is strong enough to move dust and debris, special precautions need to be taken to keep the work area contained. That may mean creating a wind screen of plastic at the edge of the ground-cover plastic to keep dust and debris from migrating. More frequent cleanup of exterior work areas is also not addressed specifically, but frequent cleanup will help the renovator comply with the requirements to contain the work area and prevent dust and debris from getting outside of the work area. Ultimately, you are responsible for preventing dust and debris from leaving the work area, so take appropriate precautions to make that happen when wind is a factor.
Overview of Exterior Containment Steps

- Establish the work area.
- Close all windows and doors.
- Establish, as necessary, additional containment to prevent spread of dust to adjacent properties.

**RRP Rule: Exterior Containment General Requirements:**

- **Posted signs:** Signs must be placed on all sides of the work area to define the area, must be posted in the primary language of occupants, and must be posted before the beginning of the renovation and remain until cleaning verification is achieved.
- **Contain the work area:** Before renovation, isolate the work area to prevent the escape of dust. During work maintain the containment integrity and ensure that containment does not interfere with occupant and worker egress from the building or work area.
- **Close doors and windows:** Close all doors and windows within 20 feet of the work area. For multi-story buildings close all windows and doors on the same floor within 20 feet of the work area and all windows on all floors below that are the same horizontal distance from the renovation.
- **Doors used as entrances to the work area:** Cover doorway openings with plastic sheeting that allows workers to pass through while confining dust to the work area.
- **Cover the ground:** Cover the ground with plastic sheeting or other impermeable material extending 10 feet beyond the perimeter of surfaces undergoing renovation or to a sufficient distance to contain dust, whichever is greater, unless the property line prevents 10 feet of such ground cover.
- **Ensure that dust and debris do not contaminate or migrate to adjacent areas or properties:** In certain situations, the renovation will require extra precautions for containing the exterior work area to ensure that dust and debris does not contaminate other properties. Examples of these situations may include high wind, over-spray issues, or short distances between properties that require vertical containments to keep dust in the work area. The RRP Rule establishes performance standards that the contractor must meet, but does not specify how the contractor must meet them. This allows the contractor flexibility in how to comply with the requirement to ensure that no dust or debris leaves the work area.
Hands-on Exercises: Interior and Exterior Containment

• Practice the following Skills:
  • Skill Set #2: Setting up Barriers, Signs and Flapped Entry Doors.
  • Skill Set #3: Cover and Move Furniture.
  • Skill Set #4: Establish Interior Containment.
  • Skill Set #5: Establish Exterior Containment.

• Work in groups of 2 to 6.
• Choose the right tools and materials.

Setting Up
This exercise gives you a chance to practice setting up the work area signs, barriers and containments. The slide provides basic instruction.

• Follow the instructions in each skill set. Your instructor may choose to also demonstrate skills.
• Form into groups of 2 to 6 students.
• Your instructor will assign your group to an area to perform setup activities as if for a job.
• Choose the right tools and set up the work area to provide proper containment.
Skill Set #2: Setting up Barriers, Signs and Flapped Entry Doors

Time: 10 minutes
Feb 09

Supplies needed:
- Barrier tape
- Warning signs
- Doorway to use for work area entry setup
- Utility knife and razor blades, or scissors
- Heavy duty plastic sheeting
- Duct tape, masking tape, and/or painter’s tape
- Stapler and staples
- Broom handle, or dowels, or 1” x 1” x 30” wood or metal stock
- Optional: Pre-engineered containment systems may also be used for this exercise.

Note to Instructor: It is strongly suggested that instructors prepare plastic bags containing all materials needed for the skills practice prior to the exercise in order to meet the time limits allocated to Skill Set #2.

Purpose: The purpose of this hands-on exercise is to show students the proper steps in determining where to place critical barriers, and to give them practice in erecting barriers and posting signs to isolate the work area from access by unauthorized personnel.

Note to Instructor: Read the purpose of this activity to students. Remind them that these setup steps must be completed before the disturbance of more than 6 ft² per room of lead-based paint, or, whenever window replacement or demolition is to be accomplished.

Demonstration: The course instructor must show and explain all of the steps involved in establishing a critical barrier and in placement of signage. Critical barriers are plastic sheeting barriers secured over openings, doors, and windows that must remain in place until cleaning verification or clearance is achieved in order to keep dust inside of the work area. While they are not always required, they can assist with controlling the spread of dust to other areas of the home. Use students to assist in the erection of the demonstration critical barriers. Note: In the interest of time, use precut barriers for installation in the doorway. Velcro attached barriers may be used for demonstration and practice. Velcro sign attachments may also be used.

Evaluating the Students: The instructor should allow students to practice the steps on the following page while watching each student follow the steps. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. Option: Have students say the steps as they work. Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skill Set #2 and that particular student’s name.
Skill Set #2: Setting up Barriers, Signs, and Flapped Entry Doors
- Continued

Skills Practice:

Step 1: Ask occupants to leave and remain out of the room where work will be done.

Step 2: Have them stay out until the cleaning verification procedure is complete or until clearance is passed. Install barrier tape to establish a controlled perimeter.

Step 3: Post a “Do Not Enter” sign at the doorway to the work area.* Also post a sign that states that no eating, drinking, or smoking is allowed in the doorway to the work area.*

Step 4: Cover the work area entry doorway with 2 layers of plastic sheeting, by doing the following:*

Step 5: Cut first plastic sheeting layer slightly wider and longer than (about 3 inches longer) than the door frame.*

Step 6: Make a small “S” fold at the top of the plastic sheeting and tape so that all layers are secured to the top of the door frame.* Make a similar “S” fold at the bottom of the plastic sheeting and tape so that all layers are secured to the floor.* This will ensure that the plastic sheeting is not tight and allows it to give instead of tearing when people move through it. Secure both sides of the plastic sheeting to the door frame with tape.

Step 7: Staple top corners to the door frame for reinforcement.*

Step 8: For exiting and entering the room, use duct tape to create a vertical line about the size of a man from floor to header in the middle of the plastic sheeting on both sides.* Cut a long vertical slit through the duct tape; leave about 6 inches at the top and the bottom uncut.* Reinforce the top and bottom of the slit with horizontal duct tape to prevent the plastic sheeting from tearing.*

Step 9: Tape a second layer of plastic sheeting to the top of the door frame.* This layer is cut slightly shorter than the door frame so that it will hang down flat against the first sheet of plastic sheeting.

Step 10: Weight the bottom of the second layer of plastic sheeting by taping a dowel rod to the bottom of the second layer of plastic sheeting with duct tape. This creates a self-sealing flap over the doorway and seals the opening that was cut in the plastic sheeting during step 8.

*Indicates required skills that must be accomplished for a “Proficient” rating.
Skill Set #3: Cover or Remove Furniture

**Time:** 10 minutes
Feb 09

**Supplies needed:**
- Heavy duty plastic sheeting
- Cutting tool (e.g., razor knife, box cutter or scissors)
- Tape (duct, painters, and masking)

**Purpose:** The purpose of this hands-on exercise is to show students the proper steps for determining when and how to cover or remove furniture and belongings from a work area.

**Note to Instructor:** Read the purpose of this activity to students. Remind them that these setup steps must be completed before the disturbance of more than 6 ft² per room of lead-based paint, or, whenever window replacement or demolition is to be accomplished. Also remind them that the best solution to the problem of moving furniture and belongings is to notify residents to remove them prior to the work. Remind them also that it is better to remove personal property than to cover it. 

**Demonstration:** The course instructor should explain all of the steps involved in covering and/or removing furniture and belongings from the work area. Use students to demonstrate moving chairs out of the work area. Then cover a table with plastic sheeting and secure the plastic sheeting with tape so that no part of the table is exposed. Discuss placing other items under the table for maximized efficiency in preparing the work area. The demonstration should not take longer than 3 minutes including the time needed to hand out materials.

**Evaluating the Students:** The instructor should allow students to practice the steps on the following page while watching each student follow the steps. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. 

**Option:** Have students say the steps as they work. Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skill Set #3 and that particular student’s name.
Skill Set #3: Cover or Remove Furniture – Continued

Skills Practice:

Step 1: Move all the furniture out of the work area.

Note: If the training area is small, designate an area against one wall that is “out of the work area”, where furniture removed from the work area can be placed. In a classroom setting, move the chairs and most of the tables to the designated area, and cover the tables.

Step 2: Have the students team into groups of 2 to 6 per group. Cover several of the tables where students were sitting. This is done as follows:

Step 3: Cut a piece of plastic sheeting large enough to cover the table and to overlap the floor by 3-6 inches.*

Step 4: Secure the plastic sheeting to the table and/or the floor with tape.*

Step 5: If the table will not need to be moved during the work, the plastic sheeting can be secured to the floor using duct tape or masking tape as is appropriate to the surface.*

Step 6: If the table will need to be moved during the work, wrap the table with plastic sheeting including the legs and secure the plastic sheeting to the table with tape. Take care when applying tape so that there is no damage to the finished surfaces of the furniture.*

Note: Students should understand that they are to remove or cover all window treatments, furniture and rugs within 6 feet of surfaces that will be renovated, repaired or painted. Removal of furniture is recommended whenever possible.

*Indicates required skills that must be accomplished for a “Proficient” rating.
Skill Set #4: Establish Interior Containment

Time: 10 minutes
Feb 09

Supplies needed:
- Orange cones
- Rope and/or barrier tape (bright color preferable)
- Warning signs
- Tape measure
- Tape (duct, painters, and masking)
- Heavy duty plastic sheeting
- Cutting tool (e.g., razor knife, box cutter or scissors)
- Magnetic covers
- Disposable tack pad

Purpose: The purpose of this hands-on exercise is to show students the proper steps in covering floors, and closing and sealing the doors, windows and HVAC in the work area.

Note to Instructor: Read the purpose of this activity to students. Remind them that these setup steps must be completed before the disturbance of more than 6 ft² per room of lead-based paint, or, whenever window replacement or demolition is to be accomplished.

Demonstration: The course instructor should explain all of the steps involved in covering and sealing floors and other horizontal surfaces in the work area, and in closing and sealing doors and windows between the work area and non-work areas. Use students to demonstrate closing and taping the windows and doors with masking tape. Remind them that they are trying to keep dust from escaping the work area.

Evaluating the Students: Allow students to practice the steps for covering the floors, closing and sealing windows, and closing and sealing doors. Watch each student follow the steps on the following page. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. Option: Have students say the steps as they work. Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skill Set #4 and that particular student’s name.
Skill Set #4: Establish Interior Containment - Continued

Skills Practice:

Step 1: At each non-entry doorway leading from the work area, place an orange cone, barrier tape, and a “Do Not Enter” sign.*

Step 2: Close all doors and windows leading to/from the work area.*

Step 3: Tape the seams around each door and window casing with painter’s tape, masking tape, or duct tape.*

Step 4: Cut plastic sheeting so that it covers all exposed surfaces within 6 feet of the component(s) that are to be affected by the work.*

Step 5: Secure the plastic sheeting to the floor and walls as appropriate with tape.*

Step 6: Use plastic sheeting floor runners to avoid stepping on the carpet or floors when walking out of the work area. Secure them to the floor with tape.*

Step 7: Close and cover all air and heat diffusers and intakes with magnetic covers, tape, or plastic sheeting and tape.* Also, if possible, turn off the HVAC system while working.* HVAC units may be turned on after cleaning verification or clearance has been achieved.

Step 8: Stage all of the tools, supplies and equipment you will need to conduct the renovation, repair or painting work on the plastic sheeting in the work area to avoid contaminating the work area.*

Step 9: Place a disposable tack pad at the corner of the plastic sheeting nearest the entry door to control tracking dust off of the plastic sheeting.*

*Indicates required skills that must be accomplished for a “Proficient” rating.
Skill Set #5: Establish Exterior Containment

Purpose: The purpose of this hands-on exercise is to show students the proper steps for restricting entry to the exterior work area, and to protect the ground under and around the work area from becoming contaminated.

Note to Instructor: Read the purpose of this activity to students. Remind them that these setup steps must be completed before the disturbance of more than 20 ft² of paint on components that have been determined to be lead-based paint, or, whenever window replacement or demolition is to be accomplished.

Demonstration: The course instructor should explain all of the steps involved in restricting access to and containing dust within the work area. Emphasize to students that proper setup will restrict access, and will keep dust and debris from escaping the work area.

Evaluating the Students: Allow students to cover the ground and establish barriers to prevent unauthorized access to the work area. Watch each student follow the steps on the following page. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. Option: Have students say the steps as they work. Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skill Set #5 and that particular student’s name.
Skill Set #5: Establish Exterior Containment - Continued

Skills Practice:

Step 1: At each non-entry doorway leading into the work area, place an orange cone, barrier tape, and a “Do Not Enter” sign.*

Step 2: Close all doors and windows within 20 feet of the work area.*

Step 3: Place plastic sheeting as ground cover a minimum of 10 feet in all directions from the actual location of a paint disturbance.*

Step 4: Weigh down the edges of the plastic sheeting with 2x4s or bricks or stake down the edges of the plastic sheeting.*

Step 5: Secure the plastic sheeting to the floor and walls with tape or furring strips and tacks.*

Step 6: Place barrier fencing or a rope around the perimeter of the work area 20 feet from the work area and on all exposed sides.*

Step 7: Establish an entry point to the work area and place a “Do Not Enter, No Food or Drinks or Smoking Allowed” sign.*

Step 8: Curb the edges of the plastic sheeting to prevent dust from blowing off.* Curbs can be made by running a low rope near the ground and draping the plastic sheeting over the top of the rope. The rope should be only a few inches above the ground. A staked 2x4 may also be used to raise the edges of the plastic sheeting instead of the rope method.

Step 9: Stage all of the tools, supplies, and equipment you will need to conduct the renovation, repair, or painting work on the plastic sheeting in the work area to avoid contaminating the work area.*

Step 10: Place a disposable tack pad at the corner of the plastic sheeting nearest the entry door to control tracking dust off of the plastic sheeting.*

*Indicates required skills that must be accomplished for a “Proficient” rating.
Debrief of Hands-on Exercise

- How did it go?
- What were some of the hard parts?

Debrief of Hands-on Exercises.
Consider the questions above. Discuss as a class.
Now You Know…

• How to setup for a job
  • Interior containment
  • Exterior containment

Now you know how to set up for a job. The next module will discuss the conduct of lead-safe work practices during the job.
Module 5: During the Work
Module 5: During the Work

Overview:
• Traditional renovations create airborne dust.
• Prohibited practices.
• Protect yourself and make a personal protective equipment toolkit.
• Control the spread of dust.
• Hands-on exercise (Skill Set #6).

Requirements in the EPA RRP Rule:

The RRP Rule prohibits the use of certain practices. These prohibited practices are discussed in this module. This module also contains recommendations regarding how to reduce dust during work activities that are not specifically required or addressed in the RRP Rule. The practices you choose to use in the contained work area must not include prohibited practices. Beyond this you are free to use whatever practices get the job done, provided that all dust and debris you generate stays in the work area and does not migrate to other areas or properties. The recommendations in this section will assist you by reducing the amount of dust released during work. Dust reduction in the work area will make the workplace safer for employees, and will make cleaning easier.

Upon completion of this module, you will know:
• What work practices are prohibited under the RRP Rule because they create dangerous amounts of dust and paint chips;
• What practices to use to control dust, debris or paint chips; and,
• What tools you will need.

**Traditional work practices create large amounts of dust!**

- This chart shows amounts of lead dust created by three common construction practices: hand sanding, power sanding, and interior demolition. **The RRP Rule prohibits the use of power sanding, grinding, planing and cutting without attached HEPA-filtered local capture ventilation because these practices produce so much dust.**
- By using safe work practices, you can control and significantly reduce the amount of dust created on the job. Controlling leaded dust at the source of generation is important because dust released into the air will eventually become settled dust on the ground. Later in this chapter, you will learn safe work practices that can replace these prohibited work practices. In this section you will also find best practice recommendations for reducing dust in the work area.
Prohibited Practices

- Open-flame burning or torching.
- Heat gun above 1,100°F.
- Power sanding, power grinding, power planing, needle guns, abrasive blasting and sandblasting, without HEPA vacuum attachment.

The EPA Renovation, Repair, and Painting Rule does not specifically address what measures must be taken to reduce the amount of dust generated on the job. Rather, the rule lists three Prohibited Practices that must not be used on the job.

1. Open-flame burning or torching.
2. Heat gun above 1,100°F (degrees Fahrenheit).
3. The use of machines that remove lead-based paint through high-speed operation such as sanding, grinding, planing, needle gun, abrasive blasting, or sandblasting is prohibited unless such machines are used with attached HEPA-filtered local capture ventilation.

A key to minimizing the spread of dust and paint chips is not to use certain traditional work practices known to create large amounts of dust and debris.

- Open-flame burning or torching of paint and using a heat gun above 1,100°F create very fine leaded dust particulates ("fume") that are dangerous for workers to breathe. The small leaded dust particles created by burning and heating also settle on surrounding surfaces and are very hard to clean up.

- Power sanding, power grinding, power planing, needle guns, abrasive blasting, and sandblasting create a large amount of dust that floats in the air and then settles on surfaces inside and outside of the work area. These activities are prohibited unless equipped with attached HEPA-filtered local capture ventilation devices to control the dust-laden exhaust.

See Appendix 5 Steps to LEAD SAFE Renovation, Repair and Painting for more information.

The practices listed on the slide are also prohibited in pre-1978 properties with lead-based paint that receive Federal housing assistance. The HUD Rule also prohibits extensive dry scraping and sanding by hand, and paint stripping in a poorly ventilated space using a volatile paint stripper. States, localities or tribes may also prohibit these practices.
Specialized Tools

- Large jobs may require special considerations to get the job done, like:
  - Power sanders, grinders and planers, needle guns, and abrasive and sand blasters, each with required HEPA-filtered capture attachments.
  - Pneumatic and battery powered tools to protect against shock hazards.
  - Specialized planning and containment.

Only power tools equipped with attached HEPA-filtered local capture ventilation may be used when lead-based paint is present or presumed to be present.

- Electric power tools such as sanders, grinders, circular saws, reciprocating saws, planers and drills produce dust and debris. Because they are electric, wet methods are not safe. Pneumatic and battery powered tools prevent shock hazards. Attached HEPA-filtered tools or the use of vacuum attached shrouds on these tools contain the dangerous leaded dust and paint chips that are generated by their use.
- Tools with attached HEPA-filtered capture ventilation collect and filter dust and debris as it is created. A shroud at the head of the tool helps to contain the dust and paint chips as the vacuum draws away dust and debris for safe storage in the vacuum canister. This makes the job cleaner and safer.
- Abrasive blasting is very effective at removing large areas of paint quickly, but these practices require special HEPA filtration equipment that contains the blast medium, dust and paint chips without releasing dust into the air or into the containment.

Containment is even more important when using specialized tools.

- Proper containment and cleaning are crucial even when using HEPA-filtered specialized tools. These tools generate a lot of dust inside a localized negative pressure (vacuum) environment. If the vacuum fails or if the vacuum seal created by the shroud is broken, large volumes of dust can be released. Nonetheless, HEPA-filtered specialized tools can reduce dust levels when used properly, and can aid work production by shortening the cleaning time and lowering cost.
- See the Shopping List of tools and supplies found in Appendix 5 Steps to LEAD SAFE Renovation, Repair and Painting for more information.
Lead Safety for Renovation, Repair, and Painting

Protect Yourself

- **Workers should wear:**
  - Disposable painter's hat.
  - Disposable coveralls.
    - Repair tears with duct tape.
    - Dispose of in plastic bag.
  - Disposable N-100, R-100 or P-100 respirator.
- **Wash face and hands frequently and at the end of each shift.**
  - Washing helps to reduce hand-to-mouth ingestion of leaded dust.
- **OSHA may require more protection depending on what work is done.**

Workers should protect themselves.

- **Painter's hats** are an inexpensive way to keep dust and paint chips out of workers' hair. Painter's hats can be easily disposed of, and should be disposed of at the end of each day or at the end of the job.

- **Disposable coveralls** are a good way to keep dust off workers' street clothes and reduce the chance of carrying dust away as they come and go. The coveralls can be removed when workers leave the work site and stored in a plastic bag overnight. Remember to use a HEPA vacuum to remove dust and debris from coveralls or other outerwear (a "dry decon") before exiting the work area. To keep costs down, consider buying extra large coveralls in bulk and sizing down to fit workers using duct tape. Some coveralls have a hood to keep dust out of hair.

- **Respiratory protection.** Employers should consider that workers should wear respiratory protection, such as a disposable N-100, R-100 or P-100 respirator, to prevent them from inhaling leaded dust. These respirators are particulate-filtering respirators and would not be appropriate as protection from chemical stripping compounds. OSHA provides additional information on respirators in 29 CFR 1910.134.

- **You must wash your hands and face at the end of each shift.** Workers should wash their hands and faces periodically to avoid ingesting leaded dust. It is **forbidden for anyone to eat, drink, or smoke in the work area.** Some of the dust that settles on the face around the mouth invariably finds its way into the mouth. Workers should also wash at the end of the day before getting in their car or going home. They shouldn’t take leaded dust home to their families.

- Personal protection is especially important on high dust generating jobs when lead-based paint or lead-contaminated dust is disturbed, and while cleaning is being performed. However, the same level of protection is not necessary during the planning, testing or setup phases of the work when lead is not being disturbed.

- The protective equipment listed above is meant to show what is needed during activities that disturb lead-based paint and lead-contaminated dust. Depending upon work practices used, OSHA rules may require employers to take further steps to protect the health of workers on the job.

- OSHA provides additional information on working with lead in their Safety and Health Regulations for Lead in the Construction Industry (29 CFR 1926.62).
Control the Spread of Dust

- When you leave the work site, clean yourself and your tools.
  - Remove shoe coverings and HEPA vacuum or wipe shoes.
  - Walk on disposable tack pads to remove dust from your soles.
  - HEPA vacuum and remove coveralls, and HEPA vacuum your clothes.
  - Remove gloves if used, and carefully wash your hands and face.
  - Dispose of all used disposable clothing in plastic bags.
- At the end of the day don’t take lead home to your family on your clothes or in your car.
  - HEPA vacuum clothes, shoes, etc.
  - Change your clothes, and dispose of or place dusty work cloths in a plastic bag to wash separately from household laundry.

Don’t hug your family until you get clean!
- Wash your hands and face.
- Shower as soon as you get home.

Precautions to take when leaving the work site

- When you leave the work site (the area covered by protective sheeting or the work room), take precautions to prevent spreading dust and paint chips on your clothes and shoes to other parts of the residence.
- Every time you leave the plastic sheeting around the surfaces being renovated, remove the disposable shoe covers and wipe or vacuum your shoes before you step off the plastic sheeting. A large disposable tack pad on the floor can help to clean the soles of your shoes.
- Every time you leave containment, HEPA vacuum and remove your disposable coveralls and disposable shoe covers. Clean and/or vacuum your shoes, and wash your hands and face.
- At the end of the day:
  - Change your clothes and wash yourself to reduce the risk of contaminating your car and taking leaded dust home to your family.
  - Before leaving the worksite, remove any protective clothing, HEPA vacuum dust from non-protective clothing, and thoroughly wash your hands and face. Throw away disposable clothing or place clothing in a plastic bag to stop dust from getting on other clothes at home.
  - If you cannot clean yourself at the work site get a piece of plastic to protect the floor and seat of your car from lead contamination.
  - As soon as you arrive home, take a shower and be sure to thoroughly wash your hair, especially before playing with children. Wash your work clothes separately from regular household laundry to stop lead from getting on your other clothes.
  - Be clean before you come in contact with family members, especially children. Remember the video about the contractor who lead-poisoned his own kids.
Cleaning During the Job

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

Clean the work site frequently.

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

Daily cleaning during the job includes:

• Removing debris frequently. Seal and dispose of construction debris as it is created.
• Vacuuming horizontal surfaces frequently. HEPA vacuum dust and paint chips that settle on surfaces, including protective sheeting. As workers come and go during the work day, this debris is easily spread. Periodic cleaning throughout the work day helps minimize the spread of dust.
• Collect paint chips as they are created. When removing paint, paint chips can spread outside the immediate work area as workers come and go from the work site. To keep paint chips from spreading beyond the work site, make sure that they are collected as they are created. Periodically HEPA vacuum and dispose of paint chips.
• Wrapping and disposing of removed components. When removing painted components such as windows, trim and cabinets, wrap them in plastic sheeting and dispose of them in stages. This will prevent the spread of debris and keep residents, especially children, from coming into contact with leaded dust created by the work.
• Safe Waste Disposal. All renovation waste from the work area must be contained prior to its removal, storage, or disposal to prevent releases of dust and debris. Chutes for removing waste from the work area must be covered. At the conclusion of each work day, collect waste and store it in containment, in an enclosure, or behind a barrier that prevents the release of, and access to, dust and debris. When transporting waste from the renovation work area it must be contained to prevent the release of dust and debris.

How often should cleaning during the job take place?

• The goal is to keep dust and debris under control, not to maintain a completely spotless site at all times. Every job is different; so clean when it makes sense to, without hindering progress. Remove large amounts of dust, paint chips, and debris frequently, at least daily.
Exercise: Personal Protective Equipment

- Watch the instructor dress a volunteer in personal protective equipment.
  - Skill Set #6 – Protective Equipment (10 Min).
- Practice putting on and taking off personal protective equipment.
- Dispose of used equipment properly and clean up.

Personal Protective Equipment

This exercise gives you a chance to learn and practice the proper steps for putting on and taking off personal protective equipment, disposing of used equipment, and decontaminating yourself. The slide provides basic instruction.
Skill Set #6: Personal Protective Equipment

**Time:** 10 minutes

Feb 09

**Supplies needed:**
- Disposable coveralls
- Disposable non-latex gloves
- Disposable foot covers
- Eye protection
- Leather or canvas work gloves
- N-100 respirators
- Disposable waste bags
- Duct tape
- Hand washing facilities and hand soap

**Purpose:** The purpose of this hands-on exercise is to show students the proper steps for putting on (donning) and taking off (doffing) personal protective equipment, and the steps for decontaminating and disposing of used equipment.

**Note to Instructor:** Read the purpose of this activity to students.

**Demonstration:** The course instructor should explain all of the steps involved in putting on personal protective equipment while actually dressing a volunteer student in personal protective equipment. Emphasize to students that this equipment prevents their exposure to lead as well as prevents the contamination of areas outside of the work area.

**Evaluating the Students:** Watch each student as they follow the steps on the next page. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. **Option:** Have students say the steps as they work. Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skills Set #6 and that particular student’s name.
Skill Set #6: Personal Protective Equipment – Continued

Skills Practice:

Step 1:  Put on (don) a set of protective coveralls.*

Step 2:  Put on disposable gloves.*

Step 3:  Put on boot covers over shoes.*

Step 4: Put on safety glasses.*

Step 5: Put on work gloves.*

Step 6:  When dressed in this Personal Protective Equipment, discuss the use of respirators and show the proper method for putting on and securing the respirator in place.

Note: Students should not wear a respirator if they are not currently enrolled in the training firm’s respiratory protection program. Watch the demonstration but do not try on a respirator if this note applies you.

Step 7: Remove the work gloves and place them in a marked waste bag.*

Step 8:  Remove the boot covers by pulling them off from the heel and rolling the cover inside out as it is rolled toward the toes. Once removed, place them in a marked waste bag.*

Step 9: Remove your suit by unzipping it and rolling it dirty side in to prevent releasing dust. Once removed, place the suit in a marked waste bag.*

Step 10:  Remove your disposable non-latex gloves by grasping the cuff of one glove and peeling the glove inside out off of the hand. Hold the glove that was removed in the palm of the gloved hand. Place one finger under the cuff of the gloved hand and remove this glove by peeling it off of the gloved hand inside out and over the balled up glove you had already removed. Once removed, you should have one glove inside the other, with the dirty side contained. Dispose of the gloves in the marked waste bag.*

Step 11: Wash your hands, face and shoes with soap and water. Dry your hands and face with a disposable towel.*

*Indicates required skills that must be accomplished for a “Proficient” rating.
Now You Know…

• What work practices produce dust.
• What work practices are prohibited by EPA and HUD.
• How to work safely around lead-based paint and leaded dust.
• Proper use of personal protective equipment.

The practices you learned in this module will help you make less dust as you work.

In the next module, we’ll talk about how to conduct final cleaning of the work area, and how to verify that the cleaning is complete.
Module 6: Cleaning Activities and Checking Your Work
Module 6: Cleaning Activities and Checking Your Work

Overview
• What is effective cleanup?
• Interior cleaning techniques.
• Exterior cleaning techniques.
• How to check your work.
• Cleaning verification procedure.
• Clearance testing.
• Safe disposal practices.

What you will learn in this module:
This module will cover all the topics listed on the slide above.
• The goal of cleaning is to leave the work area as clean as or cleaner than when you arrived so that, as a result of your work, leaded dust is not left behind to poison the residents.
• At the end of this module, you will know how to check your work to ensure the work area is clean enough to pass the visual inspection and cleaning verification procedure, or pass a clearance examination.
• By using the techniques described in this module, you will be able to clean a work area quickly and efficiently. Remember, approaching a cleanup is similar to approaching a job. Proper preparation and planning will help make your cleaning efforts more effective and efficient.
• Always schedule time at the end of each day to thoroughly clean the work area.
What is Effective Cleanup?

- Keeping dust from getting back into areas already cleaned.
- Using proper cleaning techniques.
- Cleaning all surfaces, tools and clothing.
- Checking your work.
  - Usually will involve performing cleaning verification.
  - Could include a clearance examination.
- Safe and secure disposal of waste.

Containment
- Effective cleaning begins with proper preparation and containment. Cleaning will be much easier and efficient if proper containment has kept all dust and debris confined to the work area. While cleaning, keeping dust in the area that is being cleaned is also important. You don’t want to have cleaned areas become re-contaminated after cleaning.

Proper cleaning techniques
- Follow a “top to bottom, back your way out” approach so that you don’t have to re-enter an area that has already been cleaned. Start cleaning high to low. You should be careful not to spread dust to other areas while cleaning. Follow an ordered sequence of cleaning to ensure that you do not contaminate other areas. For example, if floors are cleaned before the countertops you must walk on the floors to get to the countertops and this risks re-contaminating the floors. Never re-enter areas already cleaned. Also, countertops are higher than floors and can drop dust onto the floors.

Cleaning all surfaces
- The term “all surfaces” includes all vertical surfaces such as walls and windows, and all horizontal surfaces such as floors, door tops and moldings, window troughs, and window sills. Cleaning should proceed from high to low, i.e., from top of wall to window to floor.

Checking your work
- Conduct a visual inspection after cleaning is completed. Look for paint chips, dust and debris.
- Perform cleaning verification until all areas pass when compared to the cleaning verification card.
- A dust clearance examination may replace cleaning verification when required by Federal, state, tribal, or local law, or by the owner.

Safe and secure disposal of waste
- Bag and “gooseneck seal” all waste in heavy duty plastic bags. Safely dispose of all waste in accordance with Federal, state and local regulations. See slides 6-9 and 6-10 for information on disposal.
Lead Safety for Renovation, Repair, and Painting

**Interior Cleaning Requirements**

- Collect all paint chips and debris, and seal in heavy duty plastic bags.
- Mist, remove, fold (dirty side in) and tape or seal protective sheeting. Dispose of sheeting as waste.
- Plastic sheeting between non-contaminated rooms and work areas must remain in place until after cleaning and removal of other sheeting.
- HEPA vacuum or wet wipe walls from high to low, then HEPA vacuum remaining surfaces and wipe with a damp cloth.
- Clean 2 feet beyond the contained work area.
- Use disposable wipes or change cloths frequently.
- For carpet or rug, use HEPA vacuum with beater bar.
- HEPA vacuum and wet mop uncarpeted floors - two-bucket mopping method or wet mopping system.

**Pick up**

- Always begin cleaning activities by picking up visible paint chips and debris with a wet disposable cloth without dispersing any of it, and sealing this material in a heavy-duty bag.
- When the job is complete, mist the sheeting, fold it (dirty side in), and either seal it with tape, or seal it in a heavy-duty bag. Always fold dirty side inwards, and seal with tape or place in a heavy duty plastic bag. If it is placed in a heavy-duty bag, “gooseneck-seal” the bag and dispose of the bag with the rest of your waste. Dispose of all sheeting as waste by using the correct folding and disposal procedure, after it has been vacuumed.

**Clean with a Plan**

- Start cleaning at the far end of the work area and work back to the exit.
- Clean walls with a HEPA vacuum or by wiping with a damp disposable cloth: Start with the tops of the walls, tops of doors and door frames and work down to the floor.
- Thoroughly vacuum all remaining surfaces and objects, including furniture and fixtures, in the work area. The HEPA vacuum must be equipped with a beater bar when vacuuming carpeting or rugs.
- Wipe all surfaces and objects that remained in the work area, except carpeted or upholstered surfaces, with a damp cloth.

**Clean the floor last**

- Clean with a wet mopping system or a two-sided bucket and mop.
- Clean the entire work area and the area within 2 feet of the work area.
- If using the two-bucket mopping system, repeat the process using a new mop head and clean water. Remember, always keep one bucket for cleaning solution and the other bucket for wringing out the cloth or mop head. You must keep wash and rinse water separate. Change the rinse water often.

**Check your work**

- Before a Certified Renovator visually inspects the work area, check your work to determine whether dust, debris or residue is still present. If dust, debris or residue is still present, these conditions must be corrected before the visual inspection is performed.
Visual Inspection Procedure

1. Conducted by Certified Renovator.
2. Put on disposable foot covers before entering the work area.
3. Make sure there is adequate lighting in the work area.
   • Turn-on all of the lights or use a bright, white-light flashlight.
4. Systematically look for dust and debris on every horizontal surface in the work area and 2 feet beyond.
   • Work from the farthest area from the entry to the entry.
   • Closely examine each surface.
5. If you find visible dust or debris, then re-clean the work area and repeat step 4.
6. Once you have carefully looked at all of the surfaces and found no dust or debris, proceed to the cleaning verification procedure or clearance.

• Visual inspection after cleaning is required by the RRP Rule. Visual inspection is just the first step.
• A visual inspection must be conducted by a Certified Renovator once cleaning is complete, and prior to the cleaning verification or clearance examination of the work area.
• In a visual inspection, the Certified Renovator looks for visible paint chips, dust and debris.
• Make sure that adequate lighting is provided during the cleaning and visual inspection of the work area. You cannot see dust and small paint chips without adequate lighting.
• Inspect the entire work area and the area 2 feet beyond the work area on all sides of the containment.
• Visual inspection of the work area alone will not verify that the work area has been cleaned adequately – visual inspection is only the first step. In many instances, leaded dust is not visible to the naked eye and will not be detected during a visual inspection. Once the visual inspection has been completed and no visible dust and debris are present, the work area must pass either the cleaning verification procedure or a clearance examination in order for the project to be completed in compliance with the RRP Rule.
• Whether the cleaning verification procedure or clearance examination is conducted will be based on regulatory requirements or terms in the renovation contract.
Cleaning Verification (CV) Procedure

- Wipe each window sill within the work area. Use a single wet disposable cleaning cloth per window sill.
- Wipe uncarpeted floors and all countertops with wet disposable cleaning cloths. Wipe up to a maximum of 40 ft² per cloth.
- Compare each wipe to the CV card. If the cloth matches or is lighter than the CV card, the surface has passed cleaning verification and no further action is required.
- If the cloth is darker than the CV card, re-clean and repeat the CV process.
- If the second wet cloth fails, wait 1 hour or until surfaces are dry, and then wipe with an electrostatically-charged white disposable cleaning cloth designed to be used for cleaning hard surfaces. This completes the cleaning verification.

After visual inspection, one of two activities must be conducted. A Certified Renovator must perform cleaning verification or other certified professionals must conduct a clearance examination. The steps for the cleaning verification procedure are explained below.

Window Sills
- Using a single, wet, disposable cleaning cloth, wipe the entire surface of each window sill in the work area.

Wipe Countertops and Floors
- Wipe the entire surface of each countertop and uncarpeted floor within the work area with wet disposable cleaning cloths. Floors must be wiped using a wet cleaning system, including a long handle device with a head to which a wet disposable cleaning cloth is attached. The cloth must remain damp at all times while being used to wipe the floor.
- If the surface of a countertop or floor within the work area is greater than 40 square feet, the surface within the work area must be divided into roughly equal sections that are each less than 40 square feet. Wipe each surface section separately using a new wet disposable cleaning cloth.

Interpret the Cleaning Verification Procedure.
- Compare each wipe representing a specific surface section to the cleaning verification card. If the cloth used to wipe each surface section within the work area matches or is lighter than the cleaning verification card, that surface section has been adequately cleaned.
- If the cloth is darker than the cleaning verification card, re-clean that surface section, then use a new wet disposable cleaning cloth to wipe the surface section. If the cloth matches or is lighter than the cleaning verification card, that surface section has been adequately cleaned.
- If the second cloth does not match and is not lighter than the cleaning verification card, re-clean the surface and wait for 1 hour or until the surface section has dried completely, whichever is longer. Then wipe the surface section with an electrostatically charged white disposable cleaning cloth designed to be used for cleaning hard surfaces. The cleaning verification procedure is now complete and the surface is considered clean.
- When cleaning verification has been completed for all of the surfaces in the work area (including window sills), warning signs may be removed.
Dust Clearance Examination

A dust clearance examination may be performed instead of cleaning verification.

- **A clearance examination must be conducted by a Certified Lead Inspector, Risk Assessor, or Dust Sampling Technician.**
- **If clearance fails, the renovation firm must re-clean the work area until dust standards comply with applicable state, territorial, tribal and local standards.**

Clearance Examination (Dust Clearance Testing) – Optional under the RRP Rule

- Dust clearance testing may be performed to check the effectiveness of the cleaning efforts. Clearance is an option under the EPA Renovation, Repair, and Painting Rule and is required by the HUD Rule in many cases.
- Dust clearance testing is performed to check the effectiveness of cleaning efforts.
- In some cases, dust clearance testing may be required as part of “clearance” (a regulation-defined process to ensure that a work area is not contaminated with leaded dust after work is completed). Cleaning verification need not be performed if dust clearance testing is required at the conclusion of a renovation. In such cases, dust clearance testing may only be performed by a Certified Lead Inspector, Risk Assessor, or Dust Sampling Technician. The Certified Renovation Firm is required to re-clean the work area until dust-lead levels in the work area meet the clearance standards. Some state, local, and tribal laws may require a clearance examination following renovation and remodeling work, to levels that differ from the Federal clearance standards. The selection of a CV or a clearance examination will be based on regulatory requirements or the renovation contract.

Clearance is required in many pre-1978 properties receiving Federal housing assistance. The clearance examination may be scheduled by the agency administering the assistance. A clearance examination is performed by a trained person independent of the renovation firm performing the work. Ask your client or contact the agency administering the assistance to the property to find out if a clearance examination is required at the end of the job and to find out who will schedule it. Remember, if the property fails clearance, the unit must be re-cleaned and another clearance examination performed. Sometimes the cost of re-cleaning and the additional clearance examination will be the responsibility of the contractor. Cleaning well the first time will save both time and money.
Exterior Cleanup Requirements

- Clean all surfaces in the work area until no visible dust, debris, or residue remains.
- Remove all dust and debris without dispersal, and seal in heavy plastic bags.
- Remove protective plastic sheeting and mist before folding it dirty side inward.
- Check your work.
  - Focus on areas such as window sills, bare soil, and children’s play areas.
  - Look for dust, debris and paint chips.

Specific exterior jobs
- If work takes place on an exterior porch or stairwell, HEPA vacuuming, wet cleaning and mopping, in addition to a thorough visual inspection, should be used to clean the work area. For such jobs, the cleanup can be similar to cleanup after interior jobs. Collect and dispose of any dust and debris with the rest of your waste.

Remember
- Lead contaminated soil can poison children.
- Avoid dry raking and shoveling, and spreading dust. However, raking and shoveling the soil is appropriate if it is misted first.

Protective sheeting
- Collect all dust and debris on the sheeting and place in plastic bags.
- Mist sheeting, fold dirty side inward, and dispose of as waste. This is especially important since you will not be cleaning the ground afterward. Remember that you are responsible to make sure you do not leave dust and debris behind.
- The Certified Renovator should visually inspect the plastic after cleaning for dust and debris. Remember the Certified Renovator is required to certify that the work area was cleaned properly at the end of the job.
- Protective sheeting is to be disposed of as waste.

Visual inspection
- A thorough visual inspection of the work area should be conducted after any exterior job. Any visible paint chips, wood chips and other debris from the work area should be collected and disposed of with the rest of your waste.
- Focus your visual inspection on areas such as exterior porches, outside play areas, bare soil and ground, and window sills, but don’t ignore or neglect other areas.
Exterior – Check Effectiveness of Cleaning

- Visual inspection
  - A Certified Renovator conducts a visual inspection after any cleaning.
  - Determines if any visible dust and debris are present in and beyond the boundaries of the work area.
- If visible dust or debris are found, collect and dispose of all paint chips, dust, and debris identified during the visual inspection.
- After re-cleaning, the Certified Renovator conducts another visual inspection.
- When all areas pass, warning signs may be removed.

Checking your work

- A thorough visual inspection is the main part of checking your cleanup after an exterior job. You should collect and dispose of any paint chips, wood chips and debris found during the visual inspection.
- A visual inspection is conducted after completing cleanup, to check your work.
- The Certified Renovator must perform the visual inspection to determine whether dust, debris or residue is still present on surfaces in or below the work area, including window sills and on the ground.
- If dust or residue is present, clean again, and then repeat the visual inspection.
- Warning signs may be removed after passing visual inspection.

Clearance on exterior jobs. For exterior jobs, HUD requires only a visual assessment of the work area to pass clearance. No dust or soil testing is required. If you follow procedures taught in this course you will satisfy HUD requirements.
Disposal

• What should I do with my waste?
• At the work site:
  • Place waste in heavy duty plastic bag.
  • “Gooseneck seal” the bag with duct tape.
  • Carefully dispose of waste in accordance with Federal and other regulations.
  • HEPA vacuum the exterior of the waste bag before removing it from the work area.
  • Store waste in a secure area.

At the Work Site
• Always collect, bag and seal all waste at the work site and in the work area. HEPA vacuum or wipe the exterior of waste bags before removing them from the work area. Do not carry your waste to another room or another area before bagging and sealing it. Store all waste in a secure container or dumpster until disposal. Limit on-site storage time. Avoid transporting waste in an open truck or in a personal vehicle. Some examples of waste include protective sheeting, HEPA filters, paint chips, dust, dirty water, used cloths, used wipes, used mop heads, used protective clothing, used respirators, used gloves, and architectural components. Architectural components that are too big to fit into bags must be wrapped in plastic and sealed with tape prior to removal from the work area. If needed, “double-bag” your waste to help prevent the waste from escaping if the bag is cut or ripped.

Waste Water
• Water used for cleanup should be filtered and dumped in a toilet if local rules allow. Never dump this water down a sink or tub, down a storm drain or on the ground. Filtering waste water through a 5-micron filter may be necessary when lead-contamination such as paint chips and dust may be present in the water. Check with your local water treatment authority, and in Federal and state regulations for more information.

Always dispose of waste water in accordance with Federal, state and local regulations.

HUD recommends that when building components are recycled or sold, painted building components should be stripped before re-installation. If components are not stripped, they should never be reinstalled in housing.
Lead Safety for Renovation, Repair, and Painting

Disposal – Federal, State and Local Information

• According to Federal law:
  • In housing: Waste must be disposed of as normal household waste.
  • In non-residential child-occupied facilities: If waste exceeds 220 lbs, treat all debris as hazardous.
• Always check local requirements!

Waste Disposal Issues

Because EPA considers most residential renovation and remodeling as “routine residential maintenance”, the waste generated during these activities is classified as solid, non-hazardous waste, and should be taken to a licensed solid waste landfill. This does not apply to commercial, public or other non-residential child-occupied facilities.

• If you generate any hazardous waste, you should determine whether you generate more than 220 pounds of hazardous waste per job site per month. If you have less than 220 pounds per location per month, manage the waste as solid, non-hazardous waste. If you generate more than 220 pounds of hazardous waste, you should contact your state and local regulators to find out how to properly dispose of it.
• Some possible examples of hazardous waste include: paint chips; vacuum debris; sludge or chemical waste from strippers; and, HEPA filters.
• Some possible examples of non-hazardous waste may include: disposable clothing; respirator filters; rugs and carpets; protective sheeting; and, solid components with no peeling paint.
• All waste should be sealed in heavy duty plastic bags and handled carefully.
• Large architectural components should be wrapped and sealed in plastic sheeting, and disposed of along with other waste.
• Always check Federal, state and local requirements before disposing of waste. Some states have enacted more stringent waste management and disposal requirements than Federal regulations. You need to become aware of how Federal, state and local requirements affect the management and disposal of renovation waste in your area.
Exercise: Cleaning and the Cleaning Verification Procedure

- Work in groups of 2-6.
- Assignments:
  - Skill Set #7: Interior Final Cleaning
  - Skill Set #8: Exterior Final Cleaning
  - Skill Set #9: Bagging Waste
  - Skill Set #10: Visual Inspection
  - Skill Set #11: Cleaning Verification Procedure
- Choose the tools and supplies you need to clean the work area.
- Clean your work area.
- You have 40 minutes.

Exercise: Cleanup and Cleaning Verification

This exercise gives you a chance to demonstrate cleanup, visual clearance, cleaning verification, and proper waste-bagging techniques. The slide provides basic instruction.

- Stay in your groups of 2 to 6 students, in your work area.
- Choose the right tools. Tools available include buckets, mops, water, detergent, HEPA vacuum, wipes, plastic sheeting, plastic bags, tape, etc.
- Clean up the dust.
- Bag the waste.
- Check your work.
- Verify cleaning.
Skill Set #7: Interior Final Cleaning
Time: 10 minutes
Feb 09

Supplies needed:
- Heavy duty plastic sheeting
- Duct tape
- HEPA vacuum with attachments and a powered beater bar
- Garden sprayer
- Cutting tool (e.g., razor knife, box cutter or scissors)
- Disposable wet cleaning wipes
- Heavy duty plastic bags
- Two-sided mop bucket with wringer (or equivalent), disposable mop heads, long handled mop to which disposable cleaning cloths can be attached; or, a wet mopping system.

Purpose: The purpose of this hands-on exercise is to show students the proper steps for cleaning the interior work area after the completion of the work and prior to the visual inspection and cleaning verification procedure, or a clearance examination.

Note to Instructor: Read the purpose of this activity to students. Remind them that they are trying to completely clean all visible dust and debris in the work area, and that their work will be checked. Remind them that this level of cleanliness is achievable, but does require attention and careful execution.

- The course instructor should explain all of the steps involved in cleaning the work area. Emphasize to students that there are no short cuts to passing the visual inspection.
- Recommended personal protective equipment during final cleaning activities is a set of disposable coveralls, disposable gloves, and shoe covers.
- If plastic sheeting is not already in place from previous exercises, have plastic sheeting for the floor or carpets put down.

Evaluating the Students: Watch each student follow the steps on the following page. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skills Set #7 and that particular student’s name.
Skill Set #7: Interior Final Cleaning - Continued

**Skills Practice:**

Step 1: Wrap and seal, or bag all components and other large materials and then remove them from the work area.*

Step 2: Clean off the plastic sheeting using a HEPA vacuum (this procedure is not required, but it is faster than wiping up dust and debris by hand). Mist the plastic sheeting and fold dirty side inward. Either seal the edges of the folded plastic sheeting with tape or place it in a heavy-duty plastic bag. Dispose of the protective sheeting.*

Step 3: Remove all waste from the work area and place in appropriate waste containers.*

Step 4: Clean all surfaces within the work area and in the area 2 feet beyond the work area until no dust or debris remains. Start cleaning at the top of the walls and work down toward the floor, HEPA vacuum or wet wipe all wall surfaces in the work area. HEPA vacuum all remaining surfaces in the work area, including furniture and fixtures. Use the upholstery attachment for the window surfaces and the crevice tool along the edge of the walls. Use the HEPA vacuum with a beater bar for carpeting. Work from the end farthest from the work area entrance back to the entrance, making sure never to step back into areas that have already been cleaned.*

Step 5: Next, wipe all remaining surfaces and objects in the work area except for carpeted and upholstered surfaces, with a disposable wet cleaning wipe. Also mop uncarpeted floors using a two-bucket method or wet mopping system. Work from the end farthest from the work area entrance back to the entrance, making sure never to step back into areas that have already been cleaned. For carpeted areas, conduct a second pass with the HEPA vacuum using the beater bar attachment instead of wiping with a wet cleaning cloth.*

Step 6: If the property is HUD-regulated, repeat Step 4 for walls, countertops and floors, and then continue to Step 7. Otherwise, continue to Step 7.

Step 7: After completion of cleaning procedures, check your work. Conduct a careful visual inspection of the work area for visible dust and debris. If visible dust or debris is found, repeat Steps 4 and 5 as needed to make sure no visible dust or debris is present, and then re-check your work with a thorough visual inspection of the work area. When there is no visible dust or debris present, proceed to step 8.*

Step 8: Notify the Certified Renovator in charge of the project that the work area is ready for visual inspection.*

*Indicates required skills that must be accomplished for a “Proficient” rating.
Skill Set #8: Exterior Final Cleaning

**Time:** 10 minutes

Feb 09

**Supplies needed:**
- Heavy duty plastic sheeting
- Heavy duty plastic bags
- Tape (duct, painters, and masking)
- Cutting tool (e.g., razor knife, box cutter or scissors)
- Flashlight.
- Disposable wet cleaning wipes
- HEPA vacuum with attachments
- Two-sided mop bucket with wringer (or equivalent), disposable mop heads, long handled mop to which disposable cleaning cloths can be attached; or, a wet mopping system.

**Purpose:** The purpose of this hands-on exercise is to show students the proper steps for cleaning an exterior work area after the completion of the work and prior to the visual inspection and (if required) the cleaning verification procedure or a clearance examination.

**Note to Instructor:** Read the purpose of this activity to students. Remind them that they are trying to clean all visible dust and debris within the work area, and that their work will be checked. Remind them that this level of cleanliness is achievable, but does require attention and careful execution.

- The course instructor should explain all of the steps involved in cleaning the work area. Emphasize to students that there are no short cuts to passing the visual inspection.

- Recommended personal protective equipment during cleaning activities is a set of disposable coveralls, disposable gloves, and shoe covers.

- If plastic sheeting is not already in place from previous exercises, have plastic sheeting for the floor or carpets put down.

**Evaluating the Students:** Watch each student follow the steps on the following page. Make corrections and suggestions as the exercise proceeds and determine if additional practice is necessary. **Option:** Have students say the steps as they work. Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skills Set #8 and that particular student’s name.
Skill Set #8: Exterior Final Cleaning - Continued

Skills Practice:
Step 1: Wrap and seal or bag all components and other large materials and then remove them from the work area.*

Step 2: Clean off the plastic sheeting using a HEPA vacuum (this procedure is not required, but it sure is faster than wiping up dust and debris by hand). Mist the plastic sheeting and fold dirty side inward. Either seal the edges of the plastic sheeting with tape or place it in a heavy-duty plastic bag. Dispose of plastic sheeting.*

Step 3: Remove all waste from the work area and place in appropriate waste containers.*

Step 4: Clean all surfaces in the work area and areas within 2 feet beyond the work area until no visible dust, debris, or paint chips remain.*

**Suggested Cleaning Procedure For Exterior Cleanable Surfaces:** Start cleaning at the top of the walls and work down to the floor, HEPA vacuum or wet wipe all cleanable surfaces in the work area, including furniture and fixtures. Use the HEPA vacuum with the upholstery attachment for windows and use the crevice tool along the walls. Work from the end farthest from the work area entrance back to the entrance, making sure never to step back into areas that have already been cleaned.

Step 5: After completion of cleaning, check your work. This is done by conducting a careful visual inspection of the work area for visible dust, debris, or paint chips on hard surfaces, and for visible dust, debris, or paint chips in the soil areas under the work area protective sheeting. If dust or debris is found, re-clean, and then re-check your work with a thorough visual inspection of the work area. Once there is no visible dust, debris, or paint chips present, proceed to step 6.*

Step 6: Notify the Certified Renovator in charge of the project that the work area is ready for visual inspection.*

*Indicates required skills that must be accomplished for a “Proficient” rating.
Skill Set #9: Bagging Waste

Time: 10 minutes
Feb 09

Supplies needed:
- Used plastic sheeting and used personal protective equipment (from previous exercises)
- Dust and debris (from previous exercises)
- Heavy duty plastic sheeting
- Heavy duty plastic bags
- Cutting tool (e.g., razor knife, box cutter or scissors)
- HEPA vacuum with attachments
- Duct tape

Purpose: The purpose of this hands-on exercise is to show the students the proper steps to bag and gooseneck waste, wrap large pieces of debris, and remove waste from the work area.

Note to Instructor: Read the purpose of this activity to students.

- Demonstration: The course instructor should demonstrate the proper gooseneck technique for sealing waste bags.
- Optional Bagging Relay Race: This exercise can be conducted as a relay race. Divide students into teams and have each team member select a waste bag, load it with simulated waste material, make a gooseneck in the waste bag, vacuum the bag and submit it as complete in the simulated waste storage area. This will allow the instructors to observe proficiency in the method of closing the bags and making goosenecks and provides a fun way to learn for the students.

Evaluating the Students: Watch each student make a gooseneck closure on a waste bag. Students must complete all required Steps to be “Proficient”. Once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skills Set #9 and that particular student's name.
Skill Set #9: Bagging Waste - Continued

Skills Practice:

Note: This exercise requires that the waste materials generated throughout the exercises be stored in unsealed bags or in sheets of plastic.

Gooseneck Procedure for Waste Bags:

Step 1: Each student should get a waste bag and place some material in it that will be discarded as simulate waste. Do not overfill bags.

Step 2: Gather the open end of the bag just below the opening into one hand.*

Step 3: Twist the bag so that the neck of the bag twists in the same direction and forms an 8”-10” column.*

Step 4: Fold the twisted column over on itself, in a similar manner to how you would fold a hose over onto itself to cut off the flow of water.*

Step 5: Grasp the folded neck of the bag in one hand and wrap tape around the folded neck to secure the fold in place.*

Step 6: Now wrap the tape about 2 or 3 inches from the top of the fold, several times so that the bag cannot come open. The resulting bags neck looks like the neck of a goose folded back on itself (a goose neck seal).*

Step 7: Use the HEPA vacuum to remove any dust from the exterior of the bags. Carry the bags out of the work area to the appropriate waste container.*

Wrapping large pieces of debris:

Step 1: Cut a piece of plastic so that it can be wrapped around the debris to be disposed of.*

Step 2: Once wrapped in plastic, tape the seams of the package.*

Step 3: Wrap tape around the width of the package in three spots to keep the package from unraveling.*

Step 4: Use the HEPA vacuum to remove any dust from the exterior of the package and carry the wrapped debris out of the work area to the appropriate waste container.*

*Indicates required skills that must be accomplished for a “Proficient” rating.
Skill Set #10: Visual Inspection

Time: 5 minutes
Feb 09

Supplies needed:
- Disposable foot covers
- Flashlight

Purpose: The purpose of this hands-on exercise is to show the students the proper steps for conducting a visual inspection of the work area prior to conduct of the cleaning verification procedure.

Note to Instructor: Read the purpose of this activity to students. Remind them that they are trying to verify that all visible dust and debris has been cleaned from the work area. Remind them that this level of cleanliness is achievable, but does require attention and careful execution. Also read the note to the students below.

Note to Students: If a clearance examination is to be performed, the Certified Renovator should still conduct a visual inspection before submitting to the two-part clearance examination. A clearance examination consists of a separate visual inspection and dust wipe testing. The two-part clearance examination is conducted by a Certified Lead Inspector, Certified Lead Risk Assessor, or Certified Sampling Technician.

Demonstration: The course instructor should explain all of the steps involved in performing a visual clearance in the work area. Emphasize to students that there are no short cuts to passing the visual inspection.

Evaluating the Students: Watch each student conduct a visual inspection and listen as they point out problems that must be fixed. Students must complete all required Steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skills Set #10 and that particular student’s name.
Skill Set #10: Visual Inspection - Continued

Skills Practice:

Step 1: Put on disposable foot covers so that you do not track dust and debris into
the work area, then enter the work area.*

Step 2: Turn on all of the lights that are available in the work area. Bring a bright,
white-light flashlight to make sure there is adequate lighting.*

Step 3: Systematically look at every horizontal surface in the work area, working from
the farthest area from the entry to the entry without recovering your tracks.
Get close to the surfaces you are inspecting.*

Note: Remember this is a visual inspection, but the cleaning verification is
going to wipe dust up to compare with the cleaning verification card. If you
suspect a surface to be dirty, have it re-cleaned with a wet cleaning cloth.

Step 4: If you find visible dust or debris, re-clean the work area and repeat step 3.*

Step 5: Once you have carefully inspected all of the surfaces and have found no dust
or debris, proceed to the cleaning verification procedure in Skill Set #11.*

*Indicates required skills that must be accomplished for a “Proficient” rating.
Skill Set #11: Cleaning Verification Procedure

Time: 15 minutes
Feb 09

**Supplies needed:**
- Baby powder or corn starch
- Disposable foot covers
- Flashlight
- Disposable non-latex gloves
- Disposable wet cleaning wipes
- Cleaning verification card, one per student to take away and retain
- Electrostatically charged, white, disposable cleaning cloths designed for cleaning hard surfaces
- Long-handled mop designed for wet cleaning wipes
- Tape measure
- Watch or clock

**Purpose:** The purpose of this hands-on exercise is to show the students the proper steps for conducting the cleaning verification procedure.

- The course instructor should explain all of the steps involved in performing the cleaning verification procedure.

**Evaluating the Students:** Watch each student conduct the cleaning verification procedure and listen as they point out problems that must be fixed. Students must complete all required steps to be “Proficient”. Evaluate the work of each student and once the student has completed all required elements of the exercise correctly, record the performance as “Proficient” in the field on the Participant Progress Log that corresponds to Skills Set #11 and that particular student’s name.
Skill Set #11: Cleaning Verification Procedure - Continued

Skills Practice:

Step 1: As you enter the work area put on disposable foot covers so that you do not track dust and debris into the work area.*

Step 2: Turn on all of the lights that are available in the work area. Make sure there is adequate lighting.*

For window sills:
Step 3: While wearing gloves, wipe each window sill in the work area with a clean, white, damp cleaning wipe.*

Step 4: Compare the cleaning wipe to the cleaning verification card. If the first wipe is the same as or whiter (lighter) than the cleaning verification card, the window sill is clean; continue to Step 6. If the first cleaning wipe is not the same as or whiter (lighter) than the cleaning verification card, re-clean the window sill, and, repeat Step 3 and then proceed to Step 5 (skip this step).*

Step 5: Compare the second cleaning wipe to the cleaning verification card. If the second wipe is the same as or whiter (lighter) than the cleaning verification card, the window sill is clean; continue to Step 6. If the second cleaning wipe is not the same as and not whiter (not lighter) than the cleaning verification card, wait one hour or until the wet surface is dry (for the purposes of this exercise you do not wait). Then re-clean the surface with a dry, electrostatically charged, white, disposable cleaning cloth designed for use on hard surfaces. The window sill is now clean and has completed the cleaning verification procedure.*

For Floors and Countertops:
Step 6: While wearing gloves, wipe each floor or countertop in the work area with a clean, white, damp cleaning wipe. For floors, use a long handled mop designed to hold a wet cleaning wipe. For floors, wipe no more than 40 square feet per wipe. For countertops wipe the whole surface of the countertop up to 40 square feet per wipe.*

Step 7: Compare each floor and countertop cleaning wipe to the cleaning verification card. If the first wipe is the same as or whiter (lighter) than the cleaning verification card, the floor or countertop is clean. If the first cleaning wipe is not the same as and not whiter (not lighter) than the cleaning verification card, re-clean the floor section or countertop section, wipe the floor or countertop section with a wet cleaning wipe, and repeat Step 6 for that section and proceed to Step 8 (skip this step).*

Step 8: Compare the second floor or countertop cleaning wipe to the cleaning verification card. If the second wipe is the same as or whiter (lighter) than the cleaning verification card, the floor or countertop section has been adequately cleaned. If the second cleaning wipe is not the same as and not whiter (not lighter) than the cleaning verification card, wait one hour or until the wet surface is dry (for the purposes of this exercise you do not wait). Then re-clean the surface with a dry, electrostatically charged, white, disposable cleaning cloth designed for use on hard surfaces. The floor or countertop section is now clean and has completed the cleaning verification procedure.*

Step 9: Once the cleaning verification shows that all areas have been adequately cleaned, remove the signs and critical barriers around the work area.*

*Indicates required skills that must be accomplished for a “Proficient” rating
Now You Know…

• How to clean the work area systematically.
• How to check the effectiveness of cleaning.
• How to perform a visual inspection of the work area.
• How to perform the cleaning verification procedure.
• How to release the work area for clearance testing.
• How to properly dispose of waste.

The information on the slide above summarizes the topics covered in this module.
Module 7: Recordkeeping
Module 7: Recordkeeping

Overview:
• In this section, you will learn about records required for each job.
• Records must be retained and made available to EPA, upon request, for 3 years following completion of renovation.

Language of the RRP Rule is:
“Firms performing renovations must retain and, if requested, make available to EPA, all records necessary to demonstrate compliance…for a period of three years following completion of the renovation.”

HUD also has a 3-year record retention requirement for notices, evaluations, and clearance or abatement reports (24 CFR 35.175).
On-The-Job Records

- Copies of Certified Firm and Certified Renovator certifications (must be kept on site).
- Lead-based paint testing results when an EPA-recognized test kit is used.
- Proof of owner/occupant pre-renovation education.
- Opt out certification by owner/occupant, when they qualify to and decide to opt out of the lead-safe work practice requirements.
- Non-certified worker training documentation (must be kept on site).

The Certified Firm must designate (in writing) a Certified Renovator to be responsible for each renovation job in target housing or a child-occupied facility. This is the logical person to organize and maintain on-the-job records during the work. On the jobsite, the records should be kept in a safe, secure, clean and dry place. Once the project is complete, some records can be filed with other firm records while others may need to be moved to the next job site.

Records to be maintained on site include:
- Copy of Certified Firm and Certified Renovator(s) certifications.
- Non-certified worker training documentation.

Records to be maintained to document the job:
- Copy of Certified Firm and Certified Renovator(s) certifications.
- Non-certified worker training documentation.
- Designation of a Certified Renovator to the job.
- Information on and results of use of EPA-recognized test kits provided by a Certified Renovator who acted as the representative of the Certified Firm at the job site and who conducted testing for the presence of lead-based paint on surfaces to be affected by the renovation.
- Lead-based paint inspection reports provided by a Certified Lead Inspector or Certified Lead Risk Assessor, if applicable.
- Proof of owner/occupant pre-renovation education
- Opt-out certification by owner-occupant, when they qualify to, and decide to, opt-out of lead safe work practice requirements.
- Any other signed and dated documents from the owner(s) and/or residents regarding conduct of the renovation and requirements in the EPA RRP Rule.
- All reports required from the Certified Firm and the Certified Renovator by the EPA RRP Rule.
Recordkeeping: Pre-Renovation Education Records

In Target Housing – Individual units:
• Must acquire either written proof of receipt by an adult occupant or proof of delivery/unsuccessful delivery of Renovate Right, or:
• Written proof of receipt of Renovate Right by owner or proof of mailing (if mailing, send 7 days prior to renovation).

In Target Housing - Common Areas (Two Options):
• Provide written notification to each affected unit and make Renovate Right pamphlet available on request; or:
• Keep copies or pictures of the signs and notices posted.

In Child-Occupied Facilities
• Written proof of receipt of Renovate Right by owner or proof of mailing required (If mailing, send 7 days prior to renovation).
• Maintain proof of receipt by owner or adult representative, or certify in writing that the Renovate Right pamphlet has been delivered to facility.
• Keep copies or pictures of the signs and notices posted.

In addition to the requirements above, maintain all records for pre-renovation education activities that contain information about the following:

In Target Housing – Individual Units:
• When contacts with the owner and occupants were attempted.
• Written proof of when contacts were made.

In Target Housing – Common Areas:
• Documentation of when and to whom written notification was delivered for each unit affected.
• What notices were posted, and when and where they were posted.

In Child-Occupied Facilities:
• When contacts with the owner and occupants were attempted.
• Written proof of when contacts were made.
• Whether and when contact was made with the owner or adult representative of the child-occupied facility.
• What notices were posted, and when and where they were posted.
Sample Confirmation of Receipt of Renovate Right

☐ I have received a copy of the pamphlet, Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools.

Recipient Signature: __________ Printed Name: __________ Date: __/__/__

Self-Certification Option (for tenant-occupied dwellings only) - If the lead pamphlet was delivered but a tenant signature was not obtainable, you may check the appropriate box below.

☐ Refusal to sign.
☐ Unavailable for signature.

Gather the following information:
- Printed name and signature of person certifying lead pamphlet delivery.
- Date and time of lead pamphlet delivery.
- Unit address.
Future Sample Pre-Renovation Form

This sample form may be used by firms to document compliance with the requirements of the Federal Lead-Based Paint Renovation, Repair, and Painting Program after April 2010.

Occupant Confirmation

Pamphlet Receipt
— I have received a copy of the lead hazard information pamphlet informing me of the potential risk of the lead hazard exposure from renovation activity to be performed in my dwelling unit. I received this pamphlet before the work began.

Owner-occupant Opt-out Acknowledgment
— (A) I confirm that I own and live in this property, that no child under the age of 6 resides here, that no pregnant woman resides here, and that this property is not a child-occupied facility.

Note: A child resides in the primary residence of his or her custodial parents, legal guardians, foster parents, or informal caretaker if the child lives and sleeps most of the time at the caretaker’s residence.

Note: A child-occupied facility is a pre-1978 building visited regularly by the same child, under 6 years of age, on at least two different days within any week, for at least 3 hours each day, provided that the visits total at least 60 hours annually.

If Box A is checked, check either Box B or Box C, but not both.
— (B) I request that the renovation firm use the lead-safe work practices required by EPA’s Lead-Based Paint Renovation, Repair, and Painting Rule; or
— (C) I understand that the firm performing the renovation will not be required to use the lead-safe work practices required by EPA’s Lead-Based Paint Renovation, Repair, and Painting Rule.

Printed Name of Owner-occupant

Signature of Owner-occupant  Signature Date

Renovator’s Self Certification Option (for tenant-occupied dwellings only)

Instructions to Renovator: If the lead hazard information pamphlet was delivered but a tenant signature was not obtainable, you may check the appropriate box below.

— Declined – I certify that I have made a good faith effort to deliver the lead hazard information pamphlet to the rental dwelling unit listed below at the date and time indicated and that the occupant declined to sign the confirmation of receipt. I further certify that I have left a copy of the pamphlet at the unit with the occupant.

— Unavailable for signature – I certify that I have made a good faith effort to deliver the lead hazard information pamphlet to the rental dwelling unit listed below and that the occupant was unavailable to sign the confirmation of receipt. I further certify that I have left a copy of the pamphlet at the unit by sliding it under the door or by (fill in how pamphlet was left).

Printed Name of Person Certifying Delivery Attempted Delivery Date

Signature of Person Certifying Lead Pamphlet Delivery

Unit Address

Note Regarding Mailing Option — As an alternative to delivery in person, you may mail the lead hazard information pamphlet to the owner and/or tenant. Pamphlet must be mailed at least 7 days before renovation. Mailing must be documented by a certificate of mailing from the post office.
Sample Forms (continued)

**Renovation Notice** — *For use in notifying tenants of renovations in common areas of multi-family housing.*

The following renovation activities will take place in the following locations:

<table>
<thead>
<tr>
<th>Activity (e.g., sanding, window replacement)</th>
<th>Location (e.g., lobby, recreation center)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The expected starting date is __________ and the expected ending date is __________. Because this is an older building built before 1978, some of the paint disturbed during the renovation may contain lead. You may obtain a copy of the pamphlet, *Protect Your Family From Lead in Your Home*, by telephoning me at __________. Please leave a message and be sure to include your name, phone number and address. I will either mail you a pamphlet or slide one under your door.

<table>
<thead>
<tr>
<th>Date</th>
<th>Printed name of renovator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature of renovator

---

**Record of Tenant Notification Procedures** — *Procedures Used For Delivering Notices to Tenants of Renovations in Common Areas*

Project Address: ____________________________________________

Street (apt. #) ____________________________________________

City __________________________________ State __________ Zip Code __________

Owner of multi-family housing __________________________________ Number of dwelling units

Method of delivering notice forms (e.g. delivery to units, delivery to mailboxes of units) __________________________________

Name of person delivering notices __________________________________

Signature of person delivering notices __________________________________ Date of Delivery ____________________________________
Recordkeeping: Non-Certified Worker Training

- Worker’s name.
- Description of lead safe work practices the worker is trained to perform.
- Completed and signed skills evaluation checklists.
- Date(s) of training.
- Name and signature of the Certified Renovator who conducted the training.

Documentation of Non-Certified Renovation Worker Training

The Certified Renovator who conducted the non-certified worker training must document the information taught to, and skill set proficiencies achieved by, each individual trainee. This training can be conducted in a classroom setting with simulated hands-on or on the job. Documentation may vary for each trainee as not all trainees may be assigned to conduct all lead-safe work practices and the training is only required to be task specific.

To simplify this documentation, your training manual includes a form that can be adapted for documenting hands-on and topical training for non-certified workers (See Appendix 6).
Recordkeeping: Test Kit Reporting

If an EPA-recognized test kit is used to test surfaces in the work area, the firm must:

- Submit a report to the person contracting for the work within 30 days after the end of the renovation, containing:
  - Manufacturer and model of the EPA-recognized test kit.
  - A description of the components tested.
  - The location of components tested.
  - Results of the testing.
- Retain a copy of the test kit documentation form.

Checking for Lead-Based Paint With EPA-Recognized Test Kits:

- Check www.epa.gov for a list of EPA-recognized test kits.
- Each component to be renovated or impacted by renovation must be tested. If all surfaces are found to be free of lead-based paint, the RRP Rule does not apply.
- If a set of affected components make up an integrated whole (such as a stair tread or riser within a single staircase; or, a window casing, apron, stool, header or trough in a window case system), then only one of the individual components from that set needs to be tested.

EPA-Recognized Test Kits:

- Until September 1, 2010, EPA is only requiring the use of test kits that determine that lead-based paint is not present on the surfaces tested. If a color change does not occur, lead-safe work practices are not required. If a color change occurs, while the change does not with certainty mean that lead-based paint is present, the surface must be presumed to be coated with lead-based paint.
- To be EPA-recognized after September 1, 2010, a test kit must be able to identify lead-based paint. At that time, a test kit positive test result will mean that lead-based paint is present in the coating and that lead-safe work practices must be followed when that surface is disturbed. A negative test result will mean that lead safe-work practices are not required. These kits may be available as early as September 2009.
- If the test kit positive indicator is present on any of the tested surfaces, lead-safe work practices must be used. Alternatively, sampling may be performed by a Certified Lead Inspector or Risk Assessor to prove by laboratory analysis that lead-based paint is not present.
- Certified Renovators must use an EPA-recognized test kit to test affected surfaces. EPA-recognized test kits are listed on the EPA website at www.epa.gov.

Reporting:

- When test kits are used, within 30 days of completing the renovation, the Certified Renovation firm must provide information on test kit manufacturers and models used for testing, a description of components tested including locations, and the results of testing, to the client who contracted for the renovation.
- Retain a copy of the test kit documentation form.
Recordkeeping: Post-Renovation Reporting

- At the end of each renovation, the Certified Renovator must sign a report including the following information:
  - Name of Certified Renovator assigned to lead the project;
  - Copy of Certified Renovator certification(s);
  - Certification from a Certified Renovator of non-certified worker training, and a list of the topics covered;
  - Certification of posting of warning signs;
  - Description of chemical spot testing, if any performed;
  - Certification by the Certified Renovator of work area containment, on-site waste containment and transport, proper post renovation work area cleaning, and of successful cleaning verification.
  - Clearance report, if performed.

Post-Renovation Reporting
The end of renovation report should describe the whole project from posting signs to cleaning verification or clearance. The report should name the Certified Renovator designated by the Certified Firm as responsible for lead-safe work practices on that project. Also include proof of certification for the designated Certified Renovator. The report also must have a signed statement from the Certified Renovator that covers the following areas:

- Proof of non-certified worker training;
- Proof of posting warning signs;
- Description of results from used of EPA-recognized chemical spot test kits;
- Description of work area containment;
- Description of on-site waste containment and transport;
- Proof of proper post-renovation work area cleaning;
- Records of inspections and/or risk assessments conducted by Certified Lead Inspectors or Risk Assessors, if applicable.
- Proof of successful cleaning verification.

If dust clearance sampling is performed in lieu of cleaning verification, provide a copy of the dust sampling report to the person who contracted for the renovation within 30 days of the completion of the renovation (see 40 CFR 745.86(d)).